# CITY COUNCIL MEETING AGENDA

## May 20, 2013

**5:30 p.m. - Special Meeting: Executive Session to discuss Litigation, potential litigation and real estate acquisition**

**7:00 p.m. – Regular Meeting**

**1. CALL TO ORDER** **2. PLEDGE OF ALLEGIANCE** **3. ROLL CALL**

**4. AGENDA CONFIRMATION**

**5. PUBLIC COMMENT** Individuals will please limit their comments to three minutes, and groups to five minutes.

**6. CORRESPONDENCE FOR THE RECORD**

| | | |
|---|---|---|
| a. | Email Dated May 5, 2013, from Robert and Robbie Howell. | 3. |
| b. | Letter Dated May 6, 2013, from Laura Pond. | 5. |
| c. | Email Dated May 6, 2013, from Debi Wagner. | 7. |
| d. | Email Dated May 6, 2013, from Winona Deyman. | 13. |
| e. | Email Dated May 6, 2013, from Chestine Edgar. | 15. |
| f. | Email Dated May 6, 2013, from Linda Plein. | 21. |
| g. | Email Dated May 6, 2013, from Leonard Boscarine. | 25. |
| h. | Email Dated May 6, 2013, from Dick West. | 33. |

**7. CONSENT AGENDA**

| | | |
|---|---|---|
| a. | Approval of Vouchers: Numbers 34613 - 34749 in the Amount of $238,371.15 dated May 20, 2013, and Payroll Salaries and Benefits Numbers 5754 - 5770 for Direct Deposits and Wire Transfers in the Amount of $304,886.16 for April 16 - April 30, Paid on May 3, 2013. | 37. |
| b. | Approval of Minutes: Council Regular Meeting, May, 6, 2013. | 57. |
| c. | Motion to Adopt Ordinance No. 580, Amending the 2013-2014 Biennial Budget for Legal and Consulting Services Related to the Burien Town Square Project. | 61. |
| d. | Motion to Approve Modification to Burien CARES Contract. | 63. |

**8. BUSINESS AGENDA**

| | | |
|---|---|---|
| a. | Presentation of Service Awards to Albertsons' Employees. | |
| b. | Presentation of Annual Report by Small Business Development Center (SBDC). | |
| c. | Motion to Adopt Ordinance No. 581 approving updates to Burien's Shoreline Master Program and authorizing its submission to the Department of Ecology. | 77. |
| d. | Burien Dog Park Project - Staff Update. | 559. |

**COUNCILMEMBERS**

**Brian Bennett, Mayor** **Lucy Krakowiak, Deputy Mayor** **Jack Block, Jr.**
**Rose Clark** **Bob Edgar** **Joan McGilton** **Gerald F. Robison**

**City Hall, 400 SW 152nd Street, 1st Floor**

| | | | |
|---|---|---|---|
| **8. BUSINESS AGENDA (cont'd.)** | e. | Discussion and Potential Adoption of Ordinance No. 582 Increasing the City's Surface Water Management Discount Rates and Amending Chapter 13.10 of the Burien Municipal Code. | 573. |
| | f. | Review of Council Proposed Agenda Schedule. | 581. |
| | g. | City Manager's Report. | 585. |

**9. COUNCIL BUSINESS**

**10. ADJOURNMENT**

## Carol Allread

**From:** Public Council Inbox
**Sent:** Monday, May 06, 2013 1:51 PM
**To:** 'roberth2@comcast.net'
**Subject:** RE: Comments for the SMP Hearing Scheduled for 5-6-2013

Dear Robert and Robbie Howell,

Thank you for writing to the City Council to express your concerns.

Your email will be provided to Councilmembers at the meeting today, 5/6/13, and your email will be included in a future Council agenda packet as Correspondence for the Record.

Sincerely,

Carol Allread
Executive Assistant, City Manager Office
City of Burien
(206) 248-5508 Office
(206) 248-5539 Fax
carola@burienwa.gov

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**From:** Monica Lusk
**Sent:** Monday, May 06, 2013 12:21 PM
**To:** Public Council Inbox
**Subject:** FW: Comments for the SMP Hearing Scheduled for 5-6-2013

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**From:** Robert Howell [mailto:roberth2@comcast.net]
**Sent:** Sunday, May 05, 2013 11:13 PM
**To:** Monica Lusk; Bob Fritzen; Joan McGilton; Rose Clark; Brian Bennett; Jack Block Jr.; Jerry Robison; Bob Edgar; Lucy Krakowiak; Head of DOE Bellevue Office; DOE Shorelines and Ecology; DOE Bellingham office
**Subject:** Comments for the SMP Hearing Scheduled for 5-6-2013

To the City of Burien
To the DOE-State of Washington

Please put this letter on the public record as our comments for the public hearing scheduled in Burien for May 6, 2013,relating to the draft version of the Burien SMP. While this appears to be a late time to be submitting comments, we as citizens were denied the right to attend the meetings of this SMP ad hoc advisory group. The public/citizens was kept out of the meetings and not allowed to make any comments regarding the working issues. So we have just gotten the revised version for review and comment.

**Issue 1-**We submitted numerous photos and documentation of the plants and animals that use Lake Burien as their habitat to both the City of Burien and DOE. Several of the species listed are considered species of concern by King County and documented as such in their Comprehensive Plan. We requested that our baseline inventory be included in the appendices to the SMP. The City Council voted to have the Lake Burien inventory documents added to the Appendices in 2010. However, this version of the SMP and it's supporting documents that we now see is missing that inventory list. We are requesting that the inventory be placed with those documents. The BAS document that Burien had done in 2011states that these are the kind of documents that should be added to Burien's CAO when updates occur.The SMP includes an update to the CAO for the shorelines.

**Issue2-Page**

IV-21, 22,24 and Appendix X of the SMP document creates a No Net Loss Compliance policy for the shorelines and a methodology

CFTR: 5/20/13

1 CC: Chip Davis, Community Development Director

David Johanson

for determining how this will be calculated and allowed. We feel that the assumptions, process and method for calculating this have errors in the mitigation hypothesis for "no net loss" that is being advanced. The scientific sources for supporting this methodology is not discussed or cited. Important elements about how Zone 1 and Zone 2 actually work with each other seem to be missing. **2b.** on page IV-21(ii) should require that a planner or staff member meet with, view the site and go over the worksheet for validity and accuracy. **4b**. should not allow new developments in Zone 2 for Lake Burien because developing the setback means that part of the Buffer will then be used as a working setback. The setbacks for homes on Lake Burien is typically 80' to 125' so there really are no unavoidable new developments that are needed in Zone 2 and working in Zone 2 and using the Buffer as a working setback will cause net loss to the lake. **Page IV-38, 2ii,** 45 feet should remain in for Lake Burien as there is no change in the proposed buffer. **Page IV-2g**, appurtenances and accessory dwelling should not be allowed in the setback/Zone 2 for Lake Burien because there is no unavoidable need for them and because they will cause damage to the Buffer by allowing it to serve in part as the setback. Lastly almost the entire shoreline of Lake Burien is considered to be a critical area and as such warrants additional protection. **Appendix X-** is missing some factors that need to be considered with regard to net loss as has been discussed before.

**Issue 3-Supplement** to the Shoreline Analysis and Characterization-Table 1 on page1 , A Metric to approximate ecological function for shoreline evaluation,on page 6, Table 2, Table 3 all appear to have problems to the underlying assumptions on what indicators are to be used and how their scores are determined. Ariel shots to determine types of vegetation are grossly inaccurate. Because these tables don't seem to really be used for any real purpose, we are requesting that the scores for Lake Burien be deleted from the tables. We don't feel that this is really a way to determine No Net Loss Indicators for this reach of the Lake Burien shoreline.

**Issue 4-On** page 14 of the same document, #7 the assumption about future development for Lake Burien is incorrect. David Johanson/Burien City Planner has stated that if a lot is allowed to be divided the city will allow it and it probably can be built on. The city has identified 53 lots that can be newly created around Lake Burien. This will cause net loss to the lake because of the storm water issues, non point pollution and lack of low impact development regulation in the city. Currently, the facilities around the lake are inadequate for the storm water generated. This is causing net loss to the lake. We asked numerous times at meetings and on the record that this issue be discussed during the SMP process and the City Staff would not allow this to be discussed in the SMP process. Had it been discussed, it might have implied different buffers were needed for the lake or a different land use such as a low density as is stated in the EIS that was used for this SMP. We would like to have this discussed before this SMP update is completed and approved by DOE.
Also, please make like corrections in the Cumulative Impacts Analysis document. Without this discussion and problem solving being applied to the SMP, Lake Burien will continue to experience net loss.

**Issue 5-remove** the Table 1 or remove Lake Burien from Table 1 on page 5 and Table 2 on page 6 of the Cumulative Impacts Analysis. The tables serve no real purpose. Correct the assumptions for foreseeable future development for Lake Burien to reflect what could happen by sub-plotting a number of the existing properties. The discussion of the problem with sub-plotting these areas is discussed in the EIS. On page 7, correct the count on wetlands for Lake Burien.

We are requesting that you make the corrections to the draft SMP as have been discussed in this letter.

Sincerely,

Robert C. Howell

Robbie L. Howell

May 6, 2013

Mrs. Laura L Pond
12435 2nd Avenue SW
Burien, WA 98146

RECEIVED

MAY 07 2013

City of Burien

Re: Proposed Off-leash Dog Parks

Dear Burien City Council,

Thank you for allowing neighborhood feedback concerning which parks might be appropriate for an off-leash dog park in Burien. I live within 500 feet of Hazel Valley Park and enjoy using this park often. This quiet park features a wheelchair friendly paved path. I think it might be the **only** one of its kind in the Burien Parks system. Hazel Valley Park is too people friendly for use as an off-leash dog park.

Hazel Valley Park is surrounded by very dense housing. Many homes actually abut the park and hundreds of homes and small lots are within earshot of barking dogs in this crowded neighborhood. Of the approximately 17 adjacent property owners, many have dogs. How are they going to use and enjoy their backyards with loose dogs at their fence lines? They and their pets will be constantly harassed by off-leash dogs. Also, the additional traffic on the narrow streets, no off-street parking, **noise**, and essentially no remaining land use for people in the little park make Hazel Valley Park a vey poor choice.

Dog owners in the neighborhood use Hazel Valley Park for walking leashed dogs-**away** from the climbing toys used by unpredictable kids, away from the joggers on the dirt/cinder trail, the basketball court and soccer games at nearby Puget Sound Park. This densely zoned area almost requires this non-specific use open space.

Anybody that needs a visual of off-leash dog parks, please visit the sorry mess that is the Madison Park Off-leash Dog area in Seattle. Van loads of for-profit "dog-sitters" using (abusing) the park. "If you build it, they will come". Dog urine kills trees, it kills grass and it doesn't take much. Hazel Valley Park has some lovely 100 year old trees within its boundaries. We all want to enjoy them – alive, for many years. Also, it is optimistic (read naïve) to imagine that owners/doggie business operators will stoop to scoop every time. Even now the leashed dog/human teams need improvement with this. I predict something similar to a smelly moonscape and don't want to imagine winter time.

Barking dogs are a public nuisance. Homeowners call Animal Control over dog noise. Sound travels an incredible distance. Please do not fill the air on Sunday mornings, or any other time of day or evening, with the cacophony a dog park will surely create. I did not buy a home anywhere near a dog park and do not want to live near one now. Respect our property rights. Respect the history of the neighborhood. A portion of this park (the treed area) was donated to the Park System by the former resident and this little park was developed with Urban Renewal Forward Thrust funding. Please choose a more isolated park, encourage the use of Crestview Off-leash Dog Park, create an area in the Port buffer zone or forget the whole idea.

Little Hazel Valley Park is currently used by leashed pets and pals, families with children, the mobility challenged, anyone wanting to travel a paved path or sit and enjoy the outdoors. Let's keep it that way.

Best Regards,

Laura Pond

CFTR: 5/20/13
PC: 5/10/13

cc: Michael Lafreniere, Parks Director
Steve Roemer, Parks Manager

## Carol Allread

**From:** Public Council Inbox
**Sent:** Monday, May 06, 2013 2:08 PM
**To:** 'dwagner007@msn.com'
**Subject:** RE: shoreline

Dear Ms. Wagner,

Thank you for writing to the City Council to express your concerns.

Your email will be provided to Councilmembers at the meeting today, 5/6/13, and your email will be included in a future Council agenda packet as Correspondence for the Record.

Sincerely,

Carol Allread
Executive Assistant, City Manager Office
City of Burien
(206) 248-5508 Office
(206) 248-5539 Fax
carola@burienwa.gov

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**From:** Monica Lusk
**Sent:** Monday, May 06, 2013 12:25 PM
**To:** Public Council Inbox
**Subject:** FW: shoreline

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**From:** D Wagner [mailto:dwagner007@msn.com]
**Sent:** Monday, May 06, 2013 12:11 PM
**To:** Monica Lusk
**Subject:** shoreline

Hello Monica:
I am submitting these comments for the public hearing on May 6, 2013 to be added to the public record on the SMP. Referring to page IV - 21-24, the process and methodology on these pages for new development in the shoreline buffers should only apply to the marine shoreline. It was purposely developed to allow marine shoreline owners to create new development in the buffer, zone 1 and 2 and is not one of the four items that DOE addressed needed to be done for the Lake Burien shoreline.

I feel that this methodology for no net loss in the shorelines is a flawed model.
Thank you,
Debi Wagner

CFTR: 5/20/13 cc Chip Davis, Community Development Director
David Johanson, Senior Planner

May 11, 2013
To the Burien City Council
To Bob Fritzen, DOE

To Whom It May Concern:

Burien is having a public hearing on its Shoreline Master Program (SMP) and we are submitting this as part of the Public Record for that hearing. However, since Geoff Tallent has left DOE, it has become **unclear** who has taken over for him at DOE. For that reason, you may be receiving these public comments. It is our understanding that the Burien SMP is still in the draft form and has not been approved as of the writing of this letter and this public comment period. While the SMP is in the draft form, it is also our understanding that the document is open for work and amendment to that document. Therefore our comments are being made with the assumption that they will be considered in the amending process and prior to the final approval of the Burien SMP by DOE.

The Burien SMP document process has not been the open process to public participation as identified by RCWs and this has been of great concern to us. Five years have passed since the work started on the Burien SMP and some confusion still surrounds what is actually happening. The Agenda Bill in the May 6, 2013 Burien City Council packet states that four items are to have required changes. The first change was to have involved increasing the marine riparian buffer and building setback. While that appears to have happened in the document, then a whole series of tables and a methodology was developed by the ad hoc committee to justify working in the setback (Zone 1) and buffer (Zone 2) of the freshwater shoreline (Lake Burien). We are asking that any changes in the SMP document that have happened for the marine shoreline not apply to Lake Burien.

Additionally, another item was required by DOE for change requiring a shoreline variance for geologically hazardous area buffer reductions to between 0 and 25 feet, and wetland buffer reduction to 25 feet. Again it is unclear whether this wetland buffer reduction refers to the marine shoreline wetlands or to the freshwater shoreline wetland also. It was our understanding that the freshwater wetlands buffer was already established at 30' for buffer and 15' for the setback. These new tables and methodology appear to allow work in Zone 2 (setback) in exchange for alteration to Zone 1 (buffer) and apply to the both the marine and freshwater environment. The homes surrounding Lake Burien should not need this variance as they are setback generally 80 to 125 feet from the shoreline and there should be no unavoidable intrusion into the setback and buffer needed. We are requesting that the tables developed to address these issues in the marine shoreline not apply to freshwater shoreline (Lake Burien)..

**Here are our comments related to the newest redline version that we have been able to secure. We will reference our comments by page no. and the revision date listed on that page regarding the new "no net loss' model and calculation for "Zone 1" and "Zone 2":**

1. **Pages IV-21 and IV-22. We oppose the redline version select areas because they claim to establish a methodology for measuring "no net loss" that is based on no science standards**

**or no Best Available Science standards for determining "no net loss"**. This is a model that was created in someone's living room with no scientists present; by an ad hoc committee development that was not open to any public oversight whatsoever. While three trained and published local scientists volunteered to serve on this committee, they were not allowed to serve on the committee nor were they even allowed to attend as observers to the committee meetings. Their approach to the "No Net Loss Compliance" is a mathematical manipulation problem that neglects a number of the variables that should be considered in the "no net loss" equation. DOE should not consider embracing this as a standard or legal precedent for SMP plans throughout the state.

2. **Item 4b on page IV-22 and the accompanying worksheet on IV-24. The proposed measure of adverse impacts in Zone 2 versus the benefit of adding native vegetation in Zone 1 sets up an arbitrary point scale that is based on no research models and does not differentiate on the levels of "partially functioning areas".** So, should an area that already has a part mix of lawn and native vegetation be scored the same at a rolled sod lawn or a mostly dirt or lightly graveled area or a hand seeded lawn? And by what DOE standard was the concept of "partially functioning" even established? So how is the difference established between "4 points" and "2 points" on the worksheet for the type of surfaces? Plus, why is there is no "3 points" option? Secondly, the equation (worksheet?) does not take into consideration that when hardening the setback with impervious surface, then any development, maintenance and use in the setback forces the user to enter into the buffer and use a portion of the buffer as a setback. There appears to be no requirements for Low Impact Development (LID) in this equation. This new development causes addition and ongoing damage to the buffer that is not accounted for in the "no net loss" equation on page IV-24. While portions of the marine shoreline are so hardened and damaged, any improvement would be better than what currently exists, the Lake Burien shoreline is not hardened in the same sort of manner. The buffer (Zone 1) and the setback (Zone 2) are largely vegetated and the homes are setback generally 80 to 125 feet. This methodology to harden and develop the Lake Burien shoreline should not be allowed and we are asking it be removed. The methodology was really developed to address the marine shoreline situation.

3. **Item 5. Optional method, page IV-22, In demonstrating successful mitigation of unavoidable impacts, all of the adverse impacts are not listed as was discussed in latter comments and there seems to be no standard for how "unavoidable" impacts versus "I just want to do it" impacts are determined.** So, is having a three car attached garage to a primary residence constructed in Zone 2 versus a two car attached garage (located where?) an unavoidable adverse impact that warrants the use of this optional method? Or, does adding a new appurtenance, cabana, garage or patio into this setback (which will then adversely impact the buffer) qualify as an unavoidable impact?

**4. Section 4b (Page IV-22) should not be allowed for Lake Burien** since most of the homes are setback 80 to 125 ft. and there is no unavoidable needs on these primary residences that required the penetration of Zone 2 which is a 15' setback from an already less than minimal 30' buffer for the area. There is no unavoidable need for these accessory structures and appurtenances in the setback/buffer (Zone 2) in the freshwater shoreline. Allowing this method will cause net loss to the lake.

And what is the height allowed on these appurtenances and accessory structures that will considerably block the view of existing developed freshwater properties that were originally built to abide with the historical required buffers and setbacks? This does not make sense for the Lake Burien shoreline.

4. **Items 4b, 5 and 6 on page IV-22. These seem to promote "further creep" toward the shoreline which the SMP was supposed to prevent against to prevent "net loss" to the shorelines.** Plainly stated, it is a sneaky way to move even closer to the shoreline than was intended by the use of a prescribed buffer and setback method for development and mitigation. It is a backdoor method for creeping further into the shoreline with new development by the pretended assumption that native vegetation is the cure all for all new development. Again, this should not be allowed for Lake Burien. The reason that the Marine Shoreline Owners wanted this changed was supposedly to allow them to rebuild their homes if they were destroyed. This provision for new development far exceeds just the replacement of their property on its existing footprint--it now allows them to further develop and expand their properties into the shorelines and advances the same model for Lake Burien. The two different kinds of shorelines have very different kinds of development conditions and should not be lumped together into the same model. **The simple solution to correct this section of the document is to keep the original language as stated for Lake Burien-a 30 foot buffer and a 15 foot setback for Lake Burien and institute this new methodology for the marine shorelines only. That was one of the four issues that DOE wanted changed in the document. Therefore, the Figure 7: Impact Assessment Worksheet on page IV-24 should only apply to the marine shorelines.**

5. **Definitions Section-page VI-1**
**20.40.005 Appurtenances-** a height limit should be given. Also, as we seem to remember, appurtenances can be used as a dwelling which would extend beyond a single family's enjoyment. Is this assumption in error? They are clearly avoidable intrusions and how do they differ from accessory structures that are also discussed in this SMP. Accessory structures are not defined in this definition section.

**20.40.101 Partially functioning areas-**the problem with this definition is that there is no way, method or scale to determine the degree of partially functioning. Even native vegetations planted in a particular manner can result in a partially functioning area. The tables in this document weigh partially functioning at all of the same score and there is a practical, obvious, significant difference in partially functioning as created by a slatted deck vs. a non native landscaped area vs. a lawn. The amount of water and sunlight penetration for these different types of partially functioning areas varies widely and there is no tested scale provided to show or score them differently.

6.**Supplement to the Shoreline Analysis and Characterization-** Remove Lake Burien from Table 1, Table 2, Table 3, Table 9, Table 10 because the SR-LB shoreline is different than the marine shorelines and shouldn't be compared to them. Additionally, the tables serve no real purpose except to show the differences between the marine shorelines. Lastly, some of the factors that should be considered are lacking from the point scale on these tables.

Also, #7 on page 15 makes the wrong presumption about future development for Lake Burien. Many of the properties around Lake Burien are very old. The buildings and structures on them will be taken down in the 20 year future. When that happens developers and property owners will consider short platting these properties. In 1999, the City of Burien estimated that 53 new residences could be put in the Lake Burien area. This amount of new impervious surface and development to the Lake Burien shoreline would cause increased net loss to the shoreline. Currently the Lake Burien shoreline is being used at the 12,000' lot size level and the city's stormwater facilities are inadequate, deteriorating are creating net loss for water quality and wildlife habitat in the area. In 2010 and 2011, a toxic algae bloom occurred on the lake due to this issue. This bloom lasted 9 months and caused net loss to the lake, water quality and Miller Creek. It was a health and safety issue for all living things using the lake and Miller Creek. Since at least 2004, flooding has impacted the homes and properties around the lake because of the stormwater issues. **While we tried to get this issue of land use for the Lake Burien shoreline addressed during the SMP process, the city staff would not allow this issue to be discussed. As residents, we have attempted on numerous occasions to get the city to address these issues and problems; during the Comprehensive Plan process, the Drainage Master Plan process and the Shoreline Master Plan process. In our contact with the Growth Management Hearings Board (see Case No. 11-3-004), it appears that this update to the SMP is the appropriate time that this situation/issue should be discussed and considered. Restricting property development is a recognized and effective strategy to achieve the SMA "no net loss" standard. This may have changed the final determination on what should be the required buffer for Lake Burien as well as the appropriate land use. The EIS that this SMP was developed under makes it clear that the land use for the Lake Burien shoreline should be low density residential. We feel this discussion still needs to happen before this SMP is adopted by DOE.**

**7.Cummulative Impacts Analysis-** Remove Lake Burien from Table 1 and Table 2.

In conclusion, we are sorry that these comments have come in so late to the public hearing process but as citizens we were excluded for any involvement with the ad hoc committee that drafted the changes. We are only seeing this work for the first time now. However, we are requesting that these changes be made before this SMP draft document is finalized by DOE.

C. Edgar and the Lake Burien Neighborhood

## Carol Allread

**From:** Public Council Inbox
**Sent:** Monday, May 06, 2013 2:12 PM
**To:** 'winonamary@msn.com'
**Subject:** FW:

Dear Ms. Deyman,

Thank you for writing to the City Council to express your concerns.

Your email will be provided to Councilmembers at the meeting today, 5/6/13, and your email will be included in a future Council agenda packet as Correspondence for the Record.

Sincerely,

Carol Allread
Executive Assistant, City Manager Office
City of Burien
(206) 248-5508 Office
(206) 248-5539 Fax
carola@burienwa.gov

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**From:** Monica Lusk
**Sent:** Monday, May 06, 2013 12:35 PM
**To:** Public Council Inbox
**Subject:** FW:

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**From:** winona deyman [mailto:winonamary@msn.com]
**Sent:** Monday, May 06, 2013 12:30 PM
**To:** Monica Lusk
**Subject:**

To Monica Lusk,

Please add my following comments about the SMP to the public hearing record and forward them to the City Council for their consideration tonight. Reading the SMP revised draft has been about as much fun as reading a telephone book. All of the messing around with the tables on pages IV-21 through IV-24 seems to an attempt by the marine shoreline home owners to make their case for why they should be able to continue to do new development in their already badly degraded shorelines. However, I feel their no net loss arguement is faulty because all of the varibles are not correctly weighed or even considered in the math equation. I thought this discussion was only supposed to be about the marine shorelines.

In reading the math equations and discussion on these pages, it now appears that the city is going to apply this math formula to the freshwater shoreline also? The Lake Burien shoreline is different than the marine shorelines and not at all as greatly damaged with building right to the edge of the shoreline. It was not one of the things that DOE made a comment about for revision. So why is this marine shoreline model now being

CFTR: 5/20/13

cc: Chip Davis, Community Development Director
David Johanson, Senior Planner

used for something that the Lake Burien neither needs or would benefit from? I think that using this math model would allow new development to move closer into the water in the Lake Burien shoreline and cause net loss to the water quality of the lake. It certainly doesn't need more of that. The stormwater problems are already bad enough for the lake. Every time there is a rain that lasts even one day, I have flooding on my property because of the inadequate stormwater management.

So I am asking that Lake Burien be removed for the math equation on Pages IV-21 through IV-24 and that the equation shown on those pages only be used for the marine shorelines.

A second issue I would like to comment on is that I do not believe that CARES should receive a pay increase from the city and have its contract extended tp 2016.This contract should be put out to open bid in 2014.

Winona Deyman

## Carol Allread

**From:** Public Council Inbox
**Sent:** Monday, May 06, 2013 1:59 PM
**To:** 'c_edgar2@yahoo.com'
**Subject:** RE: comments for the SMP public hearing for May 6, 2013

Dear Ms. Edgar,

Thank you for writing to the City Council to express your concerns.

Your email will be provided to Councilmembers at the meeting today, 5/6/13, and your email will be included in a future Council agenda packet as Correspondence for the Record.

Sincerely,

Carol Allread
Executive Assistant, City Manager Office
City of Burien
(206) 248-5508 Office
(206) 248-5539 Fax
carola@burienwa.gov

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**From:** Monica Lusk
**Sent:** Monday, May 06, 2013 12:24 PM
**To:** Public Council Inbox
**Subject:** FW: comments for the SMP public hearing for May 6, 2013

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**From:** Chestine Edgar [mailto:c_edgar2@yahoo.com]
**Sent:** Monday, May 06, 2013 11:25 AM
**To:** Monica Lusk; Bob Fritzen; Joan McGilton; Rose Clark; Brian Bennett; Jack Block Jr.; Jerry Robison; Bob Edgar; Lucy Krakowiak; Head of DOE Bellevue Office
**Subject:** comments for the SMP public hearing for May 6, 2013

Please place these as comments to the Public Record for this hearing on the draft to the Burien SMP that is currently up for consideration. See the attachment.

CFTR: 5/20/13

CC: Chip Davis, Community Development Director
David Johanson, Senior Planner

May 11, 2013
To the Burien City Council
To Bob Fritzen, DOE

To Whom It May Concern:

Burien is having a public hearing on its Shoreline Master Program (SMP) and we are submitting this as part of the Public Record for that hearing. However, since Geoff Tallent has left DOE, it has become **unclear** who has taken over for him at DOE. For that reason, you may be receiving these public comments. It is our understanding that the Burien SMP is still in the draft form and has not been approved as of the writing of this letter and this public comment period. While the SMP is in the draft form, it is also our understanding that the document is open for work and amendment to that document. Therefore our comments are being made with the assumption that they will be considered in the amending process and prior to the final approval of the Burien SMP by DOE.

The Burien SMP document process has not been the open process to public participation as identified by RCWs and this has been of great concern to us. Five years have passed since the work started on the Burien SMP and some confusion still surrounds what is actually happening. The Agenda Bill in the May 6, 2013 Burien City Council packet states that four items are to have required changes. The first change was to have involved increasing the marine riparian buffer and building setback. While that appears to have happened in the document, then a whole series of tables and a methodology was developed by the ad hoc committee to justify working in the setback (Zone 1) and buffer (Zone 2) of the freshwater shoreline (Lake Burien). We are asking that any changes in the SMP document that have happened for the marine shoreline not apply to Lake Burien.

Additionally, another item was required by DOE for change requiring a shoreline variance for geologically hazardous area buffer reductions to between 0 and 25 feet, and wetland buffer reduction to 25 feet. Again it is unclear whether this wetland buffer reduction refers to the marine shoreline wetlands or to the freshwater shoreline wetland also. It was our understanding that the freshwater wetlands buffer was already established at 30' for buffer and 15' for the setback. These new tables and methodology appear to allow work in Zone 2 (setback) in exchange for alteration to Zone 1 (buffer) and apply to the both the marine and freshwater environment. The homes surrounding Lake Burien should not need this variance as they are setback generally 80 to 125 feet from the shoreline and there should be no unavoidable intrusion into the setback and buffer needed. We are requesting that the tables developed to address these issues in the marine shoreline not apply to freshwater shoreline (Lake Burien)..

**Here are our comments related to the newest redline version that we have been able to secure. We will reference our comments by page no. and the revision date listed on that page regarding the new "no net loss' model and calculation for "Zone 1" and "Zone 2":**

1. **Pages IV-21 and IV-22. We are opposed these pages the redline version select areas because they claim to establish a methodology for measuring "no net loss" that is based on**

**no science standards or no Best Available Science standards for determining "no net loss".** This is a model that was created in someone's living room with no scientists present; by an ad hoc committee development that was not open to any public oversight what so ever. While three trained and published local scientists volunteered to serve on this committee, they were not allowed to serve on the committee nor were they even allowed to attend as observers to the committee meetings. Their approach to the "No Net Loss Compliance" is a mathematical manipulation problem that neglects a number of the variables that should be considered in the "no net loss" equation. DOE should not consider embracing this as a standard or legal precedent for SMP plans throughout the state.

2. **Item 4b on page IV-22 and the accompanying worksheet on IV-24. The proposed measure of adverse impacts in Zone 2 versus the benefit of adding native vegetation in Zone 1 sets up an arbitrary point scale that is based on no research models and does not differentiate on the levels of "partially functioning areas".** So, should an area that already has a part mix of lawn and native vegetation be scored the same at a rolled sod lawn or a mostly dirt or lightly graveled area or a hand seeded lawn? And by what DOE standard was the concept of "partially functioning" even established? So how is the difference established between "4 points" and "2 points" on the worksheet for the type of surfaces? Plus, why is there is no "3 points" option? Secondly, the equation (worksheet?) does not take into consideration that when hardening the setback with impervious surface, then any development, maintenance and use in the setback forces the user to enter into the buffer and use a portion of the buffer as a setback. There appears to be no requirements for Low Impact Development (LID) in this equation. This new development causes addition and ongoing damage to the buffer that is not accounted for in the "no net loss" equation on page IV-24. While portions of the marine shoreline are so hardened and damaged, any improvement would be better than what currently exists, the Lake Burien shoreline is not hardened in the same sort of manner. The buffer(Zone 1) and the setback(Zone 2) are largely vegetated and the homes are setback generally 80 to 125 feet. This methodology to harden and develop the Lake Burien shoreline should not be allowed and we are asking it be removed. The methodology was really developed to address the marine shoreline situation.

3. **Item 5. Optional method, page IV-22, In demonstrating successful mitigation of unavoidable impacts, all of the adverse impacts are not listed as was discussed in latter comments and there seems to be no standard for how "unavoidable" impacts versus "I just want to do it" impacts are determined.** So, is having a three car attached garage to a primary residence constructed in Zone 2 versus a two car attached garage (located where?) an unavoidable adverse impact that warrants the use of this optional method? Or, does adding a new appurtenance, cabana, garage or patio into this setback (which will then adversely impact the buffer) qualify as an unavoidable impact?

**4. Section 4b (Page IV-22) should not be allowed for Lake Burien** since most of the homes are setback 80 to 125 ft. and there is no unavoidable needs on these primary residences that required the penetration of Zone 2 which is a 15' setback from an already less than minimal 30' buffer for the area. There is no unavoidable need for these accessory structures and appurtenances in the setback/buffer (Zone 2) in the freshwater shoreline. Allowing this method will cause net loss to the lake.

And what is the height allowed on these appurtenances and accessory structures that will considerably block the view of existing developed freshwater properties that were originally built to abide with the historical required buffers and setbacks? This does not make sense for the Lake Burien shoreline.

4. **Items 4b, 5 and 6 on page IV-22. These seem to promote "further creep" toward the shoreline which the SMP was supposed to prevent against to prevent "net loss" to the shorelines.** Plainly stated, it is a sneaky way to move even closer to the shoreline than was intended by the use of a prescribed buffer and setback method for development and mitigation. It is a backdoor method for creeping further into the shoreline with new development by the pretended assumption that native vegetation is the cure all for all new development. Again, this should not be allowed for Lake Burien. The reason that the Marine Shoreline Owners wanted this changed was supposedly to allow them to rebuild their homes if they were destroyed. This provision for new development far exceeds just the replacement of their property on its existing footprint--it now allows them to further develop and expand their properties into the shorelines and advances the same model for Lake Burien. The two different kinds of shorelines have very different kinds of development conditions and should not be lumped together into the same model. **The simply solution to correct this section of the document is to keep the original language as stated for Lake Burien-a 30 foot buffer and a 15 foot setback for Lake Burien and institute this new methodology for the marine shorelines only. That was one of the four issues that DOE wanted changed in the document. Therefore, the Figure 7: Impact Assessment Worksheet on page IV-24 should only apply to the marine shorelines.**

5. **Definitions Section-page VI-1**
**20.40.005 Appurtenances-** a height limit should be given. Also, as we seem to remember, appurtenances can be used as a dwelling which would extend beyond a single family's enjoyment. Is this assumption in error? They are clearly avoidable intrusions and how do they differ from accessory structures that are also discussed in this SMP. Accessory structures are not defined in this definition section.

**20.40.101 Partially functioning areas-**the problem with this definition is that there is no way, method or scale to determine the degree of partially functioning. Even native vegetations planted in a particular manner can result in a partially functioning area. The tables in this document weigh partially functioning at all of the same score and there is a practical, obvious, significant difference in partially functioning as created by a slatted deck vs. a non native landscaped area vs. a lawn. The amount of water and sunlight penetration for these different types of partially functioning areas varies widely and there is no tested scale provided to show or score them differently.

6.**Supplement to the Shoreline Analysis and Characterization-** Remove Lake Burien from Table 1, Table 2, Table 3, Table 9, Table 10 because the SR-LB shoreline is different than the marine shorelines and shouldn't be compared to them. Additionally, the tables serve no real purpose except to show the differences between the marine shorelines. Lastly, some of the factors that should be considered are lacking from the point scale on these tables.

Also, #7 on page 15 makes the wrong presumption about future development for Lake Burien. Many of the properties around Lake Burien are very old. The buildings and structures on them will be taken down in the 20 year future. When that happens developers and property owners will consider short platting these properties. In 1999, the City of Burien estimated that 53 new residences could be put in the Lake Burien area. This amount of new impervious surface and development to the Lake Burien shoreline would cause increased net loss to the shoreline. Currently the Lake Burien shoreline is being used at the 12,000' lot size level and the city's stormwater facilities are inadequate, deteriorating are creating net loss for water quality and wildlife habitat in the area. In 2010 and 2011, a toxic algae bloom occurred on the lake due to this issue. This bloom lasted 9 months and caused net loss to the lake, water quality and Miller Creek. It was a health and safety issue for all living things using the lake and Miller Creek. Since at least 2004, flooding has impacted the homes and properties around the lake because of the stormwater issues. **While we tried to get this issue of land use for the Lake Burien shoreline addressed during the SMP process, the city staff would not allow this issue to be discussed. As residents, we have attempted on numerous occasions to get the city to address these issues and problems; during the Comprehensive Plan process, the Drainage Master Plan process and the Shoreline Master Plan process. In our contact with the Growth Management Hearings Board (see Case No. 11-3-004), it appears that this update to the SMP is the appropriate time that this situation/issue should be discussed and considered. Restricting property development is a recognized and effective strategy to achieve the SMA "no net loss" standard. This may have changed the final determination on what should be the required buffer for Lake Burien as well as the appropriate land use. The EIS that this SMP was developed under makes it clear that the land use for the Lake Burien shoreline should be low density residential. We feel this discussion still needs to happen before this SMP adopted by DOE.**

**7.Cummulative Impacts Analysis-** Remove Lake Burien from Table 1 and Table 2.

In conclusion, we are sorry that these comments have come in so late to the public hearing process but as citizens we were excluded for any involvement with the ad hoc committee that drafted the changes. We are only seeing this work for the first time now. However, we are requesting that these changes be made before this SMP draft document is finalized by DOE.

C. Edgar and the Lake Burien Neighborhood

## Carol Allread

**From:** Public Council Inbox
**Sent:** Monday, May 06, 2013 1:52 PM
**To:** 'lindaplein@comcast.net'
**Subject:** RE: Burien Shoreline Master Plan dates 4/10/13

Dear Ms. Plein,

Thank you for writing to the City Council to express your concerns.

Your email will be provided to Councilmembers at the meeting today, 5/6/13, and your email will be included in a future Council agenda packet as Correspondence for the Record.

Sincerely,

Carol Allread
Executive Assistant, City Manager Office
City of Burien
(206) 248-5508 Office
(206) 248-5539 Fax
carola@burienwa.gov

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**From:** Monica Lusk
**Sent:** Monday, May 06, 2013 12:22 PM
**To:** Public Council Inbox
**Subject:** FW: Burien Shoreline Master Plan dates 4/10/13

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**From:** Linda Plein [mailto:lindaplein@comcast.net]
**Sent:** Monday, May 06, 2013 7:29 AM
**Subject:** Burien Shoreline Master Plan dates 4/10/13

1600 SW 156th ST.
Burien,, WA 98166
May 4, 2103

City of Burien- City Council
Bob Fritzen, DOE
Burien, WA 98166

CC: Chip Davis, Community Development Director
David Johanson, Senior Planner

C FTR: 5/20/13

Re: Burien Shoreline Master Plan dates 4/10/13

Please consider these as comments for the Public Hearing on the revised version of the Burien Shoreline Master Plan of 4/10/13. I understand this version to be a draft form of the SMP.

1. Include the Lake Burien Inventory of Plants and Animals found on and in Lake Burien as part of the SMP document. We were told this would be included with the appendices (Rob Zissette's Report) on Aug. of 2110 at the City Council meeting by a vote of the Council. This Inventory is still missing.

2. Delete or exempt Lake Burien from 4b,5 and 5 on page IV-22 and also Appendix X. I feel that the metric created for this part of the SMP is incorrect in its assumptions about "no net loss compliance" and will NOT protect the Lake Burien from "no net loss".

3. For any of the shorelines 2b on page IV-21 should always require oversight and approval on the worksheet by a planning staff member of the City.

4. The Supplement to the Shoreline Analysis and Characterization contains Table 1 on page 1 serves no real purpose in the SMP document. Eliminate this revised tale from the Technical Documents.

5. On page 14 of the latter mentioned document, in #7 the assumption that Lake Burien will only be redeveloped into the future is in accurate. As the properties age around Lake Burien,owners and developers will remove buildings and reconsider sub potting. In 1999, the City of Burien projected that 53 new lots at 7,200 feet could be created. The residents of Lake Burien asked that this be studied, discussed and considered in the SMP update. The City of Burien staff ( David Johnason 2008-2009) refused to allow this discussion in the SMP process. We feel this discussion still needs to happen *before* the Burien SMP is finalized and adopted. The current storm water facilities at the current use of approximately 12,000 feet lots is inadequate and we have experienced degradation and net loss to the lake and flooding to our homes. In 2010 and 2011 there was a toxic algae bloom that was considered a hazard for any person, animals including thebirds and salmon downstream and a warning was even issued that the lake should not be used. We have been advised by the Growth Management Hearing Board that the SMP update is the document in which this should be discussed. Lake Burien will <u>continue</u> to experience "net loss" until this proposed land use is addressed.

6. On page 7 of the Cummulative Impacts Analysis, the assumptions drawn about Lake Burien for future development are incorrect as previously

discussed . On page 8 the assumptions drawn about there being only 10 wetlands on Lake Burien are also incorrect. This is incorrect because both the King County Deeds and Burien Critical Areas Ordinance Map show that there are **69** properties impacted by wetlands out of **70** properties. See King County Assessors records and the Burien CAO map.

The reason that you are receiving these comments now is that the above documents were developed at a CLOSED committee meetings and the public was NOT permitted to participate and citizens were not allowed to have any input or discussion.

In conclusion, I am requesting you make these corrections to the SMP revision.

Sinceley,

Linda Plein

## Carol Allread

**From:** Public Council Inbox
**Sent:** Tuesday, May 07, 2013 8:39 AM
**To:** 'Leonard Boscarine'
**Subject:** RE: Burien Shoreline Mater Plan dated 4/10/13

Dear Mr. Boscarine,

Thank you for writing to the City Council to express your concerns. Your email will be included in a future Council agenda packet as Correspondence for the Record.

Sincerely,

Carol Allread
Executive Assistant, City Manager Office
City of Burien
(206) 248-5508 Office
(206) 248-5539 Fax
carola@burienwa.gov

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**From:** Leonard Boscarine [mailto:lenboscarine@comcast.net]
**Sent:** Monday, May 06, 2013 9:49 PM
**To:** Public Council Inbox
**Subject:** Re: Burien Shoreline Mater Plan dated 4/10/13

On May 6, 2013, at 1:57 PM, Public Council Inbox wrote:

Dear Mr. Boscarine,

This correspondence is signed by Linda Plein. In order for this correspondence to be included it must be signed by you. Please return this with your name typed at the bottom instead of Linda's if you would like for it to be included as Correspondence for the Record.

Sincerely,

Carol Allread
Executive Assistant, City Manager Office
City of Burien
(206) 248-5508 Office
(206) 248-5539 Fax
carola@burienwa.gov

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**From:** Monica Lusk
**Sent:** Monday, May 06, 2013 12:22 PM
**To:** Public Council Inbox
**Subject:** FW: Burien Shoreline Mater Plan dated 4/10/13

CFTR: 5/20/13

CC: Chip Davis, Community Development Director,
David Johanson, Senior Planner

Inventory of Plants and Animals found on and in Lake Burien as part of the SMP document. We were told this would be included with the appendices (Rob Zissette's Report) on Aug. of 2110 at the City Council meeting by a vote of the Council. This Inventory is still missing.

2. Delete or exempt Lake Burien from 4b,5 and 5 on page IV-22 and also Appendix X. I feel that the metric created for this part of the SMP is incorrect in its assumptions about "no net loss compliance" and will NOT protect the Lake Burien from "no net loss".

3. For any of the shorelines 2b on page IV-21 should always require oversight and approval on the worksheet by

discussed and considered in the SMP update. The City of Burien staff ( David Johnason 2008-2009) refused to allow this discussion in the SMP process. We feel this discussion still needs to happen *before* th e Burien SMP is finalized and adopted. The current storm water facilities at the current use of approximately 12,000 feet lots is inadequate and we have experienced degradation and net loss to the lake and flooding to our homes. In 2010 and 2011 there was a toxic algae bloom that was considered a hazard for any person, animals including the birds and salmon downstream and a warning was even issued that the lake should not be used. We have been advised by the Growth

s records and the
Burien CAO map.

The reason that
you are receiving
these comments
now is that the
above documents
were developed
at a CLOSED
committee
meetings and
the public was
NOT permitted to
participate and
citizens were not
allowed to have
any input or
discussion.

In conclusion, I
am requesting
you make these
corrections to the
SMP revision.

Sincerely,

Len Boscarine

## Carol Allread

**From:** Public Council Inbox
**Sent:** Tuesday, May 14, 2013 3:24 PM
**To:** 'Dick West'
**Cc:** Monica Lusk
**Subject:** RE: May 20th Council Packet

Dear Mr. West,

Thank you for writing to the City Council to express your concerns. Your email will be included in a future Council agenda packet as Correspondence for the Record.

Sincerely,

Carol Allread
Executive Assistant, City Manager Office
City of Burien
(206) 248-5508 Office
(206) 248-5539 Fax
carola@burienwa.gov

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**From:** Dick West [mailto:dick.west2@aol.com]
**Sent:** Tuesday, May 14, 2013 11:45 AM
**To:** Monica Lusk
**Subject:** May 20th Council Packet

Monica,

I would appreciate you putting this communication to the Council in the upcoming May 20th Council Packet. I have sent an attachment for you if that is easier.

Thank you in advance for your help.

Dick West

Dear Council Members,

There are hundreds, maybe even a thousand, foreclosed houses sitting empty in Burien. Each and everyone of them destabilizes our neighborhoods, and deny the City revenues to provide services that are required by law. A few of the affects are:

- There are no utility, phone, or cable taxes being collected.
- Businesses are losing customers and B&O tax revenues decline.
- Sales tax collections are slumping as businesses leave Burien.

The average house in Burien sells for just over $200K. That would require an income of about $85K to buy that house plus a stellar credit report. Most of that $85K would be spent initially in Burien. For every twelve houses sold, over one million dollars in new purchasing power would be brought into our City.

CFTR : 5/20/13

cc: Craig Knutson, City Attorney

- Businesses activity would start to revive.
- Hiring of employees would occur.
- Sales and B&O tax revenue would increase.
- Utility & communication type taxes would increase.

The Banks must be given an incentive to unload their foreclosed properties. The incentives I am talking about are for the banks to improve their balance sheet by selling off their foreclosed house portfolios into an improving housing market. Then millions of dollars in new money would come pouring into Burien.

Unfortunately, Burien house values continue to remain weak. When home buyers see slumlord dwellings and abandoned bank repos that our City Manager chooses to ignore, they spend their money elsewhere or pay rock bottom prices. This further exacerbates the downward home price trend.

I believe it is time to define the City Manager's job description using existing Washington State Law. The majority of the City Council continue to give high marks for performance that is contrary to the City Manager's job description as defined in RCW 35A.13.080 (4). Specifically, the City Manager is tasked with faithfully executing the BMC under Washington State Law. Yet, he doesn't lift a finger, except under duress, when confronted by slumlords and abandoned bank repos even though the law clearly requires action to be taken.

I believe it is in the Community's best interest that the City Manager be proactive. I am not just referring to Code Enforcement. I am talking about as a way of approaching the governance of the City as a whole. A proactive City Manager would be looking for ways to get the Banks out of the repo business so that our City can move forward. Instead of doing what is required, the City Manager has ignored the neighborhoods, which is causing the City to drift downward. This Council approved approach is costing us an additional $200 million dollars a year in lost property values.

I want the City Council to address this issue directly an unequivocally. I propose that the Council put some skin on the line by **publicly** directing the City Manager to start enforcing the BMC immediately using a 40 hour abatement program against these houses outlined in my May 6th Public Comment. Remember, this is a revenue positive solution. This announcement will send a powerful signal to new home buyers and residents alike, that Burien will not allow these type of houses to go unchallenged any longer.

Everyone will know it, and the affect will be palpable.

- Neighborhoods will become cleaner and more desirable.
- More people will want to move into Burien.
- Houses will sell faster.
- House prices will improve.
- Burien businesses will expand.
- Jobs will be created.

An additional benefit will be that the structural deficit that Burien faces will be started to be dealt with, without raising new taxes.

Dick West

# RCW 35A.13.080

# City manager — Powers and duties.

The powers and duties of the city manager shall be:

(1) To have general supervision over the administrative affairs of the code city;

(2) To appoint and remove at any time all department heads, officers, and employees of the code city, except members of the council, and subject to the provisions of any applicable law, rule, or regulation relating to civil service: PROVIDED, That the council may provide for the appointment by the mayor, subject to confirmation by the council, of a city planning commission, and other advisory citizens' committees, commissions, and boards advisory to the city council: PROVIDED FURTHER, That if the municipal judge of the code city is appointed, such appointment shall be made by the city manager subject to confirmation by the council, for a four year term. The council may cause an audit to be made of any department or office of the code city government and may select the persons to make it, without the advice or consent of the city manager;

(3) To attend all meetings of the council at which his or her attendance may be required by that body;

(4) To see that all laws and ordinances are faithfully executed, subject to the authority which the council may grant the mayor to maintain law and order in times of emergency;

(5) To recommend for adoption by the council such measures as he or she may deem necessary or expedient;

(6) To prepare and submit to the council such reports as may be required by that body or as he or she may deem it advisable to submit;

(7) To keep the council fully advised of the financial condition of the code city and its future needs;

(8) To prepare and submit to the council a proposed budget for the fiscal year, as required by chapter 35A.33 RCW, and to be responsible for its administration upon adoption;

(9) To perform such other duties as the council may determine by ordinance or resolution.
[2009 c 549 § 3025; 1987 c 3 § 17; 1967 ex.s. c 119 § 35A.13.080.]

## Notes:

**Severability -- 1987 c 3:** See note following RCW 3.70.010.

# COMPUTER CHECK REGISTER

**CHECK REGISTER APPROVAL**

WE, THE MEMBERS OF THE CITY COUNCIL OF BURIEN, WASHINGTON, HAVING RECEIVED DEPARTMENT CERTIFICATION THAT MERCHANDISE AND/OR SERVICES HAVE BEEN RECEIVED OR RENDERED, DO HEREBY APPROVE FOR PAYMENT ON **This 20th day of May 2013** THE FOLLOWING:

CHECK NOS. **34613–34749**

IN THE AMOUNTS OF **$238,371.15**

WITH VOIDED CHECK NOS. **0**

**PAYROLL SALARIES AND BENEFITS APPROVAL**

FOR **April 16Th - April 30TH**, PAID ON **3rd of May 2013**

CHECK NOS. **5754-5770**

DIRECT DEPOSITS AND WIRE TRANSFERS IN THE AMOUNT OF: **$304,886.16**

# Accounts Payable
## Checks for Approval

User: cathyr
Printed: 05/15/2013 - 10:41 AM

| Check Number | Check Date | Fund Name | Account Name | Vendor Name | | Amount |
|---|---|---|---|---|---|---|
| 34613 | 05/20/2013 | General Fund | Professional Services | ABC Legal | | 14.00 |
| 34613 | 05/20/2013 | General Fund | Professional Services | ABC Legal | | 23.00 |
| 34613 | 05/20/2013 | General Fund | Professional Services | ABC Legal | | 7.00 |
| 34613 | 05/20/2013 | General Fund | Professional Services | ABC Legal | | 7.00 |
| 34613 | 05/20/2013 | General Fund | Professional Services | ABC Legal | | 7.00 |
| 34613 | 05/20/2013 | General Fund | Professional Services | ABC Legal | | 11.00 |
| 34613 | 05/20/2013 | General Fund | Professional Services | ABC Legal | | 50.00 |
| | | | | | Check Total: | 119.00 |
| 34614 | 05/20/2013 | Surface Water Management Fund | Office And Operating Supplies | Ace Hardware | | 30.06 |
| 34614 | 05/20/2013 | Street Fund | Office And Operating Supplies | Ace Hardware | | 18.05 |
| 34614 | 05/20/2013 | Street Fund | Office And Operating Supplies | Ace Hardware | | 6.56 |
| 34614 | 05/20/2013 | Street Fund | Office And Operating Supplies | Ace Hardware | | 8.20 |
| 34614 | 05/20/2013 | Street Fund | Office And Operating Supplies | Ace Hardware | | 45.78 |
| 34614 | 05/20/2013 | Surface Water Management Fund | Office And Operating Supplies | Ace Hardware | | 17.48 |
| 34614 | 05/20/2013 | Surface Water Management Fund | Office And Operating Supplies | Ace Hardware | | 16.40 |
| 34614 | 05/20/2013 | Surface Water Management Fund | Office And Operating Supplies | Ace Hardware | | 53.02 |
| 34614 | 05/20/2013 | Street Fund | Office And Operating Supplies | Ace Hardware | | 53.02 |
| | | | | | Check Total: | 248.57 |
| 34615 | 05/20/2013 | General Fund | Professional Services | Alliance 2020 Inc | | 18.50 |
| | | | | | Check Total: | 18.50 |
| 34616 | 05/20/2013 | Street Fund | Office And Operating Supplies | Alpine Products Inc | | 65.15 |
| 34616 | 05/20/2013 | Street Fund | Office And Operating Supplies | Alpine Products Inc | | 118.82 |
| | | | | | Check Total: | 183.97 |
| 34617 | 05/20/2013 | General Fund | Office And Operating Supplies | Aramark Uniform Services | | 37.36 |

| Check Number | Check Date | Fund Name | Account Name | Vendor Name | | Amount |
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| | | | | | Check Total: | 37.36 |
| 34618 | 05/20/2013 | General Fund | Instructors Prof Srvs | American Red Cross | | 628.00 |
| | | | | | Check Total: | 628.00 |
| 34619 | 05/20/2013 | General Fund | Telephone | A T & T | | 50.99 |
| | | | | | Check Total: | 50.99 |
| 34620 | 05/20/2013 | General Fund | Telephone | AT&T Mobility | | 15.59 |
| | | | | | Check Total: | 15.59 |
| 34621 | 05/20/2013 | Surface Water Management Fund | Professional Services | A Worksafe Service Inc | | 52.00 |
| | | | | | Check Total: | 52.00 |
| 34622 | 05/20/2013 | General Fund | Strawberry Festival | Kenneth Barger | | 81.12 |
| 34622 | 05/20/2013 | General Fund | Professional Services | Kenneth Barger | | 65.76 |
| | | | | | Check Total: | 146.88 |
| 34623 | 05/20/2013 | General Fund | Teen Programs | Brian J Barnes | | 195.20 |
| | | | | | Check Total: | 195.20 |
| 34624 | 05/20/2013 | General Fund | Prof. Svcs-Instructors | Elizabeth A Bennedsen | | 100.00 |
| | | | | | Check Total: | 100.00 |
| 34625 | 05/20/2013 | General Fund | Instructors Prof Svcs | Lucas Bonnema | | 60.00 |
| | | | | | Check Total: | 60.00 |
| 34626 | 05/20/2013 | General Fund | Printing/Binding/Copying | Brim Press LLC | | 649.18 |
| 34626 | 05/20/2013 | General Fund | Printing | Brim Press LLC | | 32.85 |
| | | | | | Check Total: | 682.03 |
| 34627 | 05/20/2013 | General Fund | Prof. Svcs-Instructors | Eileen Broomell | | 216.00 |

| Check Number | Check Date | Fund Name | Account Name | Vendor Name | | Amount |
|---|---|---|---|---|---|---|
| | | | | | Check Total: | 216.00 |
| 34628 | 05/20/2013 | General Fund | Prof. Svcs-Instructors | Viola Brumbaugh | | 1,336.00 |
| | | | | | Check Total: | 1,336.00 |
| 34629 | 05/20/2013 | Surface Water Management Fund | Repairs And Maintenance | Bryant's Tractor & Mower Inc | | 67.28 |
| 34629 | 05/20/2013 | Street Fund | Repairs And Maintenance | Bryant's Tractor & Mower Inc | | 67.28 |
| 34629 | 05/20/2013 | Street Fund | Repairs And Maintenance | Bryant's Tractor & Mower Inc | | 148.68 |
| 34629 | 05/20/2013 | Surface Water Management Fund | Repairs And Maintenance | Bryant's Tractor & Mower Inc | | 148.68 |
| 34629 | 05/20/2013 | Surface Water Management Fund | Office And Operating Supplies | Bryant's Tractor & Mower Inc | | 51.85 |
| 34629 | 05/20/2013 | Street Fund | Office And Operating Supplies | Bryant's Tractor & Mower Inc | | 51.85 |
| 34629 | 05/20/2013 | Surface Water Management Fund | Office And Operating Supplies | Bryant's Tractor & Mower Inc | | 18.61 |
| 34629 | 05/20/2013 | Street Fund | Office And Operating Supplies | Bryant's Tractor & Mower Inc | | 18.62 |
| 34629 | 05/20/2013 | Surface Water Management Fund | Office And Operating Supplies | Bryant's Tractor & Mower Inc | | 73.30 |
| 34629 | 05/20/2013 | Surface Water Management Fund | Office And Operating Supplies | Bryant's Tractor & Mower Inc | | 119.25 |
| | | | | | Check Total: | 765.40 |
| 34630 | 05/20/2013 | Surface Water Management Fund | Office And Operating Supplies | Burien Bark LLC | | 137.97 |
| 34630 | 05/20/2013 | Surface Water Management Fund | Office And Operating Supplies | Burien Bark LLC | | 137.97 |
| 34630 | 05/20/2013 | Surface Water Management Fund | Office And Operating Supplies | Burien Bark LLC | | 137.97 |
| | | | | | Check Total: | 413.91 |
| 34631 | 05/20/2013 | General Fund | Office and Operating Supplies | Burien Trophy | | 31.10 |
| | | | | | Check Total: | 31.10 |
| 34632 | 05/20/2013 | General Fund | Animal Control Services | CARES | | 10,000.00 |
| | | | | | Check Total: | 10,000.00 |
| 34633 | 05/20/2013 | Surface Water Management Fund | Office And Operating Supplies | Carpinito Brothers Inc | | 245.69 |
| 34633 | 05/20/2013 | Street Fund | Office And Operating Supplies | Carpinito Brothers Inc | | 245.69 |
| | | | | | Check Total: | 491.38 |
| 34634 | 05/20/2013 | General Fund | Repairs And Maintenance | Control Contractors Inc | | 226.55 |
| 34634 | 05/20/2013 | General Fund | Repairs And Maintenance | Control Contractors Inc | | 781.46 |

| Check Number | Check Date | Fund Name | Account Name | Vendor Name | | Amount |
|---|---|---|---|---|---|---|
| | | | | | Check Total: | 1,008.01 |
| 34635 | 05/20/2013 | Equipment Reserve Fund | Machinery And Equipment | CDW-G | | 640.30 |
| 34635 | 05/20/2013 | Equipment Reserve Fund | Machinery And Equipment | CDW-G | | 5,728.11 |
| 34635 | 05/20/2013 | General Fund | Machinery/Eqpt - Noncapitalize | CDW-G | | 919.80 |
| 34635 | 05/20/2013 | Equipment Reserve Fund | Machinery And Equipment | CDW-G | | 735.83 |
| | | | | | Check Total: | 8,024.04 |
| 34636 | 05/20/2013 | General Fund | Nuisance and Abatement Costs | CleanScapes Inc | | 175.20 |
| 34636 | 05/20/2013 | General Fund | Professional Services | CleanScapes Inc | | 1,244.60 |
| 34636 | 05/20/2013 | General Fund | Professional Services | CleanScapes Inc | | 395.02 |
| | | | | | Check Total: | 1,814.82 |
| 34637 | 05/20/2013 | General Fund | Online Video Streaming | COMCAST | | 45.21 |
| 34637 | 05/20/2013 | General Fund | Utilities | COMCAST | | 67.62 |
| 34637 | 05/20/2013 | General Fund | Utilities | COMCAST | | 72.57 |
| 34637 | 05/20/2013 | General Fund | Utilities | COMCAST | | 72.57 |
| 34637 | 05/20/2013 | Street Fund | Telephone | COMCAST | | 36.29 |
| 34637 | 05/20/2013 | Surface Water Management Fund | Telephone | COMCAST | | 36.28 |
| 34637 | 05/20/2013 | General Fund | Drug Seizure Proceeds KCSO | COMCAST | | 99.00 |
| 34637 | 05/20/2013 | General Fund | Drug Seizure Proceeds KCSO | COMCAST | | 69.95 |
| 34637 | 05/20/2013 | General Fund | Drug Seizure Proceeds KCSO | COMCAST | | 69.95 |
| | | | | | Check Total: | 569.44 |
| 34638 | 05/20/2013 | General Fund | Professional Services | Comforce Inc | | 250.00 |
| | | | | | Check Total: | 250.00 |
| 34639 | 05/20/2013 | General Fund | Office/Operating Supplies | Complete Office LLC | | 354.28 |
| 34639 | 05/20/2013 | General Fund | IT Office/Operating Supplies | Complete Office LLC | | 126.53 |
| 34639 | 05/20/2013 | General Fund | Office and Operating Supplies | Complete Office LLC | | 63.26 |
| 34639 | 05/20/2013 | General Fund | Office and Operating Supplies | Complete Office LLC | | 189.79 |
| 34639 | 05/20/2013 | General Fund | Office And Operating Supplies | Complete Office LLC | | 506.11 |
| 34639 | 05/20/2013 | General Fund | Office And Operating Supplies | Complete Office LLC | | 430.19 |
| 34639 | 05/20/2013 | General Fund | Office And Operating Supplies | Complete Office LLC | | 341.62 |
| 34639 | 05/20/2013 | General Fund | Office/Operating Supplies | Complete Office LLC | | 455.51 |
| 34639 | 05/20/2013 | General Fund | Office/Operating Supplies | Complete Office LLC | | 63.26 |
| 34639 | 05/20/2013 | General Fund | Office And Operating Supplies | Complete Office LLC | | 427.71 |
| 34639 | 05/20/2013 | General Fund | Small Tools & Minor Equipment | Complete Office LLC | | 132.48 |

| Check Number | Check Date | Fund Name | Account Name | Vendor Name | | Amount |
|---|---|---|---|---|---|---|
| | | | | | Check Total: | 3,090.74 |
| 34640 | 05/20/2013 | General Fund | Instructors Prof Svcs | Janet S. Crawley | | 144.00 |
| | | | | | Check Total: | 144.00 |
| 34641 | 05/20/2013 | General Fund | Senior Trips | City of Auburn | | 675.00 |
| | | | | | Check Total: | 675.00 |
| 34642 | 05/20/2013 | Street Fund | Utilities - Traffic Signals | City of Seattle | | 69.76 |
| 34642 | 05/20/2013 | Street Fund | Utilities - Traffic Signals | City of Seattle | | 50.49 |
| 34642 | 05/20/2013 | Street Fund | Utilities - Traffic Signals | City of Seattle | | 22.57 |
| 34642 | 05/20/2013 | Street Fund | Utilities - Traffic Signals | City of Seattle | | 66.17 |
| 34642 | 05/20/2013 | General Fund | Utilities | City of Seattle | | 57.45 |
| 34642 | 05/20/2013 | General Fund | Utilities | City of Seattle | | 11.63 |
| 34642 | 05/20/2013 | Street Fund | Utilities - Traffic Signals | City of Seattle | | 15.21 |
| 34642 | 05/20/2013 | Street Fund | Utilities - Traffic Signals | City of Seattle | | 51.71 |
| 34642 | 05/20/2013 | Street Fund | Utilities - Traffic Signals | City of Seattle | | 43.38 |
| 34642 | 05/20/2013 | Street Fund | Utilities - Traffic Signals | City of Seattle | | 86.52 |
| 34642 | 05/20/2013 | Street Fund | Utilities - Traffic Signals | City of Seattle | | 117.12 |
| 34642 | 05/20/2013 | Street Fund | Utilities - Traffic Signals | City of Seattle | | 71.37 |
| 34642 | 05/20/2013 | Street Fund | Utilities - Traffic Signals | City of Seattle | | 14.97 |
| 34642 | 05/20/2013 | Street Fund | Utilities - Traffic Signals | City of Seattle | | 76.57 |
| 34642 | 05/20/2013 | Street Fund | Utilities - Traffic Signals | City of Seattle | | 38.41 |
| 34642 | 05/20/2013 | Street Fund | Utilities - Traffic Signals | City of Seattle | | 194.97 |
| 34642 | 05/20/2013 | Street Fund | Utilities - Traffic Signals | City of Seattle | | 85.22 |
| 34642 | 05/20/2013 | General Fund | Utilities | City of Seattle | | 15.11 |
| 34642 | 05/20/2013 | General Fund | Utilities | City of Seattle | | 348.84 |
| 34642 | 05/20/2013 | General Fund | Utilities | City of Seattle | | 1,232.96 |
| 34642 | 05/20/2013 | General Fund | Utilities | City of Seattle | | 1,372.86 |
| 34642 | 05/20/2013 | General Fund | Utilities | City of Seattle | | 679.32 |
| 34642 | 05/20/2013 | General Fund | Utilities | City of Seattle | | 13.01 |
| 34642 | 05/20/2013 | Street Fund | Utilities - Traffic Signals | City of Seattle | | 408.74 |
| 34642 | 05/20/2013 | Street Fund | Utilities - Traffic Signals | City of Seattle | | 8.32 |
| 34642 | 05/20/2013 | Street Fund | Utilities - Traffic Signals | City of Seattle | | 310.74 |
| 34642 | 05/20/2013 | Street Fund | Utilities - Traffic Signals | City of Seattle | | 168.30 |
| 34642 | 05/20/2013 | Street Fund | Utilities - Traffic Signals | City of Seattle | | 178.93 |
| 34642 | 05/20/2013 | Street Fund | Utilities - Traffic Signals | City of Seattle | | 101.26 |
| | | | | | Check Total: | 5,911.91 |
| 34643 | 05/20/2013 | General Fund | Citizens Patrol/ Crime Prevent | City of SeaTac | | 46.72 |

| Check Number | Check Date | Fund Name | Account Name | Vendor Name | | Amount |
|---|---|---|---|---|---|---|
| | | | | | Check Total: | 46.72 |
| 34644 | 05/20/2013 | Street Fund | Office And Operating Supplies | WaterCo of Pac.NW Inc | | 17.79 |
| 34644 | 05/20/2013 | Surface Water Management Fund | Office And Operating Supplies | WaterCo of Pac.NW Inc | | 17.80 |
| | | | | | Check Total: | 35.59 |
| 34645 | 05/20/2013 | General Fund | State Lobbying Services | Michael D. Doubleday | | 4,500.00 |
| 34645 | 05/20/2013 | General Fund | Federal Lobbying Services | Michael D. Doubleday | | 2,050.00 |
| | | | | | Check Total: | 6,550.00 |
| 34646 | 05/20/2013 | Equipment Reserve Fund | Machinery/Eqpt - Noncapitalize | Dell Computer Corporation | | 1,933.51 |
| 34646 | 05/20/2013 | Equipment Reserve Fund | Machinery And Equipment | Dell Computer Corporation | | 14,881.09 |
| 34646 | 05/20/2013 | Equipment Reserve Fund | Machinery And Equipment | Dell Computer Corporation | | 11,208.62 |
| | | | | | Check Total: | 28,023.22 |
| 34647 | 05/20/2013 | General Fund | Professional Services | Davis Wright Tremaine | | 7,502.40 |
| 34647 | 05/20/2013 | General Fund | Professional Services | Davis Wright Tremaine | | 6,393.60 |
| | | | | | Check Total: | 13,896.00 |
| 34648 | 05/20/2013 | General Fund | Repairs And Maintenance | Elidrew, LLC | | 11.83 |
| 34648 | 05/20/2013 | General Fund | Citizens Patrol/ Crime Prevent | Elidrew, LLC | | 11.83 |
| | | | | | Check Total: | 23.66 |
| 34649 | 05/20/2013 | General Fund | Professional Services | Eden Advanced Pests Tech. | | 82.13 |
| | | | | | Check Total: | 82.13 |
| 34650 | 05/20/2013 | General Fund | Human Svc-Family/Youth | Lori Fleming | | 120.00 |
| | | | | | Check Total: | 120.00 |
| 34651 | 05/20/2013 | General Fund | Office and Operating Supplies | Grainger | | 23.42 |
| | | | | | Check Total: | 23.42 |
| 34652 | 05/20/2013 | General Fund | Instructors Prof Svcs | Alina Gridley | | 70.00 |

| Check Number | Check Date | Fund Name | Account Name | Vendor Name | | Amount |
|---|---|---|---|---|---|---|
| | | | | | Check Total: | 70.00 |
| 34653 | 05/20/2013 | General Fund | Parks Building Security | Guardian Security | | 65.00 |
| | | | | | Check Total: | 65.00 |
| 34654 | 05/20/2013 | General Fund | Instructors Prof Svcs | Victoria E. Hamilton | | 552.00 |
| 34654 | 05/20/2013 | General Fund | Instructors Prof Svcs | Victoria E. Hamilton | | 171.00 |
| | | | | | Check Total: | 723.00 |
| 34655 | 05/20/2013 | Surface Water Management Fund | Office And Operating Supplies | Home Depot Credit Services | | 107.80 |
| 34655 | 05/20/2013 | Street Fund | Office And Operating Supplies | Home Depot Credit Services | | 107.79 |
| | | | | | Check Total: | 215.59 |
| 34656 | 05/20/2013 | General Fund | Human Svc-Family/Youth | Hospitality House | | 2,500.00 |
| | | | | | Check Total: | 2,500.00 |
| 34657 | 05/20/2013 | Street Fund | Repairs & Maint. - Fleet | Hi-line Auto Electric, Inc. | | 211.47 |
| 34657 | 05/20/2013 | Surface Water Management Fund | Repairs & Maint. - Fleet | Hi-line Auto Electric, Inc. | | 211.47 |
| | | | | | Check Total: | 422.94 |
| 34658 | 05/20/2013 | General Fund | Operating Rentals and Leases | Head-quarters | | 81.50 |
| | | | | | Check Total: | 81.50 |
| 34659 | 05/20/2013 | General Fund | Prof. Svcs-Instructors | Joshua Hughes | | 150.00 |
| | | | | | Check Total: | 150.00 |
| 34660 | 05/20/2013 | Street Fund | Office And Operating Supplies | ICON Materials | | 139.12 |
| 34660 | 05/20/2013 | Street Fund | Office And Operating Supplies | ICON Materials | | 269.65 |
| 34660 | 05/20/2013 | Street Fund | Office And Operating Supplies | ICON Materials | | 85.96 |
| 34660 | 05/20/2013 | Street Fund | Office And Operating Supplies | ICON Materials | | 99.97 |
| 34660 | 05/20/2013 | Street Fund | Office And Operating Supplies | ICON Materials | | 319.05 |
| | | | | | Check Total: | 913.75 |
| 34661 | 05/20/2013 | General Fund | Operating Rents & Leases | RICOH USA Inc | | 321.93 |

| Check Number | Check Date | Fund Name | Account Name | Vendor Name | | Amount |
|---|---|---|---|---|---|---|
| 34661 | 05/20/2013 | Street Fund | Operating Rentals And Leases | RICOH USA Inc | | 170.18 |
| 34661 | 05/20/2013 | Surface Water Management Fund | Operating Rentals And Leases | RICOH USA Inc | | 170.18 |
| | | | | | Check Total: | 662.29 |
| 34662 | 05/20/2013 | General Fund | Miscellaneous | Iron Mountain | | 347.18 |
| 34662 | 05/20/2013 | General Fund | Miscellaneous | Iron Mountain | | 164.40 |
| | | | | | Check Total: | 511.58 |
| 34663 | 05/20/2013 | General Fund | Miscellaneous | Ingallina's Box Lunch Inc | | 43.75 |
| | | | | | Check Total: | 43.75 |
| 34664 | 05/20/2013 | General Fund | Telephone | Integra Telecom | | 640.66 |
| 34664 | 05/20/2013 | General Fund | Telephone | Integra Telecom | | 147.15 |
| 34664 | 05/20/2013 | General Fund | Telephone | Integra Telecom | | 22.64 |
| 34664 | 05/20/2013 | General Fund | Telephone | Integra Telecom | | 113.20 |
| 34664 | 05/20/2013 | General Fund | Telephone | Integra Telecom | | 33.96 |
| 34664 | 05/20/2013 | General Fund | Telephone | Integra Telecom | | 22.64 |
| 34664 | 05/20/2013 | General Fund | Telephone | Integra Telecom | | 56.60 |
| 34664 | 05/20/2013 | General Fund | Telephone | Integra Telecom | | 169.80 |
| 34664 | 05/20/2013 | General Fund | Telephone | Integra Telecom | | 135.84 |
| 34664 | 05/20/2013 | General Fund | Telephone | Integra Telecom | | 113.20 |
| 34664 | 05/20/2013 | General Fund | Telephone | Integra Telecom | | 105.61 |
| 34664 | 05/20/2013 | General Fund | Telephone | Integra Telecom | | 105.61 |
| 34664 | 05/20/2013 | General Fund | Telephone | Integra Telecom | | 105.73 |
| | | | | | Check Total: | 1,772.64 |
| 34665 | 05/20/2013 | General Fund | Prof. Svcs-Instructors | Moodette Ka'apana | | 75.00 |
| 34665 | 05/20/2013 | General Fund | Instructors Prof Srvs | Moodette Ka'apana | | 93.75 |
| | | | | | Check Total: | 168.75 |
| 34666 | 05/20/2013 | General Fund | Miscellaneous | King County Recorder | | 74.00 |
| 34666 | 05/20/2013 | General Fund | Miscellaneous | King County Recorder | | 74.00 |
| | | | | | Check Total: | 148.00 |
| 34667 | 05/20/2013 | General Fund | Jail Contracts | KING COUNTY FINANCE | | 416.49 |

| Check Number | Check Date | Fund Name | Account Name | Vendor Name | | Amount |
|---|---|---|---|---|---|---|
| | | | | | Check Total: | 416.49 |
| 34668 | 05/20/2013 | General Fund | Plan Review Fee Fire Dist 2 | King County Fire District #2 | | 1,756.52 |
| | | | | | Check Total: | 1,756.52 |
| 34669 | 05/20/2013 | General Fund | King Co Pet License Trust Acct | King County Pet License | | 140.00 |
| | | | | | Check Total: | 140.00 |
| 34670 | 05/20/2013 | General Fund | Drug Seizure Proceeds KCSO | KC Sheriff Sgt R Crenshaw | | 2,343.00 |
| | | | | | Check Total: | 2,343.00 |
| 34671 | 05/20/2013 | Surface Water Management Fund | Miller/Salmon/Seola Basin Plan | King County Office of Finance | | 11,995.67 |
| | | | | | Check Total: | 11,995.67 |
| 34672 | 05/20/2013 | General Fund | Instructors Prof Svcs | Keli Sim-DiRitis | | 180.00 |
| | | | | | Check Total: | 180.00 |
| 34673 | 05/20/2013 | General Fund | Public Defender | Kirshenbaum & Goss, Inc., P.S | | 7,550.00 |
| | | | | | Check Total: | 7,550.00 |
| 34674 | 05/20/2013 | General Fund | Meals | CRAIG KNUTSON | | 70.00 |
| 34674 | 05/20/2013 | General Fund | Meals | CRAIG KNUTSON | | 101.59 |
| | | | | | Check Total: | 171.59 |
| 34675 | 05/20/2013 | General Fund | Instructors Prof Svcs | Lauren Laughlin | | 276.00 |
| | | | | | Check Total: | 276.00 |
| 34676 | 05/20/2013 | General Fund | Prof. Svcs-Instructors | Lori Leberer | | 60.00 |
| | | | | | Check Total: | 60.00 |
| 34677 | 05/20/2013 | General Fund | Instructors Prof Svcs | Yon Lemieux | | 120.00 |

| Check Number | Check Date | Fund Name | Account Name | Vendor Name | | Amount |
|---|---|---|---|---|---|---|
| | | | | | Check Total: | 120.00 |
| 34678 | 05/20/2013 | General Fund | Prof. Svcs-Instructors | Alexander Lewis | | 1,410.00 |
| | | | | | Check Total: | 1,410.00 |
| 34679 | 05/20/2013 | General Fund | Prof. Svcs-Instructors | Anne Marie Littleton | | 180.00 |
| | | | | | Check Total: | 180.00 |
| 34680 | 05/20/2013 | General Fund | Prof. Svcs-Instructors | Jacob Matthew | | 580.00 |
| | | | | | Check Total: | 580.00 |
| 34681 | 05/20/2013 | General Fund | Instructors Prof Svcs | Hunter McGee | | 165.00 |
| | | | | | Check Total: | 165.00 |
| 34682 | 05/20/2013 | General Fund | Office and Operating Supplies | McLendon Hardware Inc | | 108.28 |
| 34682 | 05/20/2013 | Surface Water Management Fund | Office And Operating Supplies | McLendon Hardware Inc | | 94.39 |
| 34682 | 05/20/2013 | Street Fund | Office And Operating Supplies | McLendon Hardware Inc | | 94.40 |
| 34682 | 05/20/2013 | Street Fund | Office And Operating Supplies | McLendon Hardware Inc | | 45.15 |
| 34682 | 05/20/2013 | Surface Water Management Fund | Office And Operating Supplies | McLendon Hardware Inc | | 16.26 |
| 34682 | 05/20/2013 | Street Fund | Office And Operating Supplies | McLendon Hardware Inc | | 27.38 |
| 34682 | 05/20/2013 | Street Fund | Office And Operating Supplies | McLendon Hardware Inc | | 114.53 |
| 34682 | 05/20/2013 | Surface Water Management Fund | Office And Operating Supplies | McLendon Hardware Inc | | 110.03 |
| | | | | | Check Total: | 610.42 |
| 34683 | 05/20/2013 | General Fund | Professional Services | Denise J McVicker | | 2,400.00 |
| | | | | | Check Total: | 2,400.00 |
| 34684 | 05/20/2013 | Street Fund | Dt Business License Svcs | Microflex Inc | | 3,837.92 |
| 34684 | 05/20/2013 | General Fund | B&O Tax Collect & Audit | Microflex Inc | | 1,927.74 |
| 34684 | 05/20/2013 | Street Fund | Dt Business License Svcs | Microflex Inc | | 34.44 |
| 34684 | 05/20/2013 | General Fund | B&O Tax Collect & Audit | Microflex Inc | | 34.44 |
| 34684 | 05/20/2013 | General Fund | Sales Tax Auditing Costs | Microflex Inc | | 67.68 |
| | | | | | Check Total: | 5,902.22 |
| 34685 | 05/20/2013 | General Fund | Instructors Prof Srvs | Paul Miller | | 450.00 |

| Check Number | Check Date | Fund Name | Account Name | Vendor Name | | Amount |
|---|---|---|---|---|---|---|
| | | | | | Check Total: | 450.00 |
| 34686 | 05/20/2013 | General Fund | Office and Operating Supplies | Miller Paint Company Inc | | 33.81 |
| 34686 | 05/20/2013 | Street Fund | Office And Operating Supplies | Miller Paint Company Inc | | 60.00 |
| 34686 | 05/20/2013 | Street Fund | Office And Operating Supplies | Miller Paint Company Inc | | 29.19 |
| 34686 | 05/20/2013 | Street Fund | Office And Operating Supplies | Miller Paint Company Inc | | 209.51 |
| 34686 | 05/20/2013 | Street Fund | Office And Operating Supplies | Miller Paint Company Inc | | 84.25 |
| 34686 | 05/20/2013 | Street Fund | Office And Operating Supplies | Miller Paint Company Inc | | 113.44 |
| | | | | | Check Total: | 530.20 |
| 34687 | 05/20/2013 | General Fund | Instructors Prof Svcs | Shariana Mundi | | 946.00 |
| | | | | | Check Total: | 946.00 |
| 34688 | 05/20/2013 | General Fund | Instructors Prof Svcs | Aaron Murray | | 180.00 |
| | | | | | Check Total: | 180.00 |
| 34689 | 05/20/2013 | General Fund | Human Svc-Family/Youth | NAVOS | | 1,500.00 |
| | | | | | Check Total: | 1,500.00 |
| 34690 | 05/20/2013 | General Fund | City Hall Bldg Maintenance | NC Machinery Co. | | 5,065.00 |
| | | | | | Check Total: | 5,065.00 |
| 34691 | 05/20/2013 | General Fund | Instructors Prof Svcs | Drew Nicklas | | 252.00 |
| | | | | | Check Total: | 252.00 |
| 34692 | 05/20/2013 | General Fund | Office And Operating Supplies | National Maintenance Cont. | | 784.91 |
| | | | | | Check Total: | 784.91 |
| 34693 | 05/20/2013 | Street Fund | Office And Operating Supplies | National Safety Inc | | 535.19 |
| 34693 | 05/20/2013 | Surface Water Management Fund | Office And Operating Supplies | National Safety Inc | | 535.18 |
| | | | | | Check Total: | 1,070.37 |
| 34694 | 05/20/2013 | General Fund | Prof. Svcs-Instructors | Pamela Odegard | | 150.00 |

| Check Number | Check Date | Fund Name | Account Name | Vendor Name | | Amount |
|---|---|---|---|---|---|---|
| | | | | | Check Total: | 150.00 |
| 34695 | 05/20/2013 | Surface Water Mgmt CIP | Predesign-Engineering | OTAK, Inc | | 2,274.50 |
| | | | | | Check Total: | 2,274.50 |
| 34696 | 05/20/2013 | General Fund | Prof. Svcs-Instructors | Fritzi Oxley | | 120.00 |
| | | | | | Check Total: | 120.00 |
| 34697 | 05/20/2013 | General Fund | Office and Operating Supplies | Palmer Coking Coal Co | | 81.89 |
| | | | | | Check Total: | 81.89 |
| 34698 | 05/20/2013 | General Fund | Human Svc-Family/Youth | Pregnancy Aid of So. King Coun | | 375.00 |
| | | | | | Check Total: | 375.00 |
| 34699 | 05/20/2013 | Street Fund | 0ffice And Operating Supplies | Partner Construction Products | | 3,777.75 |
| | | | | | Check Total: | 3,777.75 |
| 34700 | 05/20/2013 | General Fund | Instructors Prof Svcs | Johawna Olena Perry | | 184.00 |
| | | | | | Check Total: | 184.00 |
| 34701 | 05/20/2013 | Surface Water Management Fund | 0ffice And Operating Supplies | Pacific Industrial Supply | | 65.43 |
| 34701 | 05/20/2013 | Street Fund | 0ffice And Operating Supplies | Pacific Industrial Supply | | 113.33 |
| 34701 | 05/20/2013 | Surface Water Management Fund | 0ffice And Operating Supplies | Pacific Industrial Supply | | 113.34 |
| | | | | | Check Total: | 292.10 |
| 34702 | 05/20/2013 | General Fund | Human Svc-Family/Youth | PARA LOS NINOS | | 3,750.00 |
| | | | | | Check Total: | 3,750.00 |
| 34703 | 05/20/2013 | General Fund | Building Maintenance | Performance Mechanical Group | | 370.11 |
| 34703 | 05/20/2013 | General Fund | Building Maintenance | Performance Mechanical Group | | 114.98 |
| | | | | | Check Total: | 485.09 |

| Check Number | Check Date | Fund Name | Account Name | Vendor Name | | Amount |
|---|---|---|---|---|---|---|
| 34704 | 05/20/2013 | General Fund | Printing/Binding/Copying | Print Place | | 367.65 |
| | | | | | Check Total: | 367.65 |
| 34705 | 05/20/2013 | General Fund | Bldg Security | Protection One Alarm Monitorin | | 47.38 |
| | | | | | Check Total: | 47.38 |
| 34706 | 05/20/2013 | General Fund | Utilities | PSE Pmt. Processing | | 386.03 |
| 34706 | 05/20/2013 | General Fund | Utilities | PSE Pmt. Processing | | 1,922.00 |
| 34706 | 05/20/2013 | General Fund | Utilities | PSE Pmt. Processing | | 68.10 |
| | | | | | Check Total: | 2,376.13 |
| 34707 | 05/20/2013 | General Fund | Office And Operating Supplies | Ramlyn Engraving & Sign Co. | | 16.43 |
| | | | | | Check Total: | 16.43 |
| 34708 | 05/20/2013 | General Fund | Refund Clearing Account -Parks | Heather McCulloch-Neal | | 39.00 |
| | | | | | Check Total: | 39.00 |
| 34709 | 05/20/2013 | General Fund | Business & Occupation Tax | Corliss Resources Inc | | 4,029.21 |
| | | | | | Check Total: | 4,029.21 |
| 34710 | 05/20/2013 | General Fund | Business & Occupation Tax | Art by Nature Inc | | 167.55 |
| | | | | | Check Total: | 167.55 |
| 34711 | 05/20/2013 | General Fund | Planning & Devel Fees/Charges | Marcos B Rodriguez | | 300.00 |
| | | | | | Check Total: | 300.00 |
| 34712 | 05/20/2013 | General Fund | Refund Clearing Account -Parks | Arica Sykes-Dawley | | 39.00 |
| | | | | | Check Total: | 39.00 |
| 34713 | 05/20/2013 | General Fund | Refund Clearing Account -Parks | Luchi Rosario | | 200.00 |
| | | | | | Check Total: | 200.00 |

| Check Number | Check Date | Fund Name | Account Name | Vendor Name | | Amount |
|---|---|---|---|---|---|---|
| 34714 | 05/20/2013 | General Fund | Publications | BRIAN ROBERTS | | 140.00 |
| | | | | | Check Total: | 140.00 |
| 34715 | 05/20/2013 | General Fund | Advertising | Robinson Newspapers | | 188.00 |
| | | | | | Check Total: | 188.00 |
| 34716 | 05/20/2013 | General Fund | Instructors Prof Svcs | George Rodriguez | | 300.00 |
| | | | | | Check Total: | 300.00 |
| 34717 | 05/20/2013 | General Fund | Prof. Svcs-Instructors | Lee Ryan | | 120.00 |
| | | | | | Check Total: | 120.00 |
| 34718 | 05/20/2013 | General Fund | CERT / Citizens Academy | Safeway Inc | | 297.73 |
| | | | | | Check Total: | 297.73 |
| 34719 | 05/20/2013 | General Fund | Prof. Svcs-Instructors | Hani Schnaith | | 25.00 |
| 34719 | 05/20/2013 | General Fund | Prof. Svcs-Instructors | Hani Schnaith | | 100.00 |
| 34719 | 05/20/2013 | General Fund | Instructors Prof Srvs | Hani Schnaith | | 100.00 |
| | | | | | Check Total: | 225.00 |
| 34720 | 05/20/2013 | General Fund | Advertising | Seattle Times | | 711.94 |
| 34720 | 05/20/2013 | General Fund | Advertising | Seattle Times | | 1,013.98 |
| | | | | | Check Total: | 1,725.92 |
| 34721 | 05/20/2013 | Street Fund | 0ffice And Operating Supplies | Seatown Locksmith | | 21.90 |
| 34721 | 05/20/2013 | General Fund | 0ffice And Operating Supplies | Seatown Locksmith | | 19.16 |
| 34721 | 05/20/2013 | General Fund | Office and Operating Supplies | Seatown Locksmith | | 24.64 |
| 34721 | 05/20/2013 | Street Fund | 0ffice And Operating Supplies | Seatown Locksmith | | 23.00 |
| 34721 | 05/20/2013 | General Fund | Office and Operating Supplies | Seatown Locksmith | | 19.16 |
| | | | | | Check Total: | 107.86 |
| 34722 | 05/20/2013 | General Fund | Computer Consultant Prof Svcs | SEITEL Systems, LLC | | 431.28 |
| | | | | | Check Total: | 431.28 |

| Check Number | Check Date | Fund Name | Account Name | Vendor Name | | Amount |
|---|---|---|---|---|---|---|
| 34723 | 05/20/2013 | General Fund | Professional Services | Sesac | | 652.00 |
| | | | | | Check Total: | 652.00 |
| 34724 | 05/20/2013 | General Fund | Professional Services | Nancy Shattuck | | 1,671.00 |
| | | | | | Check Total: | 1,671.00 |
| 34725 | 05/20/2013 | General Fund | Professional Services | Seattle King County Public Hea | | 577.00 |
| | | | | | Check Total: | 577.00 |
| 34726 | 05/20/2013 | General Fund | Professional Services | Sound Law Center | | 402.50 |
| 34726 | 05/20/2013 | General Fund | Hearing Exam Nonreimbursed | Sound Law Center | | 927.50 |
| 34726 | 05/20/2013 | General Fund | Professional Services | Sound Law Center | | 129.50 |
| | | | | | Check Total: | 1,459.50 |
| 34727 | 05/20/2013 | General Fund | Repair and Maintenance | Scott Sonnenfeld | | 739.13 |
| | | | | | Check Total: | 739.13 |
| 34728 | 05/20/2013 | General Fund | Human Svc-Family/Youth | Society of St. Vincent de Paul | | 2,465.00 |
| | | | | | Check Total: | 2,465.00 |
| 34729 | 05/20/2013 | General Fund | Utilities | Southwest Suburban Sewer Dist. | | 441.00 |
| 34729 | 05/20/2013 | General Fund | Utilities | Southwest Suburban Sewer Dist. | | 237.00 |
| 34729 | 05/20/2013 | General Fund | Utilities | Southwest Suburban Sewer Dist. | | 55.00 |
| 34729 | 05/20/2013 | General Fund | Utilities | Southwest Suburban Sewer Dist. | | 55.00 |
| 34729 | 05/20/2013 | General Fund | Utilities | Southwest Suburban Sewer Dist. | | 55.00 |
| 34729 | 05/20/2013 | General Fund | Utilities | Southwest Suburban Sewer Dist. | | 155.00 |
| 34729 | 05/20/2013 | General Fund | Utilities | Southwest Suburban Sewer Dist. | | 107.70 |
| | | | | | Check Total: | 1,105.70 |
| 34730 | 05/20/2013 | General Fund | Office And Operating Supplies | TelData Systems Inc | | 216.59 |
| | | | | | Check Total: | 216.59 |
| 34731 | 05/20/2013 | General Fund | Teen Programs | Reginald Thomas | | 390.40 |

| Check Number | Check Date | Fund Name | Account Name | Vendor Name | | Amount |
|---|---|---|---|---|---|---|
| | | | | | Check Total: | 390.40 |
| 34732 | 05/20/2013 | General Fund | Parks Maintenance | Trugreen-landcare/NW Region | | 40,324.24 |
| | | | | | Check Total: | 40,324.24 |
| 34733 | 05/20/2013 | General Fund | Operating Rentals and Leases | United Site Services | | 155.00 |
| | | | | | Check Total: | 155.00 |
| 34734 | 05/20/2013 | General Fund | Postage | US Postal Service | | 2,281.60 |
| | | | | | Check Total: | 2,281.60 |
| 34735 | 05/20/2013 | General Fund | Operating Rentals & Leases | Valley View Sewer District | | 1,030.00 |
| | | | | | Check Total: | 1,030.00 |
| 34736 | 05/20/2013 | General Fund | Telephone | Verizon Wireless | | 173.73 |
| 34736 | 05/20/2013 | General Fund | Telephone | Verizon Wireless | | 40.01 |
| 34736 | 05/20/2013 | General Fund | Telephone | Verizon Wireless | | 72.52 |
| 34736 | 05/20/2013 | General Fund | Telephone | Verizon Wireless | | 208.25 |
| 34736 | 05/20/2013 | General Fund | Drug Seizure Proceeds KCSO | Verizon Wireless | | 326.80 |
| 34736 | 05/20/2013 | General Fund | Telephone | Verizon Wireless | | 186.81 |
| 34736 | 05/20/2013 | Street Fund | Telephone | Verizon Wireless | | 342.35 |
| 34736 | 05/20/2013 | Surface Water Management Fund | Telephone | Verizon Wireless | | 434.40 |
| | | | | | Check Total: | 1,784.87 |
| 34737 | 05/20/2013 | General Fund | Prof. Svcs-Instructors | Pamela Ann Videen | | 637.50 |
| | | | | | Check Total: | 637.50 |
| 34738 | 05/20/2013 | General Fund | Instructors Prof Srvs | Minh Huynh | | 351.00 |
| | | | | | Check Total: | 351.00 |
| 34739 | 05/20/2013 | General Fund | Professional Services | Waldron Resources | | 893.78 |
| | | | | | Check Total: | 893.78 |
| 34740 | 05/20/2013 | General Fund | Prosecution - City Atty | Walls Law Firm | | 13,370.92 |

| Check Number | Check Date | Fund Name | Account Name | Vendor Name | | Amount |
|---|---|---|---|---|---|---|
| | | | | | Check Total: | 13,370.92 |
| 34741 | 05/20/2013 | Street Fund | Registration - Trainng/Workshp | Washington Asphalt Pavement | | 180.00 |
| 34741 | 05/20/2013 | Surface Water Management Fund | Registration - Trainng/Workshp | Washington Asphalt Pavement | | 180.00 |
| | | | | | Check Total: | 360.00 |
| 34742 | 05/20/2013 | General Fund | Prof. Svcs-Instructors | Carly Waterman | | 100.00 |
| | | | | | Check Total: | 100.00 |
| 34743 | 05/20/2013 | General Fund | Utilities | Water District No 20 | | 43.76 |
| 34743 | 05/20/2013 | General Fund | Utilities | Water District No 20 | | 203.89 |
| 34743 | 05/20/2013 | General Fund | Utilities | Water District No 20 | | 59.26 |
| 34743 | 05/20/2013 | General Fund | Utilities | Water District No 20 | | 201.76 |
| 34743 | 05/20/2013 | General Fund | Utilities | Water District No 20 | | 39.50 |
| 34743 | 05/20/2013 | General Fund | Utilities | Water District No 20 | | 41.63 |
| 34743 | 05/20/2013 | General Fund | Utilities | Water District No 20 | | 7.82 |
| 34743 | 05/20/2013 | Street Fund | Landscape Maint - Utilities | Water District No 20 | | 118.50 |
| 34743 | 05/20/2013 | General Fund | Utilities | Water District No 20 | | 43.76 |
| 34743 | 05/20/2013 | General Fund | Utilities | Water District No 20 | | 61.39 |
| 34743 | 05/20/2013 | Street Fund | Landscape Maint - Utilities | Water District No 20 | | 76.30 |
| | | | | | Check Total: | 897.57 |
| 34744 | 05/20/2013 | General Fund | Utilities | King Co Water Dist 49 | | 220.55 |
| | | | | | Check Total: | 220.55 |
| 34745 | 05/20/2013 | General Fund | Probatn/Publc Defndr Screenng | Tammy Weigel | | 960.00 |
| | | | | | Check Total: | 960.00 |
| 34746 | 05/20/2013 | General Fund | Dues/Memberships/Subscriptions | Washington Municipal Clerks As | | 75.00 |
| | | | | | Check Total: | 75.00 |
| 34747 | 05/20/2013 | General Fund | Office And Operating Supplies | Walter E Nelson Co | | 335.74 |
| 34747 | 05/20/2013 | General Fund | Office and Operating Supplies | Walter E Nelson Co | | 167.87 |
| 34747 | 05/20/2013 | General Fund | Office Supplies | Walter E Nelson Co | | 55.96 |

| Check Number | Check Date | Fund Name | Account Name | Vendor Name | | Amount |
|---|---|---|---|---|---|---|
| | | | | | Check Total: | 559.57 |
| 34748 | 05/20/2013 | General Fund | Professional Services | Washington State Patrol | | 300.00 |
| | | | | | Check Total: | 300.00 |
| 34749 | 05/20/2013 | General Fund | Public Defender | W. Tracy Codd | | 620.00 |
| | | | | | Check Total: | 620.00 |
| | | | | | Report Total: | 238,371.15 |

# CITY COUNCIL REGULAR MEETING MINUTES

**May 6, 2013**
**5:30 p.m. - Special Meeting: Executive Session to discuss acquisition of real estate and litigation**
**6:00 p.m. - Special Meeting: Conduct Business & Economic Development Partnership interviews**
**7:00 p.m. – Regular Meeting**

**400 SW 152nd Street, 1st Floor**
**Burien, Washington 98166**

*To hear Council's full discussion of a specific topic or the complete meeting, the following resources are available:*

- *Watch the video-stream available on the City website, www.burienwa.gov*
- *Check out a DVD of the Council Meeting from the Burien Library*

## SPECIAL MEETINGS

Mayor Bennett called the Special Meetings of the Burien City Council to order at 5:30 p.m. for the purpose of holding an Executive Session to discuss acquisition of real estate per RCW 42.30.110(1)(b) and litigation RCW 42.30.110(1)(i) and at 6:00 p.m. for the purpose of conducting Business and Economic Development Partnership interviews.

Present: Mayor Brian Bennett, Deputy Mayor Lucy Krakowiak, Councilmembers Rose Clark, Bob Edgar, Joan McGilton and Gerald F. Robison. Councilmember Jack Block, Jr. was excused.

Administrative staff present: Mike Martin, City Manager, Craig Knutson, City Attorney, and Dan Trimble, Economic Development Manager, were present for the Executive Session. Mike Martin and Dan Trimble were present for the Business & Economic Development Partnership interviews.

No action was taken.

The Special Meeting adjourned to the Regular Meeting at 6:45 p.m.

## CALL TO ORDER

Mayor Bennett called the Regular Meeting of the Burien City Council to order at 7:00 p.m.

## PLEDGE OF ALLEGIANCE

Mayor Bennett led the Pledge of Allegiance.

## ROLL CALL

Present: Mayor Brian Bennett, Deputy Mayor Lucy Krakowiak, Councilmembers Rose Clark, Bob Edgar, Joan McGilton and Gerald F. Robison. Councilmember Jack Block, Jr. was excused.

## AGENDA CONFIRMATION

**Direction/Action**

**Motion** was made by Deputy Mayor Krakowiak, seconded by Councilmember McGilton and passed unanimously to affirm the May 6, 2013, Agenda.

**PUBLIC COMMENT**

Jenn Ramirez-Robson, CEO New Futures, and Steve Daschle, Executive Director Southwest Youth and Family Services
Dick West, 11006 Roseberg Avenue South, Burien
Roger DeLorm, 13254 2nd Avenue SW, Burien
Rachel Levine, 430 South 124th Street, Burien
Quinton Thompson, 179 South 182nd Street, Burien

**CORRESPONDENCE FOR THE RECORD**

a. Petition Dated March 28, 2013, from Margie and Bob McLaughlin et al.
b. Petition Dated April 8, 2013, from Girl Scout Troop 41660 et al.
c. Email Dated April 15, 2013, from Angela Appleton.
d. Email Dated April 15, 2013, from John and Linda Poitras.
e. Email Dated April 15, 2013, from Randy Mullinax.
f. Email Dated April 16, 2013, from Dick West.
g. Email Dated April 18, 2013, from Marianne Hudson.
h. Email Dated April 22, 2013, from Alice Braverman.
i. Email Dated April 22, 2013, from Wayne Sykes.

**CONSENT AGENDA**

a. Approval of Check Register: Numbers 34476 - 34612 in the Amount of $945,963.12 dated May 6, 2013, and Payroll Salaries and Benefits Numbers 5748 - 5753 for Direct Deposits and Wire Transfers in the Amount of $208,593.93 for April 1 - April 15, Paid on April 19, 2013.
b. Approval of Minutes: Regular Meeting, April 15, 2013; Study Session, April 22, 2013.
c. Motion to Adopt City Council Meeting Guidelines.

**Direction/Action**

**Motion** was made by Deputy Mayor Krakowiak, seconded by Councilmember McGilton, and passed unanimously to approve the May 6, 2013, Consent Agenda.

**BUSINESS AGENDA**

**Motion to Approve Appointments to the Business and Economic Development Partnership**

**Direction/Action**

**Motion** was made by Deputy Mayor Krakowiak, seconded by Councilmember McGilton, to appoint Judy Coovert, Carmen Goers, Dean Anderson, Daniel A. Mathews, Matthew Wendland and Gerald D. Hasbrouck, Jr. to Burien's Business and Economic Development Partnership to full terms beginning on May 6, 2013, and ending on March 31, 2017. **Motion** passed 5-1. Opposed Councilmember Edgar.

**Public Hearing and Discussion Regarding an Alternative Proposal to the Department of Ecology regarding Burien's Shoreline Master Program Update**

Mayor Bennett opened the public hearing at 7:31 p.m.

Michael Noakes, 16409 Maplewild Avenue SW, Burien
Carol Jacobson, 3324 SW 172nd Street, Burien
Chestine Edgar, representing the Lake Burien Neighborhood, 1811 SW 152nd Street, Burien
Jennifer Kropack, 2681 SW 151st Place, Burien

There being no further testimony, Mayor Bennett closed the public hearing at7:42 p.m.

**Follow-up**
Staff will revise the language in the Shoreline Master Program Update for new buffers to only apply to marine not freshwater, separate freshwater and marine in the appendices and add language to encourage minimal impervious surfaces on paths. A continued discussion with adoption will be scheduled for May 20, 2013.

**Discussion of Ordinance No. 580, a Supplemental Appropriation Amending the 2013-2014 Biennial Budget for Legal and Consulting Services Related to the Burien Town Square Project**

**Direction/Action**
Councilmembers requested placing Ordinance No. 580 on the May 20, 2013, Consent Agenda for approval.

**Presentation of 1st Quarterly 2013 Financial Report**

**Follow-up**
Staff will include a list of revenues for the Capital Project funds and provide more detail on the transfers in future Quarterly Financial Reports.

**Discussion of Modification to Burien CARES Contract**

Councilmember Robison asked that the shall not exceed amount be updated on the contract.

**Direction/Action**
Councilmembers requested placing Amendment 2 to the Burien Community Animal Resource and Education Society (CARES) Contract on the 5/20 Consent Agenda for approval.

**City Business**

**Follow-up**
Staff will provide the details of the power outage that occurred the week of April 28, 2013, at SW 136 Street and 1st Avenue South and how the City could help the businesses that were affected.

**COUNCIL REPORTS**

Mayor Bennett spoke to the Cove to Clover event in which he participated.

Councilmember McGilton spoke to the Environmental Science Center, Highline Fund for Excellence, and the New Futures events that she attended.

**ADJOURNMENT**

**Direction/Action**
**MOTION** was made by Deputy Mayor Krakowiak, seconded by Councilmember McGilton and passed unanimously to adjourn the meeting at 8:51 p.m.

_____
Brian Bennett, Mayor

_____
Monica Lusk, City Clerk

# CITY OF BURIEN, WASHINGTON

## ORDINANCE NO. 580

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**AN ORDINANCE OF THE CITY OF BURIEN, WASHINGTON, APPROVING A SUPPLEMENTAL BUDGET APPROPRIATION AND AMENDING THE 2013-2014 BIENNIAL BUDGET TO ADJUST EXPENDITURES OF CITY FUNDS FOR 2013**

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WHEREAS, the City of Burien adopted the 2013-2014 Biennial Budget in Ordinance No. 568; and

WHEREAS, the Town Square development is a high priority economic development project for the City; and

WHEREAS, the City has engaged the economic and real estate consulting firm Heartland LLC to provide analysis of project proposals related to the development of the remaining Town Square parcels; and

WHEREAS, the City has engaged the law firm Davis Wright Tremaine, LLP to serve as special legal counsel for matters related to the Town Square Disposition and Development Agreement with Urban Partners/Harbor Urban, the Standstill Agreement with Harbor Urban, and the transactional documents related to the purchase of undeveloped Town Square parcels by Legacy Partners; and

WHEREAS, the 2013-2014 budget includes $30,000 for the above described professional services, and there is a need to increase this budget appropriation to include litigation, mediation, and settlement negotiation services related to the Town Square development; and

WHEREAS, City staff recommends that additional funds in the amount of $500,000 be appropriated by the City Council from Unencumbered Reserves for professional services related to the Town Square development;

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF BURIEN, WASHINGTON, DOES ORDAIN AS FOLLOWS:

Section 1. The 2013-2014 Biennial Budget for the period January 1, 2013 through December 31, 2014 is hereby amended to appropriate $500,000 from Unencumbered Reserves for Professional Services in 2013.

Section 2. Severability. Should any section, paragraph, sentence, clause or phrase of this Ordinance, or its application to any person or circumstance, be declared unconstitutional or otherwise invalid for any reason, or should any portion of this Ordinance be pre-empted by state or federal law or regulation, such decision or pre-emption shall not affect the validity of the

remaining portions of this Ordinance or its application to other persons or circumstances.

Section 3. Effective Date. This Ordinance shall take effect five days after publication.

ADOPTED BY THE CITY COUNCIL OF THE CITY OF BURIEN, WASHINGTON, AT A REGULAR MEETING THEREOF THIS ____ DAY OF ____, 2013.

CITY OF BURIEN

_____
Brian Bennett, Mayor

ATTEST/AUTHENTICATED:

_____
Monica Lusk, City Clerk

Approved as to form:

_____
Craig D. Knutson, City Attorney

Filed with the City Clerk: May 6, 2013
Passed by the City Council:
Ordinance No.:580
Date of Publication:

Amendment No. 2 to
2011 – 2014 CONTRACT FOR ANIMAL CONTROL SERVICES
City of Burien and Community Animal Resource Education Society (CARES),
dba Burien Animal Care and Control
(Burien Contract No. 3433)

The 2011-2014 Contract for Animal Control Services dated June 13, 2011 between the City of Burien and Community Animal Resource Education Society (CARES) dba Burien Animal Care and Control Burien shall be amended as follows:

**Provision No. 2 Compensation and Method of Payment on page 1.**
Starting June 1, 2013, the annual amount to be paid by the City to the Contractor shall be increased by $50,000 from $120,000 per year to a revised amount of $170,000 per year.

For the period June 1, 2013 to May 31, 2014, the annual amount of $170,000 shall consist of monthly payments of $12,916.67 and a lump sum payment of $15,000. The lump sum payment shall be for capital expenditures necessary for the Contractor to provide the services under this Agreement and shall include, but not be limited to, the following items:

a) Installation of a sink and dishwasher at the CARES office located at 909 SW 151st Street, Burien, WA 98166,
b) Installation of ventilation in the CARES holding room,
c) Building of vaccination room at the CARES office,
d) Purchasing of uniforms and badges for CARES staff, and
e) Purchasing of extra scanner and microchips.

The Contractor shall submit invoices or other acceptable documentation to the City verifying that the cost of such items is at least $15,000. If the total amount is less than $15,000, the City shall increase the monthly payments by whatever amount results in the total annual compensation equaling $170,000.

For the period June 1, 2014 through May 31, 2016, the amount to be paid by the City to the Contractor shall be $14,166.67 per month. This amount may be increased by a Cost of Living Adjustment (COLA) equal to the amount given to City staff, not to exceed 3% annually. The COLA, if applicable, would be effective from June 1, 2014 to May 31, 2015 based on the COLA given to City Staff for 2014 and from June 1, 2015 to May 31, 2016 based on the COLA given to City Staff for 2015.

The total amount to be paid to the Contractor from June 15, 2011 to May 31, 2013 shall not exceed $235,000. The total amount to be paid to the Contractor from June 1, 2013 to May 31, 2016 shall not exceed $510,000, subject to potential annual COLA increases as described above. Any COLA increases shall be done by written amendment to this Contract.

**Provision No. 3 Duration of Agreement and Contract Review on page No. 1.**
The Agreement is extended by two years until May 31, 2016. Another review of the contract terms and services by both parties shall be done by May 31, 2014 and continue to be done periodically thereafter to determine if modifications to the scope of services and compensation are needed.

**Provision No. 18 Notices on page 8.**
Administrative notices to the City of Burien shall be sent to the following revised City contact person:

Nhan Nguyen, Management Analyst
City of Burien
400 SW 152nd St, Suite 300
Burien, Washington 98166
Telephone: (206) 439-3165
E-mail: NhanN@burienwa.gov

Notices to the Contractor shall be sent to the following revised address:

Debra George, CARES Executive Director
909 SW 151st Street
Burien, WA 98166
Telephone: (206) 812-2737
After Hours Emergency Number: (206) 941-7199
E-mail: DebraGeorgeMi@aol.com

**Exhibit A Duties and Responsibilities of the Contractor** is amended by revising Section 16 and adding Sections 20, 21, and 22, to read as follows:

16. Activities Not Covered:

~~a) Removing dead animals from City roadways and rights-of-ways.~~

~~b) Responding to complaints or incidents involving wild animals, except where it is in the interest of public safety that the Contractor respond or to the extent of notifying the State Department of Fish and Wildlife.~~

~~c)~~a) Rehabilitating and restoring to health animals that have been injured, neglected or abused beyond basic care needed to stabilize an animal during the impound period.

20. Removing Dead Animals. The Contractor will assume responsibility of picking up all dead animals in City roadways and rights-of-way including domestic and wild animals. The Contractor will take the following actions:

a. Pick up animal
b. Scan for microchip
c. Photograph
d. Cross check with any missing animal reports

e. Contact owner if known
f. Hold in freezer for pick-up or cremation
g. Keep an active archive of dead animals for public review.

21. Wildlife complaints. The Contractor will respond to complaints or incidents involving wild animals when it is in the interest of public safety and will notify the State Department of Fish and Wildlife when it is necessary and appropriate.

22. Miscellaneous.
a. The Contractor will have a back-up Enforcement Officer (Animal Control Officer (ACO)) available, either on staff or by contract, to fill in for the main ACO when he/she is on vacation, medical, or other leave.
b. The Animal Control Officer or other designated staff person shall be trained in animal behavior assessment for purposes of helping determine when an animal should be euthanized.
c. All Contractor staff shall receive ongoing and periodic training for purposes of ensuring accurate data entry and program management.
d. The Contractor shall take action to remedy the operational issues identified in the 2013 McVicker report, which is attached as Exhibit A-1.

All other terms and conditions of the above referenced contract shall remain the same.

These changes shall become effective on June 1, 2013.

| CITY OF BURIEN | COMMUNITY ANIMAL RESOURCE EDUCATION SOCIETY (CARES) |
|---|---|
| By: _____ | By: _____ |
| Title: City Manager | Title: _____ |
| Date: _____ | Date: _____ |

**EXHIBIT A-1**

Burien C.A.R.E.S. Program Evaluation

The City of Burien contracts for animal control services with the Community Animal Resource Education Society (C.A.R.E.S.), a 501c(3) non-profit corporation. C.A.R.E.S. is licensed to do business in the City of Burien and has the insurance required by contract. C.A.R.E.S. is listed on the Secretary of State's website and is listed as "Not required to register."

Dr. Leslie Kasper was the initial contractor for the City of Burien once they chose not to renew their contract with King County. Dr. Kasper realized that it was too much work for a single person to do and chose not to continue in the capacity as the provider of Animal Care and Control for Burien. C.A.R.E.S. submitted a bid proposal and was accepted as the Burien Animal Care and Control agency to take over Animal Care and Control. Initially C.A.R.E.S. used PJ's Pet Ranch for the housing of their animals. PJ's Pet Ranch is still utilized from time to time for specific boarding requirements.

Under the contract, C.A.R.E.S. provides animal control to the City of Burien and enforces the animal control regulations set forth in the City's Municipal Code, Ordinance No. 543 which adopted portions of Title 11 of the King County Code. C.A.R.E.S. is meeting the public safety needs in terms of animal control and is open 40 hours per week as specified in the contract.

The evaluation included a 2 day site visit on February 26th and 27th, 2013. During that time I observed the daily work that the staff and volunteers carried out, interviewed staff and Debra George, and collected printed materials and reports for the study.

## FIELD SERVICES

Ray Helms is the sole animal control officer and he is also responsible for the care and health of the animals. Ray has received the National Animal Control Association (NACA) level 1 training certificate. Part of the training at NACA included bite stick training which Ray has access to in the vehicle he drives. The bite stick is a personal protection device. Ray would benefit from the Washington Animal Control Association Academy (WACA) training. Until this time, Burien's officer has been denied entrance to the academy. I have arranged, with the assistance of Pierce County's Animal Care and Control Supervisor, an opportunity for Ray to enter the academy next year. In order to enter the training program he must complete and pass the background check required by the Criminal Justice Training Commission prior to inclusion in the program. The goal of completing the WACA academy training is recommended. Ray also expressed a clear interest in attending as many other training opportunities as possible. Ray earns approximately $45,000 per year.

Additionally, Ray would benefit by spending some additional time riding along with experienced Animal Control Officers from some nearby jurisdictions. It is also advised

to continue to visit area shelters in an effort to expand learning and incorporate best practices into the daily operation of the C.A.R.E.S. shelter.

Neither Ray nor any other staff have rabies prophylaxis or have had rabies titers preformed. Rabies is not endemic to domestic animals in the area of Western Washington and there would be benefit in talking with the Health Department as to their recommendation.

From viewing some of the calls that Ray recently received, it is apparent that he works hard to be sure that all requests for service receive a response or call back within 24 hours, as required by contract. He also makes his contacts personal as he gathers information from the citizen and then makes arrangements for an appointment. Emergency requests have a response time of 30 minutes most of the time.

During conversation surrounding the activities not covered under the contract, I discovered that there is currently no mechanism for reporting the pick-up of dead animals from City roadways and rights-of-way as required by the PPM, page 11. C.A.R.E.S. is not responsible for this task and as such, when an individual has lost their pet, they may not get closure because there is no recording of those deceased pick-ups. Staff said they have never had any reports from Public Works about deceased animal pick-ups. It is necessary for Burien's Public Works department crews to report a description of any deceased domestic animal to C.A.R.E.S. which shall include the breed, color, size, sex and where the deceased animal was found as required in the PPM. C.A.R.E.S. then will maintain the record so that any citizen looking for their lost pet may be apprised of the information.

As I viewed reports of the types of calls that C.A.R.E.S. receives, responds to and completes, it became apparent that the requests for service are not being logged into a database for management. C.A.R.E.S. utilizes the Pet Point software package, a web-hosted product. The company provides web-based training and 24/7 user support. Since Pet Point is a Web-hosted or cloud-based product, they provide backups of the database.

Currently, all requests for service are recorded by hand and counted by hand. Utilizing a database to record and manage all service requests would be responsible, accurate and time-saving. Pet Point has the ability to record those requests and then the officer can complete his report and record the outcome into Pet Point. You can also connect the animals that are impounded as a result of a service request or complaint. Reporting is an automatic process. There are many stock reports available to the agency and recently they have made the ability to write your own reports available. It will allow the user to pull certain information based on the parameters they set. Taking the time to learn all aspects of the program is the major holdback with the current staff limitations.

Currently Ray is the only fully trained staff. Training and daily duties include all animal care, customer service and animal control. If Ray is injured or needs a vacation he has no backup staff with full training. Robert would only be able to take over some of the duties

with Debra George giving him direction. This seems to be a liability to the daily operation of C.A.R.E.S. if Ray is not available.

## ANIMAL CARE

There were 3 dogs and 8 cats at the shelter. One of the dogs went home late on the first day. All kennels and cat cages were clean, or in the end process of cleaning when I arrived. C.A.R.E.S. has about 12 regular, reliable volunteers that come to the shelter to help care for the animals. One individual comes daily just to care for the cats. He was thorough and maintained a quiet demeanor as he moved from cage to cage.

The volunteer followed the guidelines for control disease transmission by changing his gloves between cages as required in the Burien Animal Care and Control Policy and Procedures Manual (PPM) page 26. The cat enclosures allow for the ideal triangulated space for the cats as there is approximately 2 feet between the resting, letterbox and feeding areas as recommended in the Guidelines for Standards of Care in Animal Shelters (SOC), page 14. While the material the cat enclosures are constructed of is not ideal, the surfaces were prepared to conform to the standards set by the health department. C.A.R.E.S. was required to seal the surfaces of the enclosures with a product to prevent penetration of liquids. The sealant on the surfaces will wear down over time and will no longer be impermeable which will then allow pathogens to multiply and will be difficult to clean and disinfect.

There is also adequate space between the banks of cat enclosures that face each other. It is recommended that there be a distance of no less than 4 feet to avoid the transmission of aerosolized pathogens. This spacing prevents the spread of feline respiratory viruses.

The SOC document was published by the Association of Shelter Veterinarians and is included as an attachment to this evaluation. I recommend that each staff person familiarize themselves with this document as it is the gold standard for shelter animal care and that it be required reading for any and all future staff as well. Many of the policies and procedures in the PPM are taken directly from the SOC.

During cleaning, cats are regularly removed from their cages into a small visitation room. This is unnecessary as the recommendations of the SOC and best practices recommends that unless the cage itself is soiled, there should only be spot cleaning done with the cat remaining in the cage as it may reduce stress and therefore illness in the feline population. In fact, this information is included in the PPM. The exceptions to this practice listed in the PPM include times of disease outbreak or if the cages are heavily soiled with mucus, feces, blood or urine, if the cat poses a danger to human safety, or when a new cat is being placed into a cage vacated by another cat. Currently the floor and items in the visitation room are not cleaned or sanitized between cats which can cause the spread of disease. The Infection Control Plan (ICP) says if the animal is moved it should be into a temporary cage which is cleaned and disinfected after each use which is more appropriate if the cat is removed from its cage during cleaning.

The products used, as recommended by the King County Health department, are approved for cleaning and disinfection around dogs and cats. However, the mixing of the product requires personal safety considerations. Chemical goggles may be required in the case of possibility of splash with Fabuloso, bleach or Top Performance 256. The 256 product is mixed in the ratio of 1:25. At the time of mixing a new bottle to spray the kennels, I noted there were no personal safety devices worn by the staff. There was also not an easily consulted mixing chart for the product dilution ratio. The product was poured from a larger storage bottle into a spray bottle. Once the staff realized the product should be diluted the excess product was poured back into the original storage container. The bottle was then consulted for the appropriate ratio. Splashing or skin contact could have occurred at either time.

The current process for cleaning the dog kennels is to spray the diluted Fabuloso mixture on the walls, floors and gate surfaces, scrub with a brush and then mop the excess product out with a mop or towel. Then the surfaces are sprayed with 256, allowed to work for 10 minutes and then hand wiped with a towel. The PPM lists that the solid fecal material be scooped; detergent sprayed on every surface and scrubbed with a stiff brush; cage walls and floors and then rinsed; spray all surfaces with disinfectant and after 10 minutes rinse with clear water. Then the runs are to be squeegeed dry. There is currently no rinsing with fresh water during the cleaning process, except when the kennel run needs the initial organic material removed that cannot be removed with a scoop. The cleaning process needs to be updated in the kennels to conform to the PPM. Currently the ICP says to rinse surface with clean water which is in alignment with the PPM and SOC.

Fabuloso is mixed with bleach for the mopping of floors and cleaning of walls in the kennel and other areas. This is not appropriate as the label for Fabuloso lists that strong oxidizing agents are incompatible with the product. Bleach is an oxidizing agent and as such should not be mixed with Fabuloso. There were separate MSDS sheets for Fabuloso and bleach in the PPM notebook.

The animal control vehicle is cleaned in the same way as the kennels are currently cleaned.

The application of Fabuloso is for cleaning and detergent effect only. Fabuloso is not a disinfectant. All organic material must be cleaned from surfaces for disinfecting agents to work. The SOC clearly states that once the surface is clean or organic material, there must be the application of a disinfectant at the correct concentration and for sufficient time, rinsing and drying. 256 is a disinfectant, as is bleach. Mixing Fabuloso with bleach is not a substitute as the two products together do not provide the necessary or proper cleaning and disinfection.

Wherever possible, mopping should be avoided and hosing should be the primary method for rinsing. Mopping one kennel or area and then using that contaminated water to mop another area is counter-productive.

Pet food and water dishes are washed in a sink in the kennel area. There is currently inadequate sink and counter space to provide for the disinfection of pet dishes. The sink has a single compartment. Dishes are washed with detergent and rinsed and then placed to dry on a towel on the counter next to the sink. Without the use of a commercial sanitizer or commercial dishwasher the recommendation would be to dip the dishes in an appropriately diluted bleach solution, using a separate container for the mixture and then allow them to air dry on a raised platform such as a sink drainer. If a towel is used for the dishes to drain upon then it must be changed regularly to prevent any contamination.

Litter boxes are washed with detergent and water and are not disinfected between cats. It is advised that litter boxes should be disinfected between cats.

There are exhaust fans located in both the dog kennel area and the cat enclosure area. The one in the dog kennel handles 1500 CFM and the kennel area is approximately 1200 sq ft. The SOC calls for 10 to 20 per hour as the standard recommendation. Provided there is adequate outside air and the fan is working to capacity, the dog kennel area seems pretty close to the requirement. For actual verification it is recommended a HVAC company be hired that can measure the air changes per hour to see if the building conforms to the standard.

The quarantine room presents some unique challenges. This is a room that is within the dog kennel area but is a separate room. It is completely enclosed and has no separate ventilation system. It is used as the initial holding place for many of the animals that come into the shelter on either the weekend or a holiday. The area has a large crate placed upon a wooden pallet. The pallet should be removed from the room as it is nearly impossible to properly disinfect.

This room is also used for short term quarantine if there is a dog that has bitten and it needs to be confined away from other animals and people until it can be boarded for quarantine at one of the veterinary hospitals. It is recommended that the room have a lock that requires a key or combination to open the door so that volunteers or the public does not inadvertently enter the room if it contains an animal being held for biting for the short term. There are no additional spaces available besides this one room that allows for isolation in the case of multiple animals coming in at once or multiple aggressive animals. In some cases, whenever possible, biting animals are quarantined at their owner's home when the owner is known and the owner has adequate confinement. The dog kennels are arranged in such a way that they do not face each other and would work for separation of dogs that are easily confined and do not pose an escape hazard. Padlocks should be available to lock the kennels that contain stray dogs. This will assist in keeping the dogs secure as they wait for their owner to claim them. There is a duty and responsibility to keep animals that are not yet the property of the shelter safe and secure while they wait for their stray hold time to expire. There are currently no written protocols in place for the handling of dangerous or potentially dangerous animals. Ray admitted that these are in his head and need written documentation.

If an animal needs to be quarantined from the rest of the population because it is ill, upon impound it remains at the veterinary hospital for boarding until the veterinarian deems it healthy to return to the shelter.

If a stray dog comes in delivered by a member of the public, it is placed in the quarantine room while waiting for an opportunity to visit the veterinarian. If the animal is picked up by staff during regular business hours it is transported to the veterinary hospital first and then to the shelter if it is determined to be healthy. All incoming animals see a veterinarian at either Burien Veterinary Hospital or South Seattle Veterinary Hospital. This happens sometime between less than a day and the 3rd day after the animal is brought to the shelter. The animals are not normally vaccinated at intake or initial examination, but after the stray hold period is up and the animal is determined to be healthy and friendly. If, at the time of impound, the animal appears ill or injured then the visit to the veterinarian is immediate. Injured animals are stabilized and given pain medication. If the animal is seriously injured the veterinarian may make the decision to euthanize. C.A.R.E.S. regularly makes decisions to treat and repair all otherwise healthy animals.

There is a separate space away from the cat enclosures that has 2 large crates to keep any stray or feral cats the shelter may get. Any cat that is examined by the veterinary clinic after intake and is found to be ill does not return to the shelter. This lowers the risk of illness for the rest of the feline population.

## ANIMAL INTAKE

The contract that C.A.R.E.S. has with the City of Burien specifically requires them to apprehend and impound stray dogs. For any evictions or other police actions, all animals are taken immediately – no questions asked. There is no specific requirement to take stray cats, nor is there a requirement to accept owner surrendered animals. C.A.R.E.S. accepts, from time to time as space and resources allow some owner surrendered animals. There is a fee that normally ranges between $50.00 and $125.00.

C.A.R.E.S.' website states that it accepts most stray animals. In speaking with staff it seems that it does not regularly accept stray cats. The "Cat Policy" says that finding and working with the owner is preferable to the pet's uncertain future in a shelter environment. How would the Animal Care and Control Officer (ACCO) locate the owner? Certainly if a citizen shows up with a cat at the shelter they will probably be unwilling to take it back to the neighborhood and find the owner. Where would someone look for their lost cat if C.A.R.E.S. regularly rejects stray cats? I used several scenarios where someone may bring in a cat that would be considered stray and was told that it was considered as taking someone's property and they would ask the person to return it to where it was found. Under the adopted KCC 11.40.230 Nuisances defined:" any domesticated animal that enters upon a person's property without the permission of that person" may be deemed a nuisance and thereby impounded. C.A.R.E.S. staff asks the person with a stray cat to return the cat to where they found it. This may seem practical, but if a property owner does not wish the cat to continue trespassing and C.A.R.E.S.

refuses to take the animal then there is the distinct possibility that the animal may come to harm. Individuals may take the animal to an area completely unfamiliar to the cat and therefore lowers the cat's opportunity to be reunited with the owner. Any stray should be housed at the shelter for the area in which the animal is found which increases the likelihood that an owner will go to the correct shelter. Harm may come to the animal because of a frustrated public as well. I would recommend that the code and practice of not taking stray cats be re-examined and that a solution be found to serve the animals and the public. The ACCO will take a stray cat when there seems no other alternative and the person with the cat is uncooperative with regard to returning the cat to the location it was found.

C.A.R.E.S. also loans humane traps for animals. If a feral cat comes to the shelter in a trap, it is altered at the Feral Cat Spay Neuter Project and then returned to the area it came from. I asked what happens if the cat in the trap in tame and friendly. The answer was to ask the person to take it back to where found as it is property. The practice of loaning traps but turning away some animals is in conflict. The contract with the City of Burien requires C.A.R.E.S. to stock dog and cat traps as well as carrying cases for use by residents.

None of the dogs or cats is vaccinated upon intake. This practice is recommended both by the PPM, page 19 and the SOC, page 25. Studies suggest that approximately 50% of all animals entering a shelter have not been vaccinated. The practice of vaccinating upon intake and maintaining a clean environment are paramount for animal health. Exercising one practice without the other will guarantee failure at some point. The protocol for the vaccination of incoming stray and unvaccinated owner surrender animals should be discussed with the veterinarians C.A.R.E.S. currently uses for their animal examinations.

All animals have their description entered into the Pet Point database. There is currently no standard set for the entering of animals into the database. It is recommended that all animals have their information entered into the database by the staff person that accepts the animal within 10 minutes of the animal entering the building. There is a need for the purpose of tracking and transparency to include the animal in the inventory as soon as possible once it enters C.A.R.E.S.' custody. One cannot guarantee continuity if there is no protocol in place for the inventory. Currently if an animal comes in while the ACCO is gone from the building, he cannot be assured that the animal has been entered into the database. It is currently difficult for him to look in the computer to locate the animal to be sure it has been input into the database once he returns to the shelter. C.A.R.E.S. should definitely avoid double entry of the animal. Again, finding the time to learn more about the program should make their job easier. The data will only serve you if all data is entered in a timely and consistent fashion.

All animals that enter C.A.R.E.S. are scanned for a microchip with a Home Again Scanner. Home Again scanners have the ability to read all types of chips regardless of their MHz. If a chip is located this will aid in the location of an owner.

All animals entering the shelter should be identified with a paper collar that contains the animal's I.D. number, per PPM, page 20. This helps prevent mix-ups, especially when the animal does not have a microchip or visible I.D. and may resemble another animal in their care at the same time.

Volunteers and staff use different media to list pets that have been found: Craig's list, Facebook and Petango, which interfaces with Pet Point. Animals are also loaded manually onto the C.A.R.E.S. website, usually by volunteers.

If someone is missing their pet they can call C.A.R.E.S. or come to the shelter. Staff will find out details about the missing pet and then try to match the person to one of the found pets. The person missing their pet will have to give staff a description and location where the pet was lost. C.A.R.E.S. does not allow access to the stray dog kennel to the public, but instead will bring the animal to the citizen in the public area or one of the dog visitation areas near the lobby. C.A.R.E.S. endeavors to match the pet to the owner by using the location where the pet was found and proximity to where the owner lives; description given by the owner of the missing pet and then reaction of the animal to the individual. The owner must present I.D. and then pays an impound fee, unless the pet is currently licensed, a processing fee and boarding costs. They must also purchase a pet license if they do not have one. C.A.R.E.S. staff should be sure the animal is wearing its license when it leaves the shelter. This plants the seed for the owner to realize the value of their pet wearing visible I.D., which if the pet was wearing at the time of impound would have had the pet back home and not at the shelter on its first impound.

Typically C.A.R.E.S. handles stray and owner surrendered dogs, mostly owner surrendered cats and occasional stray cats. They have also handled chinchillas, a snake, a lovebird, rabbits and a ferret.

## ADOPTION

Because C.A.R.E.S. restricts and manages their intake of owner surrendered animals to avoid having the shelter become full, they are fairly successful at placing animals in homes. C.A.R.E.S.' adoptable animals are listed on their website and other social media in order to give them exposure to families looking for a pet. Currently the average length of stay for an owner surrendered animal to find a new home is 26.8 days. The average for stray animals from the time of intake to the time of outcome is 20.8 days. These averages take into account the fact that some lost pets go home within 1 to 2 days of being lost and the others that are not redeemed wait many more days for adoption.

All adopters are charged an adoption fee. Sometimes the fees are reduced or even waived when someone chooses a pet that has a medical bill that either has been incurred or still has need of additional medical care. If an individual is willing to take the pet that is still under or in need of medical care, an appointment is made and the animal is taken to the veterinarian. The bill comes to C.A.R.E.S. and then the new owner reimburses the fees paid. This allows an animal to find a forever home while making concessions for total adoption costs.

All adopted animals are altered prior to placement. PIMA does most altering, except large dogs and cryptorchid surgeries which are sent to Burien Veterinary Hospital. Cat alter surgeries are done at the Feral Cat Spay Neuter Project. In some cases, an animal may be fostered for the weekend by the prospective adoptive family if the animal is a few days from their surgical appointment. C.A.R.E.S. then picks the animal up from the foster parent(s) and delivers it to the veterinarian for surgical altering. The adoption will take place after the animal is surgically altered.

Currently C.A.R.E.S. will make an effort to place any and all dogs. Staff and volunteers work with shy, fearful and aggressive dogs. Frequently staff and volunteers will bring the dog into the office area to work on socializing. At this time there is no established protocol in the PPM that states when an animal should not be considered for adoption. Currently, C.A.R.E.S. feels they are being examined by the community under a microscope and must place any and all animals. This includes placing dogs and cats that have bitten for adoption.

By placing animals that have bitten or acted aggressively to humans or domestic animals, there is a huge liability on the placement agency and the contracting city. SOC and best practices recommend that assessment of an animal's behavior must begin at the time of intake. Some behavior issues such as fear or aggression affect how the animal may be handled. Behavior evaluations and documentation of behavior should be performed on all animals prior to re-homing. C.A.R.E.S. has a need to develop an evaluation assessment which should be done by consulting with someone familiar with the science of behavior assessment. Staff performing the assessment(s) must receive adequate training. It should be an overall assessment that includes: information taken at intake, behavior during the stay at the shelter and behavior at a formal evaluation. A behavior assessment form used by The Humane Society for Tacoma and Pierce County and other shelters has been provided to Debra George, but there is a need for training before the form is used with any regularity for C.A.R.E.S.' animals.

Pressure from the public to place "all" animals should not override common sense. There is a duty to citizens not to place an animal that has bitten into a new home. 3rd party litigation is not uncommon and since the current adoption contract does not actually transfer ownership of the dog to the adoptive owner there is the outward chance for the liability that I am speaking about. If the animal cannot be safely handled and is not safe for the public in an adoptive home, consideration should be given for euthanasia. It would be difficult to find a rescue agency that places biting animals or animals that have attacked and/or killed a domestic animal. Most don't.

## NON-PROFIT STATUS & VOLUNTEERS

As a 501c(3) C.A.R.E.S. has a plan to augment their donation goal. They had a comedy show that raised $5,000.00. The goal for 2013 is $20,000.00 and they are looking at other means to increase their total donations. Currently donors of in-kind donations are added into Pet Point, but there is no immediate acknowledgment of the donor. The quick

turn-around in acknowledgment is key to keeping donors as well as letting them know their donation is important to your mission.

"Donations" are gifts. They are freely given by individuals who care about what you do and want to support you. But like any other gift, unless the giver is thanked, and assured that the money was used well, they will not be motivated to give again. And they won't encourage others to give. So if you don't need donations, and would rather not receive them, then don't thank the giver. But if you do want these gifts, you need to treat them as gifts

C.A.R.E.S. relies on volunteers to supplement the daily work done by staff. It is apparent that without volunteers, C.A.R.E.S. could not provide the level of care that is needed for the animals in the shelter. Volunteer minimum age is 14 and older without a parent present. There are no payments to the Department of Labor & Industries for injury to volunteers, but they are instead covered through C.A.R.E.S.' Insurance policy according to Debra George. Volunteers are required to read the animal care protocol notebook and then sign that they have read the document. There is a need for documentation of training and competency levels of volunteers that are entrusted with the care of Burien's animals. I can provide checklist outlines as examples for the volunteer program at C.A.R.E.S. that can be modified to the tasks that volunteers handle.

Volunteers are primary to many tasks at Burien C.A.R.E.S. They clean cages, walk dogs, take laundry to the Laundromat, help with phone calls and generally assist with shelter duties. Based on the current staffing level and the lack of documentation about the level of training that volunteers have received, I would recommend that the minimum age of volunteers might be moved up to a more responsible age of volunteer until C.A.R.E.S. has adequate staff and time for training and documentation.

## FIRST AND FINAL IMPRESSIONS

One of the first things I noticed is the staff and persons employed from the DSHS program answered the phone as "Burien Animal Control". The title that is in the contract and PPM manual both refer to the correct use of the program name as "Burien Animal Care and Control." This is an important distinction to public perception and consistency within the organization is also important. The "CARE" portion of announcing who they are will do much to assist in letting everyone know who they are and what they do. If all staff and volunteers believe they are there for the "CARE" of the animals in Burien it assists in their persona presented to the citizens of Burien. All documents and printed materials with the title of Burien Animal Control should be changed to "Burien Animal Care and Control" for consistency as well. As documents are updated, notice should be made that several contain names of persons responsible for certain actions that are no longer employed at C.A.R.E.S.

- The City of Burien produced a P.S.A. to work on community outreach for the citizens.

- C.A.R.E.S. director, Debra George, is promoting the shelter at the farmer's market.
- The Animal Control Officer does not appear as professionally dressed as officers in other jurisdictions in an attempt to appear more approachable. Is this the correct approach? Staff and volunteers wear no identification to designate who they are or what job they perform.
- Is there a mixed message from the City of Burien regarding the duties of C.A.R.E.S. - softer and kinder vs "doing their job?"
- Staff and volunteers feel they are always under scrutiny and always have to be "on guard" to what the public perception will be of any of their actions.
- During conversations I encouraged them to be transparent and keep being "up front" in all they do so the public will become trusting.
- Debra George takes no salary for the work she does. The public may find this difficult to believe. Perhaps this transparency will assist in the public believing that C.A.R.E.S. is there for the animals and the City of Burien.
- Is there a process in place to evaluate the contract on a yearly or more often basis? Per contract, there is monthly reporting but that may not be enough. Reporting numbers does little to show progress to individuals not involved in the shelter world. One approach might be a quarterly state of C.A.R.E.S. report so that the City Manager and City Council are aware of the progress C.A.R.E.S. is making. Also helpful might be a comparison of statistics for the same period of time the year prior.
- There is a need for policy enforcement, training documentation and daily and weekly checklists. Verification of daily work performed through the use of checklists and oversight of the work done are paramount to the health and well-being of the animals. Follow-up is required of checklists to be sure the work done is of high quality. Checklists should be looked over and must not just be filed.
- Documentation of training that other paid staff receive must be documented. The checklist outlines can be useful for this as well. Training should include minimum standards, expectations and access to lists of duties. There should also be yearly performance evaluations of staff.
- There are no standards set for the standards of care in the shelter in the contract between Burien and C.A.R.E.S. Currently the 5 freedoms are being met: freedom from hunger or thirst; freedom from discomfort; freedom from pain, injury or disease; freedom to express normal behavior and freedom from fear or distress.
- The "Infection Control Plan" should be updated to match the PPM and SOC as there are some inconsistencies.

Respectfully submitted,

Denise McVicker, Deputy Director
The Humane Society for Tacoma & Pierce County

**CITY OF BURIEN**
**AGENDA BILL**

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| **Agenda Subject:** Motion to Adopt Ordiance No. 581 approving updates to Burien's Shoreline Master Program and authorizing its submission to the Department of Ecology. | | **Meeting Date:** May 20, 2013 |
| **Department:** Community Development<br>**Contact:** David Johanson, Senior Planner<br>**Telephone:** (206) 248-5522 | **Attachments:**<br>1. Ordinance 581 (Including Exhibits) | **Fund Source:** N/A<br>**Activity Cost:** N/A<br>**Amount Budgeted:** N/A<br>**Unencumbered Budget Authority:** N/A |
| **Adopted Initiative:**<br>Yes No | **Initiative Description:** Shoreline Master Program Update | |

**PURPOSE/REQUIRED ACTION:**
The purpose of this agenda item is for Council to take action Ordinance 581, adopting updates to Burien's Shoreline Master Program. Once action is taken the document will be submitted to the Department of Ecology as an amended alternative proposal to the one submitted on May 23, 2011.

**BACKGROUND (*Include prior Council action & discussion*):**
On Sept. 27, 2010, the City Council passed Resolution No. 317 approving Burien's Shoreline Master Program (SMP). The Dept. of Ecology held a public hearing on the SMP on December 8, 2010. Ecology approved the SMP with both required and suggested changes on April 22, 2011 (letter mailed to the City on April 27, 2011). On May 23, 2011 the City submitted an alternative proposal to Ecology.

November 28, 2011 Council appointed a shoreline working group to study the four outstanding issues and prepare a recommendation for consideration by the City Council. On September 17, 2012 the working group presented an early draft of their recommendation to the City Council. The proposed solutions to the four issues were generally well received by both the City Council and the Department of Ecology.

On April 22, 2013 Staff and the Shoreline Working Group presented a draft for consideration by the City Council. The City Council provided comments and editorial suggestions which have been included in the draft as attached.

On May 6, 2013 the Council conducted a public hearing, and following the subsequent discussion directed staff to amend language regarding;

1) Buffers and setbacks for Lake Burien,
2) Encouraging the use of pervious surfaces in buffer zone 1, and
3) Amending the appendicies to differenciate the fresh water environment from the salt water environment.

The changes from the previous version have been accepted, and the regulations section only contains editing format for the 3 topic areas stated in the above paragraph. Once action is taken, staff will then submit the SMP to the Department of Ecology for review and approval.

**OPTIONS (*Including fiscal impacts*):**
Apdopt Ordinance No. 581
Amend and adopt Ordinance No. 581

**Administrative Recommendation:** Adopt Ordinance No. 581

**Committee Recommendation:** N/A

**Advisory Board Recommendation:** I move to adopt Ordinance No. 581 approving updates to Burien's Shoreline Master Program and authorizing its submission to the Department of Ecology.

**Suggested Motion:** N/A

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| Submitted by: David Johanson<br>**Administration** | Mike Martin<br>**City Manager** |
| **Today's Date:** May 14, 2013 | **File Code:** R:\CC\Agenda 2013\052013cd-1 Shoreline Master ProgramAdoption.docx |

**CITY OF BURIEN**

**ORDINANCE NO. 581**

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**AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF BURIEN, WASHINGTON, APPROVING THE PROPOSED BURIEN SHORELINE MASTER PROGRAM AND THE ACCOMPANYING GOALS AND POLICIES, ENVIRONMENTAL DESIGNATIONS, REGULATIONS, RESTORATION PLAN AND CUMULATIVE IMPACTS ANALYSIS AND DIRECTING THAT THE SHORELINE MASTER PROGRAM AND ITS SUPPORTING DOCUMENTS BE PROVIDED TO THE WASHINGTON STATE DEPARTMENT OF ECOLOGY FOR APPROVAL.**

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WHEREAS, the State of Washington Shoreline Management Act of 1971 (Chapter 90.58 RCW), recognizes that the shorelines are among the most valuable and fragile resources of the state and that the state and local government must establish a coordinated planning program to address the types and effects of development occurring along shorelines of state-wide significance; and

WHEREAS, the City of Burien is required to update its Shoreline Master Program (SMP) pursuant to the Shoreline Management Act and the Washington Administrative Code Chapter 173-26; and

WHEREAS, the City Shoreline Advisory Committee met nine (9) times to prepare a draft Shoreline Master Program for consideration by the Planning Commission; and

WHEREAS, the City of Burien conducted two (2) public open houses on 5/14/08 and 11/30/09 to have a dialog with citizens and shoreline experts; and

WHEREAS, the Planning Commission held eight (8) public meetings and one (1) public hearing soliciting comment on the proposed Shoreline Master Program amendments on the following dates: 12/15/2009, 1/12/2010, 1/26/2010, 2/9/2010, 2/23/2010, 3/9/2010, 3/16/2010. 3/23/2010 and 3/30/2010; and

WHEREAS, the Burien City Council held seven (7) public meetings on the proposed Shoreline Master Program on the following dates: 5/3/2010, 5/10/2010, 7/19/2010, 8/2/2010, 8/23/2010, 8/30/2010 and 9/13/2010; and

WHEREAS, the Burien City Council conducted two (2) public forums on 6/14/2010 and 6/21/2010 and a held a public hearing on 8/30/2010 regarding the proposed Shoreline Master Program; and

WHEREAS, comments were solicited from federal, state, local, regional and tribal interests in accordance with RCW 90.58.130; and

WHEREAS, the proposed City of Burien Shoreline Master Program addresses the key requirement of WAC 173-26 (Shoreline Master Program Guidelines) that the SMP result in "no net loss" of ecological functions relative to the baseline conditions due to its implementation; and

WHEREAS, on April 9, 2010, the City's State Environmental Policy Act responsible official conducted SEPA review of the proposed Shoreline Master Program by issuing an Environmental Impact Statement Addendum to the 1997 Environmental Impact Statement for the City of Burien Comprehensive Plan; and

WHERAS, on September 27, 2010, the City approved Resolution No. 317 approving the proposed City of Burien Shoreline Master Program and directed City staff to forward the appropriate Shoreline Master Program update documents to the State Department of Ecology for formal review and approval; and

WHEREAS, on April 22, 2011, the Department of Ecology completed its review and determined there were required changes in order to comply with Chapter 90.58 RCW, the Shoreline Management Act of 1971, and the Shoreline Master Program Guidelines (WAC 173-26, Part III); and

WHEREAS, the Burien City Council held a study session on April 22, 2013, to review recommendations of a shoreline working group and staff to resolve points of disagreement with the Department of Ecology, and on May 6, 2013, a public hearing was conducted allowing the public to comment on a revised Shoreline Master Program(SMP) draft; and

WHEREAS, the shoreline working group and staff have further revised the draft SMP based on City Council direction, and all of Council approved revisions are set forth in the attached Exhibit A; and

WHEREAS, the Burien City Council finds that the policies and regulations set forth in Exhibit A are consistent with the Shoreline Management Act and its implementing regulations (WAC 173-26), the Growth Management Act, the City's Comprehensive Plan, the City's Zoning Code, and other applicable law;

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF BURIEN, WASHINGTON, DOES ORDAIN AS FOLLOWS:

Section 1. The Burien City Council hereby approves the proposed City of Burien Shoreline Master Program as set forth in Exhibit A, which is attached hereto and incorporated herein by reference and directs City staff to forward the appropriate Shoreline Master Program update documents to the State Department of Ecology for formal review and approval.

Section 2. Severability. Should any section, subsection, paragraph, sentence, clause or phrase of this ordinance, or its application to any person or circumstance, be declared unconstitutional or otherwise invalid for any reason, or should any portion of this ordinance be pre-empted by state or federal law or regulation, such decision or pre-emption shall not affect the validity of the remaining portions of this ordinance or its application to other persons or circumstances.

Section 3. Savings. The enactments of this ordinance shall not affect any case, proceeding, appeal or other matter currently pending in any court or in any way modify any right or liability, civil or criminal, which may be in existence on the effective date of this ordinance.

Section 4. Effective Date. This ordinance shall take effect upon approval of the proposed City of Burien Shoreline Master Program as set forth in Exhibit A by the Washington

State Department of Ecology pursuant to RCW 90.58.090 and WAC 173-26-120, and the date of such approval shall be inserted in Exhibit A at BMC 20.30.007.

ADOPTED BY THE CITY COUNCIL OF THE CITY OF BURIEN, WASHINGTON, AT A REGULAR MEETING THEREOF THIS 20TH DAY OF MAY 2013.

CITY OF BURIEN
/s/ Brian Bennett, Mayor

ATTEST/AUTHENTICATED:
/s/ Monica Lusk, City Clerk

Approved as to form:
/s/ Craig D. Knutson, City Attorney

Filed with the City Clerk: May ___, 2013
Passed by the City Council: May ___, 2013

Ordinance No.: 581
Date of Publication: May ___, 2013

# Burien Shoreline Master Program

**May 20, 2013**

**Title 20**

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# Chapter I. User's Guide

## 20.10.001 Overview of State Shoreline Management Act

The State of Washington's Shoreline Management Act (RCW 90.58) was passed by the Legislature in 1971 and adopted by the public in a 1972 referendum. The following is an excerpt from the Shoreline Management Act stating Washington State's policy regarding shorelines.

*(Complete text of RCW 90.58.020)*

*The legislature finds that the shorelines of the state are among the most valuable and fragile of its natural resources and that there is great concern throughout the state relating to their utilization, protection, restoration, and preservation. In addition it finds that ever increasing pressures of additional uses are being placed on the shorelines necessitating increased coordination in the management and development of the shorelines of the state. The legislature further finds that much of the shorelines of the state and the uplands adjacent thereto are in private ownership; that unrestricted construction on the privately owned or publicly owned shorelines of the state is not in the best public interest; and therefore, coordinated planning is necessary in order to protect the public interest associated with the shorelines of the state while, at the same time, recognizing and protecting private property rights consistent with the public interest. There is, therefor, a clear and urgent demand for a planned, rational, and concerted effort, jointly performed by federal, state, and local governments, to prevent the inherent harm in an uncoordinated and piecemeal development of the state's shorelines.*

*It is the policy of the state to provide for the management of the shorelines of the state by planning for and fostering all reasonable and appropriate uses. This policy is designed to insure the development of these shorelines in a manner which, while allowing for limited reduction of rights of the public in the navigable waters, will promote and enhance the public interest. This policy contemplates protecting against adverse effects to the public health, the land and its vegetation and wildlife, and the waters of the state and their aquatic life, while protecting generally public rights of navigation and corollary rights incidental thereto.*

*The legislature declares that the interest of all of the people shall be paramount in the management of shorelines of statewide significance. The department, in adopting guidelines for shorelines of statewide significance, and local government, in developing master programs for shorelines of statewide significance, shall give preference to uses in the following order of preference which:*

*(1) Recognize and protect the statewide interest over local interest;*

*(2) Preserve the natural character of the shoreline;*

*(3) Result in long term over short term benefit;*

*(4) Protect the resources and ecology of the shoreline;*

*(5) Increase public access to publicly owned areas of the shorelines;*

*(6) Increase recreational opportunities for the public in the shoreline;*

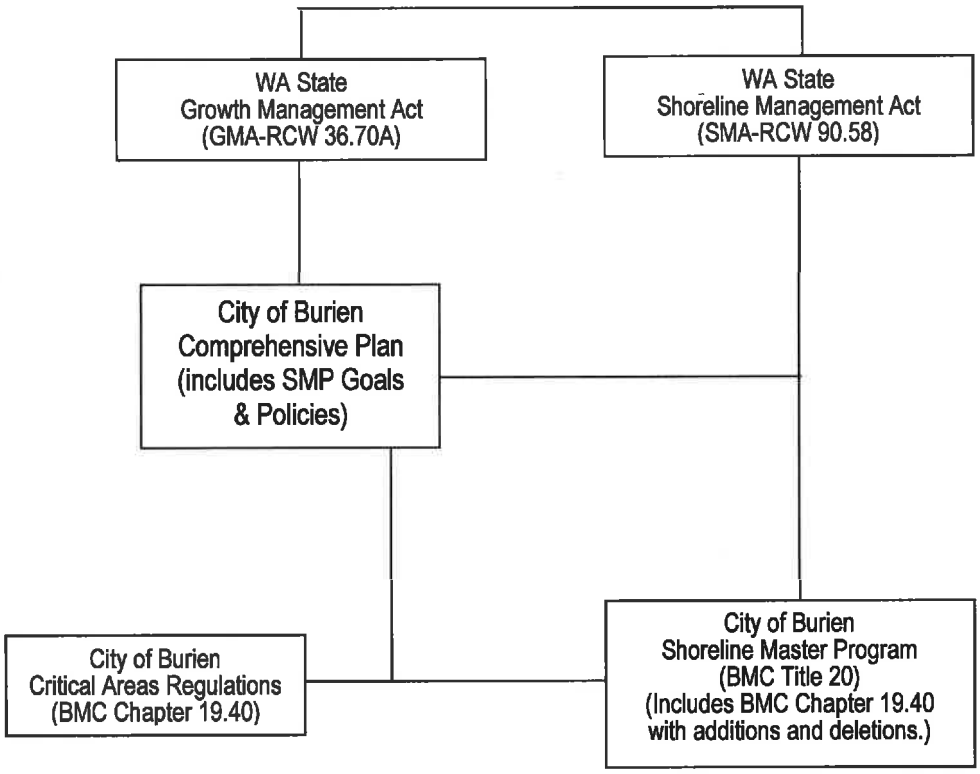
*(7) Provide for any other element as defined in RCW 90.58.100 deemed appropriate or necessary.*

*In the implementation of this policy the public's opportunity to enjoy the physical and aesthetic qualities of natural shorelines of the state shall be preserved to the greatest extent feasible consistent with the overall best interest of the state and the people generally. To this end uses shall be preferred which are consistent with control of pollution and prevention of damage to the natural environment, or are unique to or dependent upon use of the state's shoreline. Alterations of the natural condition of the shorelines of the state, in those limited instances when authorized, shall be given priority for single-family residences and their appurtenant structures, ports, shoreline recreational uses including but not limited to parks, marinas, piers, and other improvements facilitating public access to shorelines of the state, industrial and commercial developments which are particularly dependent on their location on or use of the shorelines of the state and other development that will provide an opportunity for substantial numbers of the people to enjoy the shorelines of the state. Alterations of the natural condition of the shorelines and shorelands of the state shall be recognized by the department. Shorelines and shorelands of the state shall be appropriately classified and these classifications shall be revised when circumstances warrant regardless of whether the change in circumstances occurs through man-made causes or natural causes. Any areas resulting from alterations of the natural condition of the shorelines and shorelands of the state no longer meeting the definition of "shorelines of the state" shall not be subject to the provisions of chapter 90.58 RCW.*

*Permitted uses in the shorelines of the state shall be designed and conducted in a manner to minimize, insofar as practical, any resultant damage to the ecology and environment of the shoreline area and any interference with the public's use of the water.*

In 1995, the Legislature amended the Growth Management Act (GMA) and the Shoreline Management Act (SMA) to partially integrate the two statutes. The amendments incorporated the goals and policies of the SMA as the 14th goal of the GMA, specifically designating the goals and policies of a local shoreline master program as a segment of the jurisdiction's comprehensive plan. All other portions of the SMP shall be considered a part of the jurisdiction's development regulations (RCW 36.70A.480). The diagram below indicates the relationship.

**Figure 1: Relationship of Shoreline Master Program to GMA**



The SMA is administered through a cooperative program between local governments and the Department of Ecology (Ecology), whereby local communities prepare a Shoreline Master Program (SMP) that is adopted under guidelines established by Ecology. The SMP serves to regulate development along shorelines of the state and establish a comprehensive vision of how the shoreline areas will be used and developed over time.

The SMP is a comprehensive use plan for local shoreline areas that includes desired goals and policies consistent with SMA policy (RCW 90.58.020); maps, diagrams and charts or other descriptive material and text; use and development regulations; and administrative procedures for the shoreline permitting process. The Ecology SMP guidelines (WAC 173-26) establish general goals and policies, and standards and criteria for regulations. The SMP is based on state guidelines, but tailored to the specific conditions and needs of individual communities. The SMP is also meant to be a comprehensive vision of how the shoreline area will be used and developed over time.

Under the SMA, shoreline jurisdiction generally includes water areas of the state, the lands underlying them, and areas that are 200 feet landward of the ordinary high water mark (OHWM) of said waters that have been designated as "shorelines of statewide significance" or "shorelines of the state." These designations were established in 1971, and are described in RCW 90.58.030 (Definitions and Concepts). Generally, "shorelines of statewide significance" include marine waters below extreme low water, rivers west of the Cascade Range that have a mean annual flow of 1,000 cubic feet per second (cfs) or greater, rivers east of the Cascade Range that have a mean annual flow of 200 cfs or greater, and freshwater lakes with a surface area of 1,000 acres or more. "Shorelines of the state" are generally described as all marine shorelines and shorelines of all other streams or rivers having a mean annual flow of 20 cfs or greater and lakes with a surface area greater than 20 acres.

## 20.10.005 City of Burien Shoreline Jurisdiction

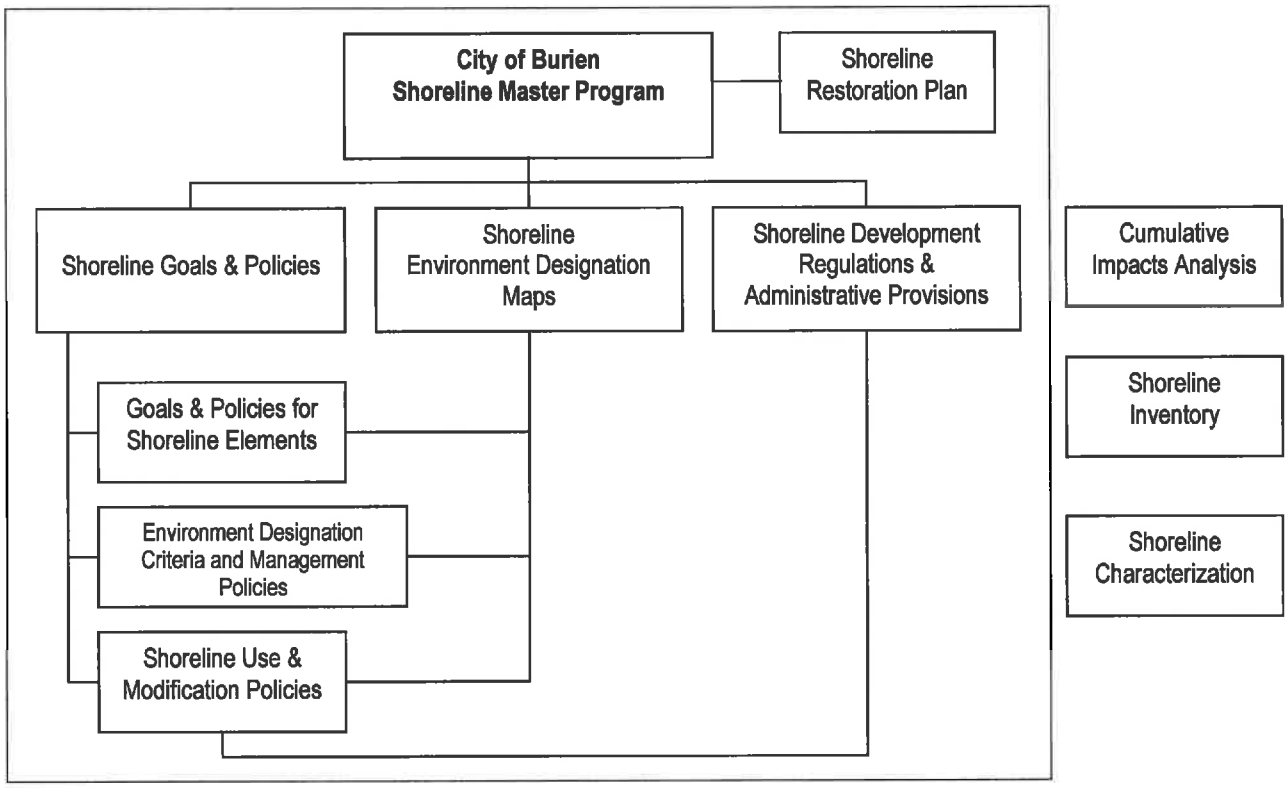
Although there are a number of waterbodies, including streams, lakes and marine shorelines, within the City of Burien, only two are regulated under the SMA. The shoreline jurisdiction within the city limits of the City of Burien includes approximately five miles of marine shoreline along Puget Sound and Lake Burien. There are no "shorelines of the state" associated with rivers or streams in the city. The portions of Puget Sound within the city limits are defined as "shorelines of statewide significance" waterward of the line of extreme low tide (RCW 90.58.030(2)(e)(iii)-Shorelines of Statewide Significance). The marine shoreline has been given a special status because they are considered a major resource from which all people in the state derive benefit.

Under the SMA, the shoreline area to be regulated under the City's SMP must include marine waters and shorelands, defined as the upland area within 200 feet of the OHWM, as well as any associated wetlands (RCW 90.58.030-Definitions and Concepts). All proposed uses and development occurring within shoreline jurisdiction must conform to Chapter 90.58 RCW, the Shoreline Management Act, and this Shoreline Master Program.

## 20.10.010 Components of Burien Shoreline Master Program

The City of Burien Shoreline Master Program was originally adopted at the time of the City's incorporation in 1993. Under new shoreline master program guidelines adopted by Ecology in 2004, cities within King County are required to update their local shoreline master programs.

**Figure 2: Structure of City of Burien Shoreline Master Program**



## 20.10.015 Amendments and State Role

The City of Burien Shoreline Master Program may be amended when new information is obtained, local circumstances change, or shoreline management approaches are improved. The city will follow procedures identified in BMC 19.65.080 (Type 4 Decisions) for Type 4 Legislative Decision which allow for public notice and hearing, review and recommendation by the Shoreline Administrator and the City Planning Commission with formal approval given by the City Council. After local adoption, all amendments to the City of Burien Shoreline Master Program must be approved by the Washington State Department of Ecology before they can be locally in effect.

Appeals of approved amendments to the Burien Shoreline Master Program are under the jurisdiction of the Central Puget Sound Growth Management Hearings Board. Appeals involving a shoreline permit are under the jurisdiction of the State of Washington Shorelines Hearings Board.

# Chapter II. General Goals and Policies

## 20.20.001 Purpose

The Shoreline Master Program goals and policies of this chapter reflect the aspirations and concerns that Burien citizens and stakeholders expressed about the City's shorelines during community and Shoreline Advisory Committee meetings. These goal and policy statements, along with the shoreline land use map, are the foundation for specific guidelines concerning how to regulate and manage activities occurring within the City's shoreline jurisdiction.

The goals and policies of this element apply to all water bodies and shorelands that meet the definitions set forth in RCW 90.58.030 (Definitions and Concepts) unless otherwise specifically stated in the goal or policy. Burien's shorelines includes those lands extending landward for two hundred feet in all directions as measured on a horizontal plane from the ordinary high water mark; floodways and contiguous floodplain areas landward two hundred feet from such floodways; and all wetlands and river deltas associated with the streams, lakes, and tidal waters. Water bodies in Burien that meet the applicable definitions include Puget Sound waterward to mid channel and Lake Burien.

## 20.20.005 General Goals and Policies

### Goal ALL

Develop, implement, and maintain a Shoreline Master Program that results in no net loss of shoreline ecological functions and processes, balances public and private interests in the shoreline, and considers other relevant programs.

**Pol. ALL 1** The Shoreline Master Program shall result in no net loss of shoreline ecological functions and processes.

**Pol. ALL 2** Regulation and management of Burien's shorelines should be guided by ongoing and comprehensive science.

**Pol. ALL 3** The City should be proactive in managing activities within the shoreline jurisdiction.

**Pol. ALL 4** Implement an adaptive management approach to respond to changes and to ensure continued effectiveness.

**Pol. ALL 5** The Shoreline Master Program should balance private use and enjoyment of tidelands and adjacent lands with the greater public benefit that shorelines provide, while recognizing the rights of individuals to use and develop private property in a manner consistent with City and other applicable regulations.

**Pol. ALL 6** When Shoreline Master Program regulations are developed and applied, they should consider site-specific characteristics.

Pol. ALL 7 Regulation and management of the City's shorelines should be coordinated with relevant local, state, federal, and other programs. Such programs include, but are not limited to, those administered by: City of Seattle, City of Normandy Park, City of SeaTac, King County, Washington Department of Ecology, Washington Department of Fish and Wildlife, Washington Department of Natural Resources, Puget Sound Partnership, United States Army Corps of Engineers, Muckleshoot Tribe, Puyallup Tribe, and Water Resource Inventory Area 9.

Pol. ALL 8 Consider an incentive base system to encourage redevelopment projects to comply with accepted shoreline best management practices and standards.

## 20.20.010 Economic Development Element

Goal ED

Insure healthy, orderly economic growth by allowing those economic activities which will be an asset to the local economy and which result in the least possible adverse effect on the quality of the shoreline and surrounding environment.

Pol. ED 1 Protect the beauty and function of the natural environment to maintain a community where people want to live and work.

Pol. ED 2 Promote actions ensuring a clean and attractive community.

## 20.20.015 Shoreline Public Access Element

Goal PA

Increase and enhance public access to shoreline areas, consistent with the natural shoreline character, private property rights, and public safety.

Pol. PA 1 Developments, uses, and activities on or near the shoreline should not impair or detract from public access to the water.

Pol. PA 2 Publicly owned shorelines should be limited to water dependent or public recreational uses, otherwise such shorelines should remain protected open space.

Pol. PA 3 Public access to the City's shorelines should be designed to provide for public safety and to minimize potential impacts to private property and individual privacy rights.

Pol. PA 4 Public access should be provided as close as possible to the water's edge with no net loss of shoreline ecological function and without adversely impacting private property rights and personal privacy rights. Public

access should be designed for handicapped and physically impaired persons.

**Pol. PA 5** The City should seek opportunities to develop new public access areas in locations dispersed throughout the shoreline.

**Pol. PA 6** The vacation or sale of street ends, other public right of ways and tax title properties that abut shoreline areas shall be prohibited except as provided for in RCW 35.79.035 (Streets-Vacation). The City should protect these areas for public access and public viewpoints.

**Pol. PA 7** Waterfront street ends should be recognized as:

a. An important community resource that provides visual and physical access to the Puget Sound;
b. Special use parks which serve the community, yet fit and support the character of the surrounding neighborhoods;
c. A destination resource, where limited facilities and enhancements are provided.

**Pol. PA 8** The City should manage and develop waterfront street ends by:

a. Supporting their use by residents city-wide, yet ensuring that the street ends and their supporting facilities are developed at a level or capacity which are appropriate to the neighborhood character, promotes safety, protects private property rights and individual privacy, and is consistent with City risk management practices;
b. Ensuring that public parking is available and limited to a level appropriate to the capacity of the public access site, and is harmonious with the surrounding neighborhood;
c. Ensuring that the waterfront street ends are preserved and maintained with limited enhancements, such as places to sit or rest which fit in with the natural environment of the area;
d. Installing signs that indicate the public's right of access, the rules of use, and penalties for misuse;
e. Installing limited trail improvements and enhancements to allow access to the water;
f. Protecting adjacent private property including but not limited to protecting individual privacy rights and ensuring public safety; and
g. Developing a street ends plan that promotes waterfront access and public safety.

**Pol. PA 9** Waterfront street ends or other shoreline access should be planned in conjunction with the affected neighborhoods. However, the broader community should be notified during the public notification process.

**Pol. PA 10** The City should disseminate information that identifies all locations for public access to the shorelines.

Pol. PA 11 The public's visual access to the City's shorelines from streets, paths, trails and designated viewing areas should be conserved and enhanced.

Pol. PA 12 Public views from the shoreline upland areas should be enhanced and conserved, while recognizing that enhancement of views should not be necessarily construed to mean removal of vegetation.

Pol. PA 13 Promote a coordinated system of connected pathways, sidewalks, passageways between buildings, beach walks, and shoreline access points that increase the amount and diversity of opportunities for walking and chances for personal discoveries.

## 20.20.020 Recreation Element

Goal REC

Develop a well-maintained, interconnected system of multi-functional parks, recreation facilities, and open spaces that: is attractive, safe, and accessible for all geographic regions and population segments within the City; supports the community's well-established neighborhoods and small town atmosphere; protects private property rights and results in no net loss of shoreline ecological functions and processes.

Pol. REC 1 Recreation facilities in the shoreline area should be restricted to those dependent upon a shoreline location, or those benefiting from a shoreline or in-water location that are in the public interest.

Pol. REC 2 Recreational developments should be located, designed and operated to be compatible with, and minimize adverse impacts on, environmental quality and valuable natural features as well as on adjacent surrounding land and water uses. Favorable consideration should be given to proposals which complement their environment and surrounding land and water uses, and result in no net loss of ecological functions.

Pol. REC 3 Public information and education programs should be developed and implemented to help ensure that the public is aware of park regulations and private property rights, and to prevent the abuse of the shoreline and its natural ecological system.

Pol. REC 4 The City shall plan to provide, in coordination with other agencies, a range of park facilities that serve a variety of recreational and open space purposes. Such planning should use the following designations and guidelines to provide such diversity:

**1. Mini or Pocket Park**

*Use Description*: Passive recreation or specialized facilities that *may* serve a concentrated or limited population such as children or senior citizens.

*Service area*: Approximately 1/3 of a mile radius.

*Size:* No minimum to approximately one acre.

*Desirable Characteristics*: These parks should be in close proximity to dwellings and or other centers of activity. Mini parks should be designed for intensive use and should be accessible and visible from surrounding area.

*Examples:* In Burien these types of parks are primarily private parks consisting of beach access for adjacent subdivisions, view appreciation areas (bench or platform), picnic tables and trees in a small area, children's play area, game tables, or planted areas.

*Other Considerations*: Since maintenance costs of these smaller parks are high relative to their service areas, few jurisdictions are able to meet the desired quantity. This type of park is most suitable to provide unique local needs, such as shore access, or as a consideration in the design of new development. The City should seek a variety of means for financing and maintaining mini-parks, including considering opportunities for community stewardship and grant or private funding.

**2. Regional Parks**

*Use Description*: Areas of natural or ornamental quality for outdoor recreation such as picnicking, boating, beach activities, swimming, and trails. Such parks may contain special amenities, facilities or features that attract people from throughout the surrounding region. Such facilities require extensive on-site parking and good access by automobile.

*Service area*: Approximately 1/2 to 1 hour driving time.

*Size:* Approximately 90 acres.

*Desirable Characteristics*: Contiguous to or encompassing significant natural resources.

*Examples:* Seahurst Park.

### 3. Special Use Park

*Use Description*: Specialized or single-purpose recreational activities such as walking and bicycle trails, street ends, or areas that preserve buildings, sites or features of historical significance.

*Service area*: Variable.

*Size:* Depends on nature of facility.

*Desirable Characteristics*: Compatibility with adjacent facilities and uses.

*Examples:* Examples within Burien shoreline consist primarily of designated view points and historical markers, and waterfront street ends (including those at SW 170th Pl., SW 163rd Pl., and at the intersection of Maplewild Ave. SW and SW 172nd St.).

### 4. Conservancy Park

*Use Description*: Conservancy parks are formally designated public resource areas. In such parks the primary management objectives are protection and management of historical, cultural and natural resources, including fish and wildlife habitat areas and may include appropriate passive recreational activities.

*Service area*: None.

*Size:* As appropriate for the resource.

*Desirable Characteristics*: As appropriate for the resource.

*Examples:* Currently Salmon Creek Ravine is most appropriately classified in this category although its feasibility for including other types of park activities consistent with its character should be evaluated. This category would also apply to any significant formally designated land, protected wetlands or steep slope areas by private or public means.

Pol. REC 5 Access for motorized vessels should be discouraged at Seahurst Park. Access for non-motorized craft should be considered if access for such craft can be provided in an environmentally-sensitive manner.

Pol. REC 6 Where appropriate, recreational developments should make adequate provisions for:

a. Vehicular and pedestrian access, both on-site and off-site;
b. Proper water supply and sewage waste disposal methods;
c. Security and fire protection;

d. The prevention of overflow and trespass onto adjacent properties, including but not limited to landscaping, fencing and posting of property; and
e. Buffering of such development from adjacent private property or natural area.

Pol. REC 7 Trails and pathways on steep shoreline bluffs should be located, designed and maintained to protect bank stability without the need for shoreline armoring.

Pol. REC 8 Mooring buoys, in general, are beneficial in enabling increased recreational opportunities. However, the City should ensure that their possible negative effects on physical and visual environments are avoided.

Pol. REC 9 Artificial marine life habitats should be encouraged in order to provide increased aquatic life for recreation. Such habitats should be constructed in areas of low habitat diversity and in consultation with the Washington Department of Fish and Wildlife.

Pol. REC 10 The linkage of shoreline parks, recreation areas and public access points with linear systems, such as hiking paths, bicycle paths, easements and /or scenic drives, should be encouraged.

Pol. REC 11 Development of recreational facility along City shorelines should implement Low Impact Development techniques whenever feasible.

## 20.20.025 Circulation Element

Goal CI

Provide safe, reasonable, and adequate circulation systems in the shoreline area that will have the least possible adverse effect on unique or fragile shoreline features and existing ecological systems, while contributing to the functional and visual enhancement of the shoreline.

Pol. CI 1 Minimize impacts to the topography and other natural characteristics of the shoreline by appropriately locating transportation routes. New roadways for vehicle circulation should be located outside of or minimized within the shoreline area.

Pol. CI 2 Cross Puget Sound bridges should be prohibited within the Burien shoreline jurisdiction.

Pol. CI 3 Provide and/or enhance physical and visual public access along shoreline public roads and trails when appropriate given topography, views, natural features, and surrounding land uses.

| | |
|---|---|
| Pol. CI 4 | Public transit systems should provide service to designated public parks within the City. |
| Pol. CI 5 | Wherever practicable, safe pedestrian and bicycle movement on and off roadways in the shoreline area should be encouraged as a means of personal transportation and recreation. |
| Pol. CI 6 | Parking in shoreline areas should directly serve a permitted shoreline use. Parking developed for public access points should be limited to the number of spaces consistent with the capacity of those public access points and is harmonious with the surrounding neighborhood. |
| Pol. CI 7 | Parking facilities should be located and designed to minimize adverse impacts, including those related to: stormwater runoff; water quality; visual qualities; public access; and vegetation and habitat maintenance. |
| Pol. CI 8 | Parking should be planned to achieve optimum use. Where possible, parking should serve more than one use. |
| Pol. CI 9 | Utilities are necessary to serve shoreline uses and shall be properly installed so as to protect the shoreline and water from contamination and degradation. |
| Pol. CI 10 | Utility facilities and right-of-ways should be located outside of the shoreline area to the maximum extent possible. When utility lines require a shoreline location, they should be placed underground. |
| Pol. CI 11 | Utility facilities should be designed and located in a manner which preserves the natural landscape and shoreline ecology and minimizes conflicts with present and planned land uses. |
| Pol. CI 12 | Parking for non water dependent uses should be located as far away as feasible from shorelines. |

## 20.20.030 Land Use Element

Goal USE

Provide functional and attractive shoreline uses that are appropriate in scale, configuration, and location, and are sensitive to and do not degrade habitat and ecological systems and other shoreline resources.

Pol. USE 1 The Shoreline Master Program shall govern the development of all designated shorelines of the City. Lands adjacent to these areas shall be managed in a manner consistent with the Shoreline Master Program.

Pol. USE 2 The City will strive to ensure that basic community values are reflected in the City's land use and decision making processes, while recognizing the rights of individuals to use and develop private property in a manner consistent with City regulations.

Pol. USE 3 Ensure the appropriate location, design, and operation of all activities, development, and redevelopment in the shoreline.

Pol. USE 4 Incentives should be available to encourage the removal and/or reduction of non-conformances.

Pol. USE 5 If feasible, septic systems should be connected to the sanitary sewer system where connections are available.

Pol. USE 6 Any existing single-family lot that was legally subdivided or legally created prior to enactment of subdivision statutes prior to incorporation or annexation shall be considered a legally conforming lot for building purposes, providing the size of the lot was not reduced by more than 50 percent through acquisition for public purposes, and on such lots new homes may be built and existing houses may be expanded and remodeled, provided that applicable setbacks, lot coverage, critical area restrictions, design review requirements (if any), height limits and other applicable regulations in the zoning code are met.

Pol. USE 7 When determining buildable lot size for residential development, the area of a lot covered by water (including but not limited to lakes or the Puget Sound) shall not be included in the calculation.

Pol. USE 8 The planned densities for single-family development should encourage a lower development potential in areas with development constraints.

Pol. USE 9 The Low Density Residential Neighborhood designation will provide for low-density residential development. Development within this designation includes existing neighborhoods that are zoned for four units net per acre or less.

Allowed Uses and Description: The Low Density Residential Neighborhood designation allows single family residential uses and their accessory uses at a density of 4 units per net acre or less, due to the constraints posed by critical areas. This policy may be implemented by more than one zoning category, based on the ability of the land and public facilities to support development. Development standards, for such items as impervious surfaces, streetscapes, sidewalks and stormwater drainage, may vary within each zoning category based on the existing character of the area.

Designation Criteria: Properties designated Low Density Residential Neighborhood should reflect the following criteria:

1. The area is already generally characterized by single-family residential development at four units per acre or less; and
2. Relative to other residential areas within the City, the area is characterized by lower intensity development as shown on Map LU-2.
3. The land is designated as a potential landslide hazard area, steep slope area, or wetland on the City of Burien's Critical Areas Map,
4. The existing and planned public facilities for the area cannot adequately support a higher density.
5. The area is subject to existing impacts from high levels of airport-related noise.

Pol. USE 10 Clustering of housing units may be allowed on lots designated for residential development that contain steep slopes and are located adjacent to an urban environment.

Pol. USE 11 As slope increases, development intensity, site coverage, and vegetation removal should decrease and thereby minimize the potential for drainage problems, soil erosion, siltation and landslides. Slopes of 40 percent or greater should be retained in a natural state, free of structures and other land surface modifications.

1. Single-family homes and detached single-family garages on existing legally established lots are exempted from this restriction, provided that:

    a. The application of this restriction would deny any appropriate use of this property;
    b. There is no other appropriate economic use with less impact;
    c. The proposed development does not pose a threat to public health, safety or welfare on or off the development site;
    d. Any alterations permitted to the critical area shall be the minimum necessary to allow for economic use of the property;
    e. An analysis of soils, footings and foundations, and drainage be prepared by qualified professionals, certifying that the proposed activity is safe and will not adversely affect the steep slope hazard area or buffer;

f. There are adequate plans, as determined by the City, for stormwater and vegetation management;
g. It is the applicant's responsibility to show that these provisions are met through an appropriate mechanism such as, or similar to, the SEPA process.

2. Short plats or other divisions of an existing legal lot shall only be approved if all resulting lots are buildable under this restriction.

3. It is the applicant's responsibility to show that these provisions are met through an appropriate mechanism such as, or similar to, the SEPA process.

Pol. USE 12 The City should prohibit development on areas prone to erosion and landslide hazards. Further, the City should restrict development on potentially unstable land to ensure public safety and conformity with existing natural constraints, unless the risks and adverse impacts associated with such development can be appropriately mitigated.

Pol. USE 13 Land uses on steep slopes should be designed to prevent property damage and environmental degradation, and to enhance open space and wildlife habitat.

Pol. USE 14 Where there is a high probability of erosion, grading should be kept to a minimum and disturbed vegetation should be restored as soon as feasible. In all cases, the City shall require appropriate site design and construction measures to control erosion and sedimentation.

Pol. USE 15 The City should have development standards that promote the siting of new structures such that they will not require shoreline stabilization and protective measures in the future.

Pol. USE 16 Shoreline stabilization and protective measures should be limited in number and extent. The use of "soft" stabilization and protective measures, such as vegetation, is preferred over the use of "hard" measures, such as concrete bulkheads.

Pol. USE 17 Encourage joint-use activities in proposed shoreline developments.

Pol. USE 18 Wakes generated by vessels operating in the shoreline area should be minimized in order to reduce adverse impacts on the shoreline environment.

Pol. USE 19 Limit use of pesticides and herbicides within shoreline jurisdiction.

Pol. USE 20 Development should be designed to minimize impacts to both views of the shoreline and views from the water. Building orientation, height and the creation of view corridors shall be considered in site and structure design.

## 20.20.035 Conservation Element

Goal CON

Preserve and enhance shoreline natural resources in order to: protect public health, safety, and welfare; maintain the integrity of the natural environment; and preserve the quality of life in Burien.

**Pol. CON 1** Protect critical areas and shoreline ecological processes and functions through regulatory and non-regulatory means. Protection may include acquisition of key properties, regulation of development, and incentives to encourage ecologically sound design.

**Pol. CON 2** The City shall ensure that uses and development in shoreline areas is compatible with the shoreline environments designated in this Shoreline Master Program. Adherence to these designations will ensure that sensitive habitat, ecological systems, and other shoreline resources are protected.

**Pol. CON 3** The City of Burien's Critical Areas Map shall be used as a reference for identifying the City's critical areas. Other unmapped critical areas do exist throughout the City. Any site containing critical areas within shoreline jurisdiction are subject to the special development regulations and conditions found in this shoreline master program

**Pol. CON 4** Development should be directed toward areas where their adverse impacts on critical areas can be minimized.

**Pol. CON 5** New development or redevelopment should avoid or mitigate additional loss of shoreline ecological functions. Developments should be encouraged to improve ecological functions and restore riparian buffers.

**Pol. CON 6** The City shall maintain a system of development regulations and a permitting system to prevent the destruction of critical areas. Development regulations should at a minimum address wetland protection, aquifer recharge areas important for potable water, fish and wildlife habitat conservation areas, frequently flooded areas, and geologically hazardous areas

**Pol. CON 7** The City shall require permit review approval before any activity or construction is allowed to occur in, adjacent to, or impact a critical area.

**Pol. CON 8** The City shall develop land use regulations to buffer critical areas from the impacts of adjacent land uses.

| | |
|---|---|
| Pol. CON 9 | The City requires the use of Best Available Science for protecting critical areas within the community pursuant to the Growth Management Act RCW 36.70A.172(1) (Critical Areas). |
| Pol. CON 10 | The City should provide education and technical assistance on low-impact development techniques. |
| Pol. CON 11 | Provide public outreach and education about shoreline ecological functions and processes, and engage the public in stewardship and enhancement activities. |
| Pol. CON 12 | Encourage minimizing the amount of impervious surfaces in new development through the use of appropriate low-impact development techniques and removing paved areas or using retrofit options in existing developments, where applicable, to minimize runoff. |
| Pol. CON 13 | The City shall consider the impacts of new development on water quality as part of its environmental review process and require where appropriate any mitigation measures. |
| Pol. CON 14 | Educate the public on water quality issues and impacts of stormwater flow. |
| Pol. CON 15 | Educate individuals and households about different ways to reduce pollution. |
| Pol. CON 16 | If no feasible alternative exists, a limited amount of development may occur on wetlands and floodplains. In these instances, a broad range of site planning techniques should be explored to minimize impacts on these critical areas. |
| Pol. CON 17 | All wetland functions should be considered in evaluating wetland mitigation proposals, including fish and wildlife habitat, flood storage, water quality, recreation, educational opportunities, and aesthetics. |
| Pol. CON 18 | The City will protect wetlands by maximizing infiltration opportunities and promoting the conservation of forest cover and native vegetation. |
| Pol. CON 19 | Mitigation for any adverse impacts on wetlands shall be provided in the same basin within which the impacts occur. |
| Pol. CON 20 | The City shall consider the impacts of new development on the quality of land, wildlife and vegetative resources as a part of its environmental review process and require any appropriate mitigating measures. Such mitigation may involve the retention of significant habitats. |
| Pol. CON 21 | The City shall encourage an increase in tree canopies through the addition and the preservation of existing vegetation and use of landscaping as an integral part of development plans. |

**Pol. CON 22** The City should require development proposals to include non structural measures to stabilize soils, hillsides, bluffs and ravine sidewalls and to promote wildlife habitat by removing invasive vegetation and retaining or restoring native vegetation.

**Pol. CON 23** The City should consider developing policies that balance the removal of vegetation to preserve and enhance views with the need to retain vegetation to promote slope stability and open space.

**Pol. CON 24** Enhance riparian vegetation to improve shoreline ecological functions and processes where possible.

**Pol. CON 25** The City should maintain and enhance existing species and habitat diversity including fish and wildlife habitat that supports the greatest diversity of native species.

**Pol. CON 26** All development activities shall be located, designed, constructed and managed to avoid disturbance of adverse impacts to fish and wildlife resources, including spawning, nesting, rearing and habitat areas and migratory routes.

**Pol. CON 27** Fish and wildlife habitat should be protected, conserved and enhanced, including:

a. Habitats for species which have been identified as endangered, threatened, or sensitive by the state or federal government;
b. Priority species and habitats listed in the Adopted King County Comprehensive Plan, October 2008, as amended;
c. Shellfish areas;
d. Kelp and eel-grass beds;
e. Herring and smelt spawning areas; and
f. Wildlife habitat networks designated by the City.

**Pol. CON 28** Fish and wildlife should be maintained through conservation and enhancement of terrestrial, air and aquatic habitats.

**Pol. CON 29** The City should ensure that habitat networks throughout the City are designated and mapped. The network should be of sufficient width to protect habitat and dispersal zones for small mammals, amphibians, reptiles, and birds. These networks should be protected through incentives, regulation and other appropriate mechanisms. Site planning should be coordinated during development review to ensure that connections are made or maintained amongst segments of the network.

**Pol. CON 30** Native plant communities and wildlife habitats shall be integrated with other land uses where possible. Development shall protect wildlife habitat

through site design and landscaping. Landscaping, screening, or vegetated buffers required during development review shall retain, salvage and/or reestablish native vegetation whenever feasible. Development within or adjacent to wildlife habitat networks shall incorporate design techniques that protect and enhance wildlife habitat values.

Pol. CON 31 The City shall promote voluntary wildlife enhancement projects which buffer and expand existing wildlife habitat, through educational and incentive programs for individuals and businesses.

Pol. CON 32 The City shall seek to retain as open space, those areas that provide essential habitat for any rare, threatened or endangered plant or wildlife species.

Pol. CON 33 The City should maintain, protect and enhance greenbelts riparian corridors and wildlife habitat corridors so that the extent and intensity of the built environment is balanced by these natural features.

Pol. CON 34 The City shall work with property owners to encourage non-purchase options such as conservation easements, current use easements, and development covenants to preserve open space and greenbelts within the city's neighborhoods. The City should also accept donations of properties where public access is anticipated or planned.

## 20.20.040 Historic, Cultural, Scientific, and Educational Element

Goal HCSE

Identify, protect, preserve, and restore buildings, sites, and areas in the shoreline having historic, cultural, scientific, or educational value for educational purposes, scientific endeavors, and enjoyment by the general public.

Pol. HCSE 1 The City should protect buildings, sites, and areas in the shoreline having historic, cultural, scientific, or educational value through designation, acquisition by purchase or gift, and incentives for preservation.

Pol. HCSE 2 Ensure that properties having historic, cultural, scientific, or educational value are protected from undue adverse impacts associated with public or private uses and activities.

Pol. HCSE 3 The City should consider developing and implementing measures which preserve trees of historical significance.

Pol. HCSE 4 Encourage educational projects and programs, including signage, that foster a greater appreciation of the importance of buildings, sites, and areas in the shoreline having historic, cultural, scientific, or educational value, as well as of shoreline management and environmental conservation.

## 20.20.045 Flood Prevention and Minimization Element

Goal FLD

Prevent and minimize flood damage to public and private property by locating development away from flood-prone areas and by protecting and restoring shoreline ecological functions and processes.

Pol. FLD 1 Discourage new development in shoreline areas that would be harmed by flood conditions, or which would create or intensify flood hazard impacts on other properties.

Pol. FLD 2 The capacity of natural drainage courses shall not be diminished by development or other activities.

Pol. FLD 3 New structural flood hazard reduction measures shall only be allowed where demonstrated to be necessary, and when non-structural methods are infeasible and mitigation is accomplished. New structural flood reduction measures shall be located landward of associated wetlands and buffer areas, except where no alternative exists as documented in a geotechnical analysis.

Pol. FLD 4 Monitor sea level rise and accordingly adjust development standards and building setbacks to minimize flooding potential.

## 20.20.050 Restoration Element

Goal REST

Restore areas which are ecologically degraded to the greatest extent feasible while maintaining appropriate use of the shoreline.

Pol. REST 1 Promote restoration actions that are doable, practical, and effective.

Pol. REST 2 The City shall be a good steward of public lands and should integrate restoration and/or enhancement of fish and wildlife habitats into capital improvement projects whenever feasible.

Pol. REST 3 Establish incentives that provide opportunities for new development or redevelopment activities in the shoreline to restore impaired ecological functions and processes. Incentives might include, but are not limited to: flexible development standards (e.g. setbacks, height limits, lot coverage), reduced or waiver of permits fees, and tax relief.

Pol. REST 4 The City shall promote voluntary shoreline enhancement projects through educational and incentive programs for individuals and organizations.

**Pol. REST 5** The City should implement the restoration plan associated with this Shoreline Master Program.

**Pol. REST 6** Improve natural stream and shoreline conditions to an environmental quality level that supports the return and continuation of salmon runs and eliminates fish blockages.

**Pol. REST 7** Stream banks and stream channels should be maintained or restored to their natural condition wherever such conditions or opportunities exist.

**Pol. REST 8** Increase availability of large woody debris and opportunities for recruitment in the nearshore zone.

**Pol. REST 9** Restore degraded shoreline areas with native species.

**Pol. REST 10** The City should investigate partnerships with local environmental groups, city, state or county agencies, or tribes to implement projects and conduct follow-up monitoring and reporting.

# Chapter III. Shoreline Environment Designations

## 20.25.001 Shorelines of Statewide Significance

The State of Washington Shoreline Management Act (SMA) designates certain shoreline areas as shorelines of statewide significance. These shorelines are considered important major resources from which all people in the state derive benefit. The SMA states that local shoreline master programs must give preference to uses which favor public and long-term interests of the people of the state. In the City of Burien, only the marine shorelines below the extreme low tide are designated shorelines of statewide significance. Lake Burien is a "shoreline of the state" and is not a "shoreline of statewide significance." The following policies apply to Burien's marine shorelines:

- Recognize and protect the statewide interest over local interest.
- Preserve the natural character of the shoreline.
- Result in long-term over short-term benefit.
- Protect the resources and ecology of the shoreline.
- Increase public access to publicly owned areas of the shoreline.
- Increase recreational opportunities for the public on the shoreline.

## 20.25.005 Shoreline Environment Designation Map

The shoreline designation map, Figure 3, establishes the general locations of each of the shoreline designations within the City of Burien. This map generally illustrates the extent of shoreline jurisdiction, but is only a depiction that will need to be reviewed and determined on a case by case basis based on the relevant definitions in the SMA. In the event that there are any undesignated shorelines of the state, they will be automatically designated Urban Conservancy under this SMP. If any part of a proposed development or activity is located within shoreline designation, the entire proposal must be reviewed for consistency with the City of Burien's Shoreline Master Program.

## 20.25.010 Aquatic

### 1. Purpose

The purpose of the "Aquatic" shoreline environment designation is to protect, restore, and manage the unique characteristics and resources of shoreline areas waterward of the ordinary high water mark, including both Lake Burien and Puget Sound. This is accomplished by managing water dependent uses and modifications to:

- Preserve/restore ecological functions of the nearshore area;
- Preserve critical saltwater and freshwater habitat;
- Provide public access and recreation opportunities;
- Assure compatibility between shoreland and aquatic uses.

## 2. Criteria for Designation

An "Aquatic" shoreline environment designation is assigned to lands waterward of the ordinary high water mark for both saltwater and freshwater bodies of water, including any submerged or inter-tidal areas. For the City of Burien, this designation applies to Lake Burien and all marine (Puget Sound) areas waterward of the ordinary high water mark out to the center of the channel within the City limits. The Aquatic shoreline environment designation includes the water surface together with the underlying lands and the water column.

## 3. Management Policies

a. Shoreline uses and modifications should be compatible with the adjoining shoreline environment and designed and managed to prevent degradation of water quality and alteration of natural hydrographic conditions.

b. New overwater structures should be allowed only for water-dependent uses, public access, or ecological restoration if it can be clearly shown that the cumulative environmental impacts of such structures will not cause significant adverse impacts to protected species.

c. The size of new overwater structures should be limited to the minimum necessary to support the structure's intended use and should support multiple uses.

d. All developments and uses on navigable waters or their beds should be located and designed to minimize interference with surface navigation and moorage.

e. All developments and uses should consider impacts to public views and access and allow for the safe, unobstructed passage of fish and wildlife, particularly those species dependent on migration.

f. Restoration opportunities associated with project impacts should be encouraged in the aquatic environment.

g. Uses that adversely impact the ecological functions of critical saltwater and freshwater habitats should not be allowed except where necessary to achieve the objectives of RCW 90.58.020 (Shoreline Management Act), and then only when their impacts are mitigated according to the sequence described in WAC 173-26-201(2)(e) (Environmental Impact Mitigation) necessary to achieve no net loss of ecological functions.

h. Shoreline uses and modifications should be designed and managed to prevent degradation of water quality and alteration of natural hydrographic conditions.

## 20.25.015 Urban Conservancy

### 1. Purpose

The purpose of the "Urban Conservancy" shoreline environment designation is to protect and restore ecological functions of open space, floodplains, and other sensitive lands where they exist in urban and developed settings, while allowing a variety of compatible uses. This designation focuses on providing public access for the enjoyment of marine and lake shorelines by allowing the development of public recreational facilities.

### 2. Criteria for Designation

An "Urban Conservancy" environment designation is assigned to areas within shoreline jurisdiction that are suitable for public access, water-enjoyment recreational uses and active recreation developments. These are areas that are developed at a low density including residences and outdoor recreation. The Urban Conservancy environment is bounded on the north by the northern end of Seahurst Park and on the south by the southern end of Eagle Landing Park.

### 3. Management Policies

a. Uses that preserve or restore the natural character of the shoreline area or promote preservation of open space and critical areas should be the primary allowed uses.

b. Public access and public recreation objectives should be implemented if feasible and wherever any significant ecological impacts can be mitigated.

c. Water-oriented uses should be given priority over non-water-oriented uses with water-dependent uses given the highest priority.

d. New development should be designed and located to preclude the need for shoreline armoring, vegetation removal, flood control, and other shoreline modifications.

e. Standards should be established for shoreline stabilization measures, vegetation conservation, water quality, and shoreline modifications. These standards shall ensure that new development does not result in a net loss of shoreline ecological functions or further degrade other shoreline values.

## 20.25.020 Shoreline Residential

### 1. Purpose

The purpose of the "Shoreline Residential" environment designation is to accommodate residential development and appurtenant structures as well provide appropriate public access.

### 2. Criteria for Designation

A Shoreline Residential environment designation is assigned to shoreline areas that are predominantly single-family or multifamily residential development or are planned and platted for residential development. These are areas that are developed at a moderate density or intensity including residences and outdoor recreation. Low intensity institutional uses may be allowed if their impacts on the shoreline environment are mitigated. The Shoreline Residential environment includes all shorelands from the northern city limits to the north end of Seahurst Park, from the southern end of Eagle Landing Park to the southern city limits, and all of Lake Burien.

### 3. Management Policies

a. Residential and accessory uses, recreation facilities and public access shall be the preferred uses.

b. Multifamily and multi-lot residential and recreational developments should provide public access and joint use for community recreational facilities.

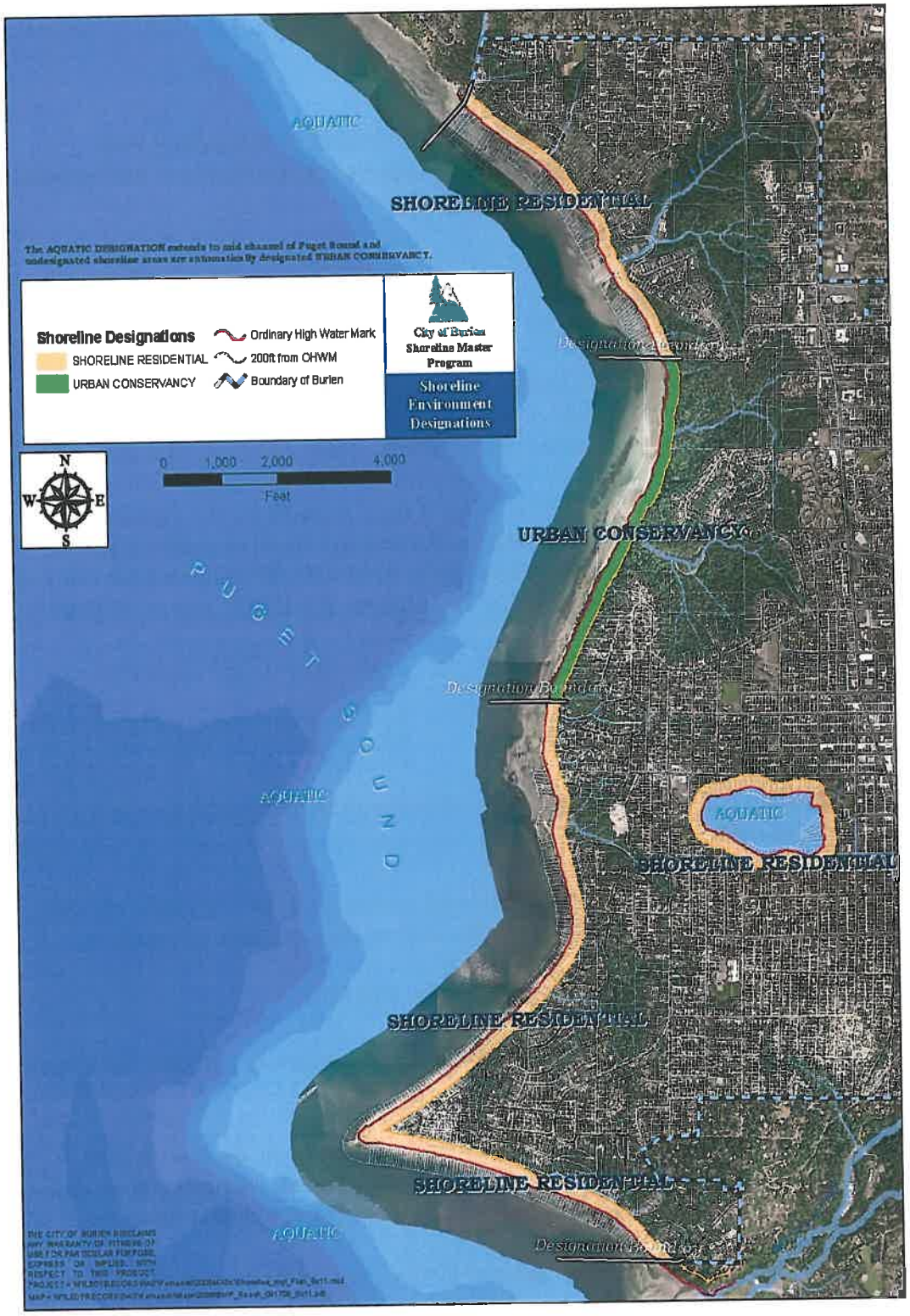
c. Water-oriented recreational uses should be allowed.

d. Any new development or redevelopment should utilize low impact development techniques where feasible.

e. Standards for building setbacks, lot coverage limitations, riparian buffers, shoreline stabilization, vegetation conservation, critical area protection, and water quality shall be set to assure no net loss of shoreline ecological functions.

f. Public access and public recreation objectives should be implemented if feasible and wherever any significant ecological impacts, can be mitigated.

## 20.25.025 Figure 3 Shoreline Environment Designation Map



# Chapter IV. Shoreline Uses and Modifications Policies and Regulations

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## General Provisions

### 20.30.001 Figure 4 Shoreline Permit Matrix

| Type of Shoreline Permit Required for New Shoreline Uses and Modifications* | | | |
|---|---|---|---|
| | Shoreline Environment Designations (Please see Chapter 20.25 for shoreline designation descriptions and section 20.25.025 Figure 3 for a map showing the locations of each designation) | | |
| | Shoreline Residential | Aquatic | Urban Conservancy |
| Aquaculture | X | CU[1] | X |
| Boat Mooring Buoy | N/A | P[3] | N/A |
| Boat Ramp | X | X | X |
| Boat House (covered moorage) | X | X | X |
| Shoreline Stabilization Structures | | | |
| • Breakwater & other in-water structures | N/A | X[6] | N/A |
| • Bulkheads | SDP[4] | CU | SDP[4] |
| • Upland Structures (retaining walls and bluff walls)** | SDP | N/A | SDP |
| Personal Wireless Service Facility | CU | N/A | X |
| Community Beach | CU | CU | X |
| Community residential facility | CU | X | X |
| Docks, Piers and Floats | CU | CU | CU |
| Docks, Piers and Floats-Residential | SDP[5] | SDP[5] | X |
| Dredging | N/A | X | N/A |
| Fill[2] | X | X | X |
| Floating home | N/A | X | N/A |
| Flood Hazard Reduction | SDP | CU | SDP |
| Forestry (clearing) | CU | N/A | CU |
| Grading | CU | N/A | CU |
| Government facility | CU | X | CU |
| Habitat Enhancement or Restoration | SDP | SDP | SDP |
| Industrial & Ports | X | X | X |
| Mining | X | X | X |
| Office | X | X | X |
| Public park and recreation facilities | SDP | SDP | SDP |
| Recreation | SDP | SDP | SDP |
| Residential - Single family** | SDP[8] | X | SDP[8] |
| Residential - Multi family | SDP | X | CU |
| Commercial Use and Development | X[7] | X | X[7] |
| Schools | CU | N/A | CU |
| Transportation Facilities & Parking | SDP | X | SDP |
| Utilities | SDP | CU | SDP |

P Permitted – Allowed when meeting the requirements for the given use. A shoreline substantial development permit (SDP) or shoreline exemption may be needed. See WAC 197-26-040 for a complete list of development exempt from a substantial development permit.

SDP Shoreline substantial development permit (City Decision) – See Chapter 20.35 for specific procedures

CU Shoreline conditional use permit (Requires a Department of Ecology Decision if locally approved.) – See Chapter 20.35 for specific procedures. A SDP may also be required.

| | |
|---|---|
| X | Prohibited |
| N/A | Not applicable |
| 1 | Prohibited in critical saltwater habitats and Lake Burien |
| 2 | Allowed if necessary to construct a permitted use |
| 3 | Private mooring buoys are exempt from the shoreline substantial development permit process but shall comply with BMC 20.30.090[Recreational Mooring Buoys] which prohibits mooring buoys on Lake Burien. |
| 4 | Construction of the normal protective bulkhead common to single-family residences must comply with BMC 20.30.070 [Bulkheads and other shoreline stabilization structures] but is not required to obtain a substantial development permit. |
| 5 | Construction of a dock, pier, or float that is below the substantial development threshold set forth in RCW 90.58.030[3e.iv] [Definitions and concepts, "susbstantial development"]shall be exempt from the Shoreline Substantial Development Permit process, but shall comply with all other applicable sections of this master program. |
| 6 | Allowed only for protection or restoration of ecological functions. |
| 7 | B&B's are allowed in Shoreline Residential environment (Section 20.30.095). Limited commercial recreation activities in Seahurst Park (Section 20.30.085) |
| 8 | A conditional use permit is required for construction within the shoreline buffer ~~that is not waterward of the existing home~~. A variance is required for any development waterward of the existing home within the buffer; however, a variance is not required if ~~. This does not apply to~~ the common line setback option of 20.30.095(2,c) is utilized. |
| * | Shoreline uses not listed in the matrix above are subject to a shoreline conditional use permit. |
| ** | Exempt from shoreline substantial development permit requirements if this is for construction of only one detached unit built by an owner, lessee, or contract purchaser who will be occupying the residence, in accordance with WAC 173-27-040(g)[single-family residential exemption], as amended. |

**Comment [d1]:** Language to ensure consistency with Residential development section

## 20.30.005 Applicability

The following provisions shall apply to all uses and activities within the City of Burien's shoreline jurisdiction unless otherwise noted. These regulations are based on general goals and policies without regard to shoreline designation based upon elements of the shoreline detailed in Chapter II of this shoreline master program consistent with RCW 90.58.100(2)[SMP required contents] and implement the principles as established in WAC 173-26-186[Governing principles of the guidelines] and WAC 173-26-221[General Master Program Provisions].

- Land Use
- Archaeological and Historic Resources
- Critical Areas
- Flood Hazard Reduction
- Public Access
- Shoreline Vegetation Conservation
- Water Quality, Storm Water, and Nonpoint Pollution

## 20.30.007 Existing Development

1. **Existing Single-Family Homes, Appurtenances, and Other Existing Structures.** Single-family homes, appurtenances and other structures that were legally established by _____ (effective date of this SMP) are considered to be conforming to the SMP. All such structures may be reconstructed within the existing footprint subject only to those building standards that prevail throughout the City of Burien for the associated zoning designation. Any addition, expansion or reconstruction beyond the existing footprint of the single-family home, appurtenance or other structure must comply with the SMP. Any single family home to which a variance is issued shall be considered a conforming structure.

   The ability to reconstruct a structure within its existing footprint does not imply an ability to create, enlarge or expand structures for Flood Hazard Reduction (see BMC 20.30.030), or Bulkheads and Other ~~Structures for~~ Shoreline Stabilization Structures (See BMC 20.30.070).

   Comment [d2]: Corrected name of section

   Replacement of any portion of any structure shall comply with the SMP requirements for materials that come in contact with the waters of Puget Sound and Lake Burien pursuant to 20.30.045 [2][Water Quality, Storm Water and Nonpoint Pollution].

2. **Other Existing Uses.** Uses that were legally established by _____(effective date of this SMP) are considered to be conforming to the SMP. Any enlargement or expansion of the use must comply with the SMP.

## 20.30.010 Impact Mitigation

### 1. Policy

a. Adverse impacts to the ecological functions and values shall be mitigated to result in no net loss of shoreline ecological functions and process.

b. Mitigation for adverse impacts of new development projects should first consider enhancement of degraded conditions to offset the impacts of the new development near shoreline resources.

(For additional policy guidance please refer to Chapter II General Goals and Policies, pgs. 1-2, 12-15 and Chapter III Management Policies, pgs. 2-4.)

### 2. Regulations

a. All shoreline development and uses shall occur in a manner that results in no net loss of shoreline ecological functions, through the location and design of all allowed development and uses. In cases where impacts to shoreline ecological functions from allowed development and uses are unavoidable, those impacts shall be mitigated according to the provisions of this section.

b. To the extent Washington's State Environmental Policy Act of 1971 (SEPA), RCW chapter 43.21C[State environmental policy], is applicable, the analysis of environmental impacts from proposed shoreline uses or developments shall be conducted consistent with the rules implementing SEPA (BMC Chapter 14[Environmental Protection] and WAC 197-11[SEPA rules]).

c. Where required, mitigation measures shall be applied in the following sequence of steps listed in order of priority.
   - i. Avoiding the impact altogether by not taking a certain action or parts of an action;
   - ii. Minimizing impacts by limiting the degree or magnitude of the action and its implementation by using appropriate technology or by taking affirmative steps to avoid or reduce impacts;
   - iii. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
   - iv. Reducing or eliminating the impact over time by preservation maintenance;
   - v. Compensating for the impact by replacing, enhancing, or providing substitute resources or environments;
   - vi. Monitoring the impact and the compensation projects and taking the appropriate corrective measures.

d. In determining appropriate mitigation measures applicable to shoreline development, lower priority measures shall be applied only where higher priority measures are determined to be infeasible or inapplicable.

e. Required mitigation shall not be in excess of that necessary to assure that proposed uses or development will result in no net loss of shoreline ecological functions.

f. When requiring compensatory measures or appropriate corrective measures pursuant to the priority of mitigation sequencing above, preferential consideration shall be given to measures that replace the impacted functions directly and in the immediate vicinity of the impact. However, alternative compensatory mitigation within the watershed that addresses limiting factors or identified critical needs for shoreline resource conservation based on watershed or comprehensive resource management plans applicable to the area of impact may be authorized. Compensatory mitigation of impacts from new development projects should first consider enhancement of degraded conditions to offset the impacts of the new development near shoreline resources. If this is not feasible the second priority should focus mitigation on areas that are in need of restoration. Authorization of compensatory mitigation measures may require appropriate safeguards, terms or conditions as necessary to ensure no net loss of ecological functions.

g. Mitigation for new development in the Shoreline Buffer is required if
    i. native vegetation is cleared, and/or
    ii. new impervious surface is created, and/or
    iii. new partially functioning area is created.

A procedure for evaluating impacts and determining requirements for mitigation is described in BMC 20.30.055 [Shoreline Buffers].

Alternatively, the applicant may choose to secure the services of a qualified professional to develop a report to demonstrate that the no-net-loss standard will be met. The Shoreline Administrator may choose to develop standards for guiding the development of this report.

Please also refer to sections BMC 20.30.050 Dimensional Standards for Shoreline Development and BMC 20.30.055 Shoreline Buffers for specific requirements.

## 20.30.015 Land Use

The following provisions apply to all development and uses regardless of whether a shoreline substantial development permit is required.

### 1. Policies

a. Preference for shoreline permitted uses shall first be given to *water dependent uses*, then to *water related* and *water enjoyment uses*.

b. The city should be proactive in enforcing shoreline regulations and provide sufficient resources to ensure enforcement occurs.

(For additional policy guidance please refer to Chapter II General Goals and Policies, pgs. 8-11 and Chapter III Management Policies, pgs. 2-4.)

### 2. Regulations

a. The application of master program policies and regulations to all uses and related modifications shall assure no net loss of ecological functions necessary to sustain shoreline natural resources.

b. *Water dependent uses* shall only be allowed overwater if the overwater location is necessary for the operation of the water dependent use. Uses which are not water dependent shall not be permitted overwater unless specifically stated otherwise in the regulations for the applicable shoreline environment.

## 20.30.020 Archaeological and Historic Resources

According to the state shoreline management guidelines, if archaeological or historic resources have been identified in shoreline jurisdiction, the local government is required to collect information about these resources and contact the state historic preservation office and local affected Indian Tribes. The county and the state maintain inventories of both archaeological and historic resources. These sites and artifacts are protected by several state provisions:

RCW Chapter 27.53— Archaeological Sites and Resources
This state law makes it illegal to knowingly disturb an archaeological site on public or private lands without a state-issued permit.

RCW Chapter 27.44— Indian Graves and Records
This state law makes it illegal to knowingly disturb Native American cairns, petroglyphs and graves on public or private lands without a state-issued permit. Selling any Native American Indian artifacts or remains removed from a cairn or grave is also illegal.

WAC 25-48—Archaeological Excavation and Removal Permit
This provision establishes procedures for application for and issuance of state permits for excavation and/or removal of archaeological sites and resources.

### 1. Policy

The City should ensure conservation of significant archeological and historic amenities in the shoreline areas and include on the inventory of registered sites maintained by the Washington State Office of Archaeology and Historic Preservation, and tribally identified sites.

(For additional policies refer to Chapter II General Goals and Policies, pg. 15.)

### 2. Regulations

a. Archaeological sites located in shoreline jurisdiction are subject to state and federal regulations as well as to the City of Burien Shoreline Master Program.

b. When an application for work in the shoreline area documented to contain archaeological resources is filed the application shall include an evaluation by a professional archaeologist coordinated with affected tribes.

c. All shoreline permits shall contain the requirement to stop work immediately and notify the City, affected tribes and the Washington State Office of Archaeology and Historic Preservation if an artifact is discovered. The property owner will be required to provide for a site inspection and evaluation by a professional archaeologist for review by the relevant tribes and agencies prior to proceeding with the development or activity.

d. Archaeological excavations may be permitted subject to the provisions of this shoreline program.

## 20.30.025 Critical Areas

Critical areas include the following areas and ecosystems: wetlands, critical aquifer recharge areas, fish and wildlife habitat conservation areas, frequently flooded areas, and geologically hazardous areas. Critical saltwater and critical freshwater habitats are also types of critical areas within shoreline jurisdiction.

### 1. Policies

a. In assessing the potential for net loss of ecological functions or processes, project specific and cumulative impacts should be considered.

b. Development standards for density, frontage improvements, setbacks, impervious surface, shoreline stabilization, vegetation conservation, buffers, critical areas, and water quality should protect existing shoreline ecological functions and processes. During permit review, the Shoreline Administrator should consider the expected impacts associated with proposed shoreline development when assessing compliance with this policy.

(For additional policy guidance please refer to Chapter II General Goals and Policies, pgs. 12-15 and Chapter III Management Policies, pgs. 2-4.)

### 2. Regulations

a. BMC 19.40—Critical areas (City of Burien Ordinance 394, adopted October 20, 2003) has been reviewed for consistency with Chapter 90.58 RCW and WAC 173-26 and shall apply to the shoreline jurisdiction with the following exceptions:

i. The exemptions and exceptions contained in BMC 19.40.070(1), (2) & (3) apply only to the critical areas provisions and are not exemptions from substantial development permits. The exceptions contained in BMC 19.40.070 (4) do not apply and are not considered part of the SMP.

ii. BMC 19.40.290 (3.B.iii) does not apply and is not considered part of the SMP. For a landslide hazard area buffer of less than twenty-five (25) feet, in addition to the items required in BMC 19.40.120, a shoreline variance shall be required.

iii. BMC 19.40.310 (2.H.v) does not apply and is not considered part of the SMP. For a wetland buffer of less than twenty-five (25) feet, a shoreline variance shall be required.

iv. BMC 19.40.410(2.B) does not apply and is not considered part of the SMP. Filling is prohibited in the Aquatic environment per Section 20.30.001 Figure 4.

v. The following types of wetlands are not regulated by the SMP:

   a. Small wetlands less than 1,000 square feet and hydrologically isolated;
   b. Man-made ponds smaller than one acre and excavated from uplands without a surface water connection to streams, lakes, or other wetlands.

b. Identification of wetlands and delineation of their boundaries pursuant to this Master Program shall be done in accordance with the approved federal wetland delineation manual and applicable regional supplements. All areas within the City of Burien meeting the wetland designation criteria in that procedure are hereby designated critical areas and are subject to the provisions of this Master Program.

c. Wetland rating system. Wetlands for the purposes of the SMP shall be categorized in accordance with the Washington State Wetland Rating System for Western Washington – Revised (Ecology Publication #04-06-025).

d. Wetland buffers. Wetland buffers for the purposes of this SMP shall be determined based upon Appendix 8-C of "Wetlands in Washington State Volume 2: Guidance for Protecting and Managing Wetlands FINAL April 2005 Ecology Publication #05-06-008" based on information provided as part of a critical area study.

e. Development proposals shall adhere to the applicable submittal requirements (a critical area report specific to the critical area) as specified in the Critical Areas Ordinance regulations adopted as part of this SMP.

f. Development shall not intrude into, over, or within 10 feet from *critical saltwater habitats* (e.g., eelgrass) except when an alternative alignment or location is not *feasible* and the development would result in no net loss of *critical saltwater habitat*.

g. When this Master Program requires mitigation, the mitigation sequence described in section BMC 20.30.010 [Impact Mitigation] shall be followed.

## 20.30.030 Flood Hazard Reduction

The following provisions apply to actions taken to reduce flood damage or hazard, as well as to uses, development and shoreline modifications that may increase flood hazards. Flood hazard reduction measures may consist of nonstructural measures such as setbacks, land use controls, wetland restoration, biotechnical measures, and storm water management. Flood hazard reduction measures may also include structural measures such as floodwalls, dikes and elevation of structures consistent with the National Flood Insurance Program.

### 1. Policies

a. All new shoreline development and uses shall be located and designed to prevent the need for shoreline stabilization and structural flood hazard reduction measures for the life of the development.

b. Flood protection structures may be allowed in shoreline jurisdiction if a shoreline substantial development permit is obtained. Structures that are near and generally parallel to the ordinary high water mark shall be considered a bulkhead and require a conditional use permit consistent with *bulkhead* regulations. (See BMC 20.30.001 Figure 4).

c. New and expanded public flood protection measures may be permitted subject to City of Burien review and approval of a critical area study and the approval of a Federal Biological Assessment by the federal agency responsible for reviewing actions related to a federally listed species.

d. New structural flood protection measures should only be allowed when necessary to protect existing development or to facilitate restoration projects.

e. When emergency repair of flood protection structures are necessary, permits for the work including mitigation, should be obtained upon abatement of the emergency or the structure must be removed.

(For additional policies refer to Chapter II General Goals and Policies, pg. 16.)

### 2. Regulations

a. Non-structural flood protection measures shall be used instead of structural solutions unless the project proponent demonstrates that a non-structural solution is not feasible and there would be no net loss of shoreline ecological functions.

b. All flood protection measures, including repair and maintenance, shall conform to standards set forth in approved floodplain management plans, when available.

c. Flood protection shall not have adverse impacts on the property of others.

d. Flood control methods must be consistent with BMC 15.55-Flood Damage Prevention and BMC 19.40-Critical Areas.

e. Subdivision proposals shall be consistent with the need to minimize flood damage by conforming to the adopted Base Flood Elevation regulations.

f. All new shoreline development and uses, including the replacement of a destroyed home, shall be located and designed to prevent the need for new or expanded structural flood hazard reduction measures for the life of the development. Exceptions may be made for the limited instances where flood hazard reduction is necessary to protect allowed uses where no alternative locations are available and no net loss of ecological functions will result.

g. New structural flood hazard reduction measures in shoreline jurisdiction are allowed only when it can be demonstrated by a scientific and engineering analysis that they are necessary to protect existing development or facilitate restoration projects, that nonstructural measures are not feasible, that impacts to ecological functions and priority species and habitats can be successfully mitigated so as to assure no net loss, and that appropriate vegetation conservation actions are undertaken consistent with Section 20.30.040.

h. Flood protection structures may be allowed in shoreline jurisdiction if a shoreline substantial development permit is obtained. In addition, flood protection structures at or near, and parallel to, the ordinary high water mark require a conditional use permit.

## 20.30.035 Public Access

Public access can be either *physical access* or *visual access*. Physical access is the ability of the general public to reach, touch, and enjoy the water's edge, and/or to travel on the waters of the state. Visual access is to view the water and the shoreline from adjacent locations or access with improvements that provide only a view of the shoreline or water, but do not allow physical access to the shoreline.

### 1. Policies

a. Public access to shoreline areas should be designed to protect private property and public health and safety.

b. Public access should be provided as close as possible to the water's edge with no net loss of shoreline ecological function that cannot be mitigated.

c. Private views of the shoreline, although considered during the review process, are not expressly protected. Property owners concerned with the protection of views from private property are encouraged to obtain view easements, purchase intervening property or seek other similar private means of minimizing view obstruction.

(For additional policies refer to Chapter II General Goals and Policies, pg. 2-4 and Chapter III Management Policies, pg. 2-4.)

### 2. Regulations

a. Public access provided by shoreline street ends, rights-of-way, and other public lands shall provide, maintain, enhance and preserve visual access to the water and shoreline in accordance with RCW 35.79.035[Limitations on vacations of streets abutting bodies of water — Procedure].

b. Visual access to outstanding scenic areas shall be provided with the provision of roadway design features that allow for visual access opportunities and are sensitive to adjacent land uses and neighborhood characteristics.

c. If a public road is located within shoreline jurisdiction, any unused right of way shall be dedicated as public access unless vacated as set forth in RCW 35.79.035[Limitations on vacations of streets abutting bodies of water — Procedure].

d. Subject to constitutional limitations, public access shall be required for all new shoreline development and uses, except for water dependent uses, individual single family residences, and subdivisions of less than five parcels.

e. Public access to shoreline areas shall not be required, where it is demonstrated to be infeasible because of adverse ecological impacts that cannot be mitigated, incompatible uses, safety, security, or constitutional and other legal limitations that may be applicable.

f. The City shall utilize alternate methods of providing public access when appropriate and *feasible*, such as off-site improvements, viewing platforms, separation of uses through site planning and design, and restricting hours of public access.

g. Public access improvements shall not result in a net loss of shoreline ecological functions.

h. Required public access sites shall be fully developed and available for public use at the time of occupancy or use of the development or activity.

i. Public access easements and permit conditions shall be recorded on the deed where applicable or on the face of a plat or short plat as a condition running in perpetuity with the land and shall occur at the time of permit approval.

j. Future actions by the applicant or other parties shall not diminish the usefulness or value of the public access site.

## 20.30.040 Shoreline Vegetation

Vegetation along the shoreline plays a number of important roles including providing bank stability, habitat and wildlife corridors, shade and cover, wood and organic debris recruitment. By slowing erosion and retaining sediments, riparian vegetation reduces pollutants including nitrogen, phosphorus, hydrocarbons, PCBs, metals, and pesticides. Shoreline vegetation also prevents excessive turbidity by slowing down and filtering surface water runoff and associated sediments. This section should be used in conjunction with BMC section 20.30.050 [Dimensional Standards for Shoreline Development].

WAC 173-26-221[5.b][SMP Guidelines, General master program provisions, vegetation conservation], sets forth the principles on how vegetation contributes to the overall health and sustainability of our shorelines. The applicability of these principles to Burien's SMP is supported by the appendices to this SMP (Shoreline Inventory, Shoreline Analysis and Characterization, Shoreline Cumulative Impacts Analysis and Supplemental Informational Documents).

### 1. Policies

a. Native plant communities within shoreline jurisdiction including, but not limited to, wetlands, lakes, streams and bluffs should be protected and maintained to minimize damage to the ecology and environment of the shoreline area.

b. Restoration and mitigation of shorelines degraded due to natural or manmade causes should, wherever feasible, use bioengineering techniques to arrest the processes of erosion and sedimentation, to improve water quality and to provide for properly functioning conditions.

c. Vegetation within the city shoreline areas should be enhanced over time to provide a greater level of ecological functions, human safety, and property protection. This should be accomplished by managing alterations within shoreline jurisdiction and implementing vegetation management standards that will maintain or enhance the ecological functions. Emphasis on vegetation maintenance and enhancement should be focused in degraded areas and areas that are most beneficial to shoreline ecological functions.

   (For additional policy guidance please see Chapter II General Goals and Policies, pg. 10-15.)

## 2. Regulations

a. *Alterations* to vegetation within shoreline jurisdiction (except for the maintenance of existing or approved conditions) are not allowed without review and approval by the City. When allowed, alterations to the vegetation shall result in no net loss of shoreline ecological value or function.

b. *Alterations* within the shoreline vegetation conservation buffer (except for the maintenance of existing or approved conditions) shall only be allowed through review and approval by the City of a vegetation management plan as set forth in paragraph d below.

c. If mitigation of impacts is necessary, it should take the form of vegetation enhancement and result in improvements to ecological functions. The vegetation management plan shall be prepared by a qualified professional and shall be consistent with the provisions of this chapter and BMC Chapter 19.40[Critical Areas]. Vegetation enhancement plans shall include:

    i. Revegetation of degraded buffer areas within Zone 1 of the Shoreline Buffer (see BMC 20.30.050 Figure 5, Dimensional Standards for Shoreline Development) (or top of shore armoring if applicable) or wetland edge with dense native vegetation meeting the standards of paragraph (d)(iii-iv) below. The Administrator may require wider widths or other improvements to mitigate greater impacts.
    ii. The above revegetation area may be modified using area averaging when existing structures encroach into Zone 1 of the Shoreline Buffer, when access through the area to waterfront facilities is needed, or when water-dependent activities need to take place in the area.

d. Within a shoreline vegetation conservation buffer as set forth in BMC 20.30.050[Dimensional Standards for Shoreline Development], *alterations* shall comply with the following;

    i. The applicant shall provide a vegetation management plan prepared by a qualified professional; and
    ii. The total area of vegetation removal or *alteration* shall be replaced at a size equal or greater to the area being altered; and
    iii. Where new or altered vegetation planting areas are proposed within the shoreline vegetation conservation buffer, either as a part of a project proposal or to replace any existing vegetation that is removed, the new vegetation shall be provided at a density to mimic natural conditions rather than a landscaped yard; and
    iv. When new vegetation planting areas are proposed within the shoreline vegetation conservation buffer, the new or altered

vegetation planting areas shall consist of mix of native trees, shrubs and ground cover; and

v. Vegetation management plans should place emphasis on surface water filtration and infiltration, and providing plantings as close to the water's edge or edge of bulkhead as feasible within Zone 1 of the Shoreline Buffer; and

vi. New lawn areas are prohibited in Zone 1 of the Shoreline Buffer due to their limited functional benefits and need for chemical and fertilizer application; and

vii. Appropriate limitations shall be included on the use of fertilizer, herbicides and pesticides as needed to protect lake and marine water quality.

e. Prior to issuance of a building permit, if applicable, the applicant shall submit a vegetation management plan pursuant to section h. The plans shall state what erosion control measures will be implemented during and after construction resulting in long term shoreline stabilization.

f. All clearing, grading and vegetation removal shall be the minimum necessary except for the removal of noxious and invasive vegetation. Hand equipment should be used when feasible.

g. Consistent with existing regulations, only noxious weeds shall be removed from critical areas or their buffer without approval of the Shoreline Administrator. Replacement of non-native vegetation may be allowed through approval of a vegetation management plan as prescribed in section h.

h. The Director shall establish standards for vegetation management plans. At a minimum, vegetation management plans shall comply with the following;

i. Describe the area to be disturbed and the proposed vegetation to be altered; and

ii. Outline specific actions or methods that will be used to minimize impacts to the ecological functions and values; and

iii. Indicate how existing shoreline vegetation will be preserved and protected; and

iv. Describe measures that will be used or enacted that will ensure any alteration and required vegetation will be maintained for a minimum of two years and preferably for the duration of the use or development; and

v. Delineate any applicable critical area and/or buffer; and

vi. The plan shall document how the proposed alteration will result in equal or better ecological function and value.

## 20.30.045 Water Quality, Storm Water and Nonpoint Pollution

Storm water picks up oil, grease, metals, yard and garden chemicals, dirt, bacteria, nutrients, and other pollutants from paved areas, and carries them to Puget Sound and Lake Burien without treatment. The higher rate of runoff from more impervious areas also results in decreased water quality by flushing more sediment into the water.

### 1. Policies

a. The City of Burien should protect against adverse impacts to the public health, to the land and its vegetation and wildlife, and to the waters of the state and their aquatic life, through implementation of the following principles:

i) Prevent impacts to water quality and storm water quantity that would result in a net loss of shoreline ecological functions, or a significant impact to aesthetic qualities, or recreational opportunities.

ii) Ensure mutual consistency between shoreline management provisions and other regulations that address water quality and storm water quantity, including public health, storm water, and water discharge standards. The regulations that are most protective of ecological functions shall apply, except as otherwise provided in RCW 36.70A.480[Growth Management, shorelines of the state], regarding the level of protection for critical areas within shorelines of the state

(For additional policy guidance please see Chapter II General Goals and Policies, pg. 12.)

### 2. Regulations

a. Construction materials that come in continuous, direct contact with surface waters shall not be treated or coated with toxic materials. Untreated wood, precast concrete, plastic or nontoxic alternatives shall be used unless the project proponent demonstrates and the City of Burien building official determines that there is no feasible alternative to toxic treatments that will provide the structural characteristics necessary for the project. Wood products treated with creosote or pentachlorophenol are prohibited on all new structures or repair projects that come in direct contact with water or could leach into surface or ground water.

b. Low impact development methods shall be incorporated into any development or redevelopment in shoreline jurisdiction when feasible.

## 20.30.050 Dimensional Standards for Shoreline Development

The following buffers are based on the City of Burien Shoreline Inventory (Appendix 1), City of Burien Supplement to the Shoreline Inventory (Appendix 1.A), the City of Burien Shoreline Analysis and Characterization (Appendix 2), the City Of Burien Supplement to the Shoreline Analysis and Characterization (Appendix 2.A), the City of Burien Shoreline Cumulative Impacts Analysis (Appendix 4), the City Of Burien Supplement to the Cumulative Impacts Analysis (Appendix 4.A), and Supplemental Informational Documents (Appendix 5) reports contained in this shoreline master program. The shoreline buffer, common line building setbacks and vegetation conservation buffers are calculated from the ordinary high water mark. Buffer setbacks are measured landward from the outer edge of a buffer. For measurement methods, refer to BMC 19.17[Misc. Use, Development and Performance Standards].

A significant majority of Burien's marine shorelines are developed with single-family residential structures and appurtenances. Specifically reaches 1, 3 and 4, on the Puget Sound, there are many structures in close proximity to the ordinary high water mark and due to this existing development pattern there are inherent conflicts in applying greater buffer widths while also retaining the ability of residents to continue use and maintain those areas that have been historically used in conjunction with those properties. Figure 6, Shoreline Planning Areas, illustrates the locations of altered and highly altered shoreline areas.

The shoreline buffer and vegetation conservation buffers shown in Figure 5 and in BMC 20.30.050[Dimensional Standards for Shoreline Development]:

1. Do not apply to legally established structures existing on _____ (effective date of the SMP).

2. Apply to new development, new structures, and additions/expansion of legally existing structures.

## Figure 5 Dimensional Standards for Shoreline Development

| | UC | SR-LB | SR-AL | SR-HA |
|---|---|---|---|---|
| **Shoreline Buffer Zone 1 (1)** | 50 ft | 30 ft | 30 ft | 20 ft |
| **Shoreline Buffer Zone 2 (1)** | 100 ft | 15 ft | 15 ft | 15 ft |
| **Vegetation Conservation (2)** | 200 ft | 150 ft | 150 ft | 150 ft |
| **Lot Size (3)** | RS-12,000 | RS-7,200 | RS-12,000 | RS-12,000 |
| **Building Coverage (4)** | 30% | 35% | 35% | 35% |

**UC: Urban Conservancy**
**SR-LB: Shoreline Residential – Lake Burien**
**SR-AL: Shoreline Residential – Marine altered**
**SR-HA: Shoreline Residential – Marine highly altered**
(Please refer to Figure 6 for a map detailing the locations of the areas listed above.)

(1) Consistent with BMC 19.40-critical areas and BMC 20.30.055(1). For single family residential development in the Marine altered and highly altered planning areas, development may occur in the buffers prescribed in this section ~~may be reduced~~ pursuant to BMC 20.30.095, through the conditional use or variance permit process. Additions or expansions of primary single family residences are not allowed in zone one or two around Lake Burien.

(2) See BMC 20.30.040 Shoreline Vegetation Conservation for specific requirements.
(3) See BMC 19.15 and BMC 19.17.170 of the zoning code for minimum lot area requirements.
(4) See BMC 19.15

**Comment [d3]:** Allows some alteration in the marine environment and specifically does not allow expansion of SFR's into zones 1 or 2 around the Lake.

**Figure 6: Shoreline Planning Areas**

## 20.30.055 Shoreline Buffers

**Policy:**

1. While buffer widths based on science are necessary to protect ecological functions, it presents challenges in existing heavily developed areas such as along some parts of Burien. In such areas, an alternative strategy is established using smaller buffers that are based on existing development pattern, in combination with mitigation requirements for new development that provide enhancement of the smaller buffer and other degraded features to address impacts of the new development outside the small buffer areas when part of a vegetation conservation plan.

**Regulations:**

1. A Shoreline Buffer is established for the Marine Shoreline and for Lake Burien. This buffer consists of two zones; Zone 1 and Zone 2.
   a) Zone 1 is adjacent to *Ordinary High Water Mark (OHWM)*. New development that would introduce adverse impacts is strictly limited within Zone 1 and, if allowed, must be mitigated to assure no net loss.
   b) Zone 2 is adjacent to the landward side of Zone 1. New development in Zone 2 that would introduce adverse impacts, if allowed, must be mitigated to assure no net loss, preferentially by restoration activities in Zone 1.
   c) The size of these zones varies as shown in 20.30.050 Figure 5. Distances are measured on a horizontal plane in a direction that is perpendicular to the line of *OHWM*.

2. **No Net Loss Compliance.** All development within the buffer as set forth in BMC 20.30.050 and 20.30.055 shall demonstrate that unavoidable adverse impacts are mitigated to achieve no net loss.

   a. Achieving no net loss can be achieved by:
      i. avoiding an adverse impact, or
      ii. relocating the adverse impact to be outside the buffer, or
      iii. by mitigating the impact.

   b. Demonstrating that the development will comply with the no net loss standard can be accomplished by one of the following methods.
      i. An applicant submitting an ecological impacts report prepared by a qualified professional, or
      ii. Completion of a project worksheet as set forth in sub-section 5. The Shoreline Administrator shall verify the accuracy of the completed worksheet in conjunction with the appropriate shoreline approval process.

c. The Shoreline Administrator may prepare standards and guidelines on what shall be included in an ecological impacts report to satisfactorily demonstrate compliance with the standards.

3. **Development Standards for Zone 1.**

a. New development in Zone 1 shall be primarily for the following;

i. maintenance of existing structures, or
ii. restoration or remodeling of existing structures within the existing footprint, or
iii. voluntary restoration activities, or
iv. providing required mitigation for adverse impacts in Zone 2.

b. An access path from Zone 2 to the line of *OHWM* may be allowed as an exception.

i. An access path shall be the minimum size and designed to serve this purpose.
ii. Additional flexibility may be allowed when it is necessary to meet the needs of users with limited mobility.
iii. When *feasible*, access paths shall be constructed using pervious materials.

4. **Development Standards for Zone 2.**

a. New development in Zone 2 shall be primarily for the following;

i. maintenance of existing structures, or
ii. the restoration or remodeling of existing structures within the existing footprint, or
iii. voluntary restoration activities.

b.New developments that result in adverse impacts may occur in buffer Zone 2, if those impacts are mitigated and the total development activity achieves no net loss. New detached accessory structures are not allowed in ~~shall~~buffer Zone 2.

c. New single family homes and expansion of existing ~~Single~~ single family homes may be allowed in ~~zone~~ buffer Zone 2 through the application of the common setback provisions of BMC 20.30.095[2.c]. New and expansions of existing single family homes around Lake Burien are not allowed in buffer zone 2.

5. **Optional method. Demonstrating successful mitigation of unavoidable adverse impacts.** An optional prescriptive worksheet (Figure 7) may be used in lieu of an ecological impact report. This method provides a means to quantify a measurement of certain adverse impacts and the benefits of certain improvements.

a. Adverse impacts. The scope of adverse impacts that can be evaluated are limited to the following:

i. creation or expansion of impervious surfaces, and
ii. removal of existing native vegetation.

**Comment [d4]:** New condition added to encourage less impact to zone 1 from access paths The term "feasible" is defined

**Comment [d5]:** Section reformatted for ease of use

**Comment [d6]:** Clarifies intent of the SWG and the desire to revert to earlier regs regarding the Lake

**Comment [d7]:** Clarifying language to be consistent with the allowances of the common setback line language

**Comment [d8]:** Consistent with language Figure 5 above

b. Ecological Benefits. Improvements to ecological functions are as follows:
   i. removal or reduction of impervious surface, and
   ii. introduction or expansion of native vegetation.

c. The optional worksheet review process may only be applied in the evaluation of single-family residential development proposals.

6. Overwater structures are allowed within the buffer as provided herein. Structures and development such as viewing platforms, boardwalks, benches, and trails are allowed when associated with public access. Pursuant to 20.30.095(2.g) [Residential Development] fences less than 6-feet high, stairs and trams may be allowed within the buffer.

7. Whenever the Shoreline Administrator determines that monitoring has established a significant adverse deviation from predicted impacts, or that mitigation or maintenance measures have failed, the applicant or the property owner shall be required to institute corrective action(s), which shall also be subject to further monitoring as provided in this section.

8. The Shoreline Administrator may require a performance bond(s) or other security in an amount sufficient to guarantee that all required mitigation measures will be completed in a manner that complies with conditions of approval and to guarantee satisfactory workmanship and materials for a period not to exceed five years. The Shoreline Administrator shall establish the conditions of the bond or other security according to the nature of the proposed mitigation, maintenance or monitoring and the likelihood and expense of correcting mitigation or maintenance failures.

9. All costs associated with the mitigation/monitoring and planning including city expenses, shall be the responsibility of the applicant.

# Figure 7: Impact Assessment Worksheet

Measure of adverse impacts in Zone 2

1) Total square feet of new impervious surface _____ X 4 points = _____
2) Total square feet of cleared native vegetation _____ X 2 points = _____
3) Total measurement (add 1 and 2) _____

Benefit of adding native vegetation in Zone 1

4) Total square feet of impervious surface eliminated _____ X 4 points = _____
5) Total square feet of partially functioning area improved _____ X 2 points = _____
6) Benefit of improvements in Zone 1 (add 4 and 5) _____

Benefit of improvements in Zone 2

7) Square feet of i~~I~~mpervious surface to native vegetation ~~(sq ft)~~ _____ X 2 points = _____
8) Square feet of p~~P~~artially functioning area to native vegetation ~~(sq ft)~~ _____ X 1 points = _____
9) Square feet of i~~I~~mpervious surface to partially functioning area ~~(sq ft)~~ _____ X 0.5 points = _____
10) Benefit of improvements in Zone 2 (add 7 – 9) _____

No Net Loss Indicator

11) Measurement of adverse impacts (line 3) _____
12) Total benefit of improvements (add 6 and 10) _____

The project will meet the no net loss standard if line 11, the measurement of adverse impacts, is less than or equal to line 12, the benefit of improvements.

## 20.30.060 Select Shoreline Uses and Modifications

Shoreline master programs establish a comprehensive program of use regulations for shorelines and provisions for specific uses to assure consistency with the policy of the act and where relevant within the jurisdiction. This section provides specific policies and regulations for the following types of uses and modifications:

- Aquaculture
- Bulkheads and Other Shoreline Stabilization Structures
- Docks, Piers and Floats
- Habitat Restoration and Enhancement
- Recreation
- Recreational Mooring Buoys
- Residential
- Transportation Facilities and Parking
- Utilities

## 20.30.065 Aquaculture

Aquaculture means the culture, harvesting or farming of food fish, shellfish, or other aquatic plants and animals. Sport fishing is not considered an aquaculture activity. Aquaculture activities include the hatching, cultivating, planting, feeding, raising, harvesting, and processing of aquatic plants and animals and the maintenance and construction of necessary equipment, buildings and growing areas. Cultivation methods include but are not limited to fish pens, fish hatcheries, shellfish rafts, racks and long lines, seaweed floats and nets and the culture of clams and oysters on tidelands and subtidal areas.

### 1. Policies

a. Aquaculture should not be permitted in areas where it would result in a net loss of ecological functions, adversely impact eelgrass and macroalgae, or significantly conflict with existing adjacent uses.

b. Aquacultural facilities must be designed and located so as not to spread disease to native aquatic life, establish new nonnative species which cause significant ecological impacts, or significantly impact the aesthetic qualities of the shoreline.

## 2. Regulations

a. Aquaculture shall be limited to geoduck harvesting within Department of Natural Resources' tracts or for recovery of a native aquatic population in accordance with a government and/or tribal approved plan.

b. Aquaculture is not permitted in areas where it would result in a net loss of ecological functions, adversely impact eelgrass and macroalgae, or significantly conflict with navigation and other water-dependent uses.

c. Aquaculture is prohibited in critical saltwater habitat or within a 10 foot buffer from these areas.

d. No aquatic organism shall be introduced into City of Burien shoreline areas without the prior written approval of the Washington State Department of Fish and Wildlife or the appropriate regulatory agency for the specific organism.

e. No aquacultural processing, except for the sorting or culling of the cultured organism and the washing or removal of surface materials or organisms, shall be permitted waterward of the ordinary high water mark unless fully contained within a tending boat or barge.

f. Shellfish seeding and culturing is allowed when conducted for native population recovery in accordance with a government and/or tribal approved plan.

## 20.30.070 Bulkheads and Other Shoreline Stabilization Structures

Shoreline stabilization includes actions taken to address erosion impacts to property and dwellings, roads and utilities, businesses, or structures caused by natural processes, such as current, flood, tides, wind, or wave action. These actions include structural and nonstructural methods.

Nonstructural methods include building setbacks, relocation of the structure to be protected, ground water management, planning and regulatory measures to avoid the need for structural stabilization.

### 1. Policies

a. New development should be located and designed to avoid the need for future shoreline stabilization to the greatest extent *feasible*.

b. New and replacement bulkheads should be designed to blend in with the natural surroundings and not detract from the aesthetic qualities or degrade the natural processes of the shoreline.

c. Burien should take active measures to preserve natural unaltered shorelines, and prevent the proliferation of new bulkheads and other forms of shoreline armoring.

d. Non-structural stabilization measures including relocating structures, increasing buffers, enhancing vegetation, managing drainage and runoff and other measures are preferred over new structural shoreline armoring.

e. Where feasible, any failing, harmful, unnecessary, or ineffective structural shoreline armoring that cannot be repaired or replaced should be removed, and shoreline ecological functions and processes should be restored using non-structural methods.

(For additional policy guidance please see Chapter II General Goals and Policies, pg. 7, 11, 13.)

### 2. Regulations

a. A shoreline stabilization structure legally existing on _____ (the effective date of the SMP):

i. May be repaired and maintained.
ii. May be replaced with a similar structure if the following apply:

1) There is a demonstrated need to protect legally established principal uses or structures and legally established appurtenances necessary for use and enjoyment of a single-family home, which appurtenances shall

not include fences, from erosion caused by currents, tidal action, or waves.

2) The existing structure can no longer adequately serve its purpose of stabilizing the shoreline to protect established uses and structures.

3) Replacement walls or bulkheads shall not encroach waterward of the ordinary high water mark or existing structure unless the residence was occupied prior to January 1, 1992 and there are overriding safety or environmental concerns. In such cases, the replacement structure shall abut the existing shoreline stabilization structure.

4) Where a net loss of ecological functions associated with *critical saltwater habitats* would occur by leaving the existing structure, removal of that structure may be required as part of the construction of the replacement.

5) Soft shoreline stabilization measures that provide restoration of shoreline ecological functions may be permitted waterward of the ordinary high water mark.

b. Jetties, breakwaters and other in-water stabilization structures except for bulkheads are prohibited except for protection or restoration of ecological functions. New bulkheads and other shoreline stabilization structures such as gabions, revetments, retaining walls and bluff walls are allowed if there would be no net loss of shoreline ecological functions and the following requirements are met:

i. Non structural methods (e.g., building setbacks, biotechnical vegetation measures, anchor trees, upland drainage control, and beach enhancement) are not feasible to protect a residence or other *primary structure* or essential public facility.

ii. The necessity to protect existing *primary structures* is demonstrated in the following manner:

1) A geotechnical analysis, accepted by the Administrator, confirming that there is a significant possibility that the *primary structure* will be damaged within three years as a result of shoreline erosion caused by tidal action, currents, or waves in the absence of an armoring structural solution. Normal sloughing, erosion of steep bluffs, or shoreline erosion itself, without a scientific or geotechnical analysis, is not demonstration of need.

2) The geotechnical analysis should evaluate on-site drainage issues and address drainage problems away from the shoreline edge before considering structural shoreline stabilization.

c. The following requirements apply to both new and replacement bulkheads:

   i. Bulkheads shall be located and constructed in a manner which will not result in adverse effects on littoral drift and adjacent properties.

   ii. Bulkheads shall not be installed solely for the purpose of creating upland by filling behind the bulkhead.

   iii. The size and quantity of material utilized for the bulkhead shall be the minimum necessary to protect the structure from the estimated energy intensity of the shoreline hydraulic system.

   iv. The maximum height of a new bulkhead on the marine shoreline shall be no greater than four (4) vertical feet above the OHWM. The height of a replacement bulkhead shall not exceed four (4) vertical feet above the OHWM or exceed the height of the existing bulkhead, whichever is greater.

d. All new and replacement shoreline structures shall be designed to minimize the transmission of wave energy.

e. All new shoreline development and uses, including the replacement of a destroyed home, shall be located and designed to prevent the need for new or expanded shoreline stabilization measures for the life of the development. Exceptions may be made for the limited instances where shoreline stabilization measures are necessary to protect allowed uses, where no alternative locations are available, and where no net loss of ecological functions will result.

## 20.30.075 Over-Water Structures—Including Docks, Piers and Floats

*Docks* are fixed structures floating upon the water. *Piers* are fixed, pile-supported structures. *Floats* (rafts) are floating structures that are moored, anchored, or otherwise secured in the water that are not directly connected to the shoreline. All of these types of overwater structures are found in the City's shoreline jurisdiction. These structures typically require permits from local, state and federal agencies. For structures overlying state owned lands, an Aquatic Lands lease and authorization from the Department of Natural Resources is required. For the purposes of this section, docks, piers, and floats will be called Over-Water Structures and addressed together unless otherwise noted. In addition to the following policies and regulations, applicants for an over-water structure should contact other permitting agencies including the Washington State Dept. of Fish and Wildlife and U.S. Army Corps of Engineers for their requirements, including dimensional standards.

### 1. Policies

a. Over-water structures should be designed to minimize impacts to ecological functions of the water body including but not limited to water quality, anadromous and forage fish habitat, spawning and rearing areas, migration, and passage.

b. New over-water structures should be restricted to the minimum size necessary and permitted only when the applicant has demonstrated that a specific need exists to support the intended *water dependent* use.

c. Ensure that over-water structures are designed and maintained to avoid adverse impacts to the environment and shoreline aesthetics and minimize interference with the public's use of the water and public beach area.

d. Encourage the use of mooring buoys in place of over-water structures.

e. Encourage shared docks between multiple owners for single family waterfront development to minimize over-water coverage adversely impacting shoreline ecological functions.

f. Over-water structures should be designed to avoid the need for maintenance dredging. The moorage of a boat larger than provided for in the original moorage design shall not be grounds for approval of dredging.

### 2. Regulations

a. New over-water structures shall be limited to those required as part of a permitted water dependent use, ecological restoration or public access.

b. Over-water structure design and construction shall be restricted to the minimum necessary to meet the needs of the proposed water dependent use.

c. Private, single residence over-water structures for the sole use of the property owner shall not be considered an outright use on City of Burien marine shorelines. An over-water structure may be allowed on the marine shoreline when the applicant has demonstrated a need for moorage and the following alternatives have been investigated and are not available or feasible:

    i. Commercial or marina moorage;
    ii. Floating moorage buoys;
    iii. Joint use moorage pier.

d. The design and construction of over-water structures as well as their subsequent use and operation, shall:

    i. Be capable of withstanding expected environmental conditions; and,
    ii. Minimize interference with adjacent water uses and navigation; and
    iii. Minimize adverse effects on fish, shellfish, wildlife, water quality public views and geohydraulic processes by limiting the size of the structure and the use of hazardous materials, incorporating grating to allow light passage or reflective panels to increase light refraction; and spaced and oriented to minimize shading and avoid a 'wall' effect that would block or baffle wave patterns, currents, littoral drive, or movement of aquatic life forms.

e. *Over-water structures* shall not be used for residential dwelling purposes nor provide moorage for boats that are occupied longer than two (2) days unless pump-out facilities are available and then no longer than seven (7) days total.

f. Only joint use over-water structures are allowed for attached dwelling unit developments.

g. Only one over-water structure is allowed for each single family detached residential lot.

h. No covered moorage is allowed waterward of the ordinary high water mark.

i. When permitted, new residential development of two or more dwellings shall provide joint use or community docks, rather than individual docks, when feasible, rather than allow individual docks for each residence.

j. Dredging associated with over-water structures is prohibited in the Aquatic environment.

## 20.30.080 Habitat Restoration and Enhancement

Shoreline habitat and natural systems enhancement projects include those activities proposed and conducted specifically for the purpose of establishing, restoring, or enhancing habitat for priority species in shorelines. Restoration or enhancement of shoreline areas means a change of the physical, chemical, or biological characteristics of a site with the goal of returning natural or historic ecological functions of a former or degraded wetland or fish and wildlife habitat conservation area.

### 1. Policy

a. Habitat restoration or enhancement projects that are not exempt pursuant to WAC 173-27-040[Developments exempt from substantial development permit requirement], may be allowed in shoreline jurisdiction if a shoreline substantial development permit is obtained.

(For additional policy guidance please see Chapter II General Goals and Policies, pg. 16 & 17.)

### 2. Regulations

a. Shoreline restoration or enhancement shall be designed to result in a natural shoreline with functions, vegetative communities and structure similar to what would historically have been found on the site or in the vicinity.

b. All shoreline restoration or enhancement projects shall ensure that critical areas and their functions are not degraded by the action.

c. Shoreline restoration projects shall implement the City's adopted shoreline restoration plan and be conducted specifically for the purpose of establishing, restoring, or enhancing habitat for priority species in shorelines.

d. Nonstructural approaches for shoreline restoration or enhancement shall be used for shoreline stabilization instead of bulkheads or other structural stabilization measures, where feasible.

e. Shoreline restoration projects that are not specifically listed in the City's adopted shoreline restoration plan shall be considered subject to approval of the Shoreline Administrator.

f. Existing artificial structures on the site of a shoreline restoration or enhancement project that appear to be impeding natural recovery of a species or habitat shall be removed.

g. When habitat is restored or enhanced, priority shall be given to retention of snags and trees that provide overhanging vegetation and/or nesting or perching branches for eagles, other raptors, or priority species.

h. Shoreline habitat restoration or enhancement projects shall not adversely impact sediment processes, littoral drift, wetlands or fish and wildlife habitat conservation areas.

i. Beach enhancement shall not be allowed within spawning, nesting or breeding habitats unless the completed project will result in a greater long term benefit to the ecological functions and values.

j. Restoration of native vegetation shall comply with the vegetation conservation section BMC 20.30.040. In addition to the provisions of BMC section 20.30.040 a re-vegetation plan shall include a monitoring and maintenance program that shall, at a minimum, include the following:
   i. Goals and objectives for the mitigation plan; and
   ii. Criteria for assessing the effectiveness of the mitigation; and
   iii. Monitoring plan including annual progress reports submitted to the Shoreline Administrator. The plan shall be in effect for a period of time sufficient to establish that performance standards have been met as determined by the Shoreline Administrator, but no less than five years; and
   iv. A contingency/adaptive management plan.

k. Restoration resulting in movement of the *OHWM* shall meet the following standards.

   i. The Shoreline Administrator may grant relief from shoreline master program development standards and use regulations when the following apply:
      (a) A shoreline restoration project causes or would cause a landward shift in the ordinary high water mark, resulting in the following:
         (i) (A) Land that had not been regulated under this Shoreline Master Program prior to construction of the restoration project is brought under shoreline jurisdiction; or
         (B) Additional regulatory requirements apply due to a landward shift in required shoreline buffers or other regulations of the shoreline master program; and
         (ii) Application of shoreline master program regulations would preclude or interfere with use of the property permitted by other development regulations, thus presenting a hardship to the project proponent;
      (b) The proposed relief meets the following criteria:
         (i) The proposed relief is the minimum necessary to relieve the hardship;

(ii) After granting the proposed relief, there is net environmental benefit from the restoration project;

(iii) Granting the proposed relief is consistent with the objectives of the shoreline restoration project and consistent with the shoreline master program; and

(iv) Where a shoreline restoration project is created as mitigation to obtain a development permit, the project proponent required to perform the mitigation is not eligible for relief under this section; and

(c) The application for relief must be submitted to the Department of Ecology for written approval or disapproval. This review must occur during the Department of Ecology's normal review of a shoreline substantial development permit, conditional use permit, or variance. If no such permit is required, then the Department of Ecology shall conduct its review when the City of Burien provides a copy of a complete application and all supporting information necessary to conduct the review.

(i) Except as otherwise provided in subsection (2) of this section, the Department of Ecology shall provide at least twenty-days (20) notice to parties that have indicated interest to the department in reviewing applications for relief under this section, and post the notice on their web site.

(ii) The department shall act within thirty calendar days of close of the public notice period, or within thirty days of receipt of the proposal from the local government if additional public notice is not required.

ii. The public notice requirements of subsection (1)(c) of this section do not apply if the relevant shoreline restoration project was included in a shoreline master program or shoreline restoration plan as defined in WAC 173-26-201[Comprehensive process to prepare or amend shoreline master programs], as follows:

(a) The restoration plan has been approved by the Department of Ecology under applicable shoreline master program guidelines;

(b) The shoreline restoration project is specifically identified in the shoreline master program or restoration plan or is located along a shoreline reach identified in the shoreline master program or restoration plan as appropriate for granting relief from shoreline regulations; and

(c) The shoreline master program or restoration plan includes policies addressing the nature of the relief and why, when, and how it would be applied.

iii. A substantial development permit is not required on land that is brought under shoreline jurisdiction due to a shoreline restoration project creating a landward shift in the ordinary high water mark.

## 20.30.085 Recreational Development

Shoreline recreational development includes facilities for activities such as hiking, fishing, picnicking, swimming, photography and viewing. It also includes facilities for more intensive uses, such as parks. This section applies to both publicly- and privately-owned shoreline facilities intended for use by the public or private group, association, or individual.

### 1. Policies

a. Allow a variety of active and passive recreation opportunities in the shoreline areas.

b. Encourage provision of view points, rest areas and picnic facilities in public shoreline areas.

(For additional policy guidance, including policies that provide for public access planning as set forth in WAC 173-26-221(4)(c)[General master program provisions, Planning process to address public access], please see Chapter II General Goals and Policies, pg. 4-7)

### 2. Regulations

a. Commercial recreational development or use in Seahurst Park shall be consistent with the provisions of this section.

b. Recreation facilities shall be designed to take maximum advantage of and enhance the natural character of the shoreline area.

c. Recreation areas shall promote public health, safety and security and not materially interfere with the normal public use of the water and shorelines.

d. Recreation facilities shall provide adequate provisions to prevent the general public from trespassing and overflowing into adjacent, privately owned properties.

e. Recreation facilities shall provide signage that prohibits tree cutting and collecting of marine life, driftwood and other natural materials.

f. Jet skis and water craft with combustion engines are prohibited on Lake Burien.

g. No person shall moor, anchor or dock a boat or other object overnight on or within 50 feet of the ordinary high water mark at any city beachfront park without authorization from the City of Burien Parks Department.

h. Shoreline recreational development is a priority and shall be primarily related to access to, enjoyment and use of the water and shorelines of the State.

## 20.30.090 Recreational Mooring Buoys

A recreational mooring buoy is a device used to tie up a boat and typically consists of a line from the boat attached to a float at the water's surface with a cable or line fixed underwater to the submerged ground. The anchor line allows the boat to float and swing around the fixed buoy anchor.

### 1. Policies

a. Recreational boat mooring buoys are the preferred method to provide moorage instead of constructing new residential docks, piers or floats on the marine waters in the City of Burien.

(For additional policy guidance please see Chapter II General Goals and Policies, pg. 7.)

### 2. Regulations

a. Mooring buoys shall be located as close to the shore as possible while avoiding beaching under all tidal situations and no farther waterward than existing authorized mooring buoys unless the drift of the boat dictates it.

b. Mooring buoys shall be located away from critical saltwater habitat.

c. Mooring buoys shall utilize a system design that minimizes damage to underwater lands and marine vegetation.

d. Individuals owning residential property abutting aquatic lands may install a mooring buoy for recreational purposes after obtaining approval from the State of Washington Department of Natural Resources (DNR), Washington Department of State Fish and Wildlife (WDFW) and the Army Corps of Engineers as appropriate.

e. Recreational mooring buoys shall be installed using a DNR or WDFW approved system.

f. Buoys shall be visible under normal daylight conditions at a minimum of 100 yards during daylight hours and must have reflectors for night time visibility.

g. Recreational mooring buoys are prohibited for commercial and transient uses or live-aboards.

h. Boats must be sixty feet or less in length to tie up to a recreational mooring buoy.

i. A *Community Beach* may have one mooring buoy for every one hundred (100) lineal feet of waterfront.

j. Mooring buoys are prohibited on Lake Burien.

## 20.30.095 Residential Development

Single family residences are the most common form of shoreline development and are identified as a priority use when developed in a manner consistent with control of pollution and prevention of damage to the natural environment. Residential development shall mean the creation of new residential lots and the construction or exterior alteration of one or more buildings, structures or portions thereof which are designed for and used to provide a place of abode for human beings including one and two family detached dwellings, multi-family residences, townhouses and condominiums, together with appurtenances and accessory structures. For purposes of this master program, Bed and Breakfast establishments are considered an accessory use (see also Use Table under Commercial Use and Development).

### 1. Policy

Residential development should demonstrate that the development and its related activities will not be detrimental to the public interest and uses of the shoreline and its associated water bodies.

(For additional policy guidance please see Chapter II General Goals and Policies, pg. 8-15.)

### 2. Regulations

a. **General.** Consistent with WAC 173-26-221(4)(d)(iv)[General master program provisions, Standards for height limits, setbacks, and view corridors], residential development shall protect existing shoreline and water views promote public safety, avoid adverse impacts to marine bluffs and nearshore habitat, and not result in a net loss of shoreline ecological functions.

b. **Dimensional Standards.** Residential development in shoreline jurisdiction shall conform to the dimensional standards found in BMC 20.30.050.

c. **Common-line building setback standards**. The Shoreline Administrator may approve new or expanded single-family primary residential structures in zone 2 of the shoreline buffer under the following conditions through the conditional use permit process and without a variance permit:

i. Where there are existing legally constructed single-family primary residential structures that are located within the shoreline buffer zone 2 designated in BMC 20.30.050 and within 50 feet of either side of the proposed building site, a ~~the required shoreline setback of the~~ new or expanded home may be located in the shoreline buffer~~reduced~~. As an alternative in such cases, the proposed new or expanded single-family primary residential structure may be setback from the *OHWM* common to the average of the *OHWM* setback of the existing adjacent residences. (see Figure 8)

ii. In those instances where only one existing single family primary residence is within 50 feet of the proposed building site, the *OHWM* setback of the proposed structure may be reduced to the average of the *OHWM* setbacks for the existing adjacent residence and the applicable setback for the adjacent vacant parcel.

iii. In no case shall the reduced setback allow development in zone 1 without a variance.

iv. In cases where the common line setback does not apply, expansion of existing single-family primary residential structures within the designated shoreline buffer zone 2 may be allowed through a conditional use permit, ~~if there is no development waterward of the existing primary residential structure~~.

v. Any shoreline *OHWM* setback reduction beyond that allowed in this section shall require approval of a shoreline variance permit.

vi. For the purposes of this section the optional method of demonstrating successful mitigation of unavoidable adverse impacts as set forth in BMC 20.30.055(5) may not be used and the applicant shall submit and ecological impact report prepared by a qualified professional demonstrating that unavoidable impacts are mitigated to achieve no net loss.

d. **Lot size calculations.** Lot size calculations shall not include portions of the lot that are waterward of the ordinary high water mark.

e. **Bluff top protection.** New development located at the top of bluffs in shoreline jurisdiction must be setback to ensure that shoreline stabilization is unlikely to be necessary for the life of the structure as demonstrated by a geotechnical analysis.

f. **Vegetation removal for access.** Private access from single family detached residences to the shoreline shall avoid removal of trees and other woody vegetation when *feasible*.

g. **Accessory structures and appurtenances.** New accessory structures and appurtenances must be proportional in size and purpose to the residence and compatible with onsite and adjacent structures, uses and natural features. New accessory structures and appurtenances are not permitted within the shoreline buffer zone 1 - unless otherwise permitted by 20.30.095(2.c)[Common line building setback standards]. New detached accessory structures are not allowed in buffer zone 2. The following may be allowed in the shoreline buffer~~except for~~:

i. Fences less than 6 feet high;

ii. Water-dependent features (buoys, docks and floats) used for recreational or personal use;

iii. Stairs and trams pursuant to subsections gi and hij below.

~~iii.~~iv. Utilities solely serving the subject single family residence.

**Comment [d9]:** Added for clarity

**Comment [d10]:** Language removed to correctly reflect the SWG's intent. Expansion water ward in marine zone 2 may occur via conditional use permit process. Confirmed that DOE can accept

**Comment [d11]:** Clarifying language to reiterate that the common setback line provisions allow for some expansion of SFR's in zone 2. Note this primarily applies to the marine environments

**Comment [d12]:** Clarifies that no new detached accessory structures are allow in zone 2, both marine and the lake. At grade structures may be allowed if impacts are mitigated. Confirmed that DOE can accept

**Comment [d13]:** Re-formatted subsections to be consistent with format above

**Comment [d14]:** Corrected references to tram and stair sub sections

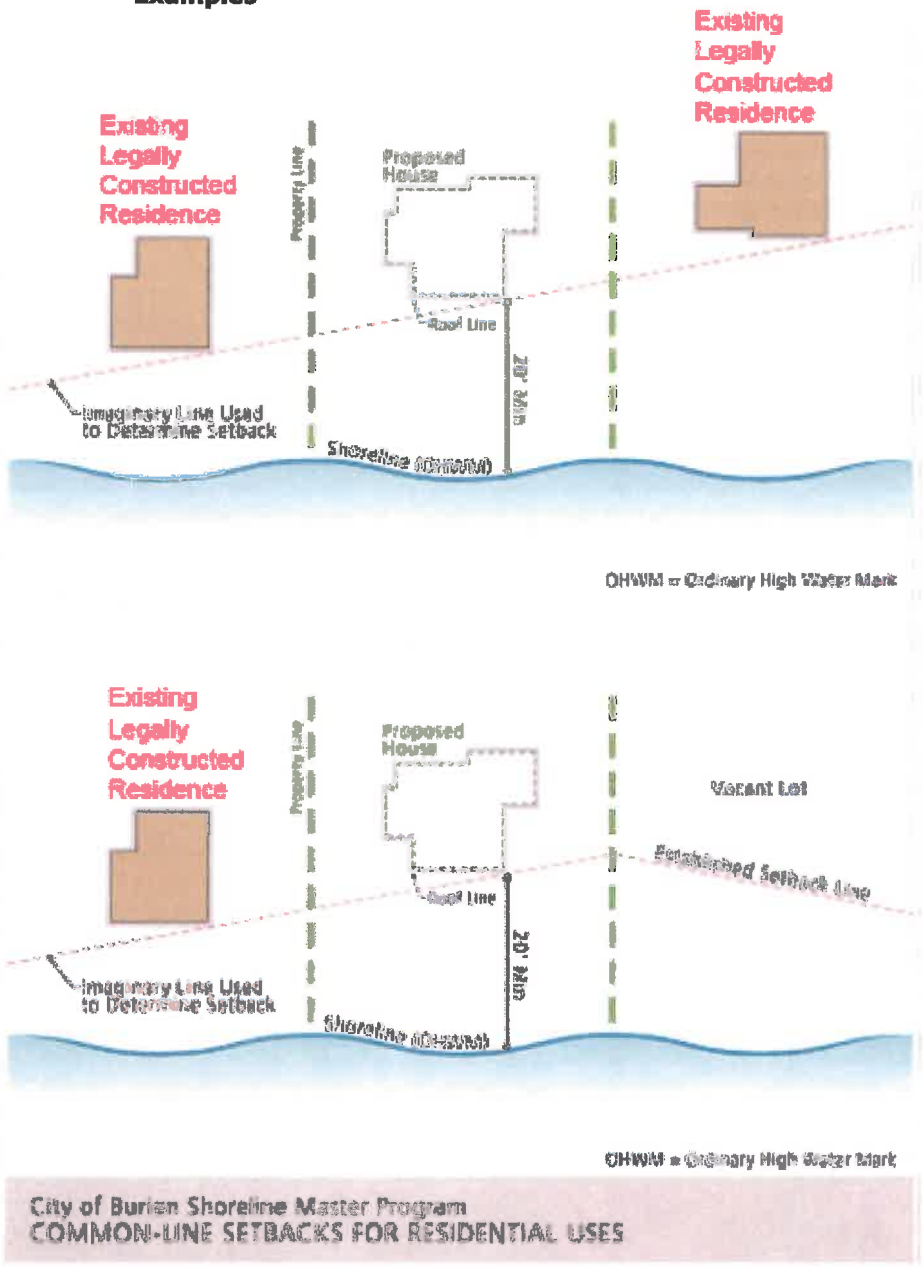
h. **Floating homes or houseboats**. Floating homes or houseboats are prohibited in shoreline jurisdiction.

i. **Stairs and trams.** Construction of new stairs and trams to the beach are allowed within required shoreline buffer areas, except on feeder bluffs, provided the project proponent demonstrates that existing shared, public or community facilities are not adequate or available for use and the possibility of a multiple-owner or multiple-user facility has been thoroughly investigated and is not *feasible*. New facilities are encouraged to be shared with adjacent properties that do not already have such facilities, and shall include shared maintenance easements and agreements as necessary. Only one stair or tram system is allowed for each primary residential structure – duplicate facilities are not allowed.

j. **Beach stairs and trams design.** New beach stairs and trams shall be designed and located such that no fill or other modification waterward of the ordinary high water mark is necessary to construct or use the structure. Stairways, trams and landings shall be located upland of existing bulkheads.

k. **Detached Accessory Dwelling Units.** New detached accessory dwelling units shall not be located in the shoreline buffers.

**Figure 8 Common-line Buffer and *OHWM* Building Setback Reduction Examples**




City of Burien Shoreline Master Program
COMMON-LINE SETBACKS FOR RESIDENTIAL USES

## 20.30.100 Transportation Facilities and Parking

Transportation facilities are those structures and developments that aid in land and water surface movement of people, animals, goods and services. They include streets, bridges, bikeways, trails and other related facilities.

### 1. Policies

a. All new or expanded roadways should be designed and located to minimize impacts to shoreline ecological functions including riparian and nearshore areas, and the natural landscape.

b. Parking is not a preferred use in shorelines and should only be allowed to support authorized uses where no feasible alternatives exist.

(For additional policy guidance please see Chapter II General Goals and Policies, pg. 7 & 8.)

### 2. Regulations

a. New transportation and parking facilities shall be located outside of the shoreline jurisdiction or as far landward from the ordinary high watermark as feasible, unless they support public access or other authorized use.

b. Transportation facilities shall be designed and maintained to minimize erosion, preserve natural drainage ways and utilize low impact development techniques.

c. Transportation and utility facilities shall share rights-of-way to minimize disturbance in shoreline areas.

d. The City shall give preference to mechanical means rather than the use of herbicides for roadside brush control on City streets in shoreline areas.

e. Construction debris, overburden and other waste materials shall not be allowed to enter into any water body by disposal or erosion from drainage, high water or other means.

f. Transportation facilities shall provide public access appropriate to the location and extent of the facility.

g. All shoreline areas disturbed by road construction and maintenance shall be replanted and stabilized. Such vegetation shall be maintained by the agency or developer constructing or maintaining the road until established.

h. Landscaping shall be provided to minimize visual impacts for all new and expanded transportation facilities in shoreline areas. A landscape plan shall be provided in conjunction with review and issuance of a shoreline substantial development permit.

## 20.30.105 Utilities

Utilities are services and facilities that produce, convey, transmit, store, or process water, sewage, communications, electric power, fuel, natural gas, and the like.

### 1. Policies

a. On-site utility features serving a primary use, such as water, sewer or gas lines to a residence, are considered a part of the primary use.

b. Utilities production and processing facilities, such as sewage treatment plants, or parts of those facilities that are non-water-oriented should not be allowed in shoreline areas unless it can be demonstrated that no other feasible option is available.

c. Utilities should be located and designed to assure no net loss of shoreline ecological functions, preserve the natural landscape, and minimize conflicts with present and planned land and shoreline uses while meeting the needs of future populations in areas planned to accommodate growth.

d. New development of pipelines and cables on tidelands, particularly those running roughly parallel to the shoreline, and development of facilities that may require periodic maintenance which would disrupt shoreline ecological functions should be discouraged except where no other feasible alternative exists.

   (For additional policy guidance please see Chapter II General Goals and Policies, pg. 4 & 9.)

### 2. Regulations

a. Utilities shall be placed underground pursuant to BMC 12.40[Utility Undergrounding Policy].

b. New development of underwater pipelines and cables on tidelands is prohibited except for deepwater outfalls and facilities where no other feasible alternative exists.

c. New cable crossings for telecommunications and power lines entering or leaving a body of water shall be bored or buried below the surface of the water body's bed from the ordinary high water mark out to a minimum water depth of minus ten feet (-10') below mean lower low water.

d. Directional boring, instead of excavation or trenching is required where *feasible*.

e. New transmission facilities for the conveyance of services, such as power lines, cables, and pipelines, shall be located outside of the shoreline area where *feasible* and when necessarily located within the shoreline area shall assure no net loss of shoreline ecological functions. When allowed, utility and transportation facilities shall share rights-of-way to minimize disturbance in shoreline areas.

f. New or altered aerial utility lines and vertical utility facilities shall make maximum use of topography to minimize visual impact on the surrounding area.

g. Communication, radio towers and personal wireless service facilities shall not obstruct or destroy scenic views of the water. This may be accomplished by design, orientation and location of the tower, height, camouflage of the tower, or other features consistent with utility technology.

h. Culverts shall be located and installed in accordance with City of Burien standards and specifications.

i. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharge from the systems into flood waters.

j. Except for water lines, all underwater pipelines transporting substances hazardous to aquatic life or water quality are prohibited unless no other feasible alternative exists. Such facilities shall include an automatic shut off valve on both shorelines and have established maintenance procedures.

k. Expansion or repair of existing, underground utilities within shoreline jurisdiction shall include reclamation of areas disturbed during construction including, where *feasible*, replanting and maintenance care until the newly planted vegetation is established.

# Chapter V. Administration and Shoreline Permit Procedures

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## 20.35.001 Purpose and Applicability

The purpose of this chapter is to establish a program for the administration and enforcement of the permit system for shoreline management provided by the Shoreline Management Act of 1971 (RCW Chapter 90.58). This chapter applies to all development within shorelines of the state within the City of Burien's shoreline jurisdiction. The City's shoreline administrative procedures are intended to be consistent with all provisions, criteria, application requirements, public notice requirements, and local or state review procedures set forth in WAC 173-27, Shoreline Management Permit and Enforcement Procedures. In the event of any inconsistencies between this Shoreline Master Program and WAC 173-27, the WAC shall govern.

All development in designated shoreline areas shall comply with the policy, provisions, and intent of the City of Burien Shoreline Master Program. Definitions contained in the Shoreline Management Act of 1971 (RCW Chapter 90.58) and the Shoreline Master Program Guidelines (WAC Chapter 173-26) shall apply to all terms and concepts used in this chapter, provided that definitions contained in this title shall be applicable where not in conflict with the Shoreline Management Act and the Shoreline Master Program Guidelines. In addition, the City will establish minimum application requirements, checklists, handouts, forms and fees for shoreline permits and shoreline exemption determinations.

Amendments to the City of Burien Shoreline Master Program will not become effective until approval by the Washington State Department of Ecology pursuant to RCW 90.58.090 (Approval of Master Program).

## 20.35.005 Authority and Rule of Liberal Construction

This chapter is promulgated pursuant to the authority and mandate of RCW 90.58.140(3) (Development Permits). Compliance with this chapter shall constitute compliance with the Shoreline Management Act, the Shoreline Master Program Guidelines, and the City of Burien Shoreline Master Program (SMP) for evaluating permits on shorelines of the state.

As provided under RCW 90.58.900 (Liberal Construction), the Shoreline Management Act (SMA) is exempted from the rule of strict construction. The SMA and the City of Burien Shoreline Master Program shall, therefore, be liberally construed to give full effect to the purposes, goals, policies, and standards for which the SMA and this Master Program were enacted. Exemptions from the Act or this Master Program are to be narrowly construed.

20.35.010 Shoreline Permit Types and Review Procedures

1. **Non-Exempt Development.** Substantial development that is not otherwise exempt or uses that are identified as requiring conditional use permits within the City of Burien's shoreline jurisdiction must obtain a *Shoreline Substantial Development Permit*, *Shoreline Conditional Use Permit*, or *Shoreline Variance* from the City.

2. **Exempt Development.** Development within the City of Burien's shoreline jurisdiction that is exempt from the requirement to obtain a *Shoreline Substantial Development Permit* shall comply with BMC 20.35.025. An exempt development that requires a Conditional Use Permit or Variance shall also comply with applicable provisions related to those processes.

3. **Pre-application Meeting**. The owner of the subject property or the authorized agent of the owner is encouraged to have a pre-application meeting with the Shoreline Administrator to determine the appropriate type of shoreline permit needed for the proposed action.

   **Permit Review.** Shoreline permits shall be reviewed using the land use decision processes in BMC Chapter 19.65 (Procedures).

   Shoreline permits are processed as a Type 1 land use decision pursuant to BMC Chapter 19.65 (Procedures). A Type 1 decision is a written administrative decision issued following public notice, consideration of written public comments and review of a written staff recommendation. For the purposes of this Master Program, the Shoreline Administrator is the decision maker on a shoreline permit using the Type 1 land use decision. The Type 1 land use decision can be appealed to the City's Hearing Examiner.

   If any shoreline use or development is subject to other approvals or permits under another permit authority, such as the zoning or subdivision codes, they shall be subject to a consolidated review and the decision maker designated for the non-shoreline approval or permit shall be the decision maker for the consolidated review.

   Depending on the underlying land use permits, the shoreline permit may be processed as a Type 2 or 3 land use review involving the Hearing Examiner or the City Council.

4. **Public Notice.** Public notice of an application for a shoreline permit shall be provided pursuant to BMC Chapter 19.65 (Procedures) unless otherwise specifically stated in this code. The minimum public notice period for shoreline permits shall be thirty (30) days. If there are conflicting public notice time periods with State Law or Administrative Codes, or local laws, the longer notice period shall be used.

5. **Department of Ecology Notification.** The Washington Department of Ecology-SEA Division (Ecology) shall be notified of the permit decision.

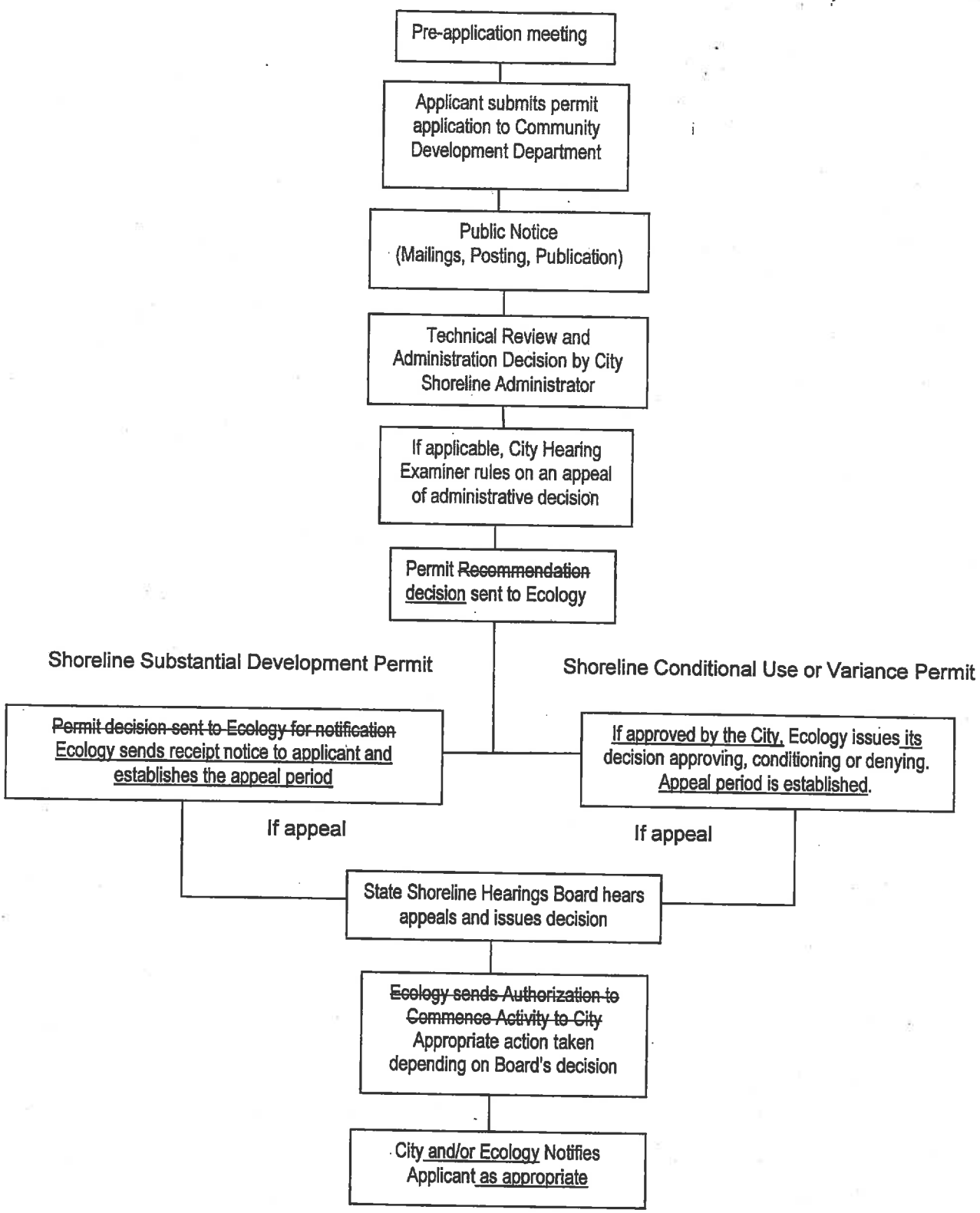
6. **Compliance with Regulations**. In the case of either a shoreline conditional use permit or a shoreline variance, the Shoreline Administrator shall determine the application's compliance with the relevant review criteria and render a decision that is then forwarded to Ecology for review and approval. The City's decision may include issuing the shoreline permit, issuing the shoreline permit with conditions, or denial of the requested shoreline permit.

7. **Shoreline Conditional Use Permit required.** A development activity or use that is listed as a conditional use pursuant to this master program or is an unlisted use, must obtain a conditional use permit even if the development or use does not require a substantial development permit. The conditional use permit application shall be processed as indicated in BMC 20.35.010.3.

8. **Shoreline Variance Required.** When a development or use is proposed that does not comply with the bulk, dimensional and performance standards of the master program, such development or use can only be authorized by approval of a shoreline variance, consistent with WAC 173-27-170 (Variances). The variance application shall be processed as set forth in BMC 20.35.010.3.

Figure 7 is a flow chart illustrating the shoreline permit review process for a type 1 shoreline permit.

## Figure 7 Shoreline Permit Review for Type 1 Process



## 20.35.015 Shoreline Substantial Development Permits

1. **Substantial Development Permit Required**. Prior to any shoreline substantial development within a shoreline of the state, a shoreline substantial development permit shall be obtained. Development undertaken pursuant to the issuance of a permit shall be limited to that specifically delineated on the official site plan submitted by the applicant. The development shall be in compliance with any and all conditions imposed upon such permit at its issuance, including any impact mitigation measures identified in documents submitted in support of the application.

2. **Approval Criteria**. A substantial development permit shall be granted by the Shoreline Administrator only when the development proposed is consistent with the following;
   a. City of Burien Comprehensive Plan, Burien Municipal Code, and Burien Shoreline Master Program; and
   b. The proposed development or activity must also be found to be consistent with policies, guidelines, and regulations of the state Shoreline Management Act (RCW 90.58, WAC 173-26 and WAC 173-27).

3. **Authority to Condition.** The Shoreline Administrator may attach conditions to the approval of permits and shoreline exemptions as necessary to assure this consistency.

## 20.35.020 Substantial Development Permits for Limited Utility Extensions

1. **Procedures**. An application for a substantial development permit for a limited utility extension shall be subject to the following procedures:

   a. The public comment period shall be 20 days. The public notice issued pursuant to BMC 19.65.040 (Notice of Application) shall explain how the public may obtain a copy of the city's decision on the application no later than two days following its issuance consistent with BMC 19.65.055 (Notice of Decision). If there is an appeal of the decision to grant or deny the permit to the local government legislative authority, the appeal shall be finally determined by the legislative authority within thirty days.

   b. For purposes of this section, a limited utility extension means the extension of a utility service that:

      i. Is categorically exempt under RCW Chapter 43.21C (State Environmental Policy Act) for one or more of the following: natural gas, electricity, telephone, water or sewer;
      ii. Will serve an existing use in compliance with RCW Chapter 90.58 (Shoreline Management Act); and

iii. Will not extend more than 2,500 linear feet within the shorelines of the state.

## 20.35.025 Exemptions from Shoreline Substantial Development Permits (See WAC 173-27-040 (Exemptions From Substantial Development Permit Requirement) for additional language and details)

1. **Rule of Narrow Construction.** There are several types of development activities that are exempt from the requirement to obtain a Shoreline Substantial Development Permit. State law requires that such exemptions be construed narrowly and if any part of the development is not eligible for exemption, then a Substantial Development Permit is required for the entire proposed development. No pre-application meeting is required for a shoreline exemption, and the City usually makes a determination on the exemption within thirty days of application. The Department of Ecology does not review shoreline exemptions unless State or Federal agency approvals are required for the project.

2. **Shoreline Exemption Process.** Exemption from the Shoreline Substantial Development Permit process does not constitute exemption from compliance with the policies and use regulations of the SMA (RCW 90.58), the provisions of this master program, or other applicable city, state or federal permit requirements. The Shoreline Administrator is authorized to grant or deny requests for exemptions from the shoreline substantial development permit requirement for uses and developments within shorelines that are specifically listed in the Shoreline Permit Matrix (Figure 4) of this master program.

   Such requests shall be applied for on forms provided by the Shoreline Administrator. The request shall be in writing and shall indicate the specific exemption of this SMP that is being applied to the development. The Shoreline Administrator shall prepare an analysis of the consistency of the project with this SMP and the SMA. As appropriate, the Shoreline Administrator's analysis and decision shall include statements of exemption, which may contain conditions and/or mitigating measures of approval to achieve consistency and compliance with the provisions of the SMA and SMP. A denial of an exemption shall be in writing and shall identify the reason(s) for the denial.

   The Shoreline Administrator's actions on the issuance of a statement of exemption or a denial are subject to appeal. The appeal shall be processed using the appeal procedures for the underlying land use approval pursuant to BMC 19.65 (Procedures). If there is no underlying land use approval, the appeal shall be processed pursuant to the Type 1 appeal procedures in BMC 19.65.065 (Type 1 Decisions).

3. **Agency Approvals Required**. Even though a project is exempt from obtaining a substantial development permit, it may still need approvals from other agencies. For example, if the proposal involves construction within navigable water or if the project includes dredging or placement of fill, a U.S. Army Corps of Engineers Section 10

and/or 404 permit is required. In addition, if the project involves construction or other activity waterward of the ordinary high water mark or if the project includes an activity that will use, divert, obstruct, or change the natural flow or bed of any state waters, a Hydraulic Project Approval from the Washington State Department of Fish and Wildlife is required.

4. **Exemptions.** The developments listed below shall not require a local Shoreline Substantial Development Permit. Developments not meeting the provisions below must obtain a Shoreline Substantial Development Permit.

   a. Any development of which the total cost or fair market value, whichever is higher, does not exceed five thousand seven hundred and eighteen dollars ($6,416), if such development does not materially interfere with the normal public use of the water or shorelines of the state and does not result in a net loss of ecological functions. For purposes of determining whether or not a permit is required, the total cost or fair market value shall be based on the value of development that is occurring on shorelines of the state as defined in RCW 90.58.030 (2)(c) (Definitions and Concepts). The total cost or fair market value of the development shall include the fair market value of any donated, contributed or found labor, equipment or materials. The dollar amount above will be periodically adjusted for inflation by the State Office of Financial Management pursuant to WAC 173-27-040(2)(a) (Exemptions From Substantial Development Permit Requirement). When a revised dollar amount is in effect, it will be provided on forms provided by the Shoreline Administrator.

   b. **Normal Maintenance and Repair.** Normal maintenance or repair of existing structures or developments, including damage by accident, fire or elements. "Normal maintenance" includes those usual acts to prevent a decline, lapse, or cessation from a lawfully established condition. "Normal repair" means to restore a development to a state comparable to its original condition, including, but not limited to its size, shape, configuration, location and external appearance, except where repair involves total replacement which is not common practice or causes substantial adverse effects to the shoreline resource or environment. The need for replacement resulting from neglect or maintenance and repair is not considered a common method of repair. Normal repair must occur within a reasonable period after decay or partial destruction. If decay or partial destruction occurs to an extent of fifty percent or greater of the replacement cost of the original development, repair or replacement must be addressed within one year. Restoration may include total replacement of buildings and structures when supported by a statement from the Building Official that complete replacement is common practice.

   c. **Construction of a normal protective bulkhead common to single family residences.** An exempt "normal protective" bulkhead shall be constructed at or near the ordinary high water mark and shall be for the purpose of protecting a single family residence from erosion, not for the purpose of creating land. When an existing bulkhead is being replaced, it shall be constructed no further waterward of the existing bulkhead than is necessary for construction of new

footings. When an exempt bulkhead has deteriorated such that an ordinary high water mark has been established by the presence and action of water landward of the bulkhead then the replacement bulkhead must be located at or near the actual ordinary high water mark. Bioengineered erosion control and alternative bank stabilization projects may be considered an exempt normal protective bulkhead, when any structural elements are consistent with the above requirements and when the project has been approved by the Department of Fish and Wildlife. Backfill behind a constructed exempt normal protective bulkhead is allowed; however, no more than 1 cubic yard of fill per 1 horizontal foot of bulkhead wall may be used.

d. **Emergency Construction.** Emergency construction necessary to protect property from damage by the elements. An *emergency* is an unanticipated and imminent threat to public health, safety, or the environment which requires immediate action within a time too short to allow full compliance with this chapter. Emergency construction does not include development of new permanent protective structures where none previously existed, except where new protective structures are deemed by the administrator to be the appropriate means to address the emergency situation. Upon abatement of the emergency situation the new structure shall be removed or any permit be obtained which would have been required, absent an emergency, pursuant to RCW Chapter 90.58 (Shoreline Management Act), or the Burien Shoreline Master Program.

e. **Single Family Residence.** Construction on shorelands by an owner, lessee or contract purchaser of a single family residence for his/her own use or for the use of his/her family, which residence does not exceed a height of thirty-five (35) feet above average grade level and which meets all requirements of the state agencies having jurisdiction and the City. "Single-family residence" means a detached dwelling designed for and occupied by one family, including those structures and developments within a contiguous ownership which are a normal appurtenances. An *appurtenance* is necessarily connected to the use and enjoyment of a single-family residence and is located landward of the ordinary high water mark and the perimeter of a wetland. Appurtenances typically include a garage, decks, driveway, utilities and fences. Construction of a single-family residence may include grading which does not exceed two hundred fifty (250) cubic yards, and which does not involve placement of fill in any wetland or waterward of the ordinary high water mark. Construction authorized under this exemption shall be located landward of the ordinary high water mark.

f. **Marking of Property Lines**. The marking of property lines or corners on state owned lands, when such marking does not significantly interfere with normal public use of the surface of the water.

g. **Navigational Aids**. Construction or modification, by or under the authority of the Coast Guard, of navigational aids such as channel markers and anchor buoys.

h. **State Certified Project**. Any project with a certification from the Governor pursuant to RCW Chapter 80.50 (Energy Facilities).

i. **Site Exploration and Investigation.** Site exploration and investigation activities that are prerequisite to preparation of an application for development authorization under this chapter, if:

   i. The activity does not interfere with the normal public use of the surface waters;

   ii. The activity will have no significant adverse impact on the environment including but not limited to fish, wildlife, fish or wildlife habitat, water quality, and aesthetic values;

   iii. The activity does not involve the installation of any structure, and upon completion of the activity the vegetation and land configuration of the site are restored to conditions existing before the activity;

   iv. A private entity seeking development authorization under this section first posts a performance bond or provides other evidence of financial responsibility to ensure that the site is restored to preexisting conditions;

   v. The activity is not subject to the permit requirements of RCW 90.58.550 (oil or natural gas exploration in marine waters).

j. **Noxious Weeds**. The process of removing or controlling aquatic noxious weeds, as defined in RCW 17.26.020 (Weeds, Rodents and Pests), through the use of an herbicide or other treatment methods applicable to weed control that are recommended by a final environmental impact statement published by the Department of Agriculture or Ecology jointly with other state agencies under RCW Chapter 43.21C (State Environmental Policy Act).

k. **Watershed Restoration Projects.** The Shoreline Administrator shall review *watershed restoration projects* for consistency with the this master program in an expeditious manner and shall issue a decision along with any conditions within forty-five days of receiving all materials necessary to review the request for exemption from the applicant. No fee will be charged for accepting and processing requests for a shoreline exemption for watershed restoration projects as used in this section.

l. **Private or Public Restoration Projects.** A public or private project, the primary purpose of which is to improve fish or wildlife habitat or fish passage, when all of the following apply:

   i. The project has been approved in writing by the Washington State Department of Fish and Wildlife (WDFW) as necessary for the improvement of the habitat or passage and appropriately designed and sited to accomplish the intended purpose;

   ii. The project has received hydraulic project approval by WDFW pursuant to RCW 77.55 (Construction Projects in State Waters); and

   iii. The Shoreline Administrator has determined that the project is consistent with this master program.

m. **Hazardous Substance Remedial Actions.** The procedural requirements of RCW Chapter 90.58 (Shoreline Management Act) shall not apply to a project for which a consent decree, order or agreed order has been issued pursuant to RCW Chapter 70.105D (Model Toxics Control Act) or to Ecology when it conducts a remedial action under RCW Chapter 70.105D (Model Toxics Control Act). Ecology shall, in consultation with the City, assure that such projects comply with the substantive requirements of RCW Chapter 90.58 (Shoreline Management Act), WAC Chapter 173–26 (SMP Guidelines) and this master program.

## 20.35.030 Letter of Exemption

1. **Letter of Exemption, General.** Persons requesting an exemption must obtain a written letter of exemption verifying the proposed development as not subject to a Shoreline Substantial Development Permit. The letter of exemption must state how the proposed action is consistent with the policies and regulations of the City of Burien Shoreline Master Program. For example, the approval of a Building Permit for a single-family residence and bulkhead can be conditioned on the basis of shoreline policy and use regulations. The Building Official or other permit authorizing official, through consultation with the Shoreline Administrator, shall attach shoreline management terms and conditions to a building permit or other permit approvals pursuant to RCW 90.58.140 (Development Permits).

2. **State and Federal Agencies.** Where shoreline development proposals are subject to review, approval, and permitting by a federal or state agency, the Shoreline Administrator shall prepare a letter and send to the Department of Ecology indicating the specific exemption provision from WAC 173-27-040 (Exemptions From Substantial Development Permit Requirement) that is being applied to the development and provide a summary of the City's analysis of the consistency of the project with the City of Burien Shoreline Master Program and the state Shoreline Management Act.

## 20.35.035 Shoreline Conditional Use Permits (See also WAC 173-27-160 (Conditional use Permits))

1. **Purpose.** The purpose of a shoreline conditional use permit is to allow greater flexibility in administering the use regulations of the Burien Shoreline Master Program in a manner consistent with the policies of the Shoreline Management Act. This allows for review of a proposed action which may have a potential for compatibility concerns with nearby uses of other impacts that could be resolved under special circumstances with appropriate mitigation measures or conditions of approval.

2. **Criteria.** Shoreline conditional uses identified in the Burien Shoreline Master Program Use Matrix or those that are unlisted uses but not prohibited uses, may be allowed only when the applicant can demonstrate all of the following:

a. The proposed use will be consistent with RCW 90.58.020 (Use Preference) and the Shoreline Management Act and the Burien Shoreline Master Program;

b. The proposed use will not interfere with the normal public use of public shorelines;

c. The proposed use and development of the site and design of the project will be compatible with other permitted and planned uses within the area;

d. The shoreline proposal will not result in significant adverse impacts on the shoreline environment and that the cumulative impact of additional requests for like actions in the area will remain consistent with the policies of the Shoreline Management Act and the Burien Shoreline Master Program.

e. That the proposed use will not cause a substantial detrimental effect to the public interest. In authorizing a shoreline conditional use permit, special conditions may be attached to the permit to prevent undesirable effects of the proposed use, to ensure consistency with the Shoreline Management Act and the Burien Shoreline Master Program, or to address cumulative impacts of all like actions.

## 20.35.040 Shoreline Variance Permits (See also WAC 173-27-170 (Variances))

1. **Applicability.** A shoreline variance permit is strictly limited to granting relief from specific bulk, dimensional or performance standards set forth in the Burien Shoreline Master Program where there are extraordinary or unique circumstances relating to the physical character or configuration of property such that strict implementation of the policies, regulations or development standards would impose unnecessary hardships on the applicant or thwart the policies set forth in RCW 90.58.020 (Use Preference) or the Burien Shoreline Master Program. Shoreline variance permits should be granted in circumstances where denial of the permit would result in a thwarting of the policy enumerated in RCW 90.58.020 (Use Preference). The applicant must demonstrate that extraordinary circumstances shall be shown and the public interest shall suffer no substantial detrimental effect. A variance permit cannot be granted for a use.

2. **Landward Variance Criteria.** Variance permits for development and/or uses that will be located landward of the ordinary high water mark and/or landward of a wetland may be authorized provided the applicant can demonstrate all of the following:

   a. The strict application of the bulk, dimensional or performance standards set forth in the applicable master program precludes reasonable use of the property;

b. The hardship described in (a) of this subsection is specifically related to the property, and is the result of unique conditions such as irregular lot shape, size, or natural features and the application of the master program, and not, for example, from deed restrictions or the applicant's own actions;

c. The design of the project is compatible with other authorized developments within the area and with uses planned for the area under the City's comprehensive plan and Shoreline Master Program and will not cause adverse impacts to the shoreline environment;

d. The variance will not constitute a grant of special privilege not enjoyed by the other properties in the area;

e. The variance requested is the minimum necessary to afford relief; and

f. The public interest will suffer no substantial detrimental effect.

3. **Waterward Variance Criteria.** Variance permits for development and/or uses that will be located waterward of the ordinary high water mark or within a wetland, may be authorized provided the applicant can demonstrate all of the following:

   a. The strict application of the bulk, dimensional or performance standards set forth in the Burien Shoreline Master Program precludes all reasonable use of the property;

   b. The proposal is consistent with the criteria established (b) through (f) of section 2; and

   c. The public rights of navigation and use of the shorelines will not be adversely affected.

4. **Consideration of Cumulative Impacts.** In the granting of all variance permits, consideration shall be given to the cumulative impact of additional requests for like actions in the area. For example, if variances were granted to other developments and/or uses in the area where similar circumstances exist, the total of the variances shall also remain consistent with the policies of RCW 90.58.020 (Use Preference) and shall not cause substantial adverse effects to the shoreline environment.

## 20.35.050 Appeals

Any person aggrieved by the granting, denying or rescinding of a Shoreline Substantial Development Permit pursuant to BMC 19.65.060 (Judicial Appeal) and RCW 90.58.140 (Development Permits) may seek review from the state shorelines hearings board by filing a petition for review within twenty-one days of the date of filing as defined in RCW 90.58.140(6) (Development Permits).

## 20.35.055 Effective Date and Duration of Shoreline Permits

Construction authorized by an approved shoreline permit shall not begin until 21 days after the date of filing as defined by RCW 90.58.140 (Development Permits). This restriction shall be stated on the permit. Construction shall be commenced or, where no construction is involved, the use or activity shall be commenced within two years and the construction related activity shall terminate within five years after the effective date of a shoreline permit or the final settlement date of any associated appeals or legal actions regarding the proposed action. Provided, that the City may authorize a single extension for a period not to exceed one year based on reasonable factors, if a request for extension has been filed before the expiration date and notice of the proposed extension is given to parties of record and the Department of Ecology. The City shall notify the Department of Ecology in writing of any change to the effective date of a permit, as authorized by this section, with an explanation of the basis for approval of the change. Any change to the time limits of a permit other than those authorized by this section shall require a new permit application. See also WAC 173-27-090 for additional information regarding duration of permits.

## 20.35.060 Compliance and Enforcement

1. Choice of Action/Penalty; Conflict. The choice of enforcement action to be taken and the severity of any penalty to be imposed shall be guided by the nature of the violation, the damage or risk to the public or to public resources, and /or the existence or degree of bad faith of the person or persons subject to the enforcement action. The provisions of Section 20.35.060 shall supersede and take precedence over any other enforcement provisions of the Burien Municipal Code in conflict herewith.

2. Order to Cease and Desist; Notice of Correction: In the event any person is or has engaged in activity that violates any of the provisions of, BMC Chapter 20.35, RCW Chapter 90.58 (Shoreline Management Act), or a permit issued pursuant to BMC Chapter 20.35, the City may issue and serve upon such person or persons, a cease and desist order and/or an order to take corrective action.

a. Content of order. The order shall set forth and contain:

i. A description of the specific nature, extent, and time of violation and the damage or potential damage; and

ii. A notice that the act or acts causing a violation or a potential violation shall immediately cease and desist or, in appropriate cases, the specific corrective action to be taken within a specific and reasonable time, which corrective action may include, but is not limited to, restoration and/or mitigation of the site and other property damaged.

b. Effective date. An order issued under this section shall become effective immediately upon receipt by the person to whom the order is directed.

c. Compliance. Failure to comply with the terms of an order issued pursuant to BMC Section 20.35.060(B) shall be a violation of BMC Chapter 20.35 and can result in enforcement actions including, but not limited to, the issuance of a civil penalty.

d. Other Action. In addition to the issuance of the cease and desist order and/or an order to take corrective action, the City may take other enforcement action available at law including, issuance of a civil notice of violation and penalties pursuant to BMC Section 20.35.060(C), seeking injunctive or declaratory relief, imposition of criminal penalties, and permit rescission as set forth in RCW 90.58.140 (Development Permits). The City may combine an order issued pursuant to Section 20.35.060(B) with a notice of violation.

3. Civil Penalties; Procedures; Remission:

a. Civil Violations. It shall be a civil violation of this BMC Chapter 20.35 for any person to:

i. Use, construct or demolish any structure, or to conduct clearing, earth-moving, construction or other development not authorized under a Substantial Development Permit, Conditional Use Permit or Variance Permit, where such permit is required by BMC Chapter 20.35.

ii. Undertake or conduct any work which is not conducted in accordance with the plans, conditions, or other requirements in a permit approved pursuant to BMC Chapter 20.35, provided that the terms or conditions are stated in the permit or the approved plans;

iii. Remove or deface any sign, notice, complaint or order required by or posted in accordance with BMC Chapter 20.35;

iv. Misrepresent any material fact in any application, plans or other information submitted to obtain any shoreline use or development authorization;

v. Fail to comply with the requirements of a substantial development permit, conditional use permit or variance issued pursuant to BMC Chapter 20.35;

vi. Undertake a development or use on shorelines of the state without first obtaining a permit required pursuant to BMC Chapter 20.35;

vii. Fail to comply with an order issued under BMC Section 20.35.060(B);

b. Amount of penalty. The penalty for each civil violation shall not exceed one thousand dollars for each violation and shall not be less than twenty-five dollars. The amount of the penalty prescribed in the notice of violation shall be determined based upon the guidelines set forth in BMC Section 20.35.060(A).

c. Separate Violation. Each calendar day that a civil violation occurs or continues to occur shall constitute a separate civil violation.

d. Notice of Civil Violation. A notice of civil violation and penalty shall be imposed by issuance and service of a notice of civil violation in writing.

e. Contents of Notice of Violation. The notice of violation shall set forth and contain:

   i. A description of the specific nature, extent, and time of violation(s) and the damage or potential damage; and

   ii. A notice that the act or acts causing a violation or a potential violation shall immediately cease and desist or, in appropriate cases, the specific corrective action to be taken within a specific and reasonable time; and

   iii. A notice that any order included in the notice of violation shall become effective immediately upon receipt by the person to whom the order is directed.

f. Service of Notice of Violation. The notice of violation shall be served upon the person or persons alleged to have committed the violation either by certified mail with return receipt requested, at such person's or persons' last known address of record, or by personal service.

g. Application for Remission or Mitigation. Any person incurring a penalty may apply in writing, within thirty days of receipt of the penalty, to the Director for remission or mitigation of such penalty. The application shall be filed with the City Clerk and shall identify the specific violation or violations for which the applicant seeks remission or mitigation, set forth the specific facts establishing the extraordinary circumstances which the applicant desires the Director to consider, include complete copies of any documents or records applicant wishes the Director to consider, include the mailing address (not a post office box) at which the applicant will receive notice of the decision, and shall be signed by the applicant. Incomplete applications and applications filed with the City after the thirty-day period specified herein shall not be considered by the Director.

   Upon receipt of a complete application for remission or mitigation, the Director, or his/her designee, shall consider the application, together with any information the Director, or his/her designee, determines is relevant, and may remit or mitigate the penalty only upon a finding that that applicant has demonstrated

extraordinary circumstances, such as the presence of information or factors not considered in setting the original penalty. When a penalty is imposed jointly by the Department of Ecology and the City, the penalty may be remitted or mitigated only upon such terms as both the Department of Ecology and the City agree.

h. Right of Appeal.

i. Any person issued a notice of civil violation pursuant to BMC Section 20.35.060(C), may appeal the same to the City Council; provided that, if the penalty is imposed jointly by the City and the Department of Ecology, an appeal shall be filed with the shorelines hearings board in accordance with WAC 173-27-290 (Appeal of Civil Penalty).

ii. Timing of Appeal. Except as provided below, any person appealing a notice of civil violation to the City Council shall file a written notice of appeal with the City Clerk within thirty days of service of the notice of civil violation. In the event that a timely and completed application is filed with the City Clerk for remission or mitigation, an appeal of a civil violation that is the subject of the application for remission or mitigation shall be filed within thirty days of applicant's receipt of the City's written decision regarding the remission or mitigation. The applicant shall be deemed to have received the written decision upon the earlier of the date of personal service of the written decision or three days after the written decision is deposited in the United States Mail, in a postage pre-paid, properly addressed envelope, using the applicant's address as stated in the application.

iii. Notice of Appeal. All appeals shall be in writing and contain the following:

A. A heading in the words: "Before the Hearing Examiner;

B. A caption reading: "Appeal of _____" giving the name of all appellant(s);

C. A brief statement in concise language of the violation or violations protested, together with any material facts claimed to support the contentions of the appellant, including a copy of the notice of civil violation(s) being appealed;

D. A brief statement in concise language of the relief sought, and the reasons why it is claimed the protested notice of violation(s) should be reversed, modified or otherwise set aside;

E. The signatures of appellant and appellant's official mailing addresses;

F. The verification (by declaration under penalty of perjury under the laws of the State of Washington) of the appellant as to the truth of the matters stated in the appeal.

iv. Hearing. Within 10 days of receiving the written appeal, the city clerk shall fix a date, time and place for the hearing of the appeal. Such date shall be not less than 10 days nor more than 60 days from the date the appeal was filed; provided that, the Hearing Examiner may reset or continue a hearing upon request of the City or the party appealing, upon good cause shown, or sua sponte. Written notice of the date of the hearing shall be provided to the appellant by mailing such notice by first class mail, postage prepaid, to the appellant at the address shown on the notice of appeal. At the hearing the appellant shall be entitled to appear in person and be represented by counsel, and to offer evidence pertinent and material to those matters or issues specifically raised by the appellant in the written notice of appeal.

v. Evidence. Unless otherwise provided by law, evidence that is material and relevant to determination of the matter consistent with the applicable legal requirements and subject to administrative rules of proceedings before the Hearing Examiner, shall be admitted into the record whether or not such evidence was considered by the official issuing the notice of civil violation.

vi. Findings/Conclusions/Recommendation. The Hearing Examiner shall conduct adjudicative proceedings, receive and examine all evidence it finds relevant to the subject matter, and prepare a record thereof. When the Hearing Examiner renders a recommendation, the examiner shall make and enter written findings and conclusions which support such decision. The findings and conclusions shall set forth and demonstrate the manner in which the decision or recommendation is consistent with applicable laws, regulations and policies of the city of Burien. The Hearing Examiner may recommend that the notice of civil violation be affirmed, dismissed or modified consistent with his/her findings and conclusions. The decision or recommendation shall be rendered as soon as possible but in all events within 20 working days of the conclusion of the hearing.

vii. City Council. When taking final action, the City Council shall make and enter findings of fact from the record before the Hearing Examiner which support its action, may affirm, reverse, modify, or remand the decision of the hearing examiner, and may adopt all or portions of the examiner's findings and conclusions. The decision of the City Council shall be a final decision.

i. Penalties due.

i. Penalties imposed under BMC Section 20.35.060(C) shall become due and payable thirty days after receipt of notice of civil violation unless application for remission or mitigation is made or an appeal is filed. Whenever an application for remission or mitigation is made, penalties shall become due and payable thirty days after receipt of the City's decision regarding the remission or mitigation. Whenever an appeal of a penalty is filed, the penalty shall become due and payable upon completion of all review proceedings and upon the issuance of a final decision confirming the penalty in whole or in part.

ii. If the amount of a penalty owed the City is not paid within thirty days after it becomes due and payable, the City may take actions necessary to recover such penalty.

j. Aiding or abetting. Any person who, through an act of commission or omission procures, aids or abets in the civil violation shall be considered to have committed a civil violation for the purposes of the civil penalty.

4. Criminal Penalties.

In addition to incurring civil penalties under BMC Section 20.35.060(C), any person found to have willfully engaged in activities on shorelines of the state in violation of the provisions of BMC Chapter 20.35, shall be guilty of a gross misdemeanor, and shall be punished by:

a. A fine of not less than twenty-five dollars ($25) or more than one thousand dollars ($1,000);

b. Imprisonment in the County/City jail for not more than ninety (90) days; or

c. Both such fine and imprisonment; provided that, the fine for the third and all subsequent violations in any five (5) year period shall not be less than five hundred dollars ($500) nor more than ten thousand dollars ($10,000); provided further, that fines for violations of RCW 90.58.550 (Oil and Natural Gas Exploration), or any rule adopted thereunder, shall be determined under RCW 90.58.560 (Oil and Natural Gas Exploration).

5. Inspection Access.

The Director and his/her authorized representatives, may for the purpose of inspection for compliance with the provisions of a permit issued pursuant to BMC Chapter 20.35, enter all properties that are subject to such a permit. All persons applying for a permit under this BMC Chapter 20.35 shall be deemed to have given their consent to entry upon the property upon issuance of the permit. No owner or occupant of any premises shall fail to

provide prompt entry to the Director or authorized representative for the purposes of inspection under this section. If such entry is refused, the City shall have recourse to every remedy provided by law to secure entry, including, issuance of a notice of a notice of correction and issuance of a notice of civil violation.

Whenever entry is required for purposes of inspection pursuant to this section, if the premises are occupied, the persons conducting the inspection shall present proper credentials and request entry, and if the premises are unoccupied, reasonable effort shall first be made to locate the owner of the premises and request entry.

6. Other Remedies.

a. In addition to the civil and criminal penalties provided for herein, the City may, pursuant to RCW Chapter 90.58 (Shoreline Management Act), bring such injunctive, declaratory, or other actions as are necessary to insure that no uses are made of the shorelines of the state located within the City of Burien in conflict with the provisions of, RCW Chapter 90.58 (Shoreline Management Act), BMC Chapter 20.35, a permit issued pursuant to BMC Chapter 20.35, or other regulations adopted pursuant state law or city code, and to otherwise enforce the provisions of the City's Shoreline Master Program.

b. Any person subject to the regulatory provisions of this Program or the Act who violates any provision thereof, or permit, or permit condition issued pursuant thereto shall be liable for all damage to public or private property arising from such violation, including the cost of restoring the affected area to its condition prior to violation. The City Attorney may bring suit for damages under this section on behalf of the City and on the behalf of all persons similarly situated pursuant to RCW Chapter 90.58 (Shoreline Management Act).

7. Abatement.

Structures or development on shorelines considered by the Director to present a hazard or other public nuisance to persons, properties or natural features may be abated by the City using all lawful means available.

## 20.35.065 Revisions to Shoreline Permits (See also WAC 173-27-100 (Revisions to Permits))

1. **Revision required.** A permit revision is required whenever an applicant proposes substantive changes to the design, terms or conditions of a project from that which is approved in the shoreline permit. Changes are considered substantive if they materially alter the project in a manner that relates to its conformance to the terms and conditions of the permit, the Burien Shoreline Master Program and/or the policies and provisions of RCW Chapter 90.58 (Shoreline Management Act). Changes which are not substantive in effect do not require approval of a revision.

2. **Required Information.** When an applicant seeks to revise a permit, the city will request from the applicant detailed plans and text describing the proposed changes. If the Shoreline Administrator determines that the proposed changes are within the scope and intent of the original permit, and are consistent with the Burien Shoreline Master Program and the Shoreline Management Act, the city may approve a revision.

   "Within the scope and intent of the original permit" means all of the following:

   a. No additional over water construction is involved except that pier, dock, or float construction may be increased by five hundred square feet or ten percent from the provisions of the original permit, whichever is less;

   b. Ground area coverage and height may be increased a maximum of ten percent from the provisions of the original permit;

   c. The revised permit does not authorize development to exceed height, lot coverage, setback, or any other requirements of the applicable master program except as authorized under a variance granted as the original permit or a part thereof;

   d. Additional or revised landscaping is consistent with any conditions attached to the original permit and with the applicable county master program;

   e. The use authorized pursuant to the original permit is not changed; and

   f. No adverse environmental impact will be caused by the project revision.

3. **New Permits Required**. If the revision, or the sum of the revision and any previously approved revisions will violate the criteria specified in (a)-(f) of the preceding section, the City shall require that the applicant apply for a new shoreline permit. Revisions to permits may be authorized after original permit authorization has expired under WAC 173-27-080(2) (Legally Established Structures). The purpose of such revisions shall be limited to authorization of changes which are consistent with this section and which would not require a permit for the development or change proposed under the terms of RCW Chapter 90.58 (Shoreline Management Act), the Burien Shoreline Master Program and this section. If the proposed change constitutes substantial development, then a new permit is required. Provided, this subsection shall not be used to extend the time requirements or to authorize substantial development beyond the time limits of the original permit. The revision approval, including the revised site plans and text consistent with the provisions of WAC 173-27-180 (Application Requirements) as necessary to clearly indicate the authorized changes, and the final ruling on consistency with this section shall be filed with the Washington State Department of Ecology. In addition, the city shall notify parties of record of the action.

4. **Revisions to Conditional Use or Variance Permits.** If the revision to the original permit involves a conditional use or variance, the city shall submit the revision to the Department of Ecology for the required state's approval, approval with conditions, or denial, and shall indicate that the revision is being submitted under the requirements of this subsection. The Department of Ecology shall render and transmit to the City and the applicant its final decision within fifteen days of the date of their receipt of the submittal from the City. The City of Burien shall notify parties of record of the Department of Ecology's final decision.

5. **Effective Date.** The revised permit is effective immediately upon final decision by the City or, when appropriate, upon final action by the Department of Ecology.

6. **Appeals.** Appeals shall be to the state shorelines hearings board in accordance with RCW 90.58.180 (Appeals) and shall be filed within twenty-one days from the date of receipt of the City's action by the Department of Ecology or the date the Department of Ecology's final decision is transmitted to the City and the applicant.

7. **Construction Authorization.** Construction undertaken pursuant to that portion of a revised permit not authorized under the original permit is at the applicant's own risk until the expiration of the appeals deadline. If an appeal is successful in proving that a revision is not within the scope and intent of the original permit, the decision shall have no bearing on the original permit.

## 20.35.070 Rescission of Shoreline Permits and Exemptions (See also RCW 90.58.140(8) (Development Permits))

Whenever any development or use is in violation of a permit or shoreline exemption issued pursuant to this chapter, the City may, concurrent with or as an alternative to any other remedy provided by this title or other law or ordinance, initiate permit rescission proceedings by scheduling a public hearing before the hearing examiner and serving the applicant with written notice thereof. Notice shall be provided in accordance with BMC 19.65.045 (Type 1 Decisions) and contain a general description of the alleged noncompliance and date, time, and place of public hearing. It shall be served by registered mail at least 15 calendar days prior to such hearing. The permit rescission request shall be processed as a Type 2 decision in accordance with the procedures established in BMC Chapter 19.65 (Procedures).

# Chapter VI. Shoreline Definitions

**Definitions contained in the Shoreline Management Act of 1971 (RCW Chapter 90.58) and the Shoreline Master Program Guidelines (WAC Chapter 173-26) shall apply to all terms and concepts used in this shoreline master program, provided that definitions contained in this title shall be applicable where not in conflict with the Shoreline Management Act and the Shoreline Master Program Guidelines and Shoreline Management procedural rules.**

**20.40.000 Alteration** means any human activity that results or is likely to result in a significant impact upon the existing condition of a critical area. Alterations include, but are not limited to, grading, filling, dredging, draining, channelizing, applying herbicides or pesticides or any hazardous substance, discharging pollutants except storm water, grazing domestic animals, paving, constructing, applying gravel, modifying for surface water management purposes, cutting, pruning, topping, trimming, relocating or removing vegetation or any other human activity which results or is likely to result in a significant impact to existent vegetation, hydrology, wildlife or wildlife habitat. Alterations do not include walking, fishing or any other passive recreation or other similar activities.

**20.40.005 Appurtenance** means development necessarily connected to the use and enjoyment of a single family residence and located landward of the perimeter of an associated wetland and landward of the ordinary high water mark. Normal appurtenances include a garage; deck; driveway; utilities solely servicing the subject single family residence; fences; and grading which does not exceed 250 cubic yards.

**20.40.010 Aquaculture** means the culture, harvesting or farming of food fish, shellfish, or other aquatic plants and animals. Activities include the hatching, cultivating, planting, feeding, raising, harvesting, and processing of aquatic plants and animals and the maintenance and construction of necessary equipment, buildings and growing areas. Cultivation methods include but are not limited to fish pens, fish hatcheries, shellfish rafts, racks and long lines, seaweed floats and nets and the culture of clams and oysters on tidelands and subtidal areas.

**20.40.015 Associated wetlands** means those wetlands that are in proximity to and either influence or are influenced by tidal waters or a lake or stream subject to the Shoreline Management Act.

**20.40.020 Beach** means the zone of unconsolidated material that is moved by waves, wind, and tidal currents, extending landward to the coastline.

**20.40.025 Boat ramp** means graded slopes, slabs, pads, planks, or rails used for launching boats by means of a trailer, hand, or mechanical device.

**20.40.030 Bulkhead** means a solid or open pile wall erected generally parallel to and near the ordinary high water mark for the purposes of protecting adjacent uplands from waves or current action.

**20.40.035 Community Beach** means a beach area jointly owned by a homeowners association for use of the neighborhood.

**20.40.040 Community residential facility** means living quarters meeting applicable federal and state standards that function as a single housekeeping unit and provide supportive services, including but not limited to counseling, rehabilitation and medical supervision, excluding drug and alcohol detoxification; if staffed by nonresident staff, each 24 staff hours per day equals one full-time residing staff member for subclassifying community residential facilities as follows:

1. Community residential facility-I: Nine to ten residents and staff.

2. Community residential facility-II: Eleven or more residents and staff. [BMC 19.10.065]

**20.40.042 Critical saltwater habitat** means all kelp beds, eelgrass beds, spawning and holding areas for forage fish, such as herring, smelt and sandlance; shellfish beds; mudflats, intertidal habitats with vascular plants, and areas with which priority species have a primary association.

**20.40.044 Development** means a use consisting of the construction or exterior alteration of structures; dredging; drilling; dumping; filling; removal of any sand, gravel, or minerals; bulkheading; driving of piling; placing of obstructions; or any project of a permanent or temporary nature which interferes with the normal public use of the surface of the waters overlying lands subject to this chapter at any state of water level.

**20.40.045 Docks** are fixed structures floating upon the water.

**20.40.050 Dredging** means the removal of earth, sand, sludge or other materials from the bottom of a stream, river, lake, bay or other water body. However, the creation of temporary depressions or contour alterations on tidelands or bedlands through the use of aquaculture harvesting equipment approved by the Washington State Department of Fish and Wildlife shall not be construed to be dredging.

**20.40.055 Feasible** means actions that meet all of the following conditions:
(a) The action can be accomplished with technologies and methods that have been used in the past in similar circumstances, or studies or tests have demonstrated in similar circumstances that such approaches are currently available and likely to achieve the intended results;
(b) The action provides a reasonable likelihood of achieving its intended purpose; and
(c) The action does not physically preclude achieving the project's primary intended legal use.

In cases where this SMP requires certain actions unless they are infeasible, the burden of proving infeasibililty is on the applicant.

In determining an action's infeasibility, the reviewing agency may weigh the action's relative public costs and public benefits, considered in the short- and long-term time frames.

**20.40.060 Fill** means any material, such as earth, clay, sand, concrete, rubble, wood chips, bark or waste of any kind which is placed, stored or dumped upon the surface of the ground resulting in an increase in the natural surface elevation.

**20.40.065 Floating home** means a structure designed and operated substantially as a permanently based structure and not as a vessel and is typically characterized by permanent utilities, a semi-permanent anchorage/moorage design, and by the lack of adequate self-propulsion to operate as a vessel.

**20.40.070 Floats (rafts)** are floating structures that are moored, anchored, or otherwise secured in the water that are not directly connected to the shoreline.

**20.40.073 Government Facility** – Services and facilities operated by any level of government, excluding those use listed separately in this Code. [BMC 19.10.210]

**20.40.074 Grading** means the movement or redistribution of the soil, sand, rock, gravel, sediment, or other material on a site in a manner that alters the natural contour of the land.

**20.40.075 Houseboat** means a vessel used for living quarters but licensed and designed substantially as a mobile structure by means of detachable utilities or facilities, anchoring, and the presence of adequate self-propulsion to operate as a vessel.

**20.40.080 In-water structure** means a structure located waterward of the ordinary high water mark that either causes or has the potential to cause water impoundment or the diversion, obstruction, or modification of water flow.

**20.40.085 Littoral drift** means the mud, sand, or gravel materials moved parallel to the shoreline in the nearshore zone by waves and currents.

**20.40.088 Mean higher high water** or "MHHW" means the tidal elevation obtained by averaging each day's highest tide at a particular location over a period of nineteen years. It is measured from the mean lower low water = 0.0 tidal elevation.

**20.40.090 Mooring buoy** means a floating object anchored to the bottom of a water body that provides tie up capabilities for vessels.

**20.40.092 Net Acre** means a measure of horizontal area for calculating development potential. At the area-wide planning level, net acre refers to the gross acre less the estimated area to be transferred (e.g., sale, dedication or donation) to public ownership from individual parcels. Net acreage is typically 67-75 percent of gross acreage, and depends largely on the amount of road right-of-way. At the site development level, this is the total acre-age of a parcel less the area transferred to public ownership. The remaining net acreage is the basis for determining development density and potential. Net acre typically includes easement areas.

**20.40.095 Normal protective bulkhead** means a bulkhead, common to single family residences, constructed at or near the ordinary high water mark to protect an existing single family residence, the sole purpose of which is to protect land from erosion, not for the purpose of creating new land.

**20.40.097 Office** – A place of employment providing professional, administrative, educational, business or governmental services other than production, distribution, sale or repair of goods or commodities. The following is a nonexclusive list of office uses: medical, dental or other health care; veterinary, accounting, architectural, engineering, consulting or other similar professional services; management, administrative, secretarial, marketing, advertising, personnel or other similar services; sales offices where no inventories or goods are available on the premises, real estate, insurance, travel agent, brokerage or other similar services.[BMC 19.10.385]

**20.40.100 Ordinary High Water Mark** (OHWM) means on all lakes, streams, and tidal water is that mark that will be found by examining the bed and banks and ascertaining where the presence and action of waters are so common and usual, and so long continued in all ordinary years, as to mark upon the soil a character distinct from that of the abutting upland, in respect to vegetation as that condition existing on June 1, 1971, as it may naturally change thereafter, or as it may change thereafter in accordance with permits issued by a local government or the department: PROVIDED, That in any area where the ordinary high water mark cannot be found, the ordinary high water mark adjoining salt water shall be the line of mean higher high tide and the ordinary high water mark adjoining fresh water shall be the line of mean high water.

**20.40.101 Partially functioning areas** means areas that provide one or more reduced ecological functions and consist of neither native vegetation nor impervious surface. Ecological functions may include sediment removal, erosion control, pollution removal, wildlife habitat, and infiltration. Partially functioning areas specifically include lawns, slat decks that allow infiltration, and non-native landscaped areas.

**20.40.102 Personal wireless service facility (*PWSF*)** – A *site*, *building*, and/or *structure* that contains facilities to provide *personal wireless services*. A personal wireless service facility includes at least one of the following: *antenna*, *support structure*, and/or *equipment enclosure*. [Ord. 265 § 23, 1999], [BMC 19.10.397]

**20.40.105 Piers** are fixed, pile-supported structures extending over the water.

**20.40.110 Physical access** means the ability of the general public to reach, touch, and enjoy the water's edge, to travel on the waters of the state, and to view the water and the shoreline from adjacent locations.

**20.40.115 Primary structure** means any permanent building, road, bridge or utility requiring a permit or approval which is necessary to support the primary use of a site.

**20.40.116 Public park and recreation facilities** – A natural or landscaped area, *buildings* or *structures*, provided by a unit of government, to meet the active or passive recreational needs of people. [BMC 19.10.210]

**20.40.117 Retail** – A commercial enterprise which: provides goods and/or services directly to the consumer; and, whose goods are available for immediate purchase and/or rental; and, whose goods are available for immediate removal from the premises by the purchaser and/or whose services are traditionally not permitted within an *office use*. The sale and consumption of food are included if: a) the seating and associated circulation area does not exceed ten percent of the *gross floor area* of the *use*, and b) it can be demonstrated to the City that the floor plan is designed to preclude the seating area from being expanded. Goods and services offered include, but are not limited to: *convenience retail uses*. [BMC 19.10.465]

**20.40.119 School** - An institution of learning offering instruction in the several branches of learning and study required by the Education Code of the state of Washington. The following are categories of schools:

1. Elementary, and middle/junior high schools: Grades kindergarten through nine, including associated meeting rooms, auditoriums and athletic facilities.

2. Secondary or high school schools: Grades 9 through 12, including associated meeting rooms, auditoriums and athletic facilities.

**20.40.120 Shorelands** means those lands extending landward for 200 feet in all directions as measured on a horizontal plane from the ordinary high water mark; floodways and 100-year floodplains; and all wetlands and river deltas associated with the streams, lakes, and tidal waters which are subject to the State of Washington Shoreline Management Act.

**20.40.125 Shoreline Administrator** means the City Manager or his or her designee in the Community Development Department who is responsible for administering the City of Burien Shoreline Master Program.

**20.40.130 Shoreline conditional use** means a use or modification classified by the City of Burien Shoreline Master Program as a conditional use or modification for certain shoreline environments or is an unlisted use/modification.

**20.40.135 Shoreline modification** means an action that modifies the physical configuration or qualities of the shoreline area, usually through the construction of a

physical element such as a breakwater, dock, boat launch ramp, or other shoreline structures. A shoreline modification also can consist of other activities, such as dredging and filling.

**20.40.140 Shoreline permit** means any substantial development, variance, conditional use, or revision thereto authorized under the provisions of the City of Burien Shoreline Master Program subject to review by the Washington State Department of Ecology.

**20.40.145 Shoreline substantial development** means any development of which the total cost, or fair market value, whichever is higher, exceeds $6,416 or the dollar amount as periodically adjusted by WAC 173-27-040(2.a), so long as such development does not materially interfere with the normal public use of the water or shorelines of the state.

**20.40.150 Shoreline variance** means a permit for the limited purposes of granting relief to specific bulk, dimensional, or performance standards set forth in the City of Burien Shoreline Master Program.

**20.40.155 Shoreline environment designations** means the categories of shorelines established by the City of Burien Shoreline Master Program in order to provide a uniform basis for applying policies and use regulations within physically distinct shoreline areas. The City of Burien Shoreline Master Program classifies shorelines into three shoreline environment designations: Urban Conservancy, Aquatic and Shoreline Residential.

**20.40.160 Shoreline jurisdiction** means the proper term describing all of the geographic areas regulated by the City of Burien Shoreline Master Program.

**20.40.165 Shoreline master program** means the general term for shoreline comprehensive plans and regulations prepared under the jurisdiction of the Shoreline Management Act.

**20.40.170 Shorelines** means all of the water areas of the state, including reservoirs, and their associated shorelands, together with the lands underlying them; except (1) shorelines of statewide significance, (2) shorelines on segments of streams upstream of a point where the mean annual flow is 20 cubic feet per second or less, and the wetlands associated with such upstream segments, and (3) shorelines on lakes less than 20 acres in size, and wetlands associated with such small lakes.

**20.40.175 Shorelines of statewide significance** means shorelines designated by the State of Washington that are major resources from which all people in the state derive benefit. Shoreline areas in the City of Burien that are designated as shorelines of statewide significance are portions of the Puget Sound adjacent to the city limits extending out to mid channel from extreme low tide.

**20.40.180 Shorelines of the state** means the total of all "shorelines" and "shorelines of statewide significance" within the state.

**20.40.185 Tidal waters** means marine and estuarine waters bounded by the ordinary high mark. Where a stream enters the tidal waters, the tidal water is bounded by the extension of the elevation of the marine ordinary high water mark within the stream.

**20.40.190 Tidelands** means the land on the shore of marine water bodies between the line of ordinary high tide and the line of extreme low tide.

**20.40.195 Tram** means a conveyance that transports passengers or freight in carriers on rails or suspended from cables supported by a series of towers.
**20.40.200 Upland** means generally the area above and landward of the ordinary high water mark.

**20.40.205 Visual access** means access with improvements that provide only a view of the shoreline or water, but do not allow physical access to the shoreline.

**20.40.210 Water dependent** means a use or a portion of a use which requires direct contact with the water and cannot exist at a nonwater location due to the intrinsic nature of its operations. Examples of water dependent uses may include ship cargo terminal loading areas, ferry and passenger terminals, barge loading facilities, ship building and dry docking, marinas, aquaculture, float plane facilities, and sewer outfalls.

**20.40.215 Water enjoyment** means a recreational use, or other use facilitating public access to the shoreline as a primary characteristic of the use; or a use that provides for recreational use or aesthetic enjoyment of the shoreline for a substantial number of people as a general character of the use and which through the location, design and operation assures the public's ability to enjoy the physical and aesthetic qualities of the shoreline. In order to qualify as a water enjoyment use, the use must be open to the general public and the shoreline space of the project must be devoted to provisions that accommodate public shoreline enjoyment. Examples may include parks, piers, museums, restaurants, educational/scientific reserves, resorts, and mixed use projects.

**20.40.220 Water oriented** means any combination of water dependent, water related, and/or water enjoyment uses. Nonwater oriented serves to describe those uses which have little or no relationship to the shoreline. Examples of nonwater oriented uses include professional office, automobile sales or repair shops, mini storage facilities, multifamily residential development, department stores, and gas stations.

**20.40.225 Water related** means a use or a portion of a use which is not intrinsically dependent on a waterfront location but whose operation cannot occur economically without a waterfront location. Examples of water related uses may include warehousing of goods transported by water, seafood processing plants, hydroelectric generating plants, gravel storage when transported by barge, oil refineries where transport is by tanker, and log storage.

**20.40.230 Watershed restoration plan** means a plan, developed or sponsored by the department of fish and wildlife, the department of ecology, the department of natural

resources, the department of transportation, a federally recognized Indian tribe acting within and pursuant to its authority, a city, a county, or a conservation district that provides a general program and implementation measures or actions for the preservation, restoration, re-creation, or enhancement of the natural resources, character, and ecology of a water body or reach, drainage area, or watershed for which agency and public review has been conducted pursuant to chapter 43.21C RCW, the State Environmental Policy Act.

**20.40.235 Wetlands** means areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Wetlands do not include those artificial wetlands intentionally created from nonwetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities, or those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or highway. Wetlands may include those artificial wetlands intentionally created from nonwetland areas to mitigate the conversion of wetlands.

# Errata Sheet

for the documents titled:

City of Burien Shoreline Master Program Update, Shoreline Inventory March 27, 2008, Revised October 23, 2008

City of Burien Shoreline Master Program Update, Shoreline Analysis and Characterization June 12, 2008, Revised October 23, 2008

Errata posted August 23, 2010

| Document | Page | Erratum |
|---|---|---|
| Shoreline Inventory | 2, section 1.3 | In Table 1 titled, *Shoreline Inventory reaches in the City of Burien*, should include the correct length calculations. The correct table is shown below. |
| Shoreline Analysis and Characterization | 2, section 1.4 | In Table 1 titled, *Shoreline Inventory reaches in the City of Burien*, should include the correct length calculations. The correct table is shown below. |

**Table 1. Shoreline Inventory reaches in the City of Burien.**

| Location | Reach | Description | Approximate Length (ft) | Approximate Length (mi) |
|---|---|---|---|---|
| Marine | M1 | Primarily residential marine shoreline extending south from City limit to the north edge of Seahurst Park. | 6,001 | 1.14 |
| Marine | M2 | Seahurst Park and primarily undeveloped shoreline south to the point at which consistent shoreline residential development begins again. Corresponds to a line projected west from SW 149th Street to intersection with the shoreline. | 6,382 | 1.21 |
| Marine | M3 | Consistent residential development extending south to the tip of Three Tree Point. | 9,246 | 1.75 |
| Marine | M4 | Consistent residential development from the tip of Three Tree Point to the southern City limit. | 7,597 | 1.44 |
| | | *Marine Subtotal* | *29,226* | *5.54* |
| Lake Burien | LB | Entire perimeter of Lake Burien | 6,172 | ~~1.67~~1.17 |
| | | **Total Jurisdictional Shoreline** | ~~35,399~~35,398 | ~~7.21~~6.71 |

| Document | Page | Erratum |
|---|---|---|
| Shoreline Inventory | 9 | Paragraph 2 of section 3.1 contains a reference to a Category 2 wetland designation for Lake Burien. For clarification purposes this designation was sourced from the City of Burien Critical Area Map adopted by Ordinance 394 in October 2003. Zoning code section 19.40.300[4.iv] designated wetlands associated with Lake Burien as Category 4. Pursuant to the zoning code Category 2 wetlands require a 100 foot buffer while category 4 wetlands require a 30 foot buffer. |
| Shoreline Analysis and Characterization | 17 | In the paragraph titled *Other Habitat Function* contains a reference to a Category 2 wetland designation for Lake Burien. For clarification purposes this designation was sourced from the City of Burien Critical Area Map adopted by Ordinance 394 in October 2003. Zoning code section 19.40.300[4.iv] designated wetlands associated with Lake Burien as Category 4. Pursuant to the zoning code Category 2 wetlands require a 100 foot buffer while category 4 wetlands require a 30 foot buffer. |

# CITY OF BURIEN
# SHORELINE MASTER PROGRAM UPDATE

# SHORELINE INVENTORY

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MARCH 27, 2008
REVISED OCTOBER 23, 2008

Grette Associates LLC
ENVIRONMENTAL CONSULTANTS

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# 1 INTRODUCTION

This report is intended to provide baseline information on the existing conditions within the City of Burien's (City's) shoreline jurisdiction (Figure 1) to provide a basis for the update of the City's Shoreline Master Program (SMP). It includes information on existing environmental conditions and land use practices, as well as current proposals for restoration activities and recommendations for other actions such as conservation and restoration. The information in this report is primarily presented in tabular and graphical formats, and is intended to support the Inventory map folio. Narrative is limited to a description of the Inventory process, summary language, and descriptive information that will be useful for subsequent stages of the SMP update but is not easily put into tabular or graphical format.

## 1.1 STUDY AREA BOUNDARY

The City of Burien is located in south central King County, south of the City of Seattle, north of the City of Normandy Park, and west of the City of SeaTac. Although there are a number of waterbodies, including streams, lakes, and marine shorelines, within the City limits only two of these are regulated under the State Shoreline Management Act (SMA). The first is the approximately five-mile stretch of Puget Sound marine shoreline between the north and south City limits. The second is Lake Burien, which is entirely located within the City limits and includes approximately 1.1 miles of shoreline (Figure 1).

Under revisions to the SMA, shoreline jurisdictions have discretion regarding the lateral extent of shoreline zone from the ordinary high water (OHW) mark. The standard shoreline jurisdictional overlay is 200 horizontal feet landward of the OHW mark and the extent of any wetlands with overlap or connection to the 200-foot overlay. In addition, a jurisdiction has the option to include the locally adopted buffers for these wetlands. This analysis will include the wetlands areas and not consider the associated buffers for discussion purposes.

## 1.2 METHODOLOGY

The scope of this Inventory was defined according to the provisions in Washington Administrative Code (WAC) 173-26-201(3)(c). Existing information and data from a number of sources were reviewed as part of this Inventory (Bibliography [Section 7]; Appendix A). The City of Burien provided detailed Geographic Information System (GIS) layers, basin plans, WRIA documents, and relevant consultant reports. This included information requested from Washington Department of Fish and Wildlife (WDFW) on Priority Habitats and Species (PHS), including endangered species, during the City's 2003 Critical Areas update and more recently in January 2008.

In addition, Washington State Department of Ecology (Ecology) water quality data and the U.S. Fish and Wildlife (USFWS) National Wetlands Inventory (NWI) were also reviewed. Updated cultural and archeological data were also reviewed and requested as part of the next steps of SMP update.

## 1.3 REPORT ORGANIZATION

This report is organized to correlate with the required analysis (WAC 173-26-201(3)(c)) and is intended to review large scale information, and scale down sequentially to smaller reaches, which are summarized at the end of the document. This approach is fairly rigorous and ensures consistency between SMPs in adjacent jurisdictions.

## 1.4 INVENTORY REACHES

The City's shorelines were divided into lineal reaches according to land use (e.g., zoning and existing land use) and environmental characteristics (e.g., drainages, substrates and drift cells) (Figures 2-4). The marine shoreline was divided into four reaches, whereas Lake Burien was kept as a single reach based on the consistent use and environment around its perimeter (Table 1; Figure 1).

**Table 1. Shoreline Inventory reaches in the City of Burien.**

| Location | Reach | Description | Approximate Length (ft) | Approximate Length (mi) |
|---|---|---|---|---|
| Marine | M1 | Primarily residential marine shoreline extending south from City limit to the north edge of Seahurst Park. | 6,001 | 1.14 |
| Marine | M2 | Seahurst Park and primarily undeveloped shoreline south to the point at which consistent shoreline residential development begins again. Corresponds to a line projected west from SW 149th Street to intersection with the shoreline. | 6,382 | 1.21 |
| Marine | M3 | Consistent residential development extending south to the tip of Three Tree Point. | 9,246 | 1.75 |
| Marine | M4 | Consistent residential development from the tip of Three Tree Point to the southern City limit. | 7,597 | 1.44 |
| | | *Marine Subtotal* | *29,226* | *5.54* |
| Lake Burien | LB | Entire perimeter of Lake Burien | 6,172 | 1.67 |
| | | **Total Jurisdictional Shoreline** | **35,399** | **7.21** |

# 2 LAND USE AND ALTERED CONDITIONS

The City of Burien is located along Puget Sound, in King County, south of Seattle. Following European settlement of Puget Sound in 1851, George Oulett became the first landowner of Burien's coast and inland in 1864. Settlement of that land that is now Burien was followed by development, including timber and railroad industries. Almost all the land that is currently developed had been built upon by the 1970s (City of Burien 2004). Burien became an incorporated City in 1993. The current City limits are shown in Figure 1.

## 2.1 HISTORIC LAND USE AND WATERSHED CONDITIONS

Prior to the 1850s, the lowlands of Puget Sound included a network of sloughs, islands, beaver ponds, and estuaries. Land use was limited to native peoples fishing, hunting and food gathering. The only evidence of forest clearing by Native Americans was maintenance of gardens and camas fields. Shellfish and salmon were their primary food sources (Kerwin and Nelson 2000).

Post-European settlement, land use in Burien consisted primarily of timber-based industry. Further development occurred with the coming of the railroad at the turn of the 20th century. Additional settlement occurred with the construction of a north-south road (to become Ambaum Boulevard) connecting Burien to the City of White Center in 1909. Over the years, development and urbanization has led to modification of the shorelines. By 1930, the land around Lake Burien and along the northern marine waterfront had been purchased by Jay C. Allen and developed into a large estate called Glennallen; the 400+-acre estate was later broken up and sold off. Development of the marine shoreline north of Salmon Creek occurred primarily throughout the 1950s and 1960s. The southern marine waterfront was not developed extensively due to the steep slopes along the shoreline. By the 1970s, development peaked; that is, most of the land that is presently developed was developed by that time (City of Burien 2004).

Existing land use within the entire City of Burien is presented in Table 2. The current Comprehensive Plan (City of Burien 2006) states that land use and development in the shoreline areas will be compatible with the SMP, and that adherence to shoreline designations "will ensure that sensitive habitat, ecological systems, and other shoreline resources are protected" (Comprehensive Plan Policy EV 1.2; City of Burien 2006).

**Table 2. Existing land use in the City of Burien.**

| Land Use Category | Acres | Percent of Gross Area |
|---|---|---|
| Single Family | 2301.04 | 58.36% |
| High Density MFR | 214.27 | 5.43% |
| Low Density MFR | 37.79 | 0.96% |
| Commercial | 79.31 | 2.01% |
| Retail | 156.47 | 3.97% |
| Industrial | 24.09 | 0.61% |
| Institutional | 135.84 | 3.45% |
| Office | 67.70 | 1.72% |
| School | 119.99 | 3.04% |
| Park | 456.88 | 11.59% |
| Transportation | 12.74 | 0.32% |
| Vacant | 335.86 | 8.52% |
| Other | 0.78 | 0.02% |
| **Gross Area** | **3,942.76** | **100.00%** |

[1] Percentages may not total 100 percent due to rounding during GIS analysis.

Burien is located within the Nearshore Sub-watershed of Water Resource Inventory Area (WRIA) 9. Eighty (80) percent of the shoreline has been modified within the Nearshore Sub-watershed. Most shoreline modification measures (such as seawalls and bulkheads) were installed to protect residential development from erosion. However, these shoreline modifications have resulted in the alteration of nearshore habitat functions; examples include interruption of habitat-forming processes, destruction of habitat, and degradation of sediment and/or water quality. Within WRIA 9, there are only a minimal number of unaltered shorelines (Kerwin and Nelson 2000, Johannessen, MacLennan, and McBride 2005). Burien's shorelines include part or all of three marine drift cells (KI-5-1, KI-7-2, and KI-7-3) which historically included both erosion (e.g., feeder bluff) and accretion (e.g., beaches) shoreforms but have now become extensively modified (Figure 4A, Johannessen, MacLennan, and McBride 2005).

It is recognized that "Habitat Limiting Factors and Impacts" in both the freshwater and marine environments include urban and industrial land use practices (Kerwin and Nelson 2000). Specific to the Burien's shoreline reaches covered by the SMP (which do not include any freshwater tributaries), these urban and industrial land use practices include those described for the Nearshore Sub-watershed by Kerwin and Nelson (2000; below):

- Altering or destroying significant amounts of nearshore habitat;
- Interrupting critical habitat-forming processes;
- Fragmenting or destroying marine riparian corridors; and
- Contributing toxic chemicals and harmful organic compounds to nearshore waters and sediments.

## 2.2 EXISTING SHORELINE DESIGNATION

The City adopted King County's existing SMP at the time of incorporation (1993). The City currently uses King County SMP shoreline designations and regulations with revisions through September 1998. Only two designations are present within the City's shoreline jurisdiction: Urban and Conservancy Environments. Conservancy is limited to the area including Seahurst Park and the area approximately 1/4 mile south of it. Based on the King County SMP, the stated purposes of these two environments are as follows:

- Urban Environment: The purpose of designating the urban environment is to ensure optimum utilization of the shorelines of the state within urbanized areas by permitting intensive use and by managing development so that it enhances and maintains the shorelines of the state for a multiplicity of urban uses. The urban environment is designed to reflect a policy of increasing utilization and efficiency of urban areas, to promote a more intense level of use through redevelopment of areas now under-utilized and to encourage multiple use of the shorelines of the state if the major use is water dependent or water related while at the same time safeguarding the quality of the environment (KCC 12.16.010 9-98).

- Conservancy Environment: Conservancy areas are intended to maintain their existing character. This designation is designed to protect, conserve, and manage existing natural resources and valuable historic and cultural areas. The preferred uses are those nonconsumptive of the physical and biological resources of the area (KCC 25.24.010 9-98).

## 2.3 EXISTING LAND USE

Existing land uses along Burien's marine shoreline predominately consist of single family homes, undeveloped parcels and publicly-owned open space (Table 3; Figures 5A-5E). The privately-owned parcels along the marine shoreline are zoned uniformly for single family development. According to the map of existing land uses derived from King County Assessor data dated January 2008, there is one parcel near the southern city limits that is occupied by a commercial use and several parcels occupied by multifamily housing. All other privately-owned parcels are occupied by single family homes or are undeveloped. The undeveloped parcels generally have constraints upon development such as steep slopes.

A significant portion of Burien's marine shoreline is publicly-owned open space, the majority of which is the 152-acre Seahurst Park. To the south of Seahurst Park is a smaller public park, the 5-acre Eagle Landing Park.

The Lake Burien shoreline is likewise occupied almost entirely by single family development. The lone exception to this is at the northeast corner of the lake where the Ruth Dykeman Children's Center is located. The density of single family development along the Lake Burien shoreline is somewhat higher than that along the marine shoreline. However, it is still low density development.

**Table 3. Existing land use observations by City of Burien shoreline reach.**

| Inventory Reach | Existing Land Use | Area (Acres) | Approximate Percent Coverage within the Reach[1] |
|---|---|---|---|
| M1 | Single Family | 18.089 | 72.3% |
| | Vacant | 5.854 | 23.4% |
| | Tracts/Other | 0.919 | 3.7% |
| | Low Density MFR | 0.137 | 0.55% |
| | Institutional | 0.003 | 0.01% |
| | | **25.002** | |
| M2 | Park | 22.384 | 78% |
| | Single Family | 3.864 | 13.5% |
| | Vacant | 2.467 | 8.6% |
| | | **28.715** | |
| M3 | Single Family | 34.992 | 86.99% |
| | Vacant | 4.686 | 11.65% |
| | Tracts/Other | 0.388 | 0.96% |
| | Low Density MFR | 0.160 | 0.40% |
| | | **40.226** | |
| M4 | Single Family | 20.418 | 91.13% |
| | Low Density MFR | 1.119 | 4.99% |
| | Vacant | 0.593 | 2.65% |
| | Commercial | 0.276 | 1.23% |
| | | **22.406** | |
| LB | Single Family | 25.185 | 87.44% |
| | School | 2.394 | 8.31% |
| | Vacant | 0.871 | 3.02% |
| | Tracts/Other | 0.159 | 0.55% |
| | Low Density MFR | 0.195 | 0.68% |
| | | **28.804** | |

[1] Percentages may not total 100 percent due to rounding during GIS.

## 2.4 ZONING DESIGNATIONS

The City's most current Zoning Map (2007; Figures 6A-6E) includes 18 zoning designations. However, only three zoning designations apply within the shoreline area. Two of these are residential single family. The third zoning designation is the Special Planning Area 2. The entire marine shoreline is zoned RS-12,000, which allows detached single family homes with a minimum lot size of 12,000 square feet. The majority of the Lake Burien shoreline is zoned RS-7,200, which allows detached single family homes with a minimum lot size of 7,200 square feet.

The northeast corner of Lake Burien is within the Special Planning Area 2, which applies to the Ruth Dykeman Children's Center. The purpose of the Special Planning Area 2 is to establish and preserve areas for the Center. The zoning regulations require that any development within the area be consistent with a City-approved Master Plan for the entire area.

## 2.5 IMPERVIOUS SURFACE

Most of the land area within Burien's shoreline jurisdiction is developed with detached single family homes. Undeveloped areas consist of some privately-owned parcels with significant constraints to development, such as steep slopes, and the publicly-owned open space of Seahurst and Eagle Landing parks. The developed area contains impervious surfaces typical of low density detached single family development.

## 2.6 ROADS AND BRIDGES

### 2.6.1 Roads

There are two roads designated as Collector Arterials that are partially located within Burien's shoreline jurisdiction. These are SW 172nd Street at the southern end of the marine shoreline, and a small portion of SW 152nd Street north of Lake Burien. In addition to these two roads are a number of local streets partially located within the shoreline jurisdiction. None of these roads has more than two lanes. In addition to public streets, there are many private driveways located within the shoreline jurisdiction.

### 2.6.2 Bridges

There are no bridges located within Burien's shoreline jurisdiction.

## 2.7 FLOOD CONTROL STRUCTURES

The outlet from Lake Burien is controlled by a concrete weir. The outlet channel conveys overflow from the lake in the southeasterly direction, and connects to the county storm water system located within SW 154th Street.

## 2.8 DOCKS, PIERS, AND OVERWATER STRUCTURES

The Lake Burien shoreline contains many private docks at a density of close to one per residence. The marine shoreline is less intensely developed with overwater structures, but there are some private docks and boat ramps.

## 2.9 STORM WATER AND SEWER OUTFALLS

The City of Burien is located within three major drainage basins: Salmon Creek, Miller Creek, and Puget Sound. Each of these drainage basins drains to Puget Sound. A 24-inch concrete pipeline, the Old Government Line, functions as a partial drainage bypass whereby the line runs to the south of Salmon Creek and used to discharge directly to the Sound. However, now it discharges through a damaged manhole at the beach due to the line being blocked by sediment. Other storm water discharges along the shorelines are shown as "storm pipes" on Figures 7A-7E. Catch basins within the shoreline jurisdictional area generally discharge directly to Puget Sound through a shoreline armoring structure. In very few instances they discharge to a stream (i.e., in Seahurst Park).

Land within Burien is mostly developed. Much of the older development did not provide detention or water quality treatment of runoff, resulting in bank erosion, poor fish habitat and poor water quality in some places.

## 2.10 OTHER UTILITIES

### 2.10.1 Water

Seattle Public Utilities supplies water for the several water districts that serve the City of Burien. The water districts that serve Burien's shoreline jurisdiction are Seattle Public Utilities, serving the northern portion of the marine shoreline; King County Water District #20, serving the central portion of the marine shoreline and the northwest portion of Lake Burien; Highline Water District, serving the southern portion of the marine shoreline; and King County Water District #49, serving the majority of Lake Burien.

Water infrastructure within the shoreline jurisdiction includes water mains of varying sizes and water services serving individual properties.

### 2.10.2 Sewer

Burien's shoreline jurisdiction is located within the Southwest Suburban Sewer District, which is divided into two subareas: the Miller Creek drainage basin and the Salmon Creek drainage basin. The Salmon Creek Wastewater Treatment Plant is located on Shorewood Drive north of Seahurst Park. The plant itself is located outside of the shoreline jurisdiction; however, its outfall discharges the treated effluent into Puget Sound.

## 2.11 CULVERTS

Drainage along the shoreline has been affected by varying degrees of development, and in some cases involves culverts. Seola Creek (which runs along the northern City limit) drains to the marine shoreline (Reach M1) through a culvert (Wild Fish Conservancy 2003). Additionally, there are some culverts associated with water draining from the small hatchery complex at the north end of Seahurst Park (Wild Fish Conservancy 2003). Along the residential shorelines in Burien, occasional small culverts (e.g., 12-inch pipe culverts) drain water from the properties onto the beaches (Wild Fish Conservancy 2003). The storm pipe culverts within the shoreline jurisdiction (marine reaches and on Lake Burien) are shown on Figures 7A-7E.

Along the marine shoreline of Seahurst Park (Reach M2), culverts have been installed beneath parking lots and road fill embankments, draining water through or under bulkheading (Wild Fish Conservancy 2003; Anchor 2002). Most of these modifications to drainage within Seahurst Park were made by the early 1970s by King County (Anchor 2002).

# 3 CRITICAL AREAS

This section describes Critical Areas already identified within the City of Burien as defined by the Washington State Growth Management Act (Revised Code of Washington [RCW] 36.70A). Those Critical Areas pertinent to the City's shorelines are: wetlands, aquifer recharge areas, Fish and Wildlife Habitat Conservation Areas, geologic hazard areas, and frequently flooded areas. For the purpose of Shoreline Inventory, areas that meet these criteria and are in any part in the identified shoreline jurisdiction area are included. Critical Areas presented below have been mapped where GIS data layers exist.

## 3.1 WETLANDS

The City's current Critical Areas map depicts five wetlands within the entire City's jurisdiction (based on wetland polygons from King County GIS data) (Figures 8A-8E). Of those, only one (Lake Burien) is within the shoreline jurisdiction (Figure 8E). A number of additional sources were reviewed to assess the presence of wetlands including the NWI, Ecology's Digital Coastal Atlas (DCA), and WDFW Priority Habitat and Species (PHS) Maps. The NWI and DCA wetland layer indicate that the marine shorelines in Burien are classified as "estuarine and marine wetlands" and "tidal aquatic beds," respectively. A wetland delineation prepared for the Seahurst Park South Seawall Project (Anchor 2005) also identified a wetland complex in Seahurst Park (Reach M2).

Although wetlands associated with shorelines of the state will be regulated under the SMP, not the Critical Areas Ordinance (CAO), the state requirement of equal or greater protections of Critical Areas under the SMP makes consideration of the existing CAO appropriate during the Inventory phase. According to the current Critical Areas map, Lake Burien has been designated as a Category 2 wetland. Estuarine aquatic bed wetlands associated with marine vegetation would likely be designated as Category 1 wetlands. Six of the seven wetlands identified within the vicinity of the Seahurst Park South Seawall Project were identified as regulated by the City and were designated as Category 3 wetlands (Anchor 2005).

As described in Section 1.1, a jurisdiction has the option to include the locally adopted buffers for these wetlands. The City has decided to include only the wetland areas in the SMP Update (i.e., it will not include the associated buffers); therefore, the wetland buffers are still regulated under the CAO. The City has adopted Ecology's wetland categories and definitions, as described under the CAO (Burien Municipal Code [BMC] Chapter 19.40.300 10-03). Buffer widths under the CAO for wetlands within the City of Burien are as follows:

- Category 1: 200 feet
- Category 2: 100 feet
- Category 3: 50 feet
- Category 4: 30 feet

## 3.2 AQUIFER RECHARGE AREAS

The City of Burien Critical Areas map (Figures 8A-8E) identifies seven aquifer recharge areas within the City limits. Of these, only one, the recharge area associated with Lake Burien, is located within the City's shoreline jurisdiction.

## 3.3 FISH AND WILDLIFE HABITAT CONSERVATION AREAS

Fish and Wildlife Habitat Conservation Areas in the City have been identified on Figures 9A-9E based on the WDFW PHS inventory (GIS layers). A current (January 2008) query of that database for this area identified two PHS polygons located within the City shoreline jurisdiction (Table 4). The two polygons encompass Urban Natural Open Spaces spanning areas within the shoreline jurisdiction, as well as areas upland of the shoreline. One polygon includes forested areas with deep ravines and small mammal and bird habitat, with potential fish habitat. The other polygon includes semi-forested parks providing habitat for more common animals. There were no PHS polygons associated with Lake Burien (Reach LB).

The PHS inventory did not include any record of salmonid usage in Burien. StreamNet and WDFW SalmonScape on-line mappers were also queried for information on fish usage in the shoreline jurisdiction. While StreamNet did not show any record of fish usage, SalmonScape indicated that salmonid usage is limited to the "potential presence" of coho salmon (*Oncorhynchus kisutch*) in Salmon Creek (Reach M1). The PHS inventory data and SalmonScape on-line mapper indicated that non-salmonid priority fish species using the shorelines include surf smelt (*Hypomesus pretiosus*) and Pacific sand lance (*Ammodytes hexapterus*). There is reported surf smelt spawning in all four marine, and reported Pacific sand lance spawning in Reaches M2, M3 and M4 (Table 4). Geoduck (*Panopea abrupta*) beds are also shown to exist along all four marine reaches (M1 through M4). There were no PHS species data or species data from other sources associated with Lake Burien (Reach LB).

Priority avian species usage in the shoreline jurisdiction includes a buffer along Reaches M2 and M3 for a bald eagle (*Haliaeetus leucocephalus*) nest that is located landward of Reach M2. Bald eagles (including those associated with this nest) as well as great blue heron (*Ardea herodias*) would be expected to be present in the Burien shoreline jurisdiction. There are no PHS polygons or points for regular habitat use by great blue heron (e.g., feeding territories, nests) within the shoreline jurisdiction, but they are likely to use at least these areas for transit.

While bald eagle are no longer listed as threatened under the Federal Endangered Species Act (ESA), bald eagles are still considered threatened by the State. The remaining species identified in the PHS data as potentially falling within the Burien shoreline jurisdiction have neither Federal nor State listing status.

**Table 4. Documented Priority Habitats and Species within the City of Burien shoreline jurisdiction.**

| Inventory Reach | Species or Habitat Type | Type of Use[1] |
|---|---|---|
| M1 | PHS polygon (I): Urban Natural Open Space (same as listed in M2 and M3) | Deep forested ravines, some with streams overlooking Puget Sound; small mammal and bird habitat; streams with likely fish use |
| | Coho salmon | Potential presence in Salmon Creek[2] |
| | Surf smelt | Documented Spawning[3] |
| | Geoduck | Presence |
| M2 | PHS polygon (I): Urban Natural Open Space (same as listed in M1 and M3) | Deep forested ravines, some with streams overlooking Puget Sound; small mammal and bird habitat; streams with likely fish use |
| | PHS polygon (II): Urban Natural Open Space | Semi-forested parks; habitat for more common species |
| | Heritage buffer | Buffer around bald eagle nest for protection |
| | Surf smelt | Spawning, Documented Spawning[3] |
| | Pacific sand lance | Spawning, Documented Spawning[3] |
| | Geoduck | Presence |
| M3 | PHS polygon (I): Urban Natural Open Space (same as listed in M1 and M2) | Deep forested ravines, some with streams overlooking Puget Sound; small mammal and bird habitat; streams with likely fish use |
| | Heritage buffer | Buffer around bald eagle nest for protection |
| | Surf smelt | Spawning, Documented Spawning[3] |
| | Pacific sand lance | Spawning, Documented Spawning[3] |
| | Geoduck | Presence |
| M4 | Surf smelt | Documented Spawning[3] |
| | Pacific sand lance | Spawning |
| | Geoduck | Presence |
| LB | None listed specifically for Lake Burien | N/A |
| All | Bald eagle, great blue heron | No PHS polygons or points (e.g., feeding territory, nests) in shoreline area, but use of shoreline habitat (presence at minimum) is known |

[1] Species and habitat use based on WDFW PHS GIS data, unless specified with additional footnote.
[2] Salmonid species and/or habitat use based on WDFW PHS GIS data and SalmonScape on-line mapper.
[3] Species and/or habitat use based on SalmonScape on-line mapper.

In addition to the PHS data, Ecology's DCA was reviewed. Although no eelgrass (*Zostera* sp.) or kelp (order Laminariales) beds were reported in the PHS data, the DCA shows eelgrass presence along all marine reaches. According to the DCA, Reaches M1, M2 and M3 contain patchy and continuous eelgrass along the lengths of shoreline, and Reach M4 contains patchy eelgrass along the shoreline. Additionally, the DCA shows patchy kelp present along the Reach M3 shoreline.

## 3.4 GEOLOGICALLY HAZARDOUS AREAS

The City defines geologically hazardous areas in its Municipal Code (BMC Chapter 19.10.190) as "areas that because of their susceptibility to erosion, sliding, earthquake or other geological events, are not suited to siting development due to public health and safety concerns. These areas include, but are not limited to erosion hazard areas, landslide hazard areas and seismic hazard areas."

Landslide and seismic hazard information is depicted on the Critical Areas map (Figures 8A-8E); these figures were compiled with GIS seismic layers from King County and 40 percent gradient map information from a contractor as a part of the CAO update in 2003.

"Landslide hazard areas" are defined by the BMC (Chapter 19.10.305) as "lands that are potentially subject to risk of mass movement due to a combination of factors, including historic failures, geologic, topographic and hydrologic features." Landslide hazard areas are shown on Figures 8A-8E as those lands with a slope greater than 40 percent. Within the shoreline jurisdiction, the entire lengths of the marine reaches (Reaches M1 through M4) are considered "landslide hazard."

"Seismic hazard areas" are defined by BMC (Chapter 19.10.480) as "lands subject to severe risk of earthquake damage as a result of seismically induced ground shaking, slope failure, settlement or soil liquefaction. These conditions occur in areas underlain by soft or loose soils." Seismic hazard areas are also depicted on Figures 8A-8E, and include portions of Reaches M3 and M4, including Three Tree Point and the shoreline to the southeast.

No landslide or seismic hazard areas are associated with Lake Burien (Reach LB).

## 3.5 FREQUENTLY FLOODED AREAS

The City's GIS data show frequently flooded areas in the City based on 100-year flood area designated by the Federal Emergency Management Agency (FEMA) and a City of Burien Flood Study (CHE 2007) (Figures 8A-8E). At this point, the 100-year flood plain data is most pertinent to shoreline jurisdiction, as the City has not yet adopted the flood study base flood elevation results (CHE 2007) to define the 100-year flood plain. Frequently flooded areas are described by reach in Table 5 (below) based on the FEMA data. The 100-year flood plain as defined by FEMA, as well as the base flood elevation (CHE 2007), extends along most of the marine shoreline (Figures 8A-8D). There is no flood plain associated with Lake Burien (Reach LB).

**Table 5. Frequently flooded (100-year flood plain) areas by City of Burien shoreline reach.**

| Inventory Reach | Flooded Area in Shoreline Jurisdiction (ac) | Total Reach Area (ac) | Percent of Shoreline Area |
|---|---|---|---|
| M1 | 18.75 | 26.52 | 70.7% |
| M2 | 8.34 | 28.51 | 29.3% |
| M3 | 10.93 | 41.64 | 26.2% |
| M4 | 12.97 | 26.61 | 48% |
| LB | 0 | 0 | 0% |
| Total | 50.99 | 123.28 | 33.2% |

# 4 DEGRADED AREAS AND POTENTIAL RESTORATION SITES

## 4.1 WATER QUALITY

Within the City shoreline area, the major source of available data for water quality is the State Water Quality Assessment, commonly referred to as the "303(d) list." Technically, the 303(d) list refers to a specific category of water quality see below). In order to maintain compliance with the Federal Clean Water Act, Ecology evaluates water quality for state fresh and marine water bodies and publishes the information as a list every two to four years. The data also are available spatially through on-line mappers made available on the Ecology website. Prior to the current list (2002/4), the next most recent list was prepared in 1998. Ecology prepares the list by integrating data from its assessment activities with data collected by other agencies and organizations. For each parameter tested, applicable areas for each waterbody are assigned one of the following categories:

- **Category 5** Polluted waters with no existing Total Maximum Daily Load (TMDL), submitted to EPA for approval on 2002/4 list.
- **Category 4c** Impaired, already has a TMDL.
- **Category 4b** Impaired, has pollution control plan.
- **Category 4a** Impaired, non-pollutant.
- **Category 3** No data (catch all for parameters not in Categories 5, 4 [all], 2, or 1).
- **Category 2** Waters of concern (not impaired or known to be impaired).
- **Category 1** Meets tested standards.

The assessment for each area of each waterbody is not inclusive for all pollutants. A Category 1 listing for a particular parameter does not necessarily mean that area is clean of all other pollutants.

Based on the most recent Ecology water quality impairments list the Burien marine shoreline has impairment listings for two water quality parameters (Table 6). One of these parameters, fecal coliform, is a Category 5 listing and requires a pollution control plan (Total Maximum Daily Load or TMDL). There is also a Category 4c listing for Fish Habitat based on algal blooms (Frankenstein 2000).

The only parameter listed for Lake Burien is total phosphorus, which meets tested standards.

**Table 6. Water quality data for City of Burien shorelines.**

| Category | Parameter | Listings ID#. | Listed prior to 2002/4 |
|---|---|---|---|
| 5 (303[d]) | Fecal coliform | 15804 | Yes |
| 4c (polluted, no TMDL required) | Fish Habitat | 21699 | No |
| 4b (polluted, no TMDL required) | - | - | - |
| 4a (polluted, no TMDL required) | - | - | - |
| 2 (waters of concern) | - | - | - |
| 1 (meets tested standards) | Total Phosphorus | 21572 | No |

## 4.2 Restoration Opportunities

Specific restoration opportunities have been defined within Seahurst Park and described in the Seahurst Park Master Plan (Anchor 2002). The plan proposed to preserve all the existing undeveloped area, increase the natural habitat area and function through extensive restoration and land acquisitions. Per the Master Plan (Anchor 2002), sustaining and restoring the marine shoreline at Seahurst Park is based on four concepts: removing existing shoreline protection structures; modeling restored beach slopes and substrates after natural conditions; replenishing gravel and sand lost to erosion; and restoring and protecting the natural delivery paths of sediment to the beach. Restoration activities at Seahurst Park have been separated into two phases (south shoreline and north shoreline). South shoreline restoration activities included removal of the seawall and restoration of beaches in 2005, and restoration of native vegetation in the upper shoreline in 2006. Future activities include additional property acquisition, native plant maintenance, and restoration of the north shoreline (similar to restoration of the south shoreline).

Additional restoration opportunities exist at Eagle Landing Park. Since the land was acquired in 2002, the City has opened trails and performed reforestation work for the purposes of preserving salmon habitat and providing public water access. Future plans for the property include restoring native plants and on-going native plant maintenance.

An inventory and assessment of current and historic marine shoreforms in WRIAs 8 and 9 (Johannessen, MacLennan, and McBride 2005) identifies a number of specific restoration opportunities including one within City shorelines (see Section 10.4). Also recommended in that study are conservation and restoration priorities within and by drift cells within WRIA 8 and 9 to protect and reconnect sediment sources within the region. However, it is important to consider that the analyses are solely based on comparison of current and historic shoreline conditions and do not take into account biological or socioeconomic factors.

Other non-specific restoration opportunities along the marine reaches include bulkhead modification to reduce the effects of hardened vertical structures on sediment transport and nearshore habitat. These modifications include removal, beach reshaping, installing longshore woody debris, and restoring connection of the beach to sediment input systems, including streams and eroding bluffs.

Installing littoral nearshore vegetation, where appropriate can provide nearshore water quality protection functions to shallow intertidal areas. Stream systems in the City are constrained by ravines, typically hosting invasive vegetation. Restoring native riparian vegetation within these systems has export of salmonid prey benefits and improves upland habitat within the Shoreline Zone.

Burien has a many highly modified shoreline areas almost entirely consisting of privately-owned uplands. Citizen outreach to provide education resources regarding the effects of lawn care practices on water quality within the marine waters and Lake Burien have potential to improve citizen involvement in shorelines.

# 5 AREAS OF SPECIAL INTEREST

The WAC definition for Areas of Special Interest (173-26-201(3)(c)(iv)) is as follows:

> Areas of special interest, such as priority habitats, developing or redeveloping harbors and waterfronts, previously identified toxic or hazardous material clean-up sites, dredged material disposal sites, or eroding shorelines, to be addressed through new master program provisions.

Priority Habitats within Burien shorelines are described by reach in Section 10. There are no known (documented) hazardous material clean-up sites or dredged disposal sites within the Shorelines of Burien.

One site of interest is the fish acclimation ponds associated with the Marine Occupational Center in Seahurst Park. The Center is a facility of the Highline School District.

# 6 PUBLIC ACCESS

Existing public access to Burien's shorelines is provided by publicly-owned open space. The 152-acre Seahurst Park and the 5-acre Eagle Landing Park both provide public access to Burien's marine shoreline.

The main entrance to Seahurst Park is accessed via SW Seahurst Park Drive. The park can also be accessed from several small trailheads at or near the perimeter of the park. An undeveloped right-of-way for SW 136th Street continues into the park. A dirt road that begins at 16th Avenue SW and Shorewood Drive at the northeastern edge of the park leads into the park. There is a trailhead at 17th Avenue SW and a trailhead at 18th Avenue SW and SW 146th Street at the southern end of the park.

Seahurst Park encompasses 0.75 miles of marine shoreline and is heavily used. The park contains 4,400 linear feet of paved or crushed rock shoreline trails, including the Nearshore Trail, as well as 9,500 linear feet of hiking trails throughout the park.

Eagle Landing Park is located at the west end of SW 149th Street, at the intersection of 25th Avenue SW. A short trail leads from the parking area to a beach on Puget Sound.

Street ends and other public right of way ends within the City include:

- South side of Three Tree Point (Maplewild Avenue SW and SW 172nd Street)
- North side of Three Tree Point (SW 170th Street)
- SW 163rd Street end
- Small 6-foot wide right of way ends (approximately 2 to 4) on north side of Three Tree Point
- 20 foot wide right-of-way end located near 2400 SW 172nd Street extending to Puget Sound

# 7 CHANNEL MIGRATION ZONES AND FLOOD PLAINS

According to the WAC 173-26-201(3)(c)(vii), the City must supply relevant and/or reasonable available information on the general location of channel migration zones, and flood plains. However, in Burien, there are no riverine shorelines; therefore, there are no channel migration zones. Due to the incised nature of the stream channels, riverine flood plains are also nonexistent in Burien; however, flooding information related to wetlands and other Critical Areas is covered in Section 3.

# 8 ARCHAEOLOGICAL AND HISTORIC RESOURCES

No historic sites are shown in Burien on the State's Department of Archeology and Historic Preservation (DAHP) Washington Information System for Architectural and Archaeological Records Data (WISAARD) mapper. However, based on the City's contact with DAHP, there are some potential areas that are of archeological significance within the City (Williams, pers. comm. 2008). These areas do not necessarily contain known sites but may be locations of past native activities. In general, potential areas of significance include mouths of steams discharging into Puget Sound (e.g., Salmon Creek, streams within Seahurst Park, and one stream south of Seahurst Park) or areas where shellfish may be present (Williams pers. comm. 2008).

# 9 GAPS IN EXISTING INFORMATION

Gaps in "Ecology Required Inventory Items" (WAC 173-26-201(3)(c)) primarily involve a lack of available or updated GIS information or layers. Several of the Critical Areas data are based on old King County information, such as wetland and/or geologically hazardous areas. Additionally, wetland information that may have been collected for individual projects within the City has not been translated into digital data. Similar gaps in available or updated digitized data exist for the Land Use category, including transportation, utilities and/or water-oriented uses.

# 10 CONDITIONS AND OPPORTUNITIES BY INVENTORY REACH

## 10.1 REACH M1

Reach M1 is the northernmost marine reach along the Burien shoreline, extending from Seola Beach to the north end of Seahurst Park. The reach is 1.14 miles in length and is primarily single family residential. Reach M1 is located entirely within drift cell KI-5-1, which is the longest drift cell in King County (11.2 miles) and extends north to Seattle (northeastern side of the Duwamish Head) (Johannessen, MacLennan, and McBride, 2005). Net shore-drift in KI-5-1 is from south to north. Historically, most of Reach M1 was exceptional or potential feeder bluff. Now it is almost entirely modified shoreline (Johannessen, MacLennan, McBride, 2005). Figure 4A depicts historic and current shoreforms from Johannessen, MacLennan, and McBride (2005).

*Current Land Use*

This reach is predominantly single family use, with portions of undeveloped property associated with high gradient slopes, street ends and vacant parcels comprising approximately 24 percent of the reach. Future land use within this reach will likely include development of the remaining parcels as single family structures, then redevelopment of smaller residences as property value increases.

*Critical Areas*

Critical Areas within this reach include the right bank and buffer of Seola Creek, Salmon Creek and associated buffers, several small unnamed tributaries to Puget Sound. There is potential presence of coho salmon in Salmon Creek. The forested ravines associated with these streams are mapped as Urban Natural Open Space, a Priority Habitat in Washington State.

Approximately 70 percent of Reach M1 is mapped as 100-year floodplain. The entire reach is mapped a landslide hazard area.

Below the OHW mark, the entire reach is mapped as having geoduck beds. Eelgrass patches are present as a sparse fringe along the reach. The southernmost end of Reach M1 is mapped having surf smelt spawning habitat. All of these areas are considered Fish and Wildlife Habitat Conservation Areas, a Critical Area type. In addition, estuarine wetlands associated with the marine aquatic bed are considered Category 1 wetlands.

*Salmonid Habitat Limiting Factors*

A high stream gradient limits opportunities for salmonids in Seola Creek and the unnamed tributaries within Reach M1. Salmon Creek has historically had salmon presence. A private structure near the mouth of Salmon Creek confines the channel and may impede fish passage to habitat upstream. Most of the marine shoreline is hardened with private bulkheads and numerous private boat ramps that affect littoral drift and longshore migration during most tidal stages. The intertidal is separated from uplands functions, by vegetation maintained in a highly altered (manicured) state.

*Opportunities for Conservation and Restoration*

Reach M1 includes the segment (49) identified as the highest priority for restoration within drift cell KI-5-1 (Johannessen, MacLennan, and McBride, 2005). This segment also ranked among the top restoration priorities in WRIA 8/9 based on historic conditions. Drift cell KI-5-1 also is generally ranked as moderately high and high prioritization for restoration and conservation respectively by Johannessen, MacLennan, and McBride (2005). As noted previously, this study is based on comparison between current and historic shoreline conditions and does not consider biological or socio-economic factors. The limited public land ownership in Reach M1 constrains opportunities for larger restoration programs. However, modifications to the baseline condition on a small scale can incrementally provide restoration of nearshore and riparian functions within the reach.

Most of the single family residences along Reach M1 are not setback from the shoreline a significant distance and impede bulkhead redesign. Other locations may be suitable for bulkhead removal or setback, with a contoured shoreline either in place of or in front of the remaining structure. Shoreline native vegetation can be installed in several locations, particularly in the undeveloped shoreline areas where vegetation can overhang shallow intertidal areas and provide the most export function.

Other restoration opportunities include mouths of Seola and Salmon Creeks where sediment transport to the beach and fish passage to the streams is impeded by structures. Modifications in both of these locations can serve to avail more habitat to salmonids and allow continued sediment nourishment to the high intertidal zone.

## 10.2 REACH M2

Reach M2 is a marine shoreline reach comprised of Seahurst Park and the undeveloped shoreline south of the park to SW 149th Street or the northern edge of resumed shoreline development. Reach M2 is 1.21 miles long and primarily undeveloped. Reach M2 is the southernmost part of drift cell KI-5-1, which begins at what is now Seahurst Park (Johannessen, MacLennan, and McBride, 2005). Based on Johannessen, MacLennan, and McBride (2005), historically Reach M2 included areas of feeder bluff, potential feeder bluff, and exceptional feeder bluff, some of which has now been modified. An accretion shoreform is present along most of its north end. Figure 4A depicts historic and current shoreforms from Johannessen, MacLennan, and McBride (2005).

*Current Land Use*

Nearly 80 percent of Reach M2 is park, set aside for passive recreation and conservation. The second highest percentage of land use is single family with 14 percent and the remainder of the reach is vacant. Seahurst Park is currently in the process of redevelopment and restoration, but it is anticipated to remain parkland for the foreseeable future.

*Critical Areas*

Reach M2 is has several important Critical Area types represented within the reach. Two large stream systems dominate the reach, with associated buffers. The riparian ravines surrounding

the streams are mapped as Urban Natural Open Space, providing habitat to wildlife and fish species as well as plant diversity.

Below the OHW mark, the entire reach is mapped as having geoduck beds. Eelgrass patches are present as a sparse fringe along the reach. Most of Reach M2 has surf smelt spawning habitat and a portion of the intertidal in front of the Park has been mapped as Pacific sand lance spawning habitat. All of these areas are considered Fish and Wildlife Habitat Conservation Areas, a Critical Area type. In addition, estuarine wetlands associated with the marine aquatic bed are considered Category 1 wetlands. A bald eagle nest located outside of the shoreline zone near the south end of Reach M2 has a heritage buffer for nest and forage area protection that extends into the shoreline zone and occupies nearly half (southern half) of Reach M2.

Seahurst Park is entirely flanked on the upland side with a landslide hazard area. Approximately 30 percent of Reach M2 is mapped within the 100-year floodplain.

*Salmonid Habitat Limiting Factors*

The streams within Reach M2 are high gradient, incised streams with salmonid habitat limited to the lowest reaches. The southern stream system has some habitat available to the toe of the slope incline. The northern stream system has been modified to accommodate the fish acclimation facilities at the Marine Occupational Center in the North end of the Park. These facilities rear coho salmon as part of the Highline School District marine science curriculum.

*Opportunities for Conservation and Restoration*

Reach M2 includes the segment (48) identified as the third highest priority for restoration within drift cell KI-5-1, as well as the segment (207) ranked as the highest priority for conservation (Johannessen, MacLennan, and McBride, 2005). As noted previously, this study is based on comparison between current and historic shoreline conditions and does not consider biological or socio-economic factors.

Although the Seahurst Park Master Plan pre-dates the WRIA 8/9 shoreforms study, it does incorporate elements to address conservation and restoration of sediment sources and transport processes within the Park. As part of the Seahurst Park Master Plan, the long seawall reach south of the south park entrance was removed and the beach reshaped to a more natural shoreline state, including native vegetation and large longshore wood placement. Additional phases of the Master Plan include seawall redevelopment and nearshore restoration for the remainder of the park and are in either planning or permitting phases. The remainder of Reach M2 has limited restoration opportunity relative to other shoreline reaches within the City. South of the park, nearshore vegetation is intact and provides water quality and biological function to the intertidal areas during most tide stages. The single family residences within Reach M2 are protected by bulkheads, yet placement of the homes near the bulkhead presents the same constraints to restoration as described in Reach M1.

## 10.3 REACH M3

Marine shoreline Reach M3 is the longest shoreline reach within the City of Burien and is delineated by the increased residential development at the south end of Reach M2 and the tip of

Three Tree Point at the south end of the reach. Reach M3 is 1.75 miles long. Reach M3 is essentially defined by drift cell KI-7-2 as well as existing land use patterns. Net shore-drift in KI-7-2 is generally from the north to the south/southwest. Based on Johannessen, MacLennan, and McBride (2005), historically Reach M3 (KI-7-2) included feeder bluff and potential feeder bluff areas alternating with accretion shoreforms. The bluffs in this reach have been entirely modified, as have some of the accretion shoreforms. Figure 4A depicts historic and current shoreforms from Johannessen, MacLennan, and McBride (2005).

*Current Land Use*

Land use in Reach M3 is developed single family residential with 87 percent of the shoreline developed in that land use category. The remaining areas of the reach are vacant. It is anticipated that the land use in Reach M3 would remain single family residential and that properties will redevelop over time.

*Critical Areas*

Critical Areas within Reach M3 include several small unnamed tributaries to Puget Sound and their associated buffers. The forested ravines associated with these streams are mapped as Urban Natural Open Space, a Priority Habitat in Washington State. The heritage buffer associated with a bald eagles nest in Reach M2 extends into Reach M3 to approximately SW 156th Street.

Twenty-six percent of Reach M3 is mapped as 100-year floodplain. The entire upland area of the reach is mapped a landslide hazard area. In addition, the soils surrounding Three Tree Point and immediately north are mapped as a seismic hazard zone.

Below the OHW mark, almost the entire reach is mapped having geoduck beds, which almost all the way south to the tip of Three Tree Point. Eelgrass patches are present as a sparse fringe along the reach and kelp beds are mapped within this reach. The southern half of Reach M3 is mapped as having surf smelt spawning habitat, overlaying a small reach of Pacific sand lance spawning habitat near SW 156th Street. All of these areas are considered Fish and Wildlife Habitat Conservation Areas, a Critical Area type. In addition, estuarine wetlands associated with the marine aquatic bed are considered Category 1 wetlands.

*Salmonid Habitat Limiting Factors*

High stream gradients limit opportunities for salmonids in the unnamed tributaries within Reach M3. The marine shoreline is hardened with private bulkheads and numerous private boat ramps that affect littoral drift and longshore migration during most tidal stages. Reach M3 also has several single family docks. The intertidal areas utilized by juvenile salmon are separated from uplands functions by the high intensity of vertical bulkheads and the nearshore vegetation maintained in a highly altered (manicured) state.

*Opportunities for Conservation and Restoration*

As Reach M3 and KI-7-2 are in complete overlap, the reach includes all includes segments identified for priority restoration (3) and conservation (1) within the drift cell (Johannessen, MacLennan, and McBride, 2005). Although none of these segments individually are ranked

among the top restoration and conservation priorities in WRIA 8/9 based on historic conditions, drift cell KI-7-2 is generally ranked as one of the highest drift cells for restoration and conservation respectively (Johannessen, MacLennan, and McBride 2005). As noted previously, this study is based on comparison between current and historic shoreline conditions and does not consider biological or socio-economic factors. The limited public land ownership in Reach M3 constrains opportunities for larger restoration programs. However, modifications to the baseline condition on a small scale can incrementally provide restoration of nearshore and riparian functions within the reach. Prioritization for restoration and conservation presented by Johannessen, MacLennan, and McBride (2005) can additionally inform where these small scale efforts may reap the most benefit within this reach.

Most of the single family residences along Reach M3 are located immediately behind the bulkheads and can impede bulkhead redesign. There appear to be few locations suitable for bulkhead removal or setback. Some areas may allow for a contoured shoreline, though the elevation of the uplands within the south end of this reach is low, where bulkhead removal could render increased risk to the upland structures. Shoreline native vegetation can be installed in the few areas of undeveloped shoreline areas where vegetation can overhang shallow intertidal areas and provide the most export function.

Other restoration opportunities include the unnamed tributaries where invasive vegetation can be controlled, but the high intensity of maintenance in private property ownership is limiting to even this restoration opportunity.

## 10.4 REACH M4

Reach M4 is similar to Reach M3 in that it is characterized by consistent residential development with a south facing aspect. The reach extends from the tip of Three Tree Point to the southern City limits. Reach M4 is 1.44 miles long. Reach M4 is located at the terminus of drift cell KI-7-3, which originates just north of the Des Moines Creek estuary and is approximately 4.5 miles in length (Johannessen, MacLennan, and McBride, 2005). Net shore-drift in KI-7-3 is from south to north. Historically, Reach M4 was feeder bluff, which has subsequently been modified, and an accretion shoreform that is still functioning despite shoreline modifications (Johannessen, MacLennan, McBride, 2005). Figure 4A depicts historic and current shoreforms from Johannessen, MacLennan, and McBride (2005).

*Current Land Use*

Land use in Reach M4 is developed single family residential with 91 percent of the shoreline developed in that land use category. The remaining areas of the reach are split between low density multifamily use (4.99 percent), vacant (2.65 percent) and commercial use (1.23 percent). It is anticipated that the land use in Reach M4 would remain predominantly single family residential and that properties will redevelop over time. Reach M4 is characterized as having narrower parcels than the other marine reaches, which extend into the intertidal south of Three Tree Point.

*Critical Areas*

Reach M4 includes few small unnamed tributaries to Puget Sound and their associated buffers. These are very high gradient streams with no associated Urban Natural Open Space.

Forty-eight percent of Reach M4 is mapped as 100-year floodplain. The entire upland area of the reach is mapped a landslide hazard area, excepting the soils surrounding Three Tree Point and immediately south. Those soils are mapped as a seismic hazard zone.

Below the OHW mark, the entire reach is mapped having geoduck beds. Eelgrass patches are present as patchy beds along the Reach M4 shoreline. A small segment of the reach is identified as Pacific sand lance spawning habitat. All of these areas are considered Fish and Wildlife Habitat Conservation Areas, a Critical Area type. In addition, estuarine wetlands associated with the marine aquatic bed are considered Category 1 wetlands.

*Salmonid Habitat Limiting Factors*

The marine shoreline of Reach M4 is hardened with private bulkheads and a few private boat ramps that affect littoral drift and longshore migration during most tidal stages. Reach M4 also has several single family docks. The intertidal areas utilized by juvenile salmon are separated from uplands functions by the high intensity of vertical bulkheads and the nearshore vegetation maintained in a highly altered (manicured) state. SW 172nd Street parallels the shoreline near most of the reach immediately behind the small residential (garage) structures along the beach. Storm water runoff from the road enters Puget Sound with no opportunity for treatment.

*Opportunities for Conservation and Restoration*

Reach M4 does not include any of the top three priority segments for restoration or conservation within drift cell KI-7-3 (Johannessen, MacLennan, and McBride, 2005). Of the three drift cells within the City, KI-7-3 is the relatively lowest priority for restoration (moderate) or conservation (moderately high) within WRIA 8/9. As noted previously, this study is based on comparison between current and historic shoreline conditions and does not consider biological or socio-economic factors. The land ownership pattern (private single family) in Reach M4 constrains opportunities for larger restoration programs. However, modifications to the baseline condition on a small scale can incrementally provide restoration of nearshore and riparian functions within the reach.

Reach M4 is characterized by structures either immediately on or near the OHW mark, between the road and the intertidal zone. Johannessen, MacLennan, and McBride (2005) identify a single specific potential restoration opportunity, removal of a number of creosote pile and possible groin removal (number 35), within the City (although this may be in part or entirely on privately owned land). There appear to be few locations suitable for bulkhead removal or setback. Those areas with residential structures set further back are characterized as "high bank" waterfront. Some areas may allow for a contoured shoreline either in place of or in front of the remaining structure. These are also locations where the City can encourage shoreline native vegetation to overhang shallow intertidal areas and provide the most export function.

## 10.5 REACH LB

Reach LB consists of the entire shoreline of Lake Burien and is the only freshwater shoreline reach in the City. The perimeter of the lake is 1.67 miles long.

*Current Land Use*

Lake Burien is mostly developed as single family use (87 percent) with a small portion (8.3 percent) in Special Planning Area 2, the Ruth Dykeman Children's Center. Reach LB is developed to its entire potential and is likely to remain in single family residential use.

*Critical Areas*

Lake Burien is mapped as an Aquifer Recharge Area. Wetlands associated with the lake edge are Critical Areas rated Category 2 wetlands. The buffer associated with a Category 2 wetland is 100 feet. There are no Priority Habitat and Species documented within Lake Burien. . . .

Lake Burien is not within the 100-year floodplain and there are no landslide or seismic hazards associated with the lake.

*Salmonid Habitat Limiting Factors*

There is no fish access into Lake Burien; therefore, salmonids are not expected within the lake.

*Opportunities for Conservation and Restoration*

The intensity of development around the lake and private ownership preclude programmatic habitat restoration. Water quality within Reach LB is affected by storm water input and non-point runoff from maintained property surrounding the shoreline. Typically, these conditions provide opportunity for property owners to maintain water quality through coordinated stewardship and landscape maintenance practices.

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*Note – Other sources, such as on-line mappers and GIS layers, are listed in the annotated bibliography (Appendix A).*


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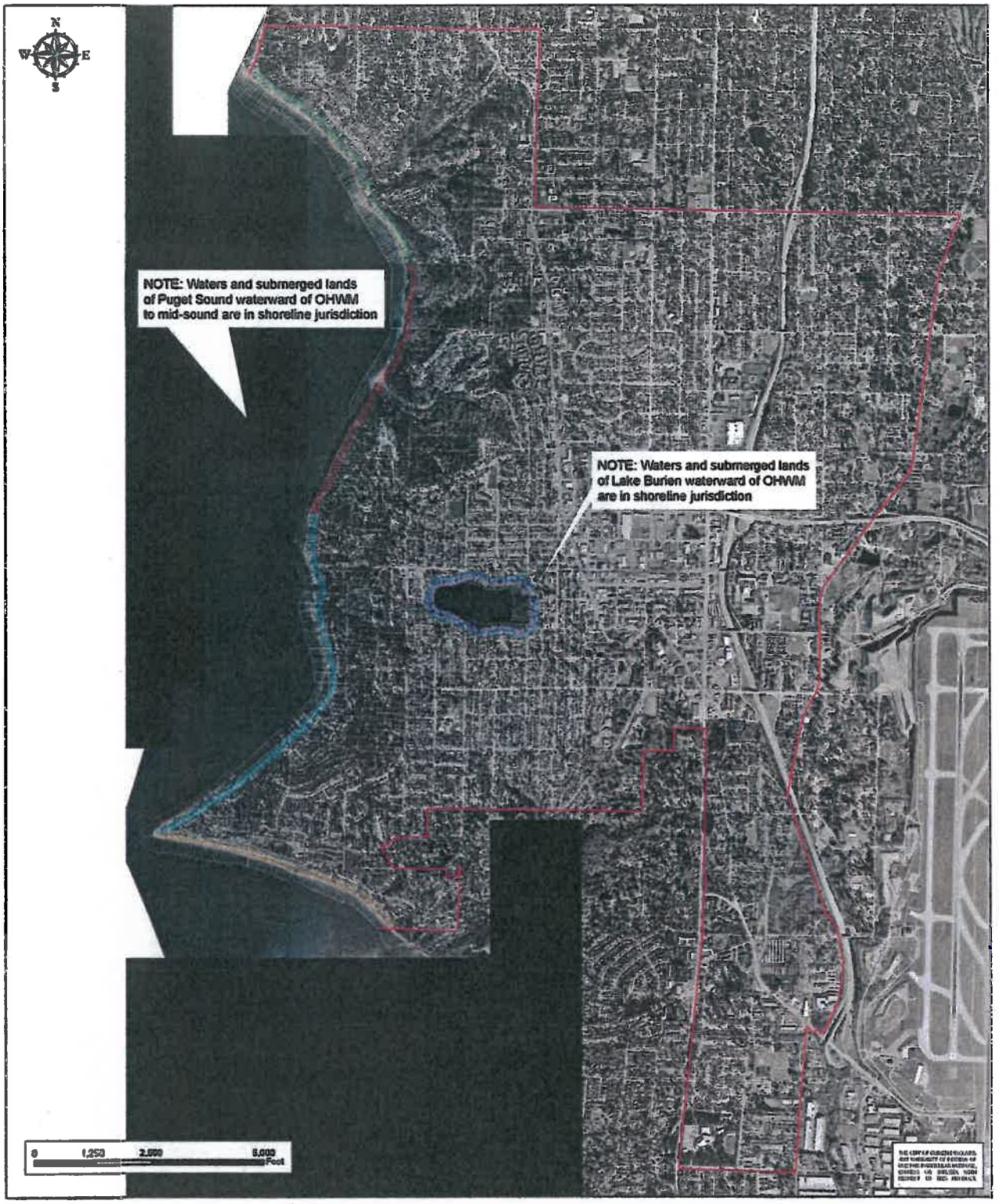
# CITY OF BURIEN
# SHORELINE MASTER PROGRAM UPDATE

# SHORELINE INVENTORY
# FIGURES




**Legend**

- Approx Marine OHWM
- Approx Marine OHWM +200'
- Approx Lake OHWM
- Approx Lake OHWM +200'
- Parcels
- City Boundary

*Reaches*

- Lake Burien
- Marine 1
- Marine 2
- Marine 3
- Marine 4

Note: OHWM = ordinary high water mark

Data Sources: City of Burien, King County

City of Burien

**Shoreline Master Program**

*Figure 1*

Preliminary Shoreline Jurisdiction

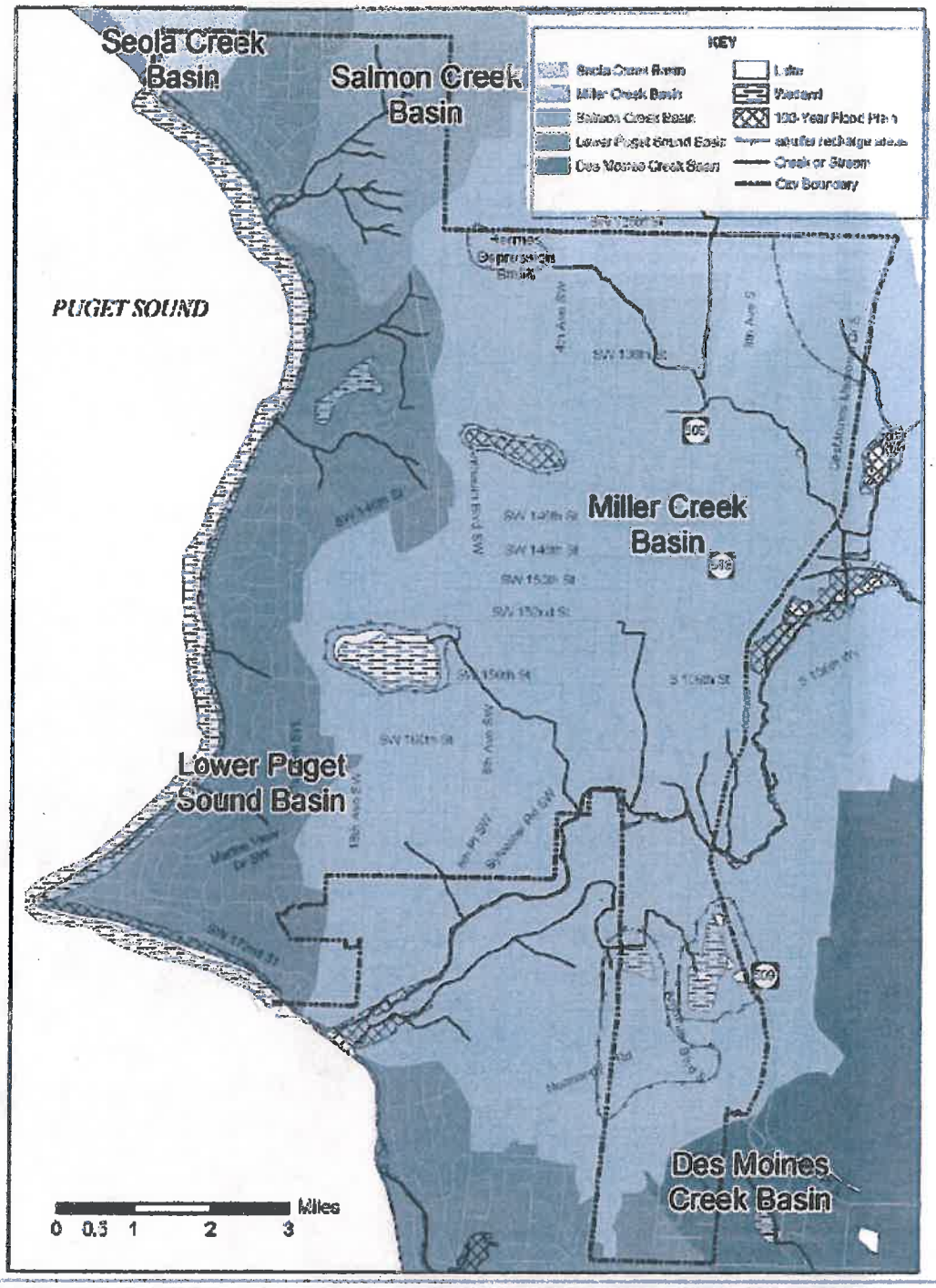



Figure 2 Natural Hydrologic Features/Drainage Basins

(adapted from The Burien Plan; City of Burien 2006)

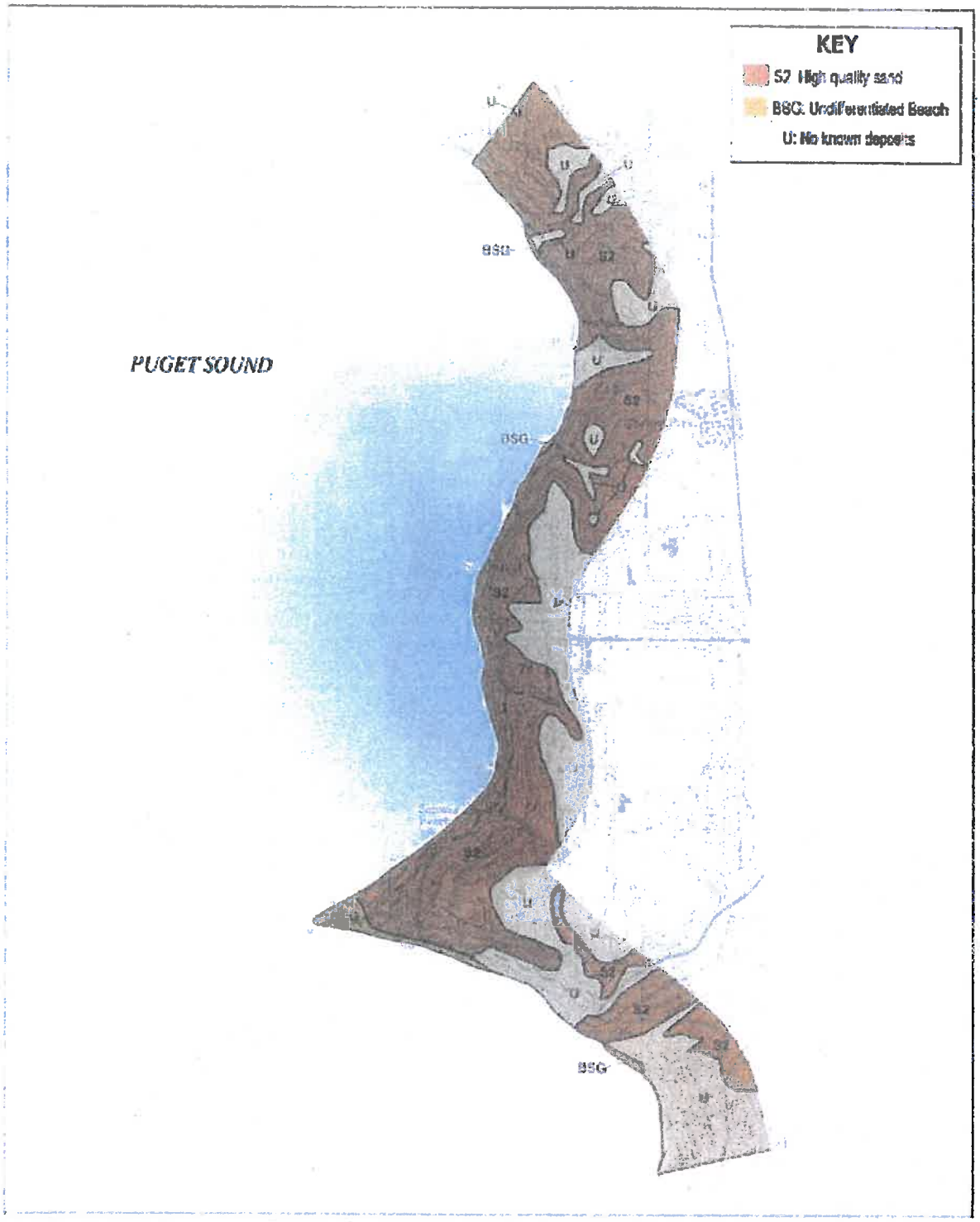



Figure 3 Sand and Gravel Areas

(adapted from The Burien Plan; City of Burien 2006)

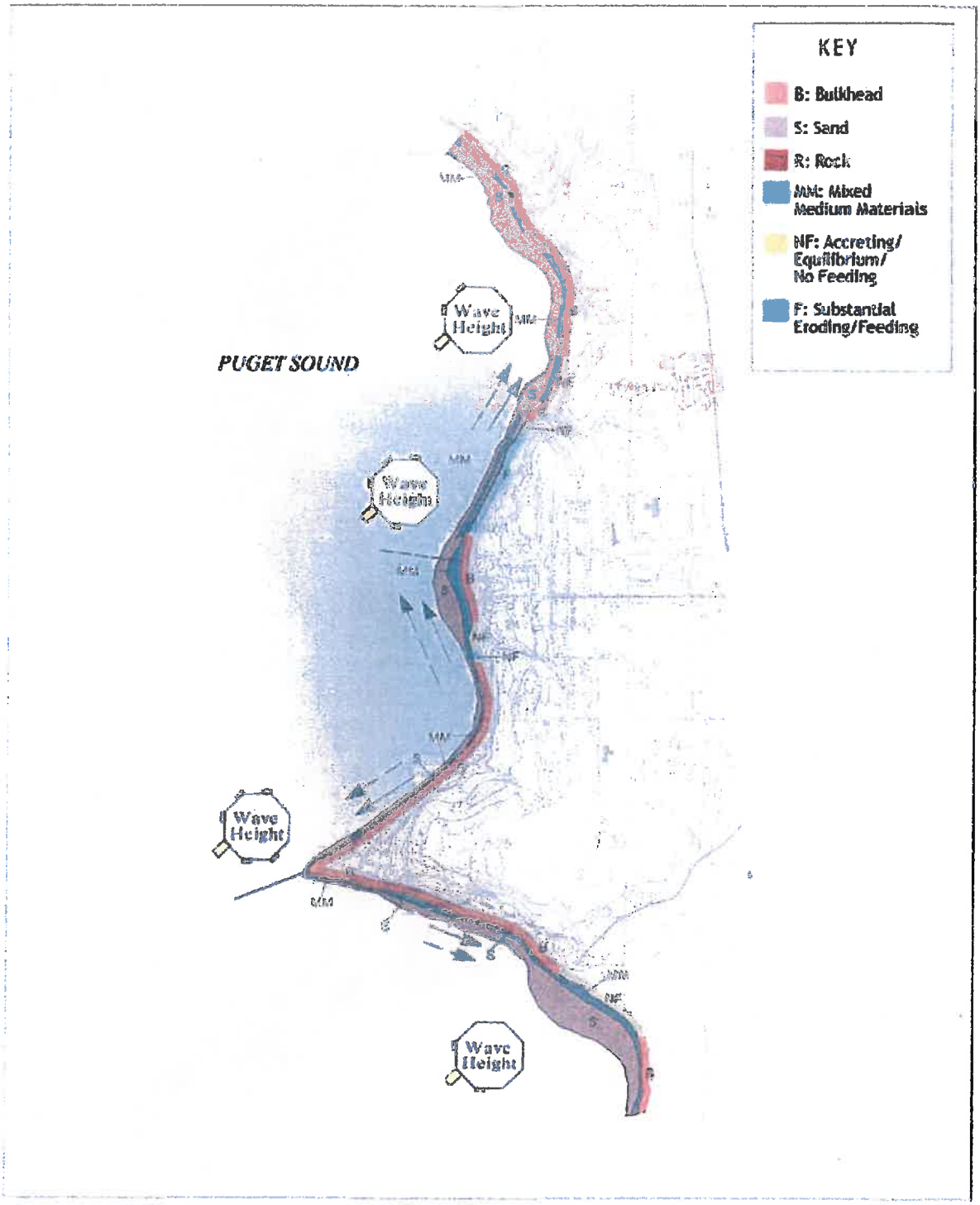
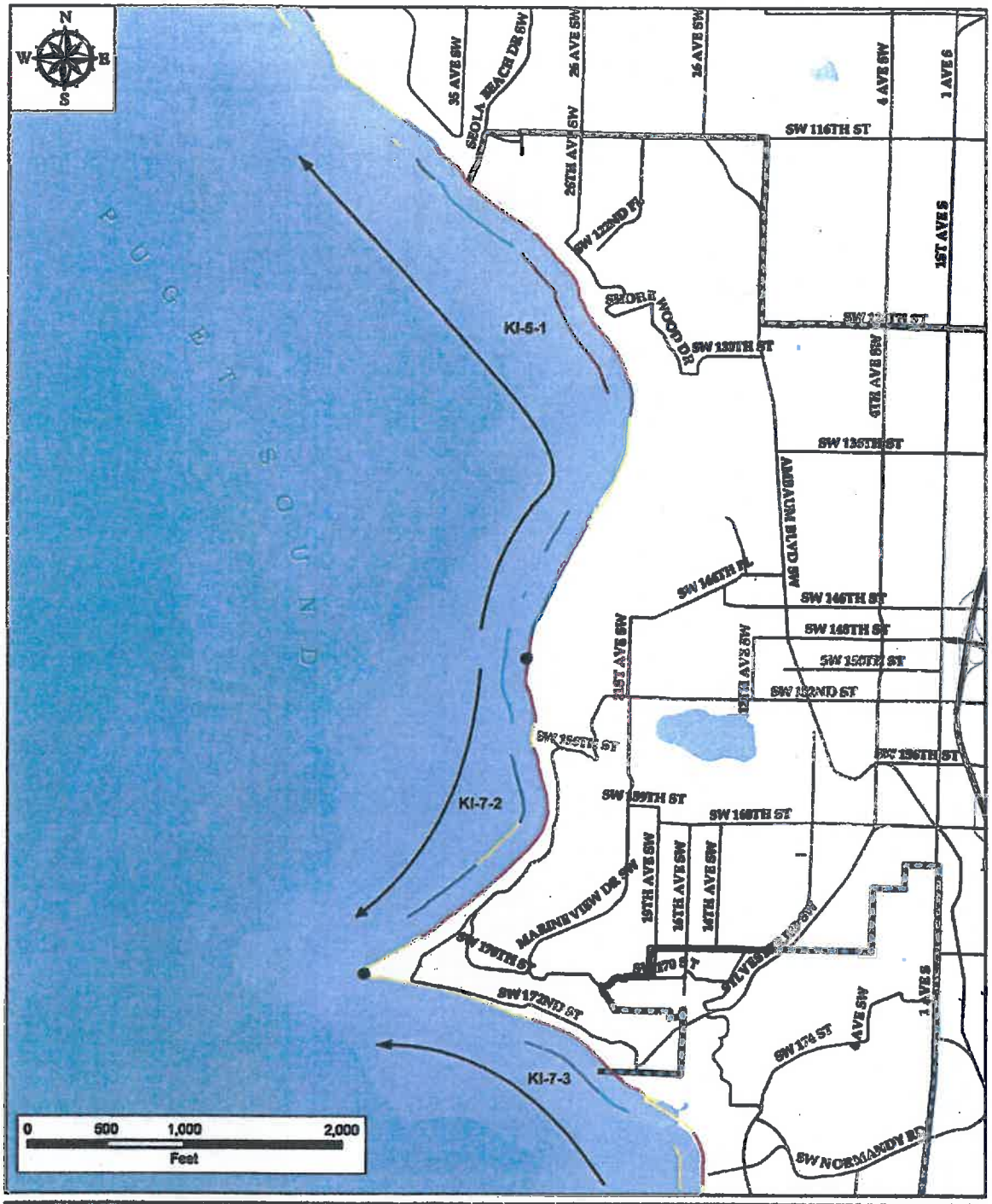



Figure 4 Coastal Drift

(adapted from The Burien Plan; City of Burien 2006)




Boundary of Burien

Drift Cell Boundaries

**Historic Conditions Shoretypes (offshore)**

- Feeder Bluff
- Feeder Bluff Exceptional
- Potential Feeder Bluff
- NOT Feeder Bluff

**Current Conditions Shoretypes**

- Accretion Shoreform
- Feeder Bluff
- Feeder Bluff Exceptional
- Modified

Data Source: Inventory and Assessment of Current and Historic Beach Feeding Sources/Erosion and Accretion Areas for the Marine Shorelines of Water Resource Inventory Areas 8 & 9

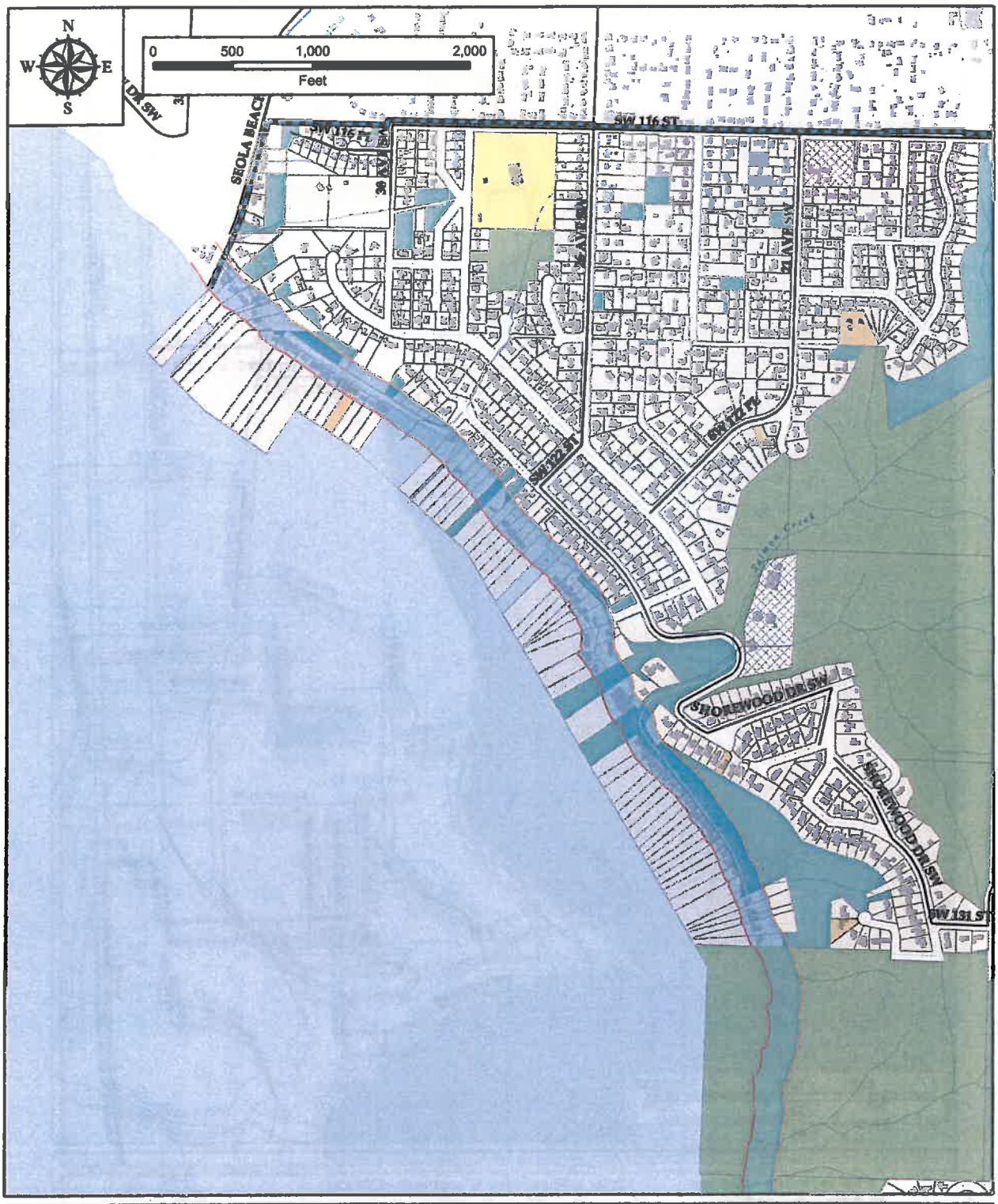
Published: December 2005

City of Burien

Shoreline Master Program

Current & Historic (buffered offshore) Sediment Sources

Figure 4A




Boundary of Burien

Buildings

**Reaches**

- Lake Burien
- Marine 1
- Marine 2
- Marine 3
- Marine 4

**Land Use**

- SFR
- Low Density MFR
- High Density MFR
- Industrial
- Commercial
- Insitutional
- Office
- Park
- Retail
- School
- Transportation
- VACANT
- Other

**City of Burien**

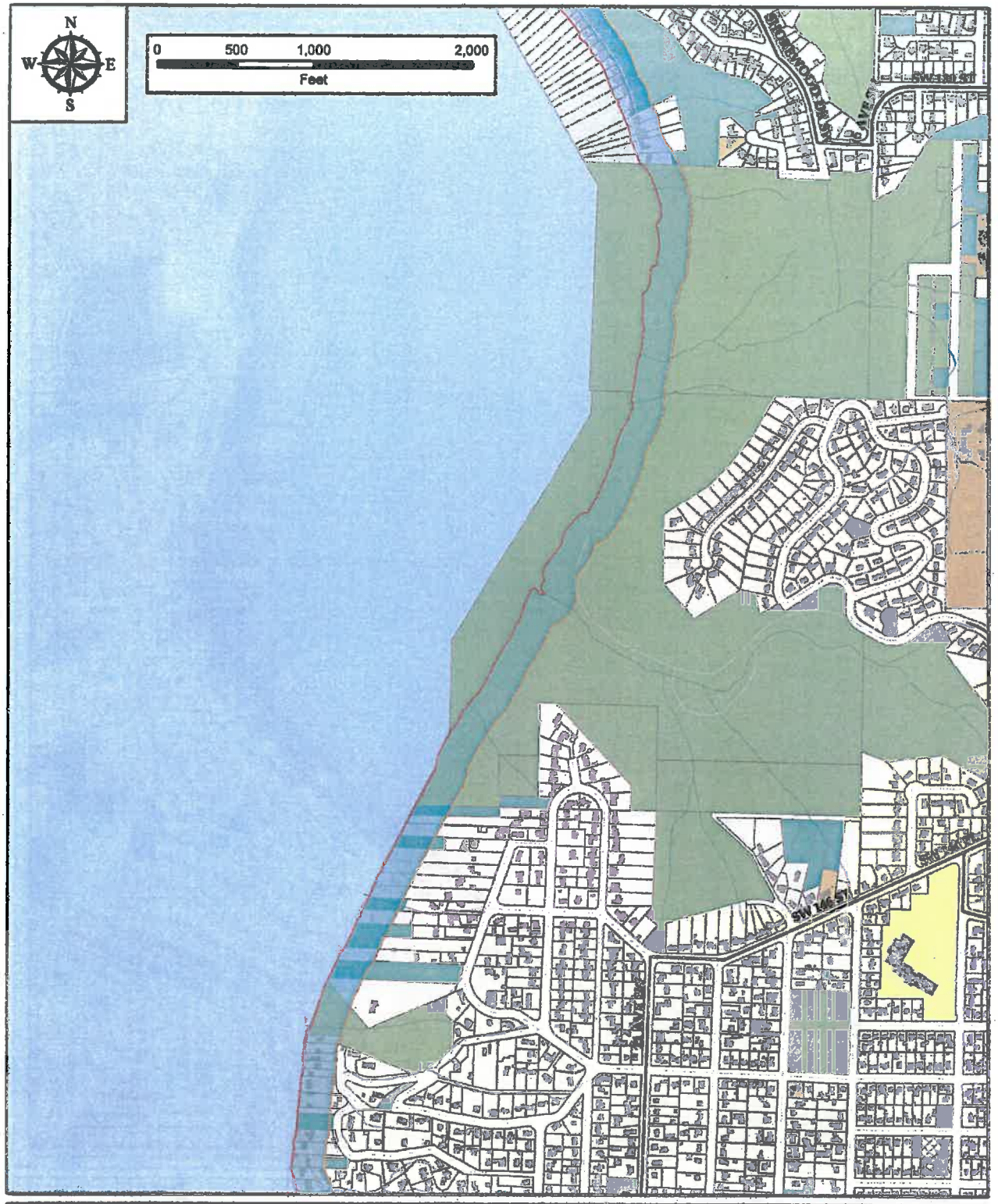
**Shoreline Master Program**

Land Use

*Marine 1*

Date: Mar 31 2008

Figure 6A




Boundary of Burien
Buildings

**Reaches**

- Lake Burien
- Marine 1
- Marine 2
- Marine 3
- Marine 4

**Land Use**

- SFR
- Low Density MFR
- High Density MFR
- Industrial
- Commercial
- Insitutional
- Office
- Park
- Retail
- School
- Transportation
- VACANT
- Other

**City of Burien**

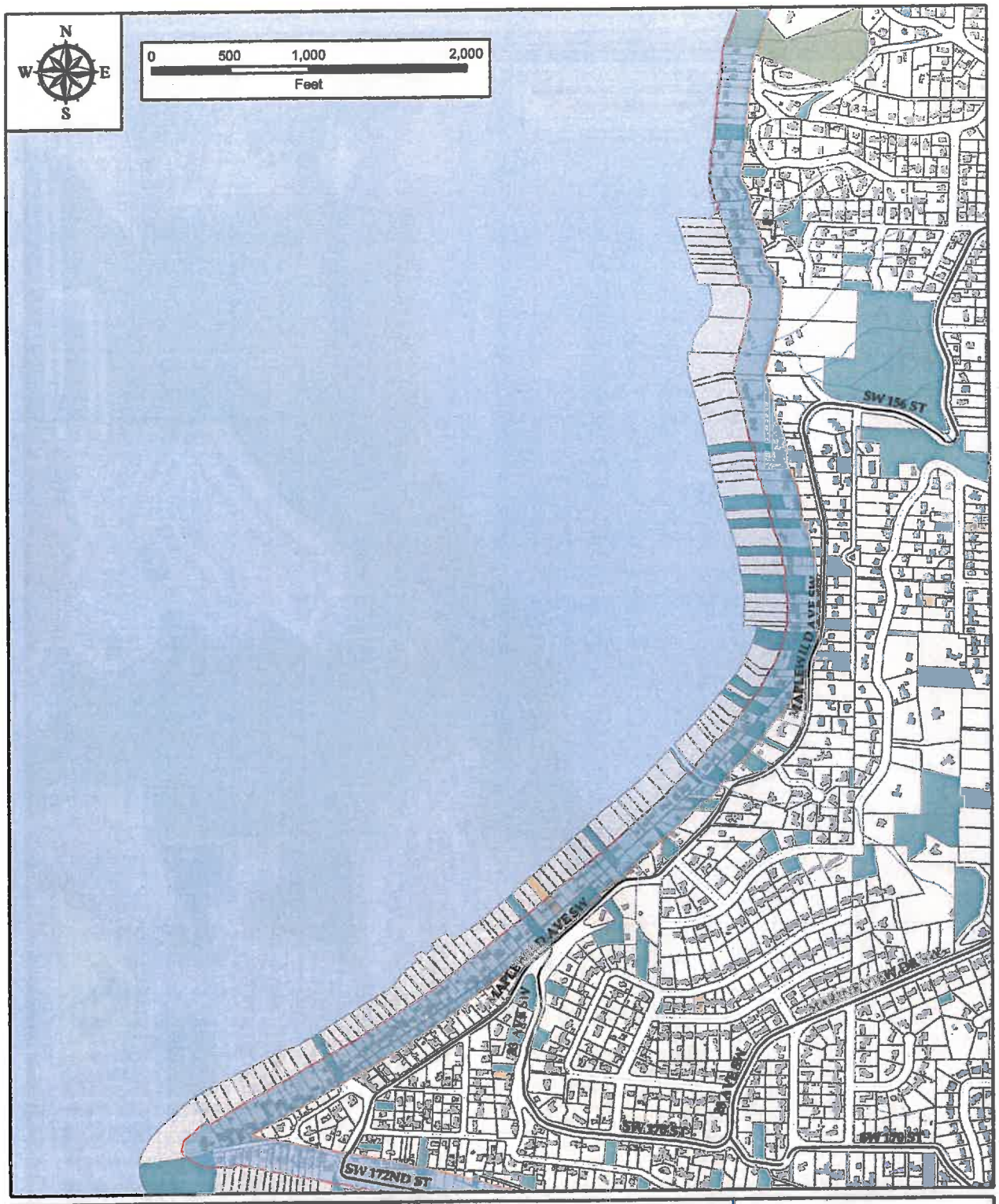
**Shoreline Master Program**

## Land Use

*Marine 2*

Date: Mar 24 2009

Figure 5B




Boundary of Burien

Buildings

**Reaches**

- Lake Burien
- Marine 1
- Marine 2
- Marine 3
- Marine 4

**Land Use**

- SFR
- Low Density MFR
- High Density MFR
- Industrial
- Commercial
- Institutional
- Office
- Park
- Retail
- School
- Transportation
- VACANT
- Other

**City of Burien**

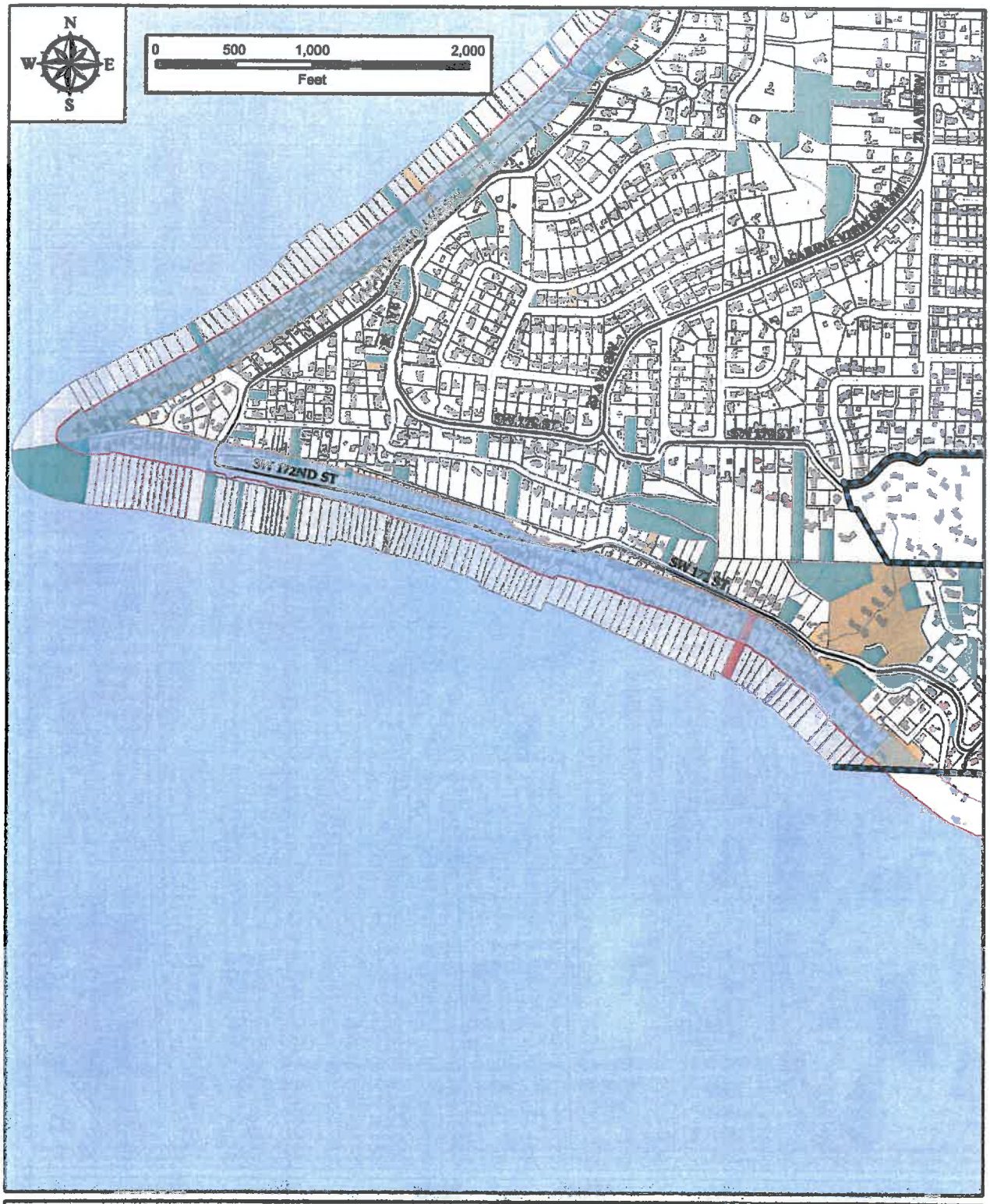
**Shoreline Master Program**

## Land Use

*Marine 3*

Date: Mar 04, 2008

Figure 5C




Boundary of Burien
Buildings

**Reaches**

- Lake Burien
- Marine 1
- Marine 2
- Marine 3
- Marine 4

**Land Use**

- SFR
- Low Density MFR
- High Density MFR
- Industrial
- Commercial
- Insitutional
- Office
- Park
- Retail
- School
- Transportation
- VACANT
- Other

**City of Burien**

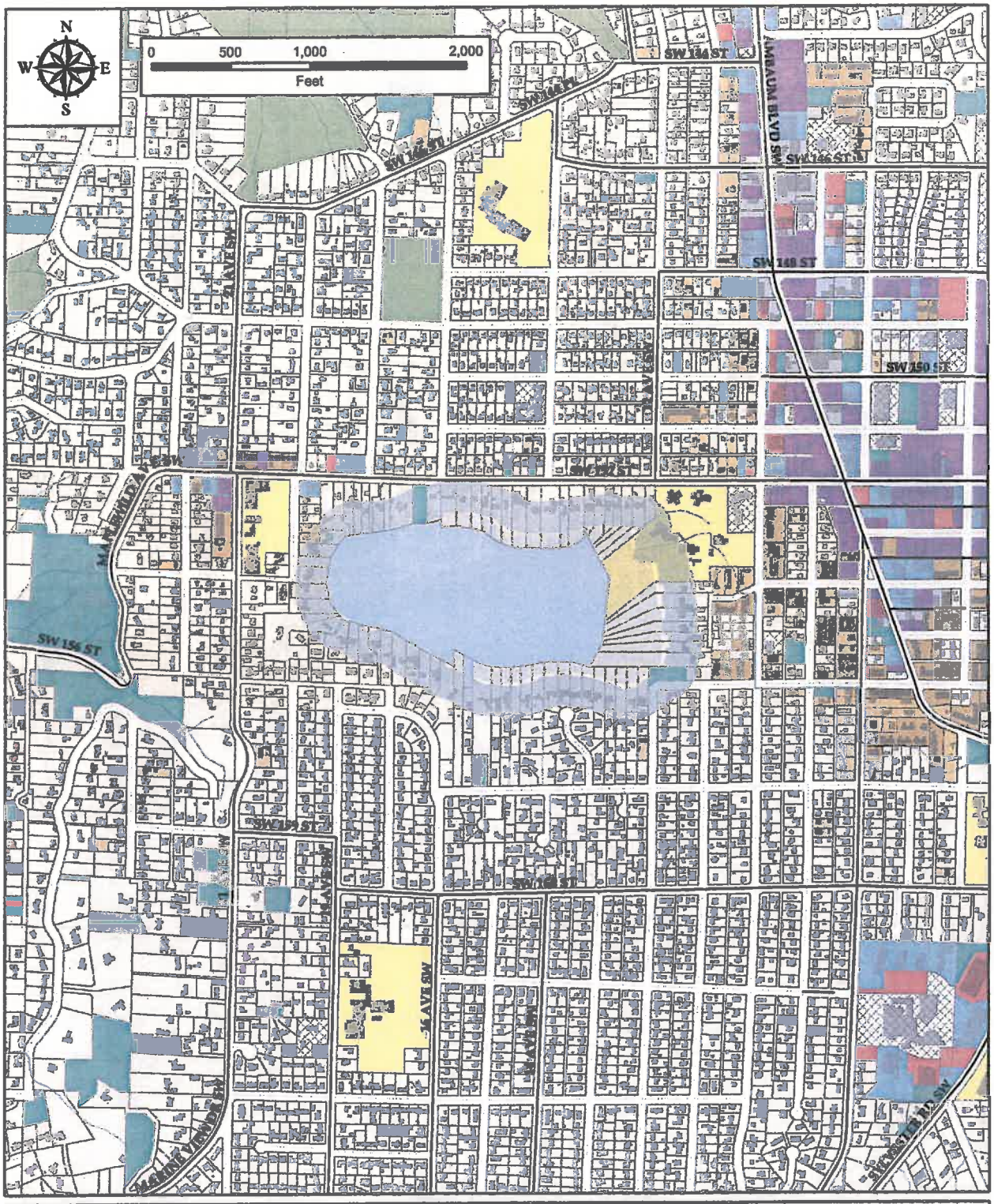
**Shoreline Master Program**

Land Use

*Marine 4*

Date: May 04, 2008

Figure 5D




Boundary of Burien

Buildings

**Reaches**

- Lake Burien
- Marine 1
- Marine 2
- Marine 3
- Marine 4

**Land Use**

- SFR
- Low Density MFR
- High Density MFR
- Industrial
- Commercial
- Insitutional
- Office
- Park
- Retail
- School
- Transportation
- VACANT
- Other

**City of Burien**

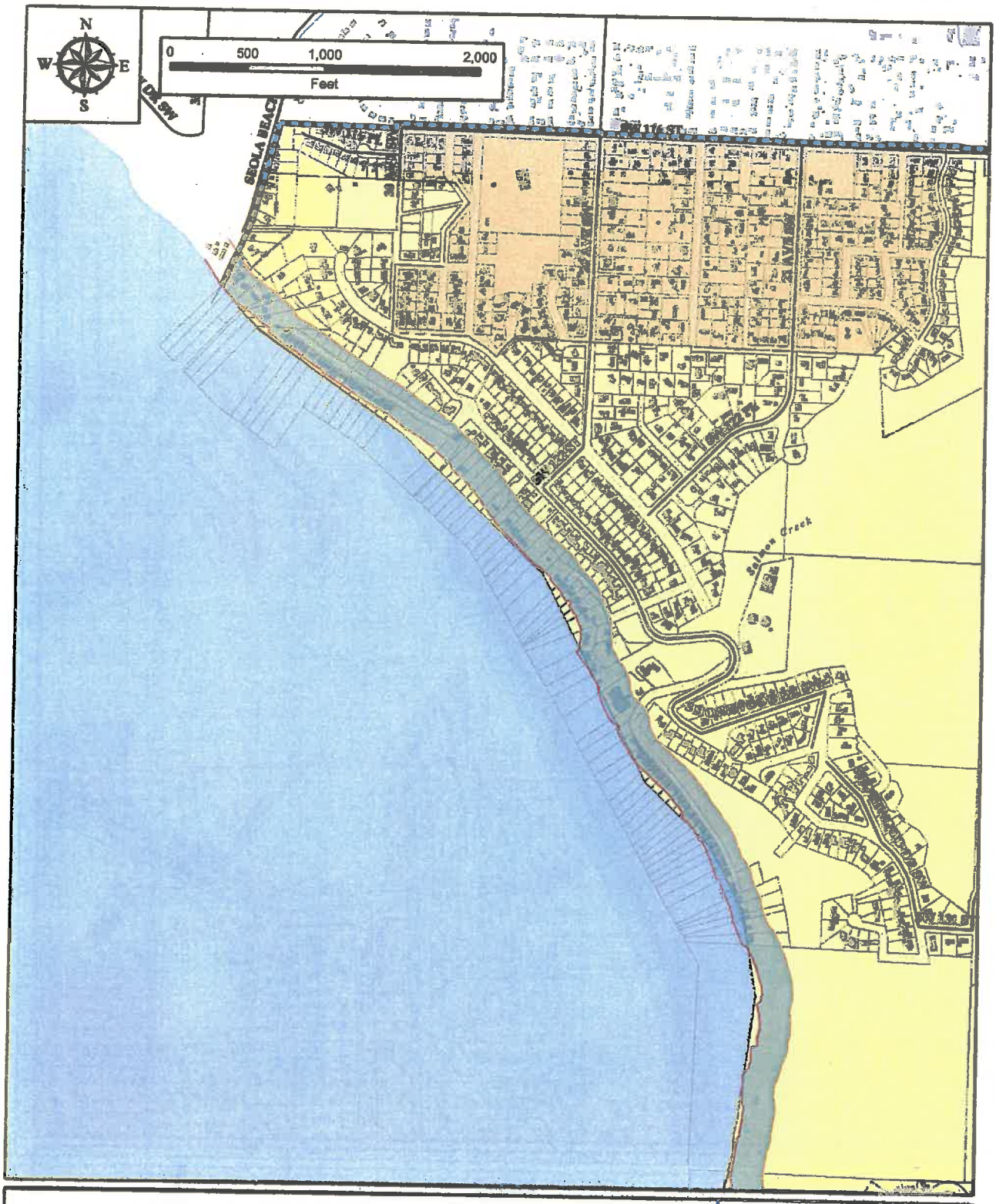
**Shoreline Master Program**

## Land Use

*Lake Burien*

Date: Mar 04, 2008

Figure 5E




Boundary of Burien
Buildings

**Reaches**

- Lake Burien
- Marine 1
- Marine 2
- Marine 3
- Marine 4

- RS-A Residential Single-Family
- RS-12,000 Residential Single-Family
- RS-7,200 Residential Single-Family
- RM-12 Residential Multi-Family
- RM-18 Residential Multi-Family
- RM-24 Residential Multi-Family
- CN Neighborhood Center
- CI Intersection Commercial
- DC Downtown Commercial

- CR Regional Commercial
- CC-1 Community Commercial
- CC-2 Community Commercial
- O Office
- I Industrial
- Special Planning Area 1
- Special Planning Area 2
- Special Planning Area 3
- Special Planning Area 4

**City of Burien**

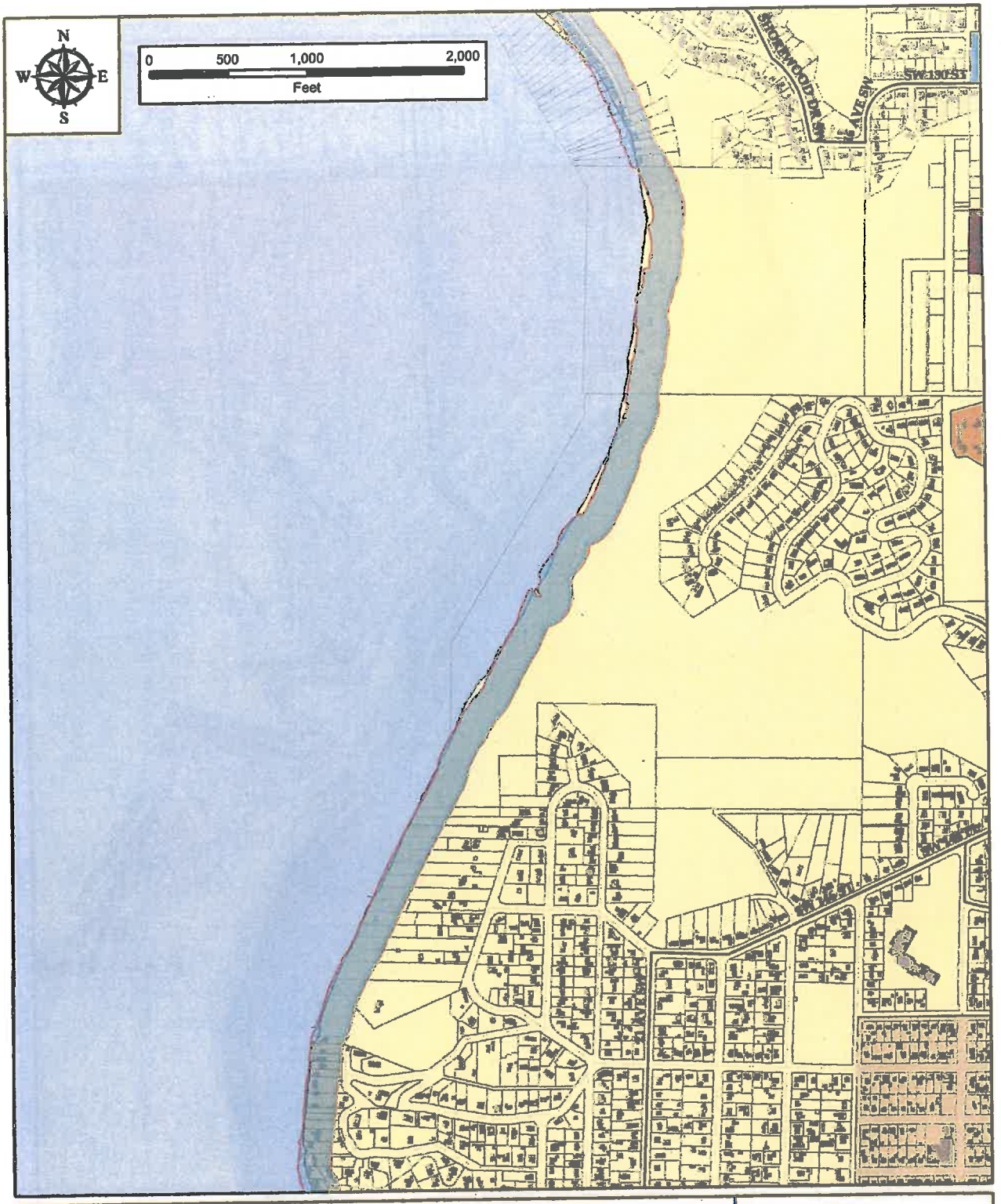
**Shoreline Master Program**

Zoning

*Marine 1*

Date: Mar 04 2008

Figure 6A




Boundary of Burien
Buildings

**Reaches**

- Lake Burien
- Marine 1
- Marine 2
- Marine 3
- Marine 4

- RS-A Residential Single-Family
- RS-12,000 Residential Single-Family
- RS-7,200 Residential Single-Family
- RM-12 Residential Multi-Family
- RM-18 Residential Multi-Family
- RM-24 Residential Multi-Family
- CN Neighborhood Center
- CI Intersection Commercial
- DC Downtown Commercial

- CR Regional Commercial
- CC-1 Community Commercial
- CC-2 Community Commercial
- O Office
- I Industrial
- Special Planning Area 1
- Special Planning Area 2
- Special Planning Area 3
- Special Planning Area 4

**City of Burien**

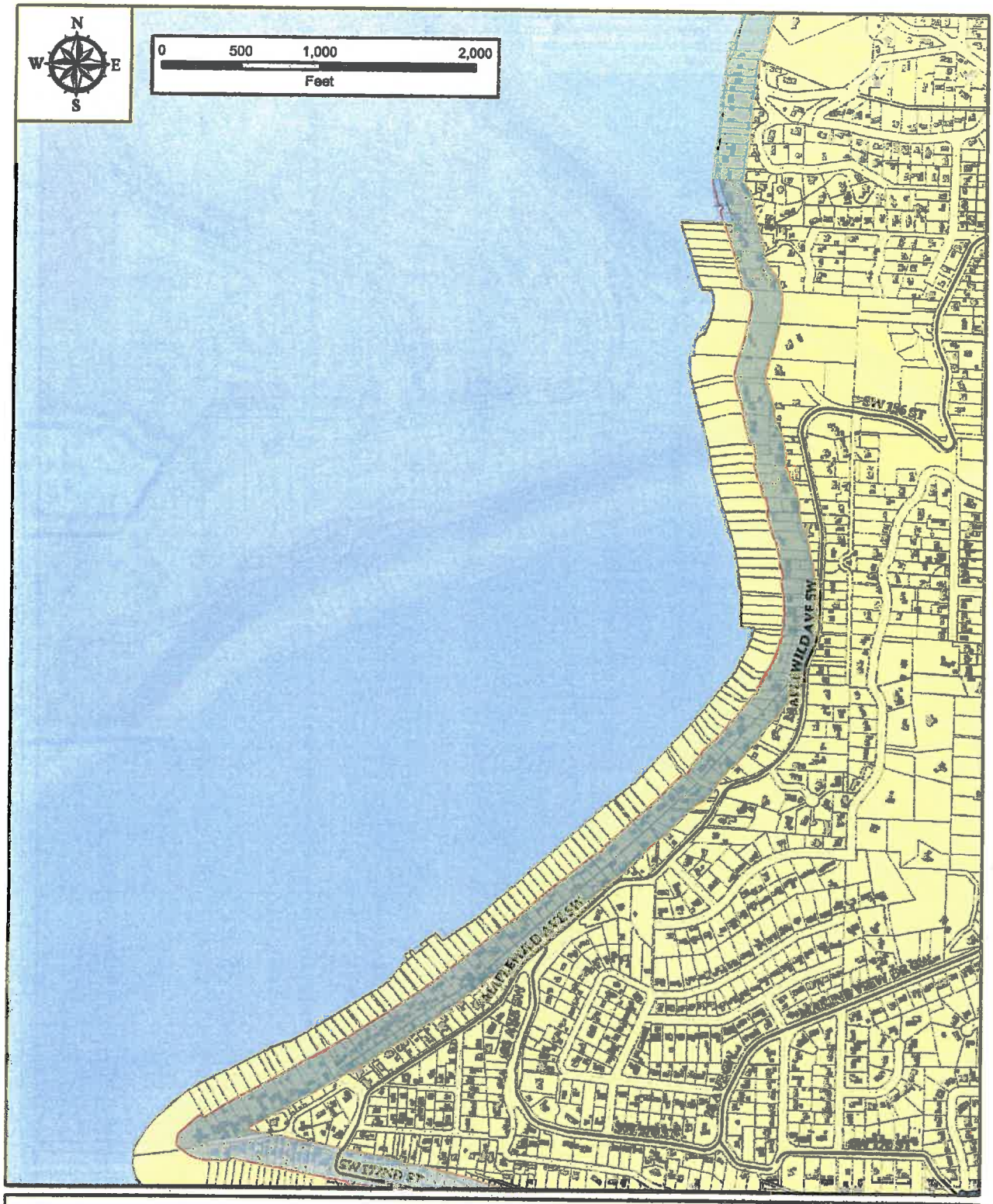
**Shoreline Master Program**

Zoning

*Marine 2*

Date: Mar 24, 2010

Figure 6B




Boundary of Burien
Buildings

**Reaches**

- Lake Burien
- Marine 1
- Marine 2
- Marine 3
- Marine 4

- RS-A Residential Single-Family
- RS-12,000 Residential Single-Family
- RS-7,200 Residential Single-Family
- RM-12 Residential Multi-Family
- RM-18 Residential Multi-Family
- RM-24 Residential Multi-Family
- CN Neighborhood Center
- CI Intersection Commercial
- DC Downtown Commercial

- CR Regional Commercial
- CC-1 Community Commercial
- CC-2 Community Commercial
- O Office
- I Industrial
- Special Planning Area 1
- Special Planning Area 2
- Special Planning Area 3
- Special Planning Area 4

**City of Burien**

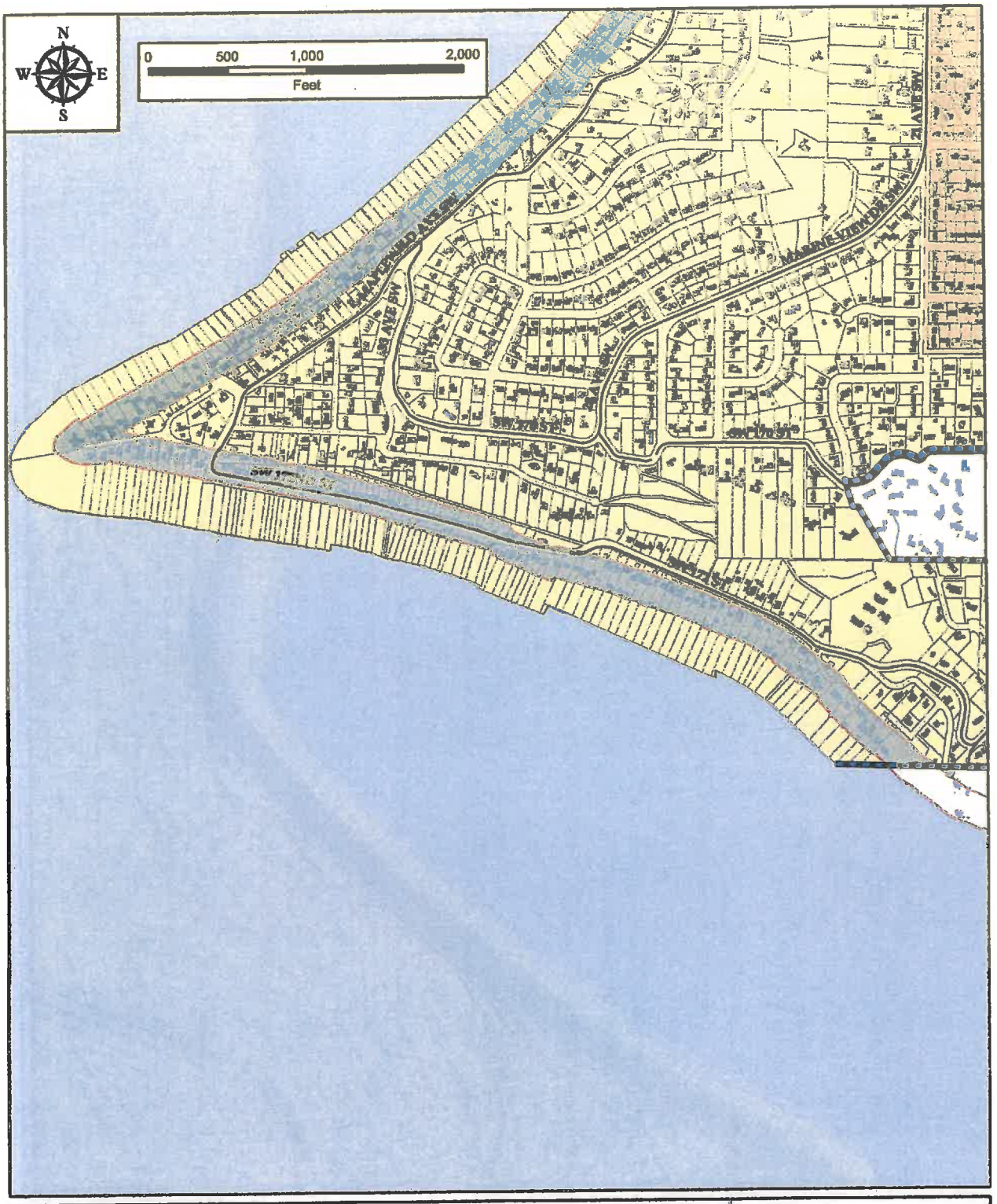
**Shoreline Master Program**

## Zoning

*Marine 3*

Date: Mar 04, 2008

Figure 6C




Boundary of Burien
Buildings

**Reaches**

- Lake Burien
- Marine 1
- Marine 2
- Marine 3
- Marine 4

- RS-A Residential Single-Family
- RS-12,000 Residential Single-Family
- RS-7,200 Residential Single-Family
- RM-12 Residential Multi-Family
- RM-18 Residential Multi-Family
- RM-24 Residential Multi-Family
- CN Neighborhood Center
- CI Intersection Commercial
- DC Downtown Commercial

- CR Regional Commercial
- CC-1 Community Commercial
- CC-2 Community Commercial
- O Office
- I Industrial
- Special Planning Area 1
- Special Planning Area 2
- Special Planning Area 3
- Special Planning Area 4

**City of Burien**

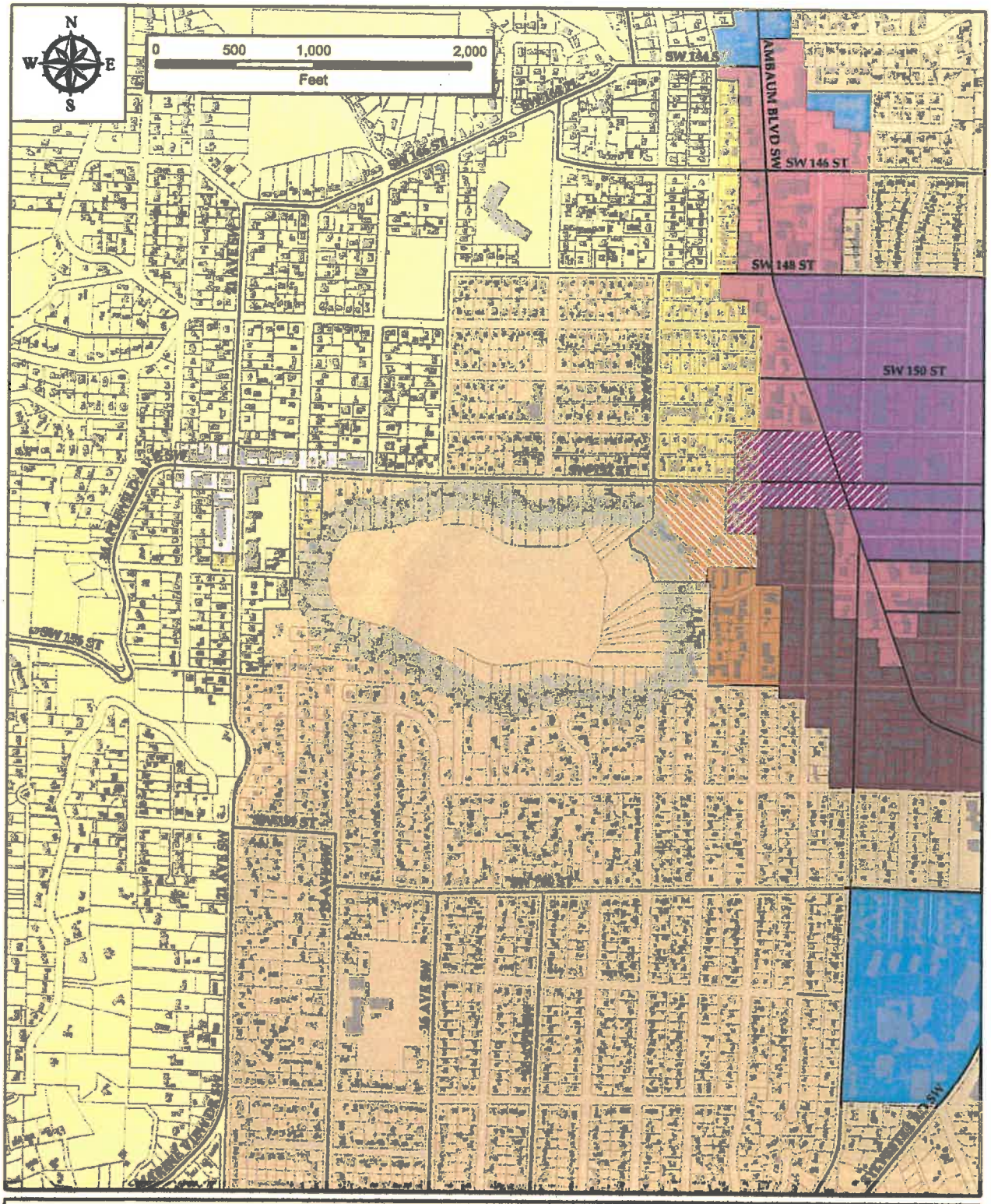
**Shoreline Master Program**

## Zoning

*Marine 4*

Date: Mar 04 2008

Figure 6D




Boundary of Burien
Buildings

**Reaches**

Lake Burien
Marine 1
Marine 2
Marine 3
Marine 4

RS-A Residential Single-Family
RS-12,000 Residential Single-Family
RS-7,200 Residential Single-Family
RM-12 Residential Multi-Family
RM-18 Residential Multi-Family
RM-24 Residential Multi-Family
CN Neighborhood Center
CI Intersection Commercial
DC Downtown Commercial

CR Regional Commercial
CC-1 Community Commercial
CC-2 Community Commercial
O Office
I Industrial
Special Planning Area 1
Special Planning Area 2
Special Planning Area 3
Special Planning Area 4

**City of Burien**

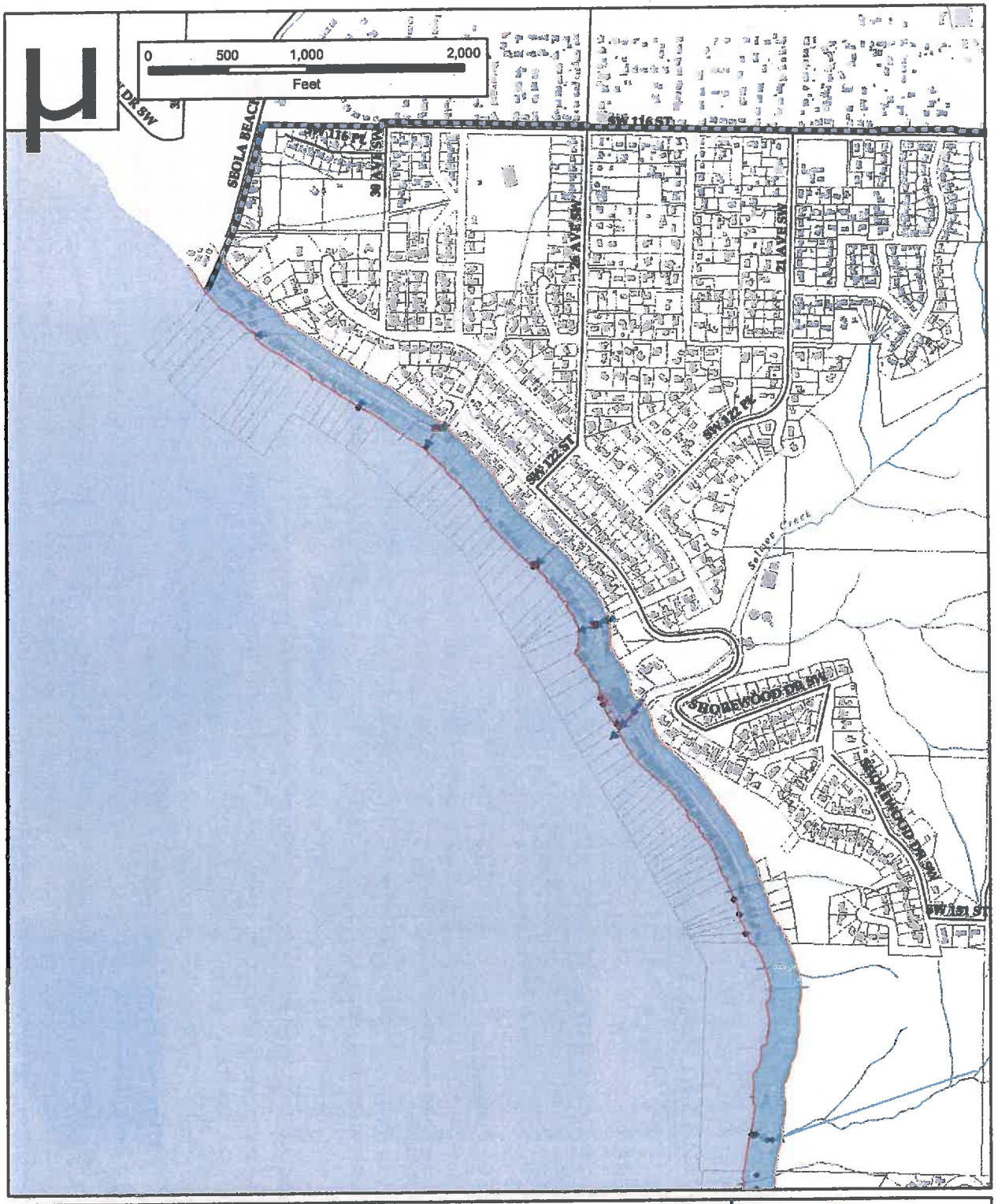
**Shoreline Master Program**

Zoning

*Lake Burien*

Date: Mar 24, 2008

Figure 6E




Boundary of Burien
Buildings

**Reaches**
- Lake Burien
- Marine 1
- Marine 2
- Marine 3
- Marine 4

**Catchbasin Reach TYPE**
- Type 2 Flow Splitter
- Other
- Downstream Defender
- Pump Station
- Stormfilter Vault
- CB Type 1
- Type 1 FROP
- CB Type 1 Infiltration
- CB Type 1 Inlet
- CB Type 2
- Type 2 FROP
- CB Type 2 Infiltration
- Type 2 Inlet
- Type 3 Infiltration
- Type 3 Vault
- No Data
- Other
- Joint

- Salmon Creek
- Miller Creek
- Small Creek
- Open Flow
- Bioswale
- Sheet Flow
- Ditches
- Storm Pipes

**City of Burien**

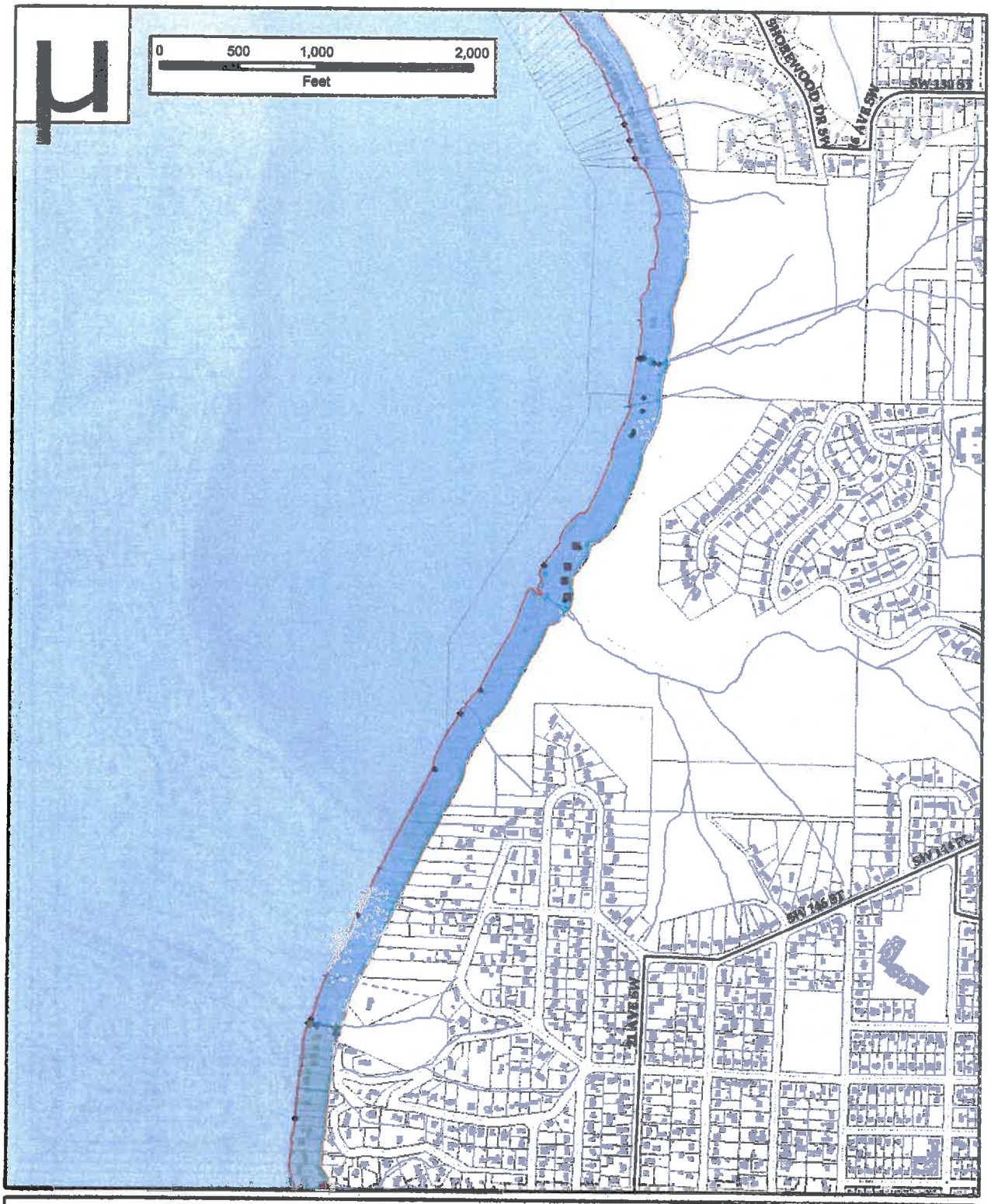
**Shoreline Master Program**

## Stormwater System

*Marine 1*

Date: Mar 24, 2008

Figure 7A




Boundary of Burien
Buildings

**Reaches**
- Lake Burien
- Marine 1
- Marine 2
- Marine 3
- Marine 4

**Catchbasin Reach TYPE**
- Type 2 Flow Splitter
- Other
- Downstream Defender
- Pump Station
- Stormfilter Vault
- CB Type 1
- Type 1 FROP
- CB Type 1 Infiltration
- CB Type 1 Inlet
- CB Type 2
- Type 2 FROP
- CB Type 2 Infiltration
- Type 2 Inlet
- Type 3 Infiltration
- Type 3 Vault
- No Data
- Other
- Joint

- Salmon Creek
- Miller Creek
- Small Creek
- Open Flow
- Bioswale
- Sheet Flow
- Ditches
- Storm Pipes

**City of Burien**

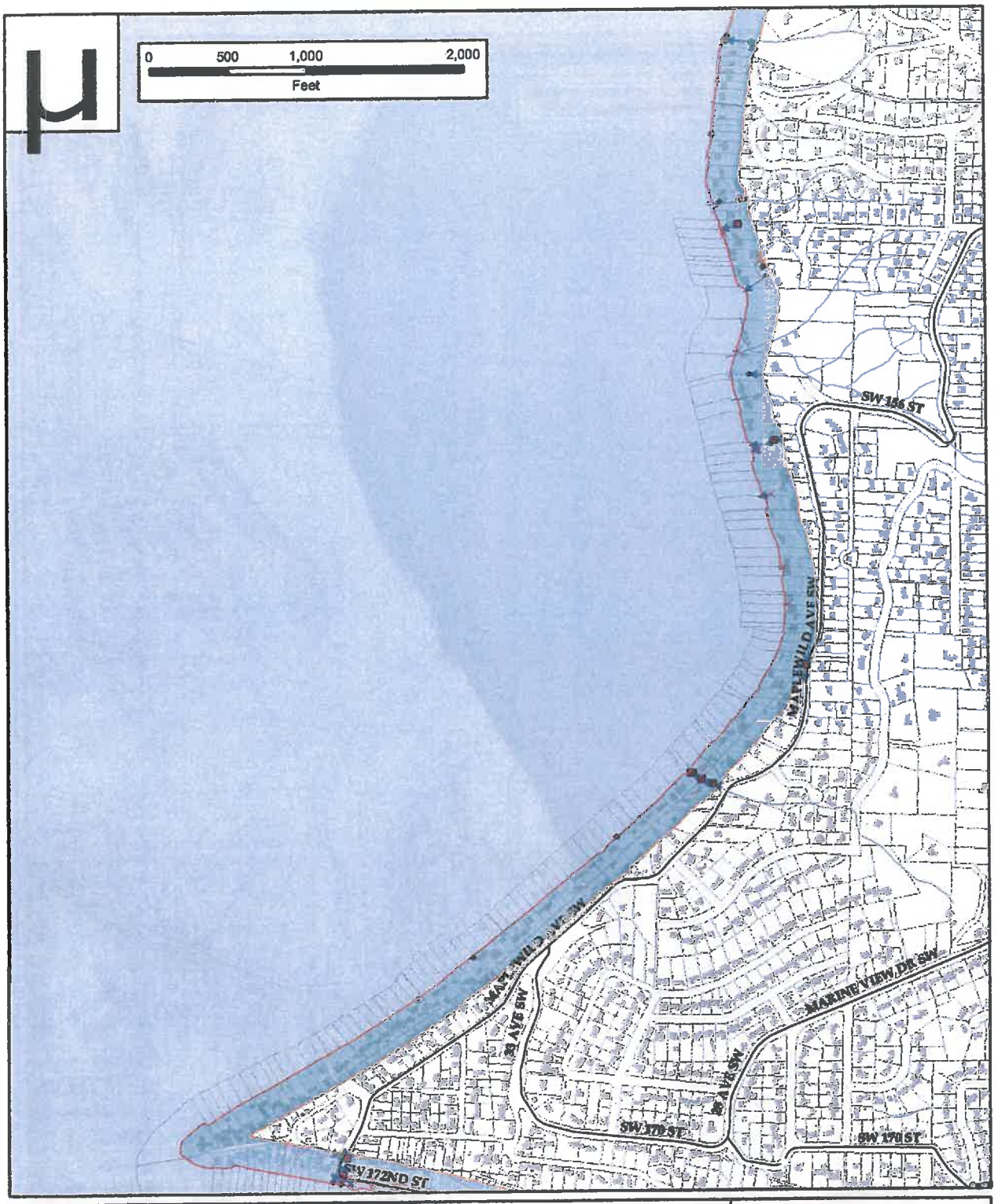
**Shoreline Master Program**

Stormwater System

*Marine 2*

Date: Mar 04 2009

Figure 7B




Boundary of Burien
Buildings

**Reaches**

- Lake Burien
- Marine 1
- Marine 2
- Marine 3
- Marine 4

**Catchbasin Reach TYPE**

- $ Type 2 Flow Splitter
- Other
- Downstream Defender
- Pump Station
- 2 Stormfilter Vault
- CB Type 1
- S Type 1 FROP
- CB Type 1 Infiltration
- CB Type 1 Inlet
- CB Type 2
- Type 2 FROP
- CB Type 2 Infiltration
- Type 2 Inlet
- 4 Type 3 Infiltration
- N Type 3 Vault
- No Data
- Other
- D Joint

- Salmon Creek
- Miller Creek
- Small Creek
- Open Flow
- Bioswale
- Sheet Flow
- Ditches
- Storm Pipes

**City of Burien**

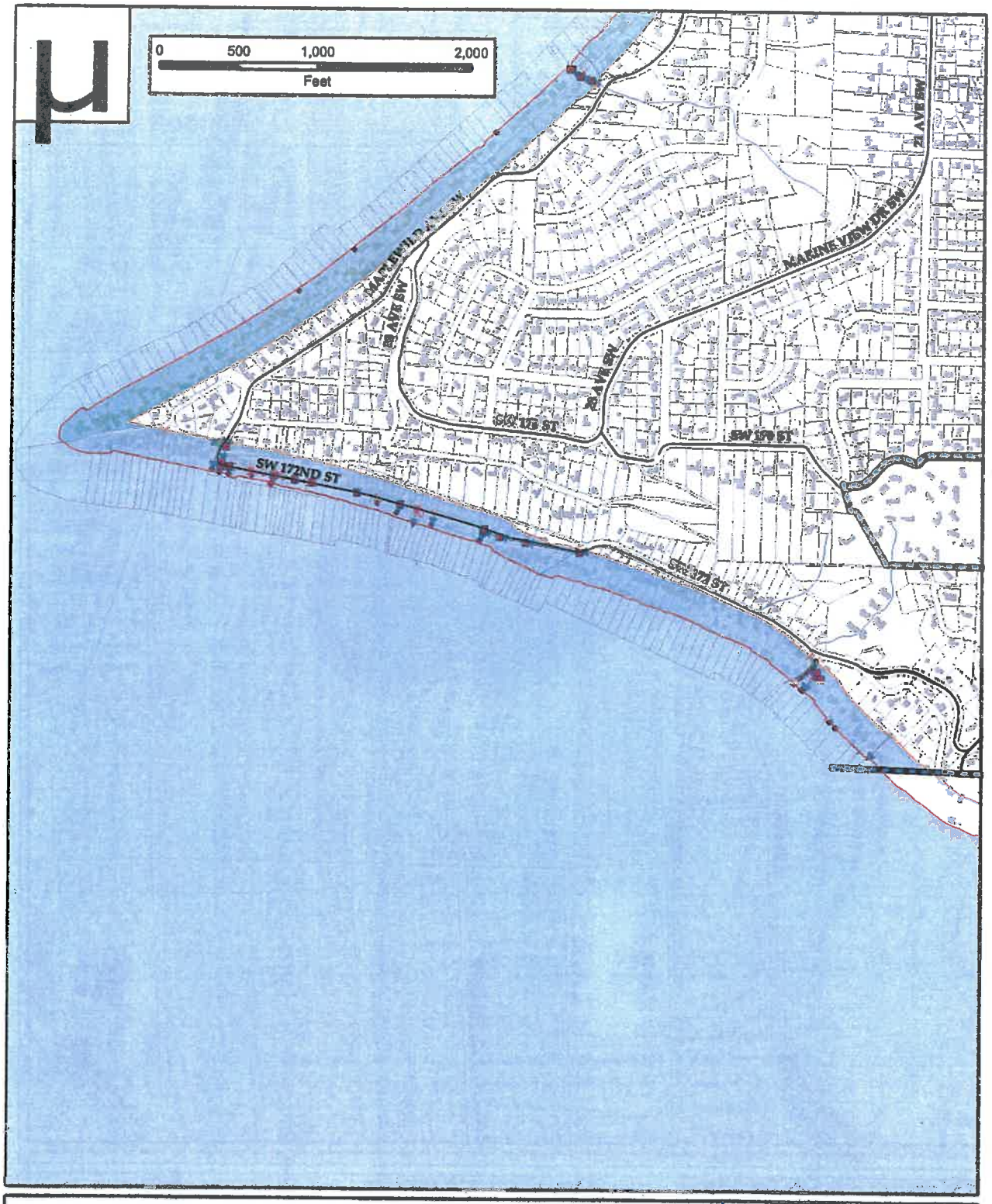
**Shoreline Master Program**

## Stormwater System

*Marine 3*

Date: Oct 24, 2008

Figure 7C




Boundary of Burien
Buildings

**Reaches**

- Lake Burien
- Marine 1
- Marine 2
- Marine 3
- Marine 4

**Catchbasin Reach TYPE**

- Type 2 Flow Splitter
- Other
- Downstream Defender
- Pump Station
- Stormfilter Vault
- CB Type 1
- Type 1 FROP
- CB Type 1 Infiltration
- CB Type 1 Inlet
- CB Type 2
- Type 2 FROP
- CB Type 2 Infiltration
- Type 2 Inlet
- Type 3 Infiltration
- Type 3 Vault
- No Data
- Other
- Joint

- Salmon Creek
- Miller Creek
- Small Creek
- Open Flow
- Bioswale
- Sheet Flow
- Ditches
- Storm Pipes

**City of Burien**

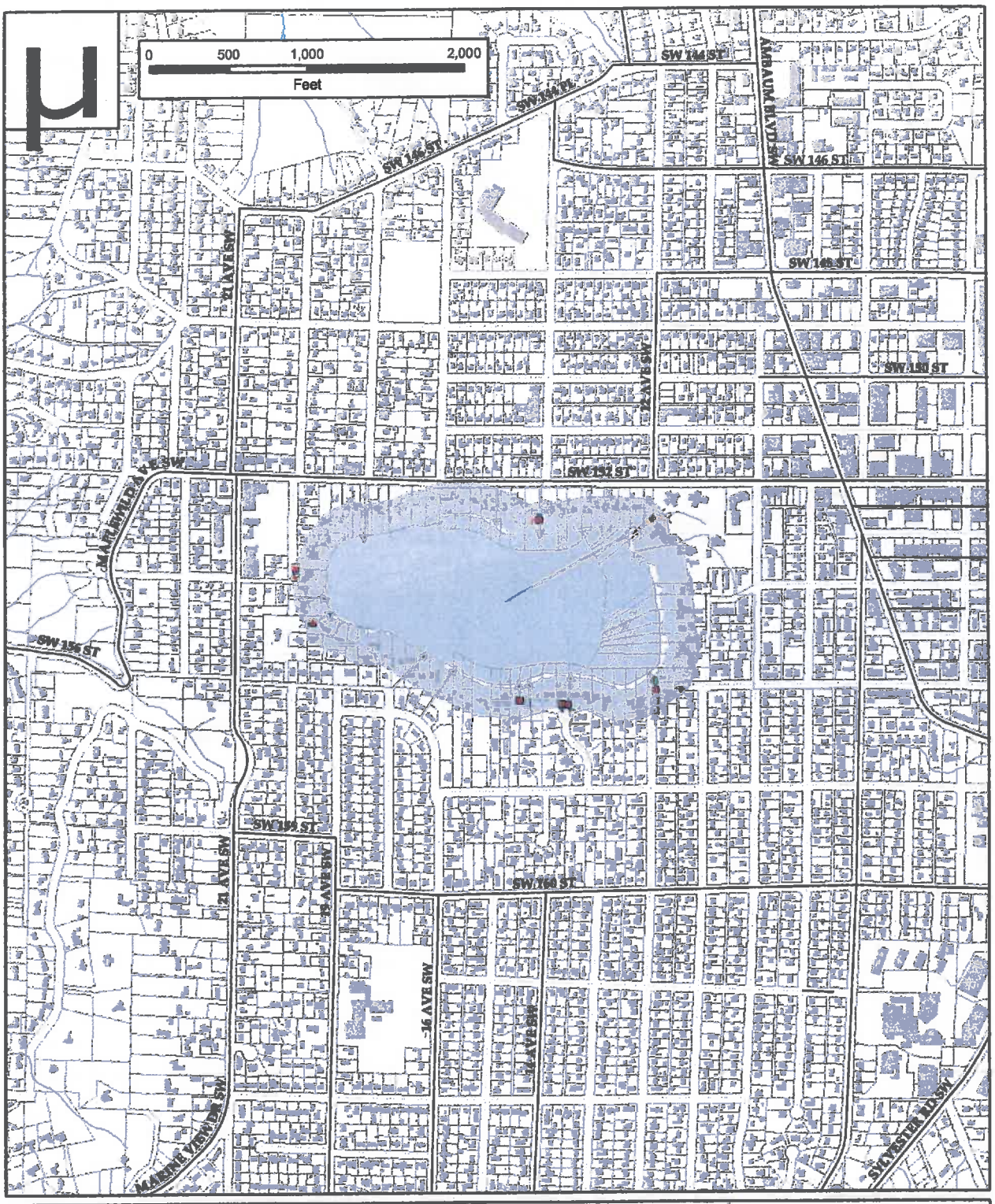
**Shoreline Master Program**

Stormwater System

*Marine 4*

Date: Mar 04, 2009

Figure 7D




Boundary of Burien
Buildings

**Reaches**

- Lake Burien
- Marine 1
- Marine 2
- Marine 3
- Marine 4

**Catchbasin Reach TYPE**

- Type 2 Flow Splitter
- Other
- Downstream Defender
- Pump Station
- Stormfilter Vault
- CB Type 1
- Type 1 FROP
- CB Type 1 Infiltration
- CB Type 1 Inlet
- CB Type 2
- Type 2 FROP
- CB Type 2 Infiltration
- Type 2 Inlet
- Type 3 Infiltration
- Type 3 Vault
- No Data
- Other
- Joint

- Salmon Creek
- Miller Creek
- Small Creek
- Open Flow
- Bioswale
- Sheet Flow
- Ditches
- Storm Pipes

**City of Burien**

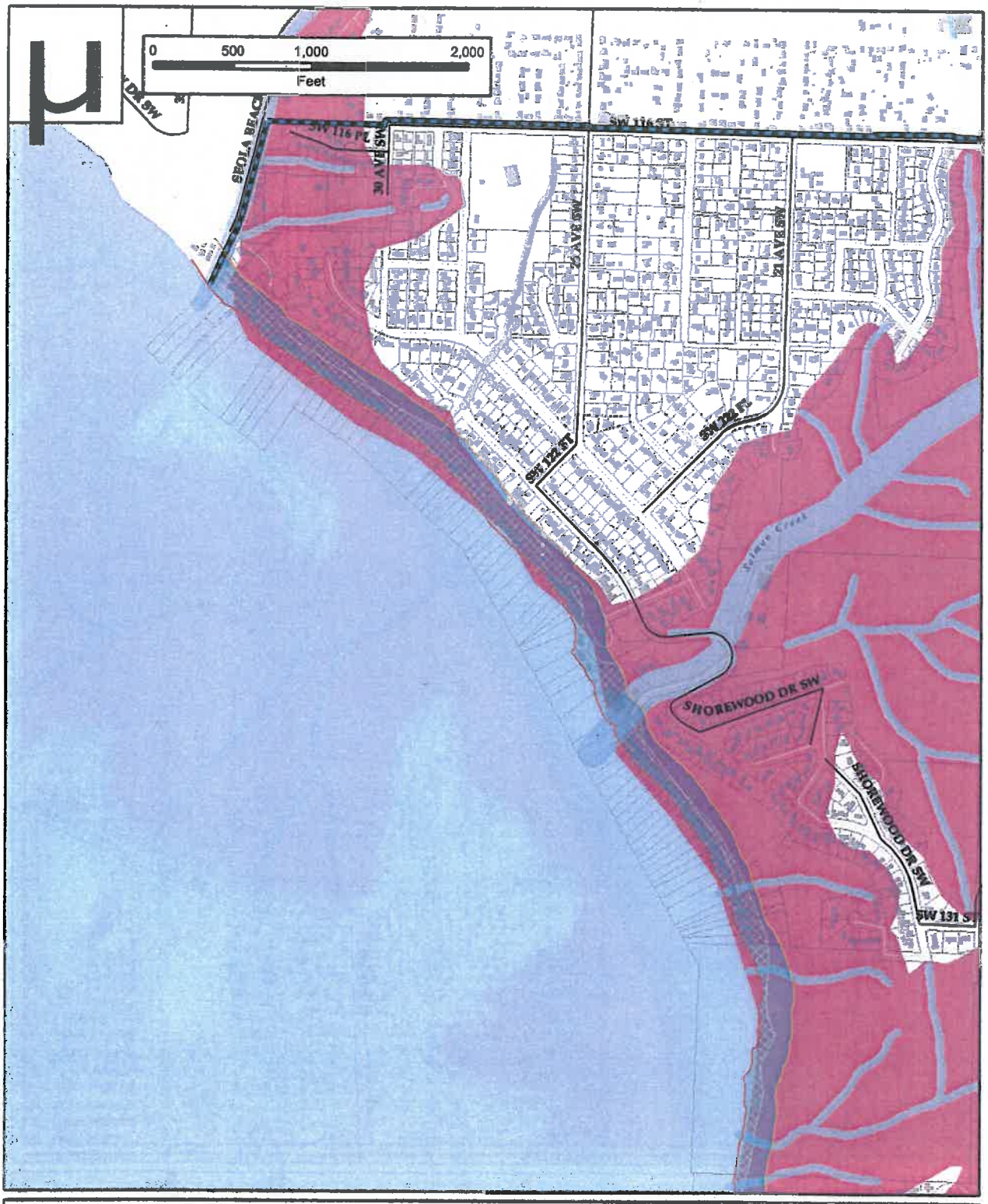
**Shoreline Master Program**

Stormwater System

*Lake Burien*

Date: Mar 24, 2008

Figure 7E




Boundary of Burien
Buildings

**Reaches**

- Lake Burien
- Marine 1
- Marine 2
- Marine 3
- Marine 4

- Seismic
- Landslide
- Aquifer Recharge Areas
- Wetlands
- Stream Buffers
- 100-Year Flood Area - FEMA

**City of Burien**

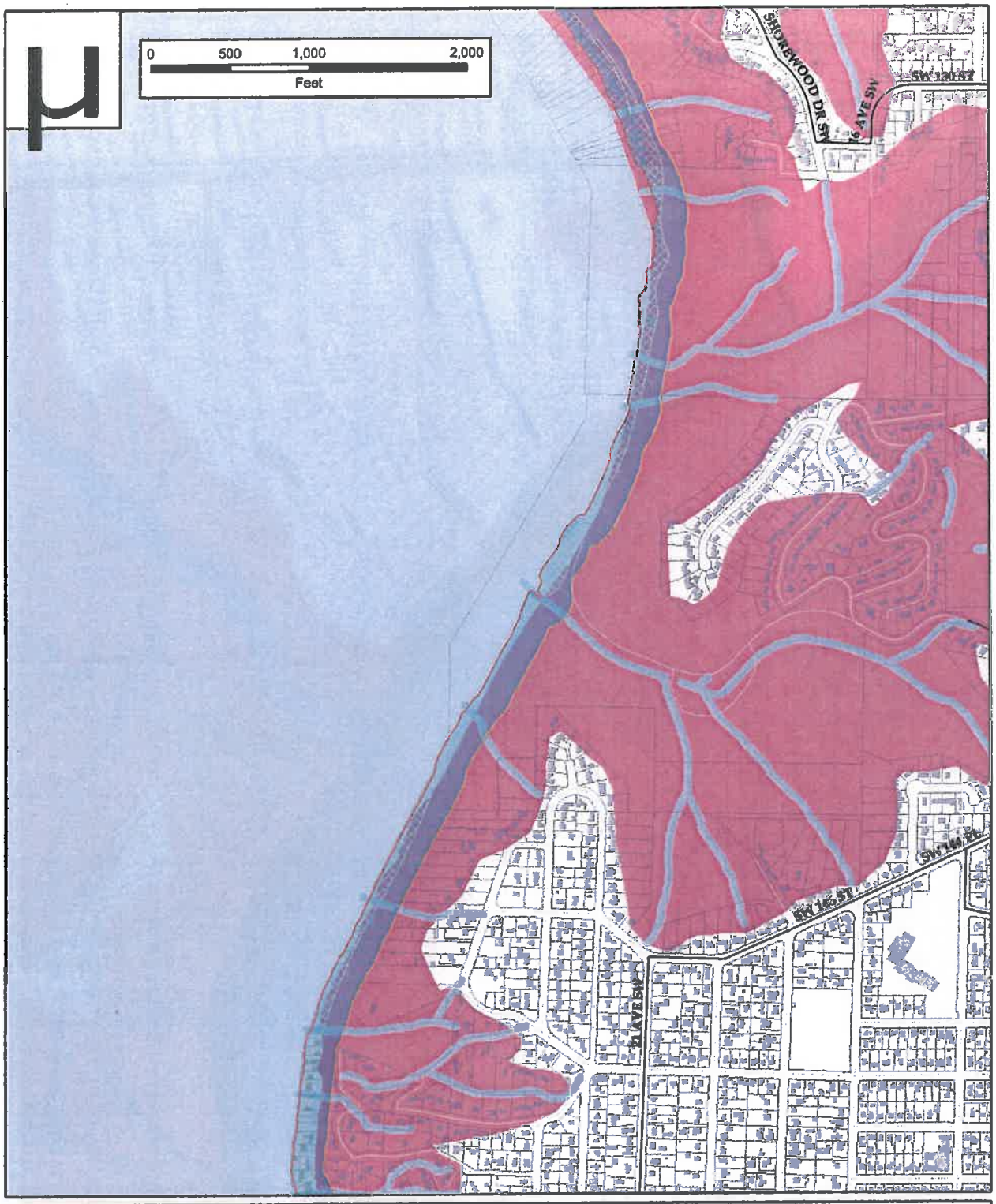
**Shoreline Master Program**

## Critical Areas

*Marine 1*

Date: Mar 04, 2008

Figure 8A




Boundary of Burien
Buildings

**Reaches**

Lake Burien
Marine 1
Marine 2
Marine 3
Marine 4

Seismic
Landslide
Aquifer Recharge Areas
Wetlands
Stream Buffers
100-Year Flood Area - FEMA

**City of Burien**

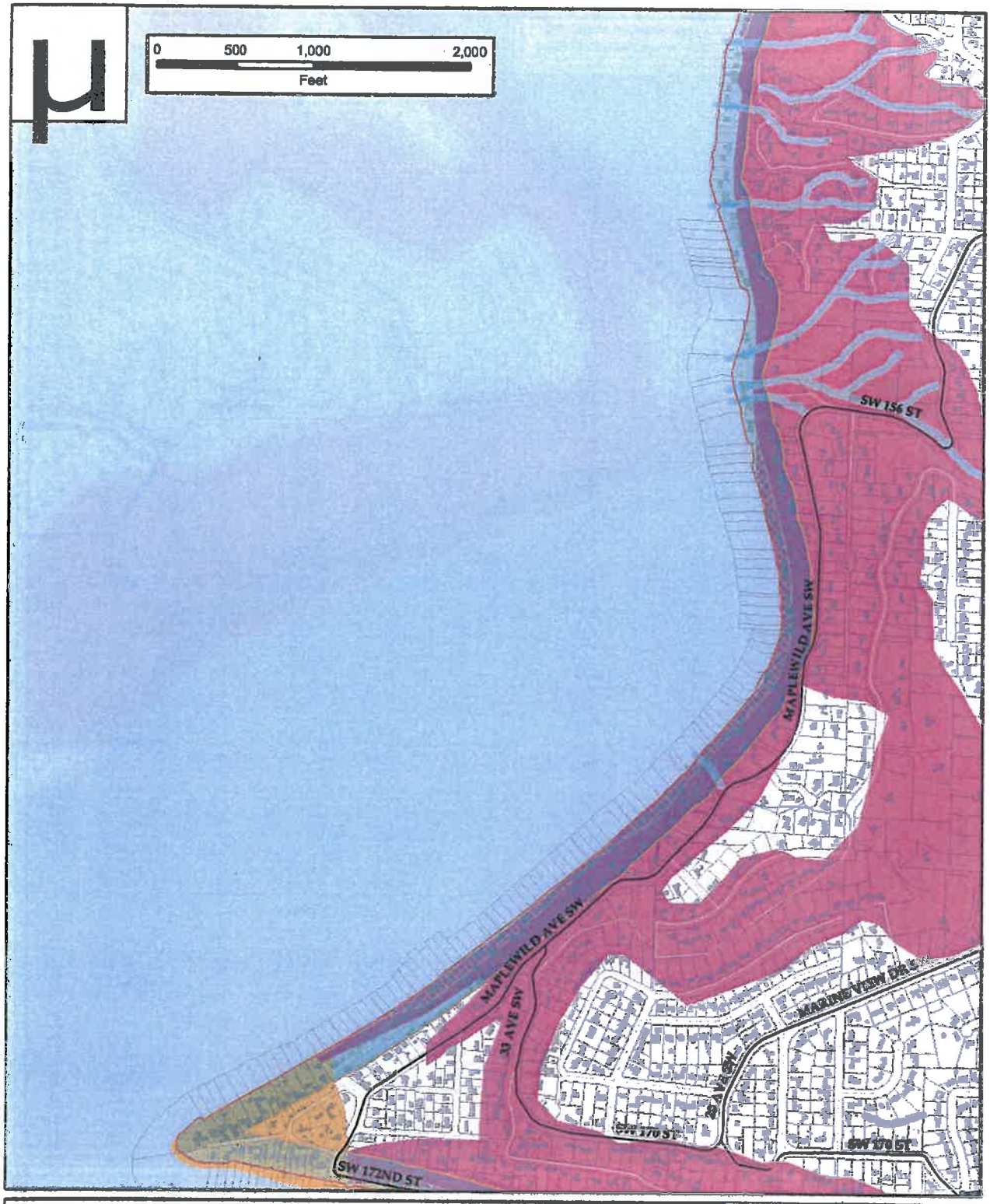
**Shoreline Master Program**

Critical Areas

*Marine 2*

Date: March 2008

Figure 8B




Boundary of Burien
Buildings

**Reaches**

Lake Burien
Marine 1
Marine 2
Marine 3
Marine 4

Seismic
Landslide
Aquifer Recharge Areas
Wetlands
Stream Buffers
100-Year Flood Area - FEMA

**City of Burien**

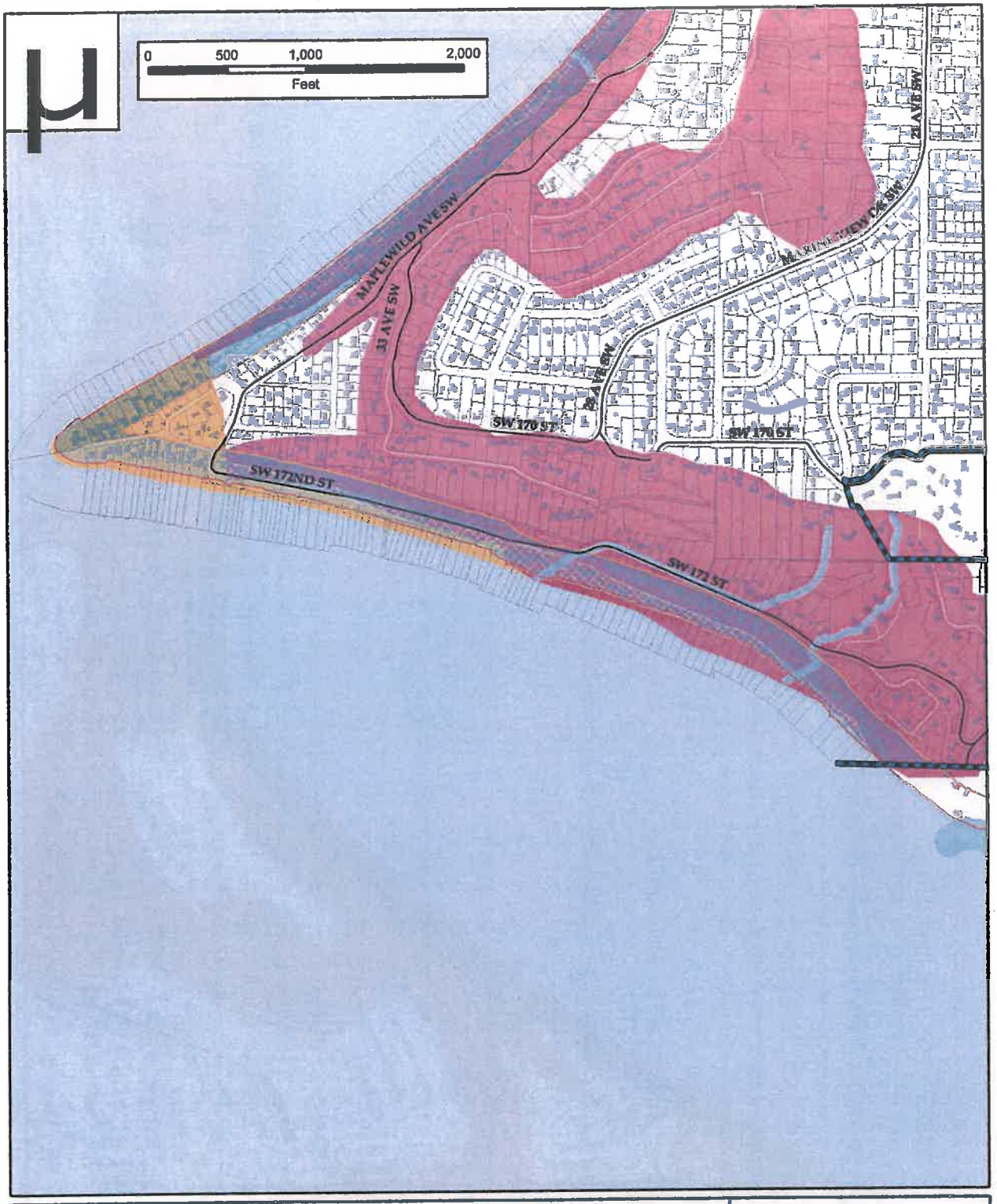
**Shoreline Master Program**

## Critical Areas

*Marine 3*

Date: Mar 04, 2008

Figure 8C




Boundary of Burien
Buildings

**Reaches**

Lake Burien
Marine 1
Marine 2
Marine 3
Marine 4

Seismic
Landslide
Aquifer Recharge Areas
Wetlands
Stream Buffers
100-Year Flood Area - FEMA

**City of Burien**

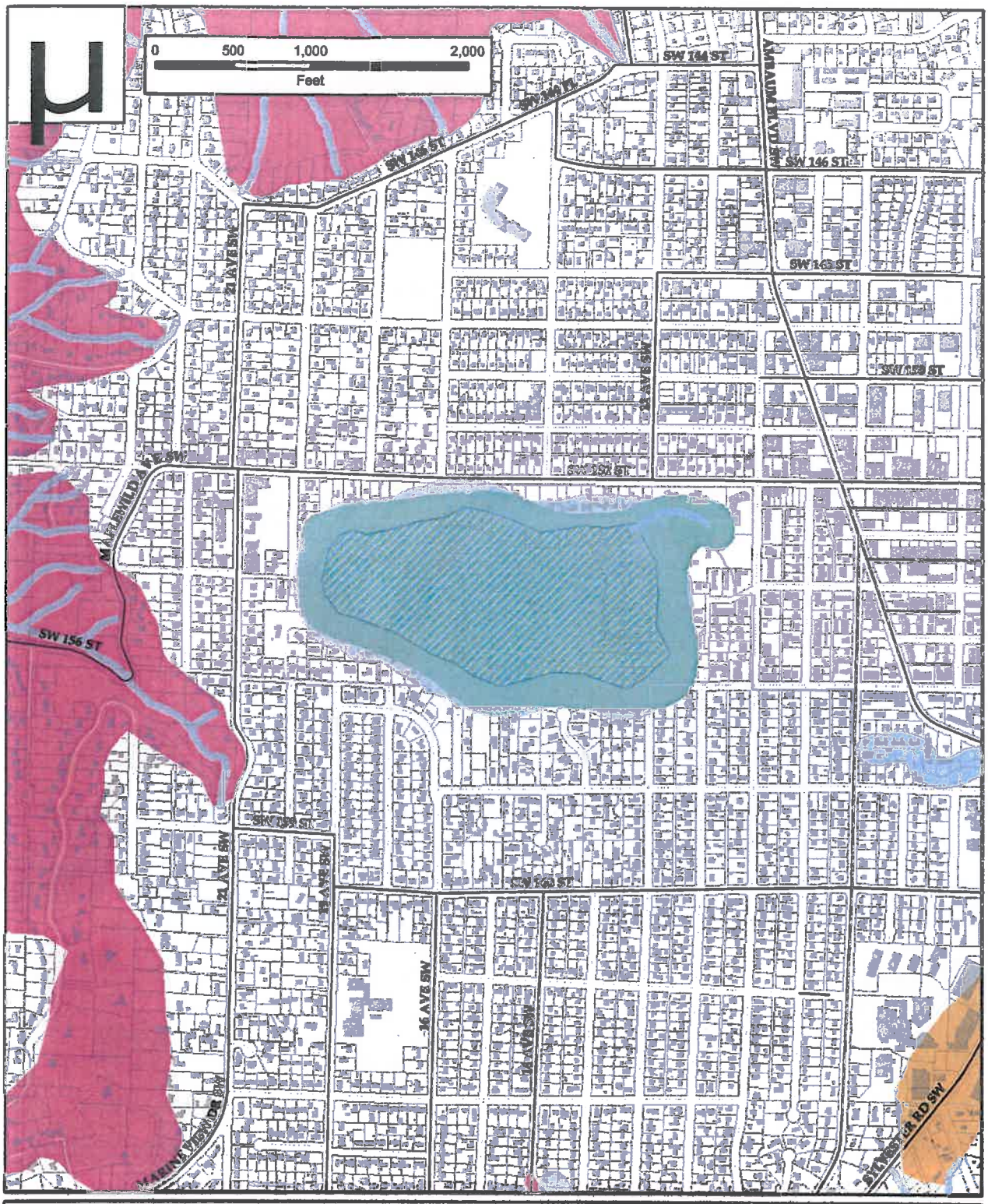
**Shoreline Master Program**

## Critical Areas

*Marine 4*

Date: Mar 04, 2008

Figure 8D




Boundary of Burien
Buildings

**Reaches**

Lake Burien
Marine 1
Marine 2
Marine 3
Marine 4

Seismic
Landslide
Aquifer Recharge Areas
Wetlands
Stream Buffers
100-Year Flood Area - FEMA

**City of Burien**

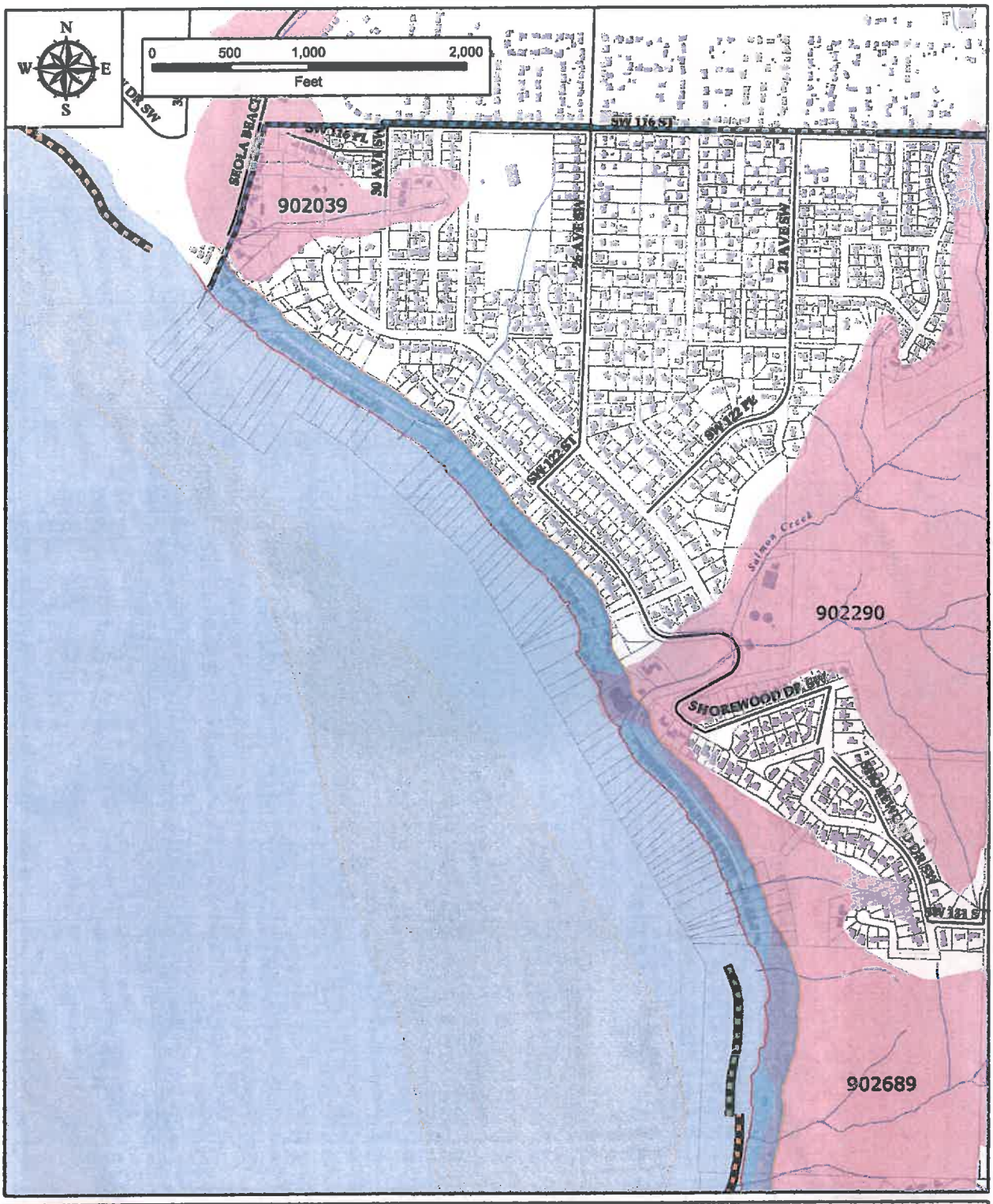
**Shoreline Master Program**

## Critical Areas

*Lake Burien*

Date: May 04, 2004

Figure 8E




Boundary of Burien
Buildings

**Reaches**

Lake Burien
Marine 1
Marine 2
Marine 3
Marine 4

Priority Habitats & Species - WDFW
Heritage Buffer
Important Species - WDFW
Surf Smelt
Pacific Sandlance
Geoduck

Data represented on these maps are subject to rules and regulations delineated by The Washington Department of Fish and Wildlife under POLICY - 5210. This product contains sensitive Information as determined by WDFW and should not be distributed.

**City of Burien**

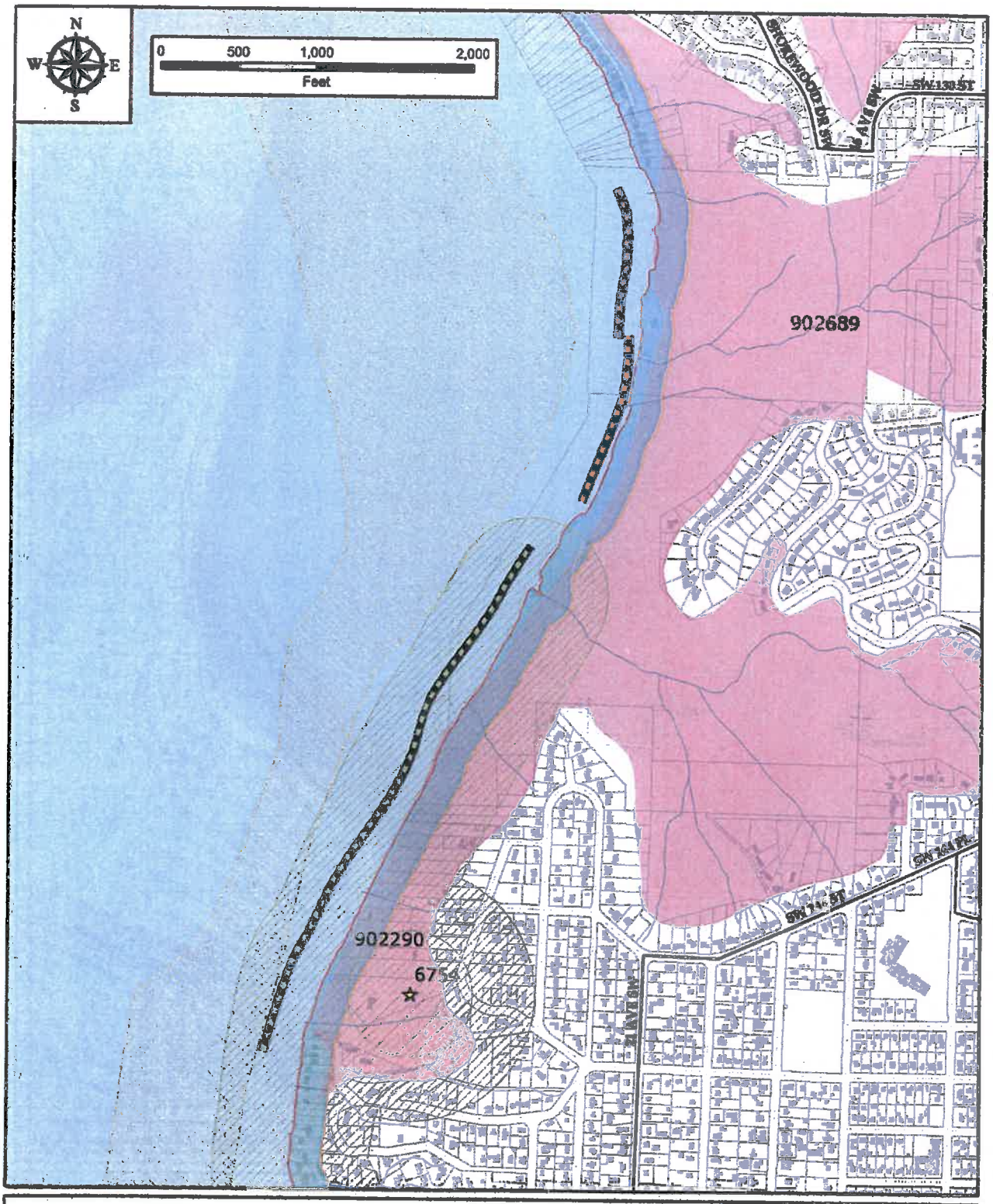
**Shoreline Master Program**

Fish & Wildlife Habitat Conservation Areas

*Marine 1*

Date: Mar 04, 2008

Figure 9A




Boundary of Burien
Buildings

**Reaches**

Lake Burien
Marine 1
Marine 2
Marine 3
Marine 4

Priority Habitats & Species - WDFW
Heritage Buffer
Important Species - WDFW
Surf Smelt
Pacific Sandlance
Geoduck

**Data represented on these maps are subject to rules and regulations delineated by The Washington Department of Fish and Wildlife under POLICY - 5210. This product contains sensitive information as determined by WDFW and should not be distributed.**

**City of Burien**

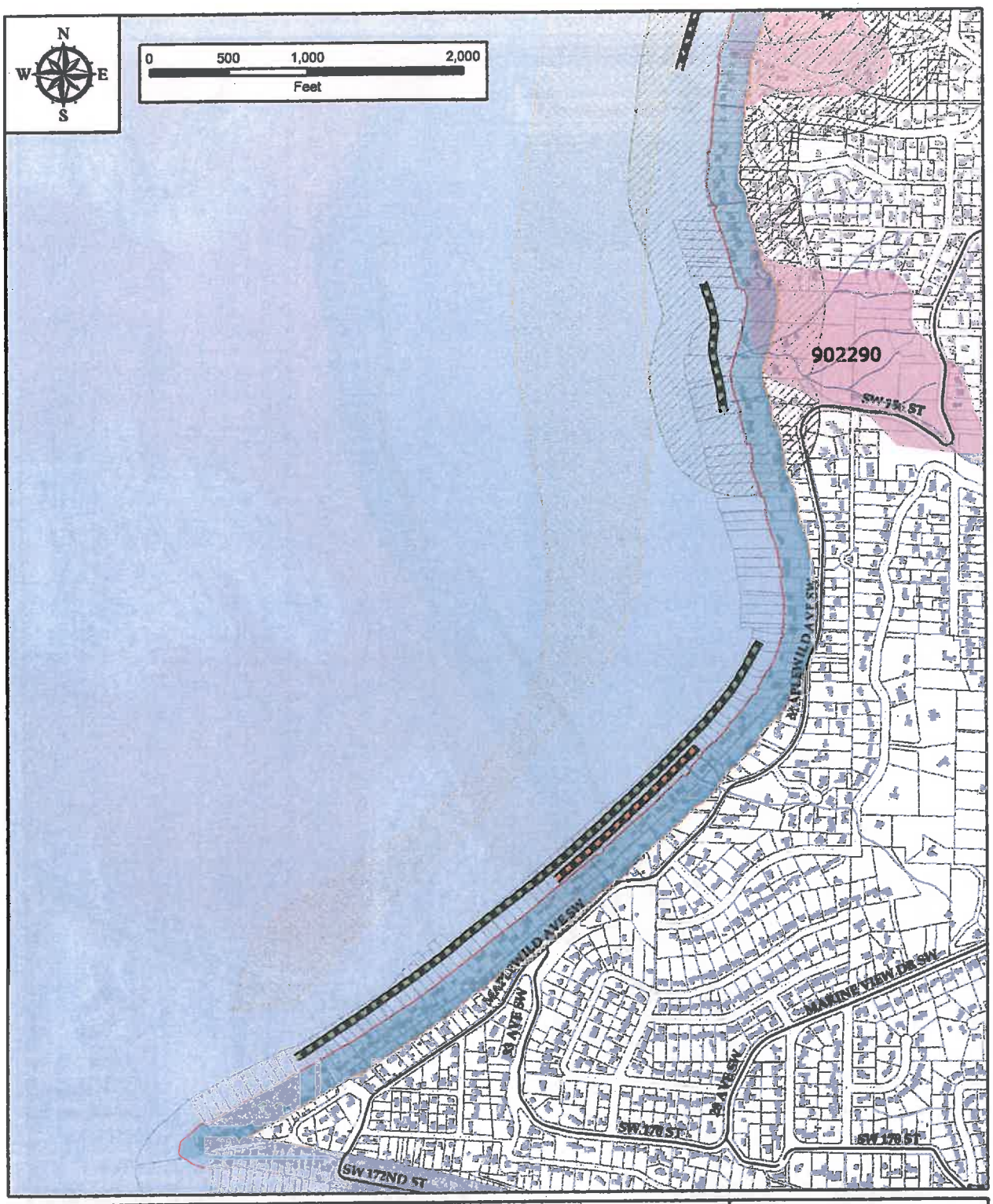
**Shoreline Master Program**

**Fish & Wildlife Habitat Conservation Areas**

*Marine 2*

Date: Mar 04, 2008

Figure 9B




Boundary of Burien
Buildings

**Reaches**

Lake Burien
Marine 1
Marine 2
Marine 3
Marine 4

Priority Habitats & Species - WDFW
Heritage Buffer
Important Species - WDFW
Surf Smelt
Pacific Sandlance
Geoduck

Data represented on these maps are subject to rules and regulations delineated by The Washington Department of Fish and Wildlife under POLICY - 5210. This product contains sensitive Information as determined by WDFW and should not be distributed.

**City of Burien**

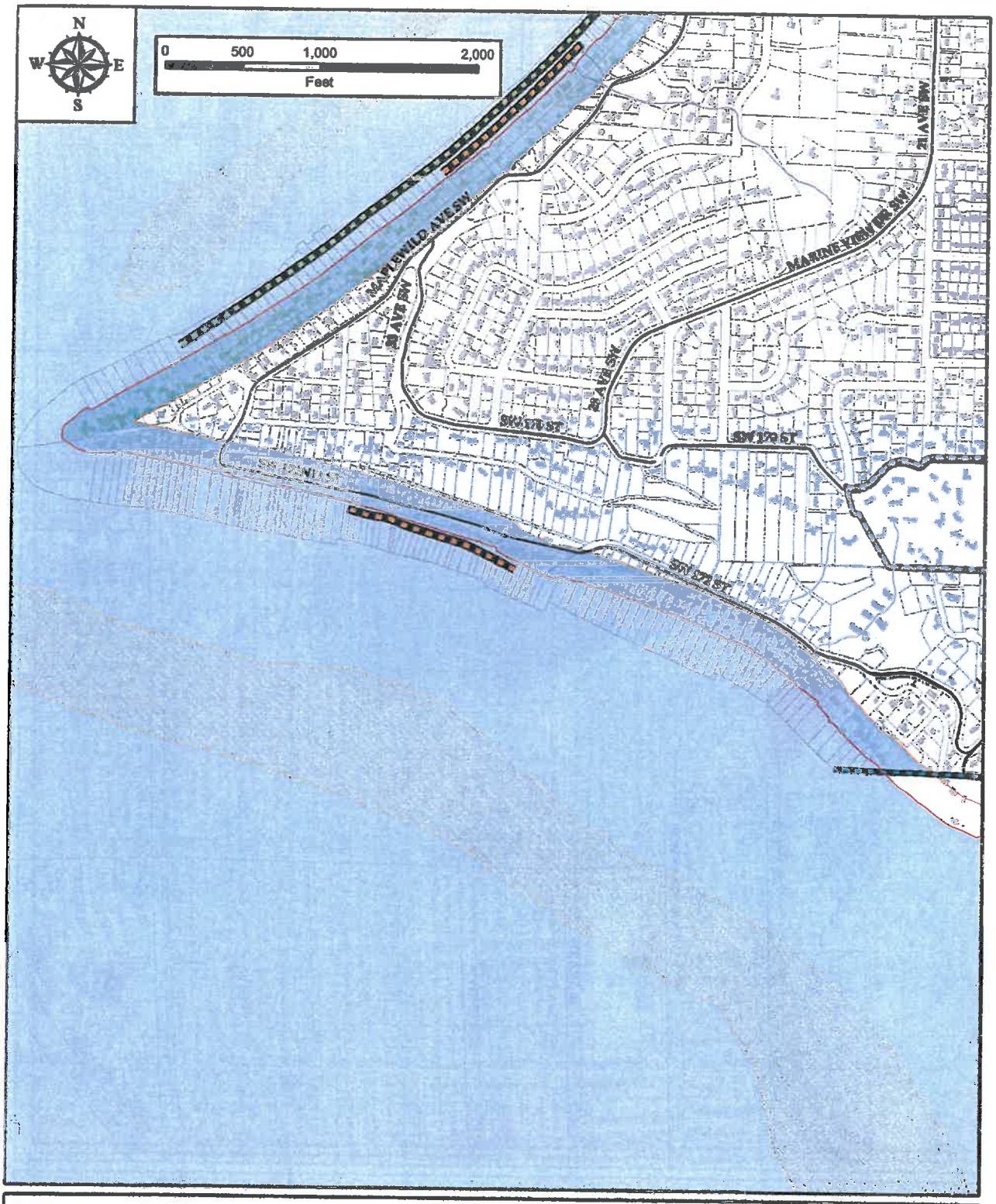
**Shoreline Master Program**

Fish & Wildlife Habitat Conservation Areas

*Marine 3*

Date: Mar 04, 2009

Figure 9C




Boundary of Burien
Buildings

**Reaches**

Lake Burien
Marine 1
Marine 2
Marine 3
Marine 4

Priority Habitats & Species - WDFW
Heritage Buffer
Important Species - WDFW
Surf Smelt
Pacific Sandlance
Geoduck

Data represented on these maps are subject to rules and regulations delineated by The Washington Department of Fish and Wildlife under POLICY - 5210. This product contains sensitive information as determined by WDFW and should not be distributed.

**City of Burien**

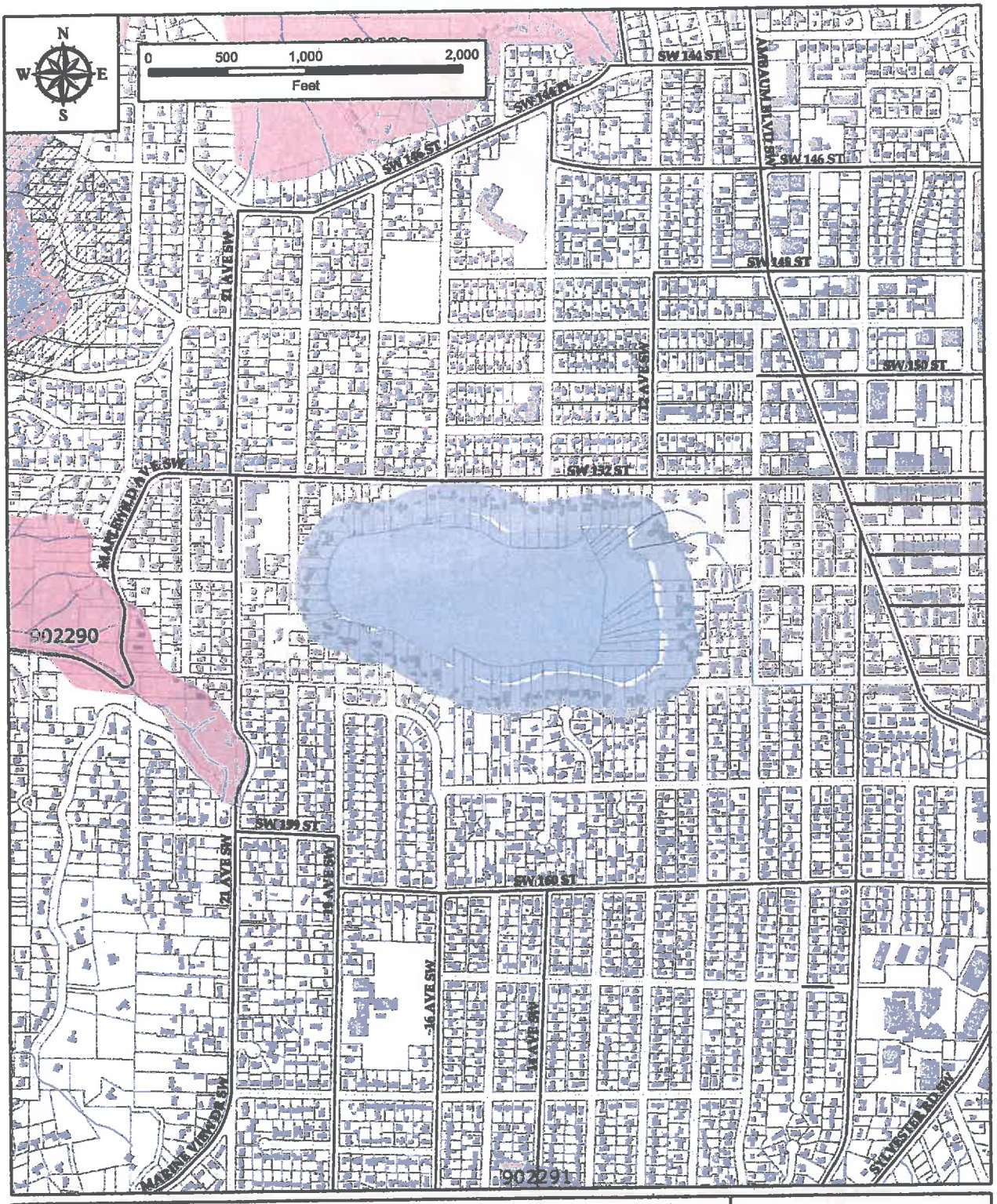
**Shoreline Master Program**

Fish & Wildlife Habitat Conservation Areas

*Marine 4*

Date: Mar 04, 2009

Figure 9D




Boundary of Burien
Buildings

**Reaches**

Lake Burien
Marine 1
Marine 2
Marine 3
Marine 4

Priority Habitats & Species - WDFW
Heritage Buffer
Important Species - WDFW
Surf Smelt
Pacific Sandlance
Geoduck

Data represented on these maps are subject to rules and regulations delineated by The Washington Department of Fish and Wildlife under POLICY - 5210. This product contains sensitive information as determined by WDFW and should not be distributed.

**City of Burien**

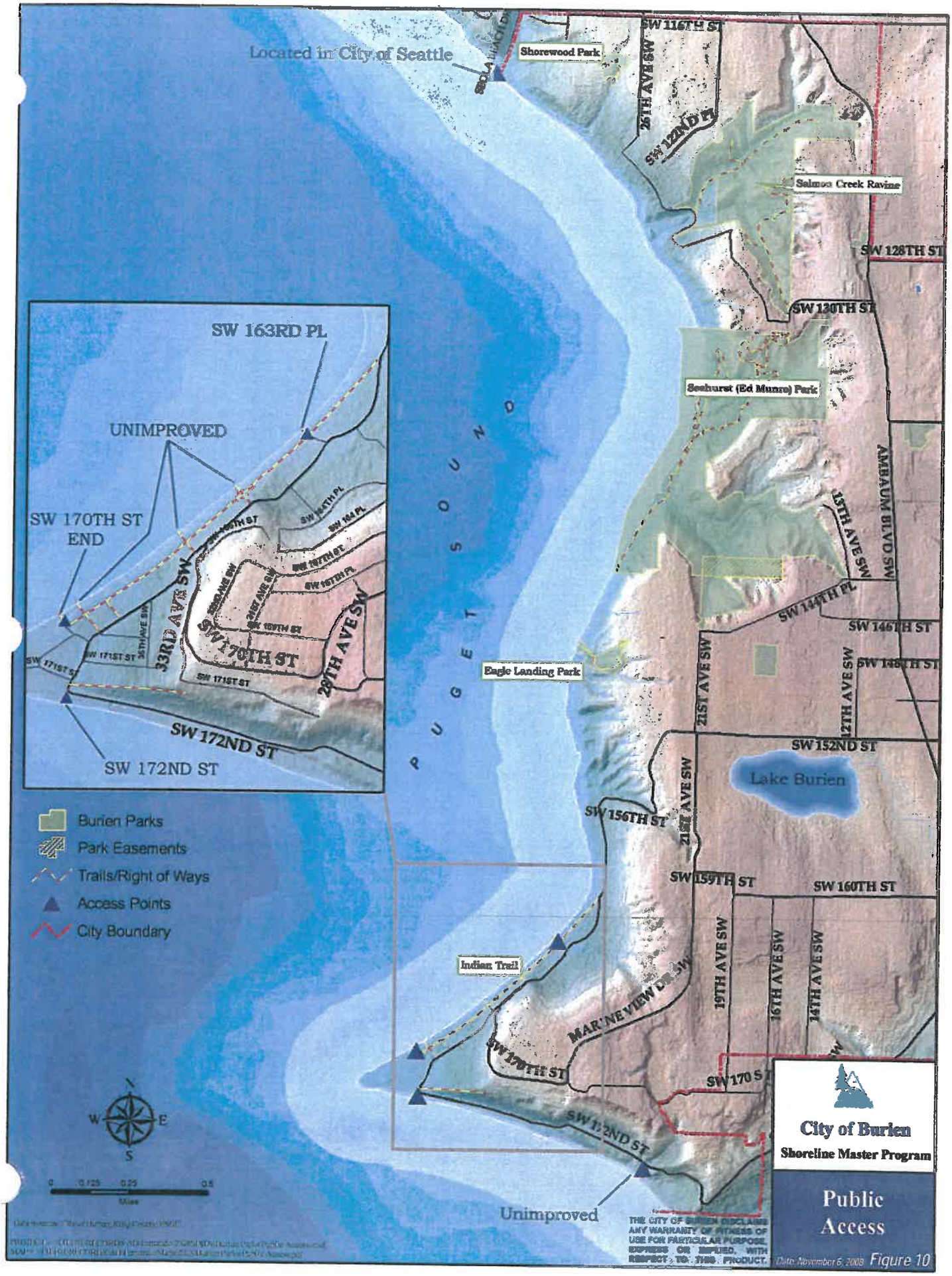
**Shoreline Master Program**

Fish & Wildlife Habitat Conservation Areas

*Lake Burien*

Date: Mar 04, 2008

Figure 9E


Located in City of Seattle
Shorewood Park
SW 116TH ST
25TH AVE SW
SW 122ND PL
Salmon Creek Ravine
SW 128TH ST
SW 130TH ST
Seahurst (Ed Munro) Park
AMBAUM BLVD SW
15TH AVE SW
SW 144TH PL
SW 146TH ST
SW 148TH ST
21ST AVE SW
12TH AVE SW
SW 152ND ST
Lake Burien
SW 156TH ST
21ST AVE SW
SW 159TH ST
SW 160TH ST
19TH AVE SW
16TH AVE SW
14TH AVE SW
MARINEVIEW DR SW
SW 170TH ST
SW 172ND ST
Eagle Landing Park
PUGET SOUND
Indian Trail
Unimproved
SW 163RD PL
UNIMPROVED
SW 170TH ST END
33RD AVE SW
SW 170TH ST
29TH AVE SW
SW 171ST ST
SW 172ND ST
Burien Parks
Park Easements
Trails/Right of Ways
Access Points
City Boundary
N
W
E
S
0 0.125 0.25 0.5
Miles
THE CITY OF BURIEN DISCLAIMS ANY WARRANTY OF FITNESS OF USE FOR PARTICULAR PURPOSE, EXPRESS OR IMPLIED, WITH RESPECT TO THIS PRODUCT.
Date November 6, 2008
Figure 10
City of Burien
Shoreline Master Program
Public Access

# CITY OF BURIEN
# SHORELINE MASTER PROGRAM UPDATE

## SHORELINE INVENTORY
## APPENDIX A: ANNOTATED BIBLIOGRAPHY

A number of information sources were used during the City of Burien Shoreline Inventory. This annotated bibliography is intended to provide readers with a list of the type, source, and use of the information in this report.

| Name | Description (as needed) | Source | Applicable Section |
|---|---|---|---|
| **CITABLE SOURCES** | | | |
| Anchor 2002 | Literature cited from Section 11 – Bibliography | Anchor Environmental, LLC (Anchor). 2002. Seahurst Park Master Plan. Prepared for the City of Burien. August 2002- as amended through February 2003. | 2.11, 4.2 |
| Anchor 2005 | Literature cited from Section 11 – Bibliography | Anchor Environmental, LLC (Anchor). 2005. Wetland Delineation for the Vicinity of the Seahurst Park South Seawall Project. Prepared for the City of Burien. April 2005. | 3.1 |
| City of Burien 2004 | Literature cited from Section 11 – Bibliography | City of Burien. 2004. Salmon Creek Neighborhood Plan. October 2004. | 2, 2.1 |
| City of Burien 2006 | Literature cited from Section 11 – Bibliography | City of Burien. 2006. The Burien Plan: The Comprehensive Plan for the City of Burien, Washington. November 2006. | 2.1 |
| CHE 2007 | Literature cited from Section 11 – Bibliography | Coast & Harbor Engineering, Inc. (CHE). 2007. City of Burien Coastal Flood Hazard Zone Delineation-DRAFT. Technical Report Prepared for the City of Burien. June 29, 2007. | 3.5 |
| Frankenstein 2000 | Literature cited from Section 11 – Bibliography | Frankenstein, G. 2000. Blooms of Ulvoids in Puget Sound. Prepared for The Puget Sound Water Quality Action Team. November 2000. | 4.1 |
| Johannessen, MacLennan, and McBride 2005 | Literature cited from Section 11 – Bibliography | Johannessen, J.W., MacLennan, A., and McBride, A, 2005. Inventory and Assessment of Current and Historic Beach Feeding Sources/Erosion and Accretion Areas for the Marine Shoreline of Water Resource Inventory Areas 8 & 9, Prepared by Coastal Geologic Services, Prepared for King County Department of Natural Resources and Parks, Seattle, WA. December 2005. | 2.1, 4.2, 10 |
| Kerwin and Nelson 2000 | Literature cited from Section 11 – Bibliography | Kerwin, J. and Nelson, T. S. (eds.). 2000. Habitat Limiting Factors and Reconnaissance Assessment Report, Green/Duwamish and Central Puget Sound Watersheds (WRIA 9 and Vashon Island). Washington Conservation Commission and the King County Department of Natural Resources. December 2000. | 2.1 |
| Wild Fish Conservancy 2003 | Literature cited from Section 11 – Bibliography | Wild Fish Conservancy. 2003. Water Type Survey Results for South King County, May/ June 2003. Available on-line at http://www.washingtontrout.org/kcpuget/index.shtml. | 2.11 |

| Name | Description (as needed) | Source | Applicable Section |
|---|---|---|---|
| Williams 2008 | Literature cited from Section 11 – Bibliography | Williams, Scott. 2008. Personal communication between David Johanson (City of Burien) with Scott Williams (Washington State Department of Archeology and Historic Preservation) regarding cultural and archeological resources. February 14, 2008. | 8 |
| | | | |

| Name | Description (as needed) | Source | Applicable Section |
|---|---|---|---|
| **GIS LAYERS** | | | |
| Aquifer Recharge Areas | GIS data | King County, City of Burien | 3.2, 10.5 |
| Base Flood Elevation | GIS data | CHE 2007 | 3.5 |
| Buildings | GIS data | City Burien | 2.3 |
| FEMA Flood Plain | GIS data | Federal Emergency Management Agency (FEMA) | 3.5 |
| Land Use | GIS data | King County Assessor (January 2008) | 1.4, 2.1, 2.3, 9, 10.1-10.5 |
| Parcels | GIS data | City of Burien | 1.4, 2.3, 2.4 |
| Priority Habitats and Species, maps/reports | GIS data | WA Department of Fish and Wildlife PHS Office | 1.2, 3.1, 3.3, 10.1-10.5 |
| Seismic Hazards | GIS data | King County | 3.4, 10.3, 10.4, 10.5 |
| Storm Water Infrastructure | GIS data | City of Burien | 2.7, 2.9, 2.10, 10.4 |
| Stream Buffers | GIS data | City of Burien | 1.1, 3.1, 3.3, 10.1-10.5 |
| Susceptible Landslide Areas | GIS data | City of Burien | 3.4, 10.1-10.5 |
| Water Areas | GIS data | King County, City of Burien | 1-5, 7, 10 |
| Water Courses in Burien | GIS data | King County, City of Burien | 1-5, 7, 10 |
| Wetlands in and around Burien | GIS data | King County, City of Burien | 1.1, 1.2, 3.1, 9, 10.1-10.5 |

| Name | Description (as needed) | Source | Applicable Section |
|---|---|---|---|
| Zoning | GIS data | City of Burien | 1.4, 2.3, 2.4 |
| | | | |
| **ON-LINE MAPPERS** | | | |
| National Wetlands Inventory | Mapper | US Fish and Wildlife Service http://www.nwi.fws.gov | 1.1, 1.2, 3.1, 9, 10.1-10.5 |
| WA Digital Coastal Atlas | Including Ecology ShoreZone layers, flood zone data, others | WA Department of Ecology http://www.ecy.wa.gov/programs/sea/SMA/atlas_home.html | 1.4, 3, 7, 10.1-10.5 |
| SalmonScape | Salmonid presence and use, forage fish spawning areas, aerial photos | WA Department of Fish and Wildlife http://wdfw.wa.gov/mapping/salmonscape/index.html | 3.3 |
| StreamNet | Salmonid presence and use | StreamNet http://www.streamnet.org/online-data/map_catalog.html | 3.3 |
| Washington State 303(d) list | Mapper | Washington State Department of Ecology http://apps.ecy.wa.gov/wqawa/viewer.htm | 4.1 |
| King County iMap | Includes King County sensitive areas information, restoration opportunities, tax assessor data, zoning designations, others | King County iMap page http://www.metrokc.gov/gis/mapportal/iMAP_main.htm | 2.4, 3, 4.2 |
| Washington Information System for Architectural and Archaeological Records Data (WISAARD) | Mapper and text | Washington State Department of Archeology and Historic Preservation http://www.dahp.wa.gov/pages/wisaardIntro.htm | 8 |
| | | | |
| **AERIAL PHOTOS** | | | |
| Ecology Aerial Photos | Aerial photo layer available for visual analysis of shorelines and some measurements | WA Department of Ecology Digital Coastal Atlas, photo layer http://www.ecy.wa.gov/programs/sea/sma/atlas_home.html | 1.4, 2, 3, 4 |

| • | Description (as needed) | Source | Applicable Section |
|---|---|---|---|
| Ecology Shoreline Photos | Oblique-view shoreline photo points; most recent photos available from 2006 | WA Department of Ecology Digital Coastal Atlas, photo points http://www.ecy.wa.gov/programs/sea/sma/atlas_home.html | 1.4, 2, 3, 4 |
| Google Earth Aerial Photos | Photo layer available for visual analysis of shorelines and some measurements | Google Earth program, photo layer; available for download http://earth.google.com/ | 1.4, 2, 3, 4 |
| SalmonScape | Color digital ortho aerial photos for visual analysis of shorelines and some measurements | WA Department of Fish and Wildlife http://wdfw.wa.gov/mapping/salmonscape/index.html | 1.4, 2, 3, 4 |
| | | | |
| OTHER | | | |
| Adolfson 2003 | Source reviewed, but not cited for this inventory | Adolfson Associates, Inc. (Adolfson). 2003. Limited City of Burien Stream Survey. Memorandum to Pat Smith and Scott Greenburg from Alex Ottley. April 15, 2003. | N/A |
| City of Burien Municipal Code (except Zoning) | On-line version | Code Publishing On-Line http://nt5.scbbs.com/cgi-bin/om_isapi.dll?clientID=289678&infobase=burien.nfo&softpage=PL_frame | 2.2, 2.3, 3.1, 3.4 |
| City of Burien Municipal Code, Zoning | On-line version | City of Burien http://www.ci.burien.wa.us/commdvlpmnt/zoning/zoningcodeindex.htm | 2.4 |
| Dowty et al. 2005 | Source reviewed, but not cited for this inventory | Dowty, P., B. Reeves, H. Berry, S. Wyllie-Echeverria, T. Mumford, A. Sewell, P. Milos and R. Wright. 2005. Puget Sound Submerged Vegetation Monitoring Project: 2003-2004 Monitoring Report. Prepared for the Nearshore Habitat Program, Puget Sound Ambient Monitoring Program. July 2005. | N/A |
| State Administrative Code and Rules | On-line WAC and RCW | Washington State Legislature http://www.leg.wa.gov/rcw http://www.leg.wa.gov/wac | 1.2, 1.3, 3, 5, 7, 9 |
| Water Type Survey Results | Water Type Survey Results for South King County, May/June, 2003 | Wild Fish Conservancy http://www.washingtontrout.org/kcpuget/index.shtml | 2.6-2.11 |

# City of Burien
# Shoreline Master Program Update

## Shoreline Inventory
## Appendix B: Shoreline Photo and GIS Atlas
## See Figures

# Supplement to the Shoreline Inventory

This document is a supplement to the *Shoreline Inventory* report that was prepared by Grette Associates LLC in 2008 as an element of the City of Burien's Shoreline Master Program Update (SMP). This supplement provides

- an update to the inventory based on information available in 2012
- a level of quantitative and qualitative detail that is unavailable in the baseline inventory
- data corrections

This supplement provides new information in both a narrative and quantitative style. It serves as the basis for the *Supplement to the Shoreline Analysis and Characterization* that is also an element of this work product.

**1) Executive Summary**

This inventory provides data and preliminary analysis that demonstrates the following broad development characteristics within Burien's Shoreline Jurisdiction.

The Lake Burien shoreline consists of 70 waterfront properties and 8 upland properties on just over a mile of waterfront. While every property is unique, development patterns are reasonably uniform. The properties are typically 15K to 26K sq. ft. in area with moderate levels of building coverage and total impervious surface. Setbacks from Ordinary High Water Mark (OHWM) are typically 80' to 125'. Most of the properties are extensively landscaped. Approximately 67% of the perimeter includes bulkheads and retaining walls. There is clear evidence of the presence of wetlands at multiple points around the lake. There is only one undeveloped property on the lake but it is a small parcel that appears to be unbuildable.

The Marine Shoreline consists of 304 waterfront properties and 74 upland properties on just less than five miles of waterfront. Development patterns are considerably more diverse than for Lake Burien.

Approximately 22.5% of the Marine shoreline, measured by length, is in a broadly natural condition.

Approximately 25% of the Marine shoreline is developed at a density that is considerably greater than is expected for RS-12000. These properties are typically between 5K and 9K sq. ft. in area with relatively high levels of building coverage and total impervious surface. Building setbacks from OHWM are typically 25' to 35'. Some of these properties include meaningful amounts of native vegetation but, if so, it is primarily on the landward side of the home at distances of over 100' from OHWM.

The remaining 52.5% of the Marine shoreline is developed in a style that is broadly consistent with RS-12000. The properties are typically 8K to 18K sq. ft. in area and generally meet the guidelines for building coverage and total impervious surface. However many of these properties are impacted to some degree by steep slopes which limit flexibility for new development. Most of the properties include bulkheads; many of these are substantial structures.

Nearly three-quarters of these properties are developed towards OHWM with typical setbacks from OHWM of 25' to 60'. For these properties the land towards OHWM is generally impervious surface and partially functioning areas for the first 100' or so with a greater tendency for native vegetation in the remaining 100'. Another 20% of these properties are developed towards the top of steep slopes with setbacks of well over 200'. For these properties the land towards OHWM is generally native vegetation. Finally there are 10 undeveloped private properties.

## 2) Methodology and Terminology

The quantitative data is derived from a number of sources including public King County data, primarily the Department of Assessments database and various parcel mapping tools, a careful evaluation of high quality aerial imagery, USGS digital elevation model (DEM) data, and multiple physical surveys. We focus on the following indicators of development conditions

- Tax Parcel Outlines - available in several formats at the King County website
- Waterfront Footage - taken directly from King County Tax Parcel database when available
- Property Depth - developed from careful evaluation of aerial imagery
- Lot size - based on aerial imagery and validated by reference to the Tax Parcel database
- Setbacks from OHWM - developed from aerial imagery
- Bulkhead type - based on physical surveys
- Fresh-water Wetlands – primarily from the King County Tax Parcel database

It is important to note that most of these indicators are based on evaluations of aerial imagery rather than professional physical surveys. It is believed that the accuracy of the resulting measures is sufficient to support effective planning decisions in the context of the SMP guidelines.

It is impractical to present and evaluate these indicators at the tax parcel level; it becomes necessary to summarize the values using convenient statistical methods. In some discussions it is sufficient to consider the **average** (mean) value of an indicator. Mean is particularly useful for values that are distributed in a uniform manner. In other cases it may be helpful to refer to the **minimum** (min), **median**, and **maximum** (max) values which are defined in the common way.

More generally it is helpful to consider the indicators in quartiles and report the 1st percentile (i.e. the minimum), the 25th percentile, the 50th percentile (also the median), the 75th percentile, and the 100th percentile (i.e. the maximum). When this report provides the **typical** values for an indicator we mean the 50% of the range between the 25th and 75th percentile.

The term **generally** is used in a more informal way that is intended to convey the same sense as **typically** but without a meaningful number of samples or statistical calculation.

Distances are measured in feet in the horizontal plane, rather than along the slope (if present).

When this report uses the term **setback** without further qualification it should be interpreted as the setback of the primary residence from OHWM i.e. the minimum distance of the primary structure from the line of Ordinary High Water Mark measured in the horizontal plane.

High quality aerial imagery is available from several sources; this report uses Google Earth. This tool provides relatively detailed imagery and simple drawing tools that can be used to add annotations, mark reference locations, and draw polygons around features of interest.

### 3) Shoreline Inventory Reaches

The original report considered Burien's two shorelines to be partitioned into a sequence of five Shoreline Inventory reaches. Table 1 shows the five reaches and descriptions from the original report but provides updated estimates of the lengths of each reach. These estimates of the lengths of the reaches are noticeably smaller than those provided in the Grette Inventory except for M3. The updated estimates have been validated by a number of efforts; we have no explanation for the magnitude of the differences between these estimates and those in the original reports.

| Reach | | Description | Length | | |
|---|---|---|---|---|---|
| | | | (ft) | (mi) | (%) |
| Marine | M1 | Primarily residential marine shoreline extending south from City limit to the north edge of Seahurst Park. | 5,463 | 1.0 | 21.2 |
| | M2 | North edge of Seahurst Park south to the point at which consistent residential development begins again. Corresponds to a line projected west from SW 149th Street to intersection with the shoreline | 5,811 | 1.1 | 22.5 |
| | M3 | Consistent residential development extending south to the tip of Three Tree Point. | 9,084 | 1.7 | 35.2 |
| | M4 | Consistent residential development from the tip of Three Tree Point to the southern City limit. | 5,469 | 1.0 | 21.2 |
| | | Marine Subtotal | 25,827 | 4.9 | 100.0 |
| Lake Burien | LB | Entire Perimeter of Lake Burien | 5,454 | 1.0 | 100.0 |
| | | Total Jurisdictional Shoreline | 31,281 | 5.9 | |

**Table 1: Shoreline Inventory Reaches in the City of Burien.**

Note: summing the distance in miles and the percentages may reveal the effect of rounding.

## 4) Shoreline Inventory Segments

This report will demonstrate that development conditions along the Marine Shoreline vary to a degree that is not fully captured by 4 large reaches. This evaluation introduces a refinement of Shoreline Inventory Reaches, *Inventory Segments*, to facilitate a thoughtful evaluation of existing conditions. Tables 2 and 3 provide a description of each Inventory Segment, a count of the number of properties in each segment, the length of each Segment measured along the line of OHWM, and the proportion of each segment as a fraction of the shoreline.

Table 2 defines five segments for Lake Burien and Table 3 defines eighteen segments for Puget Sound. Properties in Shoreline Jurisdiction are partitioned in to Waterfront and Upland properties.

A waterfront property includes land that touches OHWM. Many of these properties are entirely within Shoreline Jurisdiction but some of them extend for more than 200' from OHWM.

Upland properties are entirely or primarily within Shoreline Jurisdiction but either do not reach OHWM or include only a narrow access path to OHWM.

| Seg | | Description | Count | | Length | |
|---|---|---|---|---|---|---|
| | | | Wft | Up | (ft) | (%) |
| LB | A | Homes along 20th Ave SW - west side of Lake | 8 | 2 | 556 | 10.2 |
| | B | Homes along SW 152nd St – north side of Lake | 25 | 2 | 1,856 | 34.0 |
| | C | Ruth Dykeman Children's Center | 1 | 0 | 425 | 7.8 |
| | D | Homes along 11th Ave SW – east side of Lake | 8 | 0 | 618 | 11.3 |
| | E | Homes along south side of Lake | 28 | 4 | 1,999 | 36.7 |
| | | Lake Burien Shoreline | 70 | 8 | 5,454 | |

**Table 2: Lake Burien Shoreline Inventory Segments in the City of Burien.**

| Seg | | Description | Count | | Length | |
|---|---|---|---|---|---|---|
| | | | Wft | Up | (ft) | (%) |
| M1 | A | Homes along SW Seola Ln on level ground | 6 | 2 | 362 | 1.4 |
| | B | Homes along 30th Ave SW at base of steep slope | 12 | 4 | 983 | 3.8 |
| | C | A community beach and a portion of Shorewood Dr SW | 16 | 4 | 1,310 | 5.1 |
| | D | Shorewood Ln SW at base of steep slope | 10 | 6 | 816 | 3.2 |
| | E | A substantial property in a valley at mouth of Salmon creek | 1 | 0 | 390 | 1.5 |
| | F | Homes along Standring Lane SW at base of steep slope | 23 | 1 | 1,602 | 6.2 |
| M2 | A | Seahurst Park | 1 | 0 | 4,355 | 16.9 |
| | B | Homes along 24th/25th Ave primarily along top of slope | 13 | 0 | 1,156 | 4.5 |
| | C | Eagle Landing Park | 1 | 0 | 300 | 1.2 |
| M3 | A | 28th Ave SW with homes primarily at base of steep slope | 23 | 4 | 1,513 | 5.9 |
| | B | 27th Ave SW and a portion of Maplewild Ave SW | 24 | 7 | 2,407 | 9.3 |
| | C | Properties along the Indian Trail | 56 | 31 | 3,702 | 14.3 |
| | D | Level properties along 3 Tree Point Ln and SW 171st St | 14 | 0 | 1,462 | 5.7 |
| M4 | A | Properties on south beach along SW 171st St | 15 | 0 | 740 | 2.9 |
| | B | Properties impacted by SW 172nd St and a steep slope | 42 | 8 | 1,875 | 7.3 |
| | C | Seacoma Blvd developed on water-ward side of SW 172nd | 9 | 3 | 438 | 1.7 |
| | D | Homes at top and bottom of steep slope along SW 172nd St | 23 | 1 | 1,390 | 5.4 |
| | E | SW 173rd Pl / SW 174th St with moderate slopes | 15 | 3 | 1,026 | 4.0 |
| | | Marine Shoreline | 304 | 74 | 25,827 | |

**Table 3: Marine Shoreline Inventory Segments in the City of Burien.**

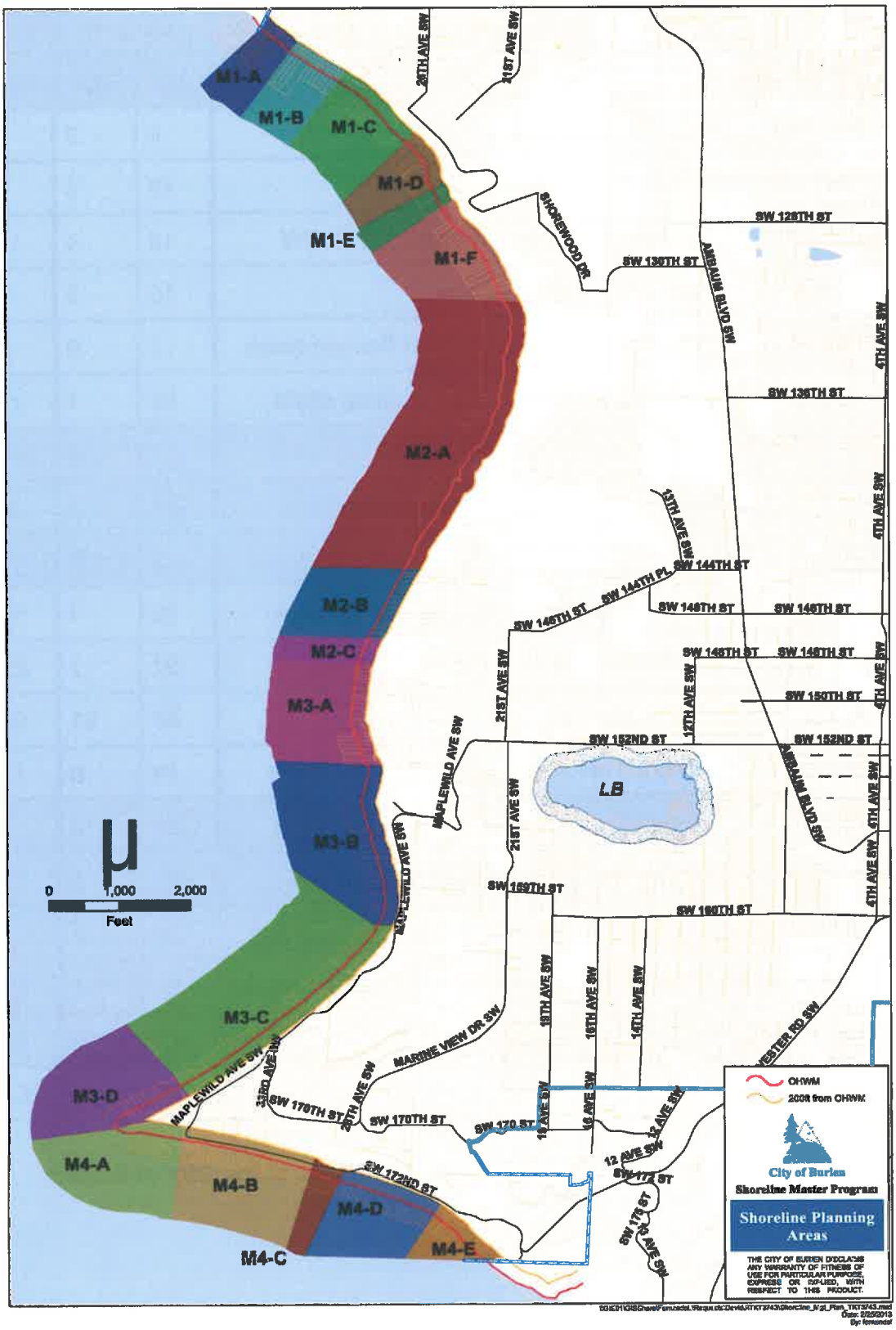



**Figure 1: Approximate location of the 23 Shoreline Inventory Segments**

### 5) Properties vs Tax Parcels

A **property** consists of one or more tax parcels. Detailed aerial imagery, physical surveys, and the King County Tax Assessors database were used to merge tax parcels into properties based on ownership and patterns of development. Properties along the shoreline are then assigned to one of four categories:

- Public parks and street ends
- Community owned private properties
- Private waterfront properties. Most of these are developed as Single Family Residences (SFR)
- Private upland properties that intrude significantly into Shoreline Jurisdiction but are generally separated from Ordinary High Water Mark (OHWM) by a waterfront property. A few of these properties include narrow access paths that connect the bulk of the property to OHWM.

Summary information for the Shoreline properties, grouped by category, is shown in Table 4.

The two public properties in M2 are parks. The remaining 4 public properties are small street ends.

The community property in M1 is the Shorewood Community Beach which is owned by a non-profit corporation that is responsible for its maintenance. The community website indicates that this corporation serves 458 local households.

The community property in M4 is a narrow access path to the beach that is jointly owned by a small number of nearby properties.

The community property on Lake Burien is a small unbuildable parcel adjacent to the lake that is co-owned by the three homes that sit directly behind it.

| Reach | | Properties | | | | | | Parcels |
|---|---|---|---|---|---|---|---|---|
| | | Waterfront | | | | Upland | Total | |
| | | Public | Comm | Private | | | | |
| | | | | Dev | Undev | | | |
| Marine | M1 | 0 | 1 | 66 | 1 | 17 | 85 | 97 |
| | M2 | 2 | 0 | 13 | 0 | 0 | 15 | 22 |
| | M3 | 3 | 0 | 107 | 7 | 42 | 159 | 184 |
| | M4 | 1 | 1 | 100 | 2 | 15 | 119 | 122 |
| | Total | 6 | 2 | 286 | 10 | 74 | 378 | 425 |
| | % by Length | 18.8% | 1.5% | 76.2% | 3.1% | 0.4% | 100% | |
| Lake Burien | Total | 0 | 1 | 68 | 1 | 8 | 78 | 82 |
| | % by Length | 0.0% | 1.7% | 97.3% | 0.7% | 0.3% | 100% | |

**Table 4: Properties and Parcels for each Shoreline Inventory Reach**

## 6) Lake Burien

Lake Burien consists of 70 private waterfront properties on slightly over 1 mile of shoreline. The lake is irregularly shaped but is broadly elliptical. It is approximately 2100' long in the east-west direction, up to 1000' wide in the north-south direction, and covers almost 40 acres.

Figure 2 provides an aerial image of a representative portion of the lake from Google Earth. The road at the top of the image is SW 152nd St and, for scale, is approximately 185' from the lake at the center for this image.

**Fig 2: A representative portion of properties on the north side of Lake Burien**

Lake Burien is zoned as RS-7200. Existing development conditions for the homes around the lake are generally uniform and broadly consistent with RS-12000 for area and building coverage. Homes are typically between 80' and 125' from OHWM and the properties are extensively landscaped.

There is one property of note at the north-east corner of the lake; the Ruth Dykeman Children's Center. This is a non-profit group home that serves a modest number of residents. This property is a special planning district in Burien's comprehensive plan and is developed at an intensity that approximates the private homes around this lake.

The level of the lake varies by almost 3' during a typical year; it is highest in the winter and lowest in the summer. Approximately 67% of the lake perimeter is protected by either a bulkhead or a retaining wall. The bulkheads are almost fully submerged when the lake is at its highest point. The bulkheads may also be subject to wave action during storms.

More than 3/4 of the waterfront properties include a dock.

There is only one property that has not been developed, a small parcel towards the south east corner of the lake. This property is less than 2500 sq. feet and appears to be unbuildable.

The properties on Lake Burien were converted from septic to municipal sewer around 1960. The sewer pipes ring the lake at a distance of approximately 45' from OHWM. Maintenance of the sewer line limits opportunities for developing or expanding a primary structure or accessory dwelling unit closer to OHWM than these pipes.

There is clear evidence of the presence of wetlands at a number of sites around the Lake but there is a little scientific data available to provide an unambiguous record of the extent and characterization of these wetlands. An element of the uncertainty is the complexity inherent in the identification and delineation of wetlands. The Department of Ecology developed the *Washington State Wetlands Identification and Delineation Manual* in March 1997 at the direction of the State Legislature in Engrossed Senate Bill 5776. This 145 page document provides a sense of the complexity of this task and indicates the need to engage qualified professionals to make an accurate determination.

As of July 2012 the King County Tax Assessor's Database indicates that 47 of the waterfront properties, approximately 66% of the perimeter, include a wetland but this database does not indicate the extent or characterization of the wetlands and it is unclear how this data was collected or even if it is being maintained. There are reports by residents of the Lake that there is evidence of wetlands at several sites that are not indicated in the King County Tax Assessor's database.

There are government maps that suggest that the entire perimeter of the lake may include wetlands but, again, it is uncertain how this determination was made.

Table 5 provides estimates of dimensional indicators for the waterfront properties on Lake Burien.

| | Len (ft) | Indicator | Min | Typical | Max |
|---|---|---|---|---|---|
| LB-A | 556 | Depth (ft) | 155 | 185 - 240 | 250 |
| | | Area (sq ft) (000's) | 13.0 | 17.5 – 40.1 | 87.8 |
| | | Setback (ft) | 45 | 90 - 155 | 200 |
| LB-B | 1,856 | Depth (ft) | 175 | 230 - 315 | 330 |
| | | Area (sq ft) (000's) | 11.2 | 17.6 – 27.4 | 40.6 |
| | | Setback (ft) | 50 | 90 - 125 | 185 |
| LB-C | 425 | Depth (ft) | | > 700 | |
| | | Area (sq ft) (000's) | | ~ 340 | |
| | | Setback (ft) | | 85 | |
| LB-D | 618 | Depth (ft) | 125 | 235 - 265 | 285 |
| | | Area (sq ft) (000's) | 15.0 | 17.9 – 28.2 | 31.9 |
| | | Setback (ft) | 70 | 100 - 160 | 190 |
| LB-E | 1,999 | Depth (ft) | 65 | 175 - 305 | 745 |
| | | Area (sq ft) (000's) | 3.1 | 14.1 – 21.9 | 55.3 |
| | | Setback (ft) | 40 | 70 - 115 | 175 |

**Table 5: Summary of Development Indicators for Lake Burien**

**7) Marine Shoreline**

Table 6 provides estimate of four dimensional indicators for the private waterfront properties along the Marine shoreline. This table hints at the variation in conditions found along the Marine shoreline. Consider, for example, the ratio of the 25th percentile and the 75th percentile; for some of the indicators the value at the 75th percentile is two to three times that at the 25th percentile even within a single Reach.

As noted in Section 4, we respond to this level of variation by dividing the four Marine Shoreline Reaches into eighteen Inventory Segments. Segments are defined by patterns of development and geographic identifiers.

| Reach | Indicator | Min | Typical | Max |
|---|---|---|---|---|
| M1 | Footage (ft) | 10 | 60 - 75 | 390 |
| | Depth (ft) | 60 | 80 - 200 | 835 |
| | Area (sq ft) (000's) | 3.6 | 5.2 - 16.8 | 225.1 |
| | Setback (ft) | 10 | 25 - 45 | 275 |
| M2 | Footage (ft) | 30 | 70 - 80 | 280 |
| | Depth (ft) | 295 | 610 - 740 | 835 |
| | Area (sq ft) (000's) | 31.5 | 46.3 - 69.6 | 178.7 |
| | Setback (ft) | 45 | 315 - 505 | 570 |
| M3 | Footage (ft) | 20 | 60 – 80 | 580 |
| | Depth (ft) | 80 | 122 - 242 | 635 |
| | Area (sq ft) (000's) | 4.4 | 7.3 - 16.7 | 128.4 |
| | Setback (ft) | 5 | 25 - 70 | 250 |
| M4 | Footage (ft) | 20 | 40 - 60 | 150 |
| | Depth (ft) | 95 | 157 - 217 | 320 |
| | Area (sq ft) (000's) | 4.4 | 7.6 - 13.4 | 69.1 |
| | Setback (ft) | 15 | 45 - 95 | 150 |

**Table 6: Summary of Development Indicators for Private Waterfront Properties**

## 7.1) Segments in Reach M1

### SW Seola Lane (M1-A)

Figure 3 shows an aerial image of all eight homes in this segment. The image is rotated so that OHWM is roughly horizontal. The compass in the upper-right corner can be used to determine map directions. The image includes an estimate of the property boundaries, excluding the tidelands, and an estimate of the location of OHWM. The properties are labeled with the final 4 digits of the tax parcel id.

This segment consists of 6 waterfront homes and 2 upland homes on generally level ground at the mouth of the Seola Creek valley. SW Seola Lane is approximately 200' from OHWM towards the northern end of the segment and closes to approximately 160' at the south-east end.

These properties are developed at a level that is toward the denser level for RS-12000. The waterfront homes are setback between 40 and 115 ft from OHWM. Conditions between the homes and OHWM are consistent with the definition of partially functioning areas [BMC 20.40.101]. The native vegetation is primarily on the landward side of the homes.

The properties include bulkheads that are approximately 2' high.

**Fig 3: The eight homes within shoreline jurisdiction in Segment M1-A**

**30th Ave SW (M1-B)**

This segment is defined by 12 waterfront homes along the landward side of 30th Ave SW between the northern extent of 30th Ave SW and the northern edge of the Shorewood Community Beach. The road runs along the bottom of a steep slope and is generally between 60' and 80' from OHWM. The road rises to an altitude of approximately 50' above Puget Sound as one travels to the south-east, left to right in this image, along this segment.

The parcels on the water ward side of the road are typically between 5K and 7K square feet in area. This is the entire land area for six of the properties; the other six properties include land on the steep slope on the landward side of the road.

It appears that the building coverage and total impervious surface exceed the standards for RS-12000, and perhaps even for RS-7200, if one excludes the area on the steep slope.

The land within 100' of OHWM is dominated by impervious surface; the roadway, driveways, buildings, concrete patios, bulkheads, etc with the remaining surface being partially functioning. In contrast the area on the landward side of 30th Ave SW consists exclusively of mature native vegetation.

**Fig 4: A representative portion of M1-B**

**Shorewood Dr SW (M1-C)**

This segment consists of the Shorewood Community Beach, the final home at the south-east end of 30th Ave SW, and 14 waterfront homes with addresses along Shorewood Dr SW. Shorewood Dr SW is approximately 350' from OHWM at an altitude of approximately 130' above Puget Sound.

Development along this segment is strongly impacted by the slope between the road and OHWM.

Approximately 1/2 of these homes, generally those at the north end of this segment, are located at the top of the slope. These homes are well over 200' from OHWM and the land between the home and OHWM is densely vegetated. All of these properties include significant bulkheads.

The remaining homes are in close proximity to OHWM at the base of the slope. Setbacks from OHWM are generally between 25' and 45'. Conditions between the home and OHWM are primarily impervious surface and partially functioning areas while the land between the home and the road is densely vegetated steep slope. All of the properties include significant bulkheads.

One of the properties, located at the center of figure 5, is undeveloped.

**Fig 5: A representative portion of M1-C**

**Shorewood Lane SW (M1-D)**

This segment includes 10 waterfront homes at the base of Shorewood Lane SW. Much of this private road has the character of a single track shared driveway that zig-zags across a steep slope.

The label for the road in this image is approximately 200' from OHWM. The properties are generally between 5K and 17K sq. ft. where the larger properties include land that stretch across the lane, e.g. the properties labeled 9077 and 9067 in the image.

Setbacks from OHWM are typically between 15' and 30'. The area between the homes and OHWM is dominated by impervious surface or partially functioning area. Native vegetation is primarily on the landward side of the homes. All of these homes are protected by significant bulkheads.

The waterfront property at the northern end of this segment, just to the left of this image, is being redeveloped; a tiny cabin is being replaced with a modern 3000 sq. ft. home on two levels.

**Fig 6: A representative portion of M1-D**

**Standring Lane SW (M1-E)**

This segment consists of a single substantial property that is located in the valley at the mouth of Salmon Creek. Figure 7 shows, approximately, the portion of this property that is within shoreline jurisdiction. This property includes a substantial bulkhead.

**Fig 7: A significant property at the entrance to Standring Lane SW**

**Standring Lane SW continued (M1-F)**

This segment consists of the 23 waterfront homes that are located on the landward side of Standring Lane SW as it runs along the base of a steep slope and approximately parallel to OHWM. The road is generally between 75' and 100' from OHWM.

The 6 properties at the south end of this lane include land on the steep slope on the landward side of this road. Figure 8 includes the first of these 6 properties; note that the road continues directly to the rear of 0090 but is occluded by the tree coverage in this image.

The portions of the properties on the water ward side of the lane are typically between 5K and 8K sq. ft. and this land is generally dominated by the home. The homes are typically setback between 20' and 35' from OHWM.

The land within 125' of OHWM is dominated by impervious surface; the roadway, the homes, driveways, concrete patios, and significant bulkheads. Some of the properties include limited amounts of partially functioning area.

The remaining 75' within shoreline jurisdiction, on the landward side of Standring Lane SW, is densely vegetated along the lower portion of a steep slope.

**Fig 8: A representative portion of M1-F. Height of image is approximately 200'**

| | Len (ft) | Indicator | Min | Typical | Max |
|---|---|---|---|---|---|
| M1-A | 362 | Depth (ft) | 135 | 150 - 225 | 235 |
| | | Area (sq ft) (000's) | 4.6 | 11.6 - 18.4 | 18.6 |
| | | Setback (ft) | 40 | 60 - 110 | 115 |
| M1-B (*) | 983 | Depth (ft) | 60 | 70 - 80 | 90 |
| | | Area (sq ft) (000's) | 3.6 | 4.9 - 6.8 | 9.8 |
| | | Setback (ft) | 15 | 25 - 35 | 35 |
| M1-C | 1,310 | Depth (ft) | 170 | 310 - 345 | 350 |
| | | Area (sq ft) (000's) | 11.0 | 16.8 - 21.8 | 23.7 |
| | | Setback (ft) | 20 | 25 - 245 | 275 |
| M1-D | 816 | Depth (ft) | 65 | 115 – 190 | 200 |
| | | Area (sq ft) (000's) | 6.1 | 8.9 - 16.5 | 17.9 |
| | | Setback (ft) | 10 | 15 - 30 | 45 |
| M1-E | 390 | Depth (ft) | 835 | 835 | 835 |
| | | Area (sq ft) (000's) | 225 | 225 | 225 |
| | | Setback (ft) | 55 | 55 | 55 |
| M1-F (*) | 1,602 | Depth (ft) | 75 | 75 - 120 | 120 |
| | | Area (sq ft) (000's) | 4.3 | 4.8 - 8.4 | 16.5 |
| | | Setback (ft) | 20 | 20 - 35 | 55 |

**Table 7: Summary of Dimensional indicators for Segments in M1**

**(*) Depth/Area excludes portion landward of roadway**

### 7.2) Segments in Reach M2

**Seahurst Park (M2-A)**

This award winning park provides the primary opportunity for public access on Puget Sound in Burien. While there is a great deal of native vegetation, providing for recreation and public access means that there are also paved and non-paved walkways, several structures, a parking lot, and lawn. There are significant bulkheads in this park but these are a target of on-going restoration efforts by the public.

**24th / 25th Ave SW (M2-B)**

This segment is defined by 13 waterfront homes that are primarily along 24th Ave SW and 25th Ave SW. The roads are more than 650' from OHWM and are at an altitude of approximately 300'. Most of the homes are at the top of this steep slope but one home has been constructed at the bottom of the hill.

**Eagle Landing Park (M2-C)**

A smaller public park with shoreline access. Primarily a nature walking trail.

| | Len (ft) | Indicator | Min | Typical | Max |
|---|---|---|---|---|---|
| M2-A | 4,355 | Depth (ft) | NA | NA | NA |
| | | Area (sq ft) (000's) | NA | NA | NA |
| | | Setback (ft) | NA | NA | NA |
| M2-B | 1,156 | Depth (ft) | 295 | 610 - 740 | 825 |
| | | Area (sq ft) (000's) | 31.5 | 46.4 - 69.6 | 178.7 |
| | | Setback (ft) | 45 | 315 - 505 | 570 |
| M2-C | 300 | Depth (ft) | 675 | 675 | 675 |
| | | Area (sq ft) (000's) | 256.1 | 256.1 | 256.1 |
| | | Setback (ft) | NA | NA | NA |

**Table 8: Summary of Dimensional indicators for Segments in M2**

## 7.3) Segments in Reach M3

### 28th Ave SW / SW 115st PL (M3-A)

This segment includes 22 private waterfront properties along 28th Ave SW and SW 115st PL. The roads are approximately 200' - 250' from OHWM at an altitude of 100' to 150' above Puget Sound. The homes are along the base of the slope towards OHWM and served by trams. The properties have substantial bulkheads.

The properties are typically between 10K and 17K sq. ft. in area but are significantly impacted by slopes. The homes are typically setback between 35' and 55' from OHWM. Conditions between the homes and OHWM are primarily impervious surface and partially functioning area. All of the properties include substantial bulkheads.

There are two adjacent undeveloped properties towards the middle of this segment. These are towards the right of figure 9; 0401 and 0420.

**Fig 9: A representative portion of M3-A**

**27th Ave SW / SW 156th St / Initial portion of Maplewild Ave SW (M3-B)**

This segment includes 24 waterfront properties between 27th Ave SW and the point at which the Indian Trail meets Maplewild Ave SW. The roads are between 200' and 300' from OHWM at an altitude of approximately 100' above Puget Sound.

The properties are typically between 15K and 30K sq. ft. in area. The steep slope in this segment is generally towards OHWM. For example, the primary structure on the property labeled 0095 towards the left of figure 10 is located at an altitude that is comparable to, but slightly lower than, Maplewild Ave SW and close to the beginning of the steep slope that drops down to OHWM.

There are 14 homes at the base of the steep slope. These homes are generally setback between 25' and 45' from OHWM. Conditions adjacent to OHWM include impervious surface, partially functioning areas, and native vegetation. All of these properties include substantial bulkheads.

There are 7 homes at the top of the steep slope and along Maplewild Ave SW. These are approximately 150' from OHWM. All of these properties include substantial bulkheads and some of these have small accessory structures and decks adjacent to the bulkhead.

There are 3 undeveloped properties in this segment. One is a substantial tax parcel at the north end of the segment, one is the more modest property labeled 0185 in the center of the image, and the final property is a substantial property at the south end of the segment. The property at the south of this segment is composed of 6 adjacent tax parcels; 2 waterfront parcels and 4 upland parcels. These properties include bulkheads.

**Fig 10: A representative portion of M3-B**

**Indian Trail (M3-C)**

The Indian Trail is a public walking trail that runs for almost 3/4 of a mile between Maplewild Ave SW and Puget Sound. The trail runs generally parallel to OHWM and is approximately 100' from OHWM for most of its length. It is generally at an altitude of 30' - 50' above OHWM although it drops close to sea-level at the public access location at SW 163rd PL and again at the south end of the trail at the public access location at SW 170th St. The distance between the trail and Maplewild Ave SW is more variable but is generally between 150' and 250'.

There are 55 private waterfront properties and 31 private upland properties. Approximately 60% of the waterfront properties are entirely on the water ward side of the trail, and hence are relatively shallow lots. The remaining 40% of the properties span the full distance from Maplewild to OHWM. However all but 4 of the waterfront properties are developed on the water ward side of the trail. The landward side of the trail is generally used for accessory structures; primarily for garages.

There are two undeveloped properties; both of these are in the steepest portion of this segment.

Most of the properties along this segment include significant bulkheads; in many places these rock walls stand over 6' tall. The bulkheads become less substantial towards the final 750' at the south of the segment.

Many of the properties, particularly those towards the middle of segment, include substantial levels of native vegetation on the water ward side of the trail i.e. within the first 100' from OHWM.

**Fig 11: A more natural, and generally steeper, portion of M3-C**

**Fig 12: A more altered, and generally less steep, portion of M3-C**

**SW Three Tree Point Lane / SW 171st St (M3-D)**

This segment, which is effectively level, contains the public access point on SW 170th St and 13 waterfront homes down to and including the property on the point itself at the boundary of M3 and M4.

The properties in this segment are typically between 200' and 250' feet deep and the properties are typically between 11K and 20K sq. ft. in area. Building coverage and impervious surface densities appear to be broadly consistent with RS-12000.

The typical setback from OHWM is 45' - 90'. Conditions between the homes and OHWM are generally partially functioning areas or impervious surfaces. Six of the properties include accessory structures in this area although there are pockets of native vegetation.

These properties include relatively modest bulkheads.

**Fig 13: A representative portion of M3-D**

Table 9 provides dimensional indicators for private waterfront properties along M3. Adjustments are made for segment M3-C to reflect the development constraint that is imposed by the Indian Trail. It was noted that approximately 40% of the waterfront properties include land on both sides of the trail yet all but 4 of the primary residences are on the water ward side of the trail. In Table 9, for segment M3-C, the reported depth/area is that of the land that contains the primary structure even if the property spans the trail.

| | Len (ft) | Indicator | Min | Typical | Max |
|---|---|---|---|---|---|
| M3-A | 1513 | Depth (ft) | 80 | 150 - 270 | 330 |
| | | Area (sq ft) (000's) | 4.6 | 9.8 - 16.7 | 32.4 |
| | | Setback (ft) | 5 | 35 - 55 | 70 |
| M3-B | 2407 | Depth (ft) | 100 | 140 - 325 | 635 |
| | | Area (sq ft) (000's) | 8.1 | 15.5 - 29.5 | 128.4 |
| | | Setback (ft) | 15 | 20 - 135 | 250 |
| M3-C (*) | 3702 | Depth (ft) | 80 | 110 - 160 | 325 |
| | | Area (sq ft) (000's) | 4.4 | 6.2 - 8.6 | 49.5 |
| | | Setback (ft) | 10 | 25 - 70 | 245 |
| M3-D | 1462 | Depth (ft) | 180 | 200 - 250 | 285 |
| | | Area (sq ft) (000's) | 9.0 | 11.5 - 19.6 | 49.5 |
| | | Setback (ft) | 20 | 45 - 90 | 130 |

**Table 9: Summary of Dimensional indicators for Waterfront homes for Segments in M3**
**(*) Depth/Area reflects impact of Indian Trail (see discussion)**

## 7.4) Segments in Reach M4

### SW 171st St (M4-A)

This segment contains 15 homes on relatively narrow parcels between OHWM and SW 171st St. The typical properties have footages between 40' and 55' and areas between 7K and 8K sq. ft. The properties are dominated by the structures and other impervious surfaces. The land between the homes and OHWM is impervious surfaces, e.g. patios, and small lawns. All of the properties include modest bulkheads.

**Fig 14: A representative portion of M4-A**

**SW 172nd St (M4-B)**

This segment consists of the first 1800' of SW 172nd St, including the public street end, up to the intersection of SW 172nd St and Seacoma Blvd. This section of SW 172nd St runs roughly parallel to OHWM and is between 50' and 75' from OHWM. The 41 residences along this segment are located on the landward side of this roadway and are constrained to the rear by a steep slope.

The area on the water ward side of this portion of SW 172nd St is used for parking by the residents of this segment and is generally developed with small accessory structures and small landscaped areas.

These properties include minor bulkheads that control erosion on a daily basis but which are overtopped during moderate storms.

**Fig 15: A representative portion of M4-B**

**Seacoma Blvd (M4-C)**

This small development contains 9 waterfront homes between SW 172nd St, which begins to move away from Puget Sound at this point, and OHWM. Figure 16 includes all of the waterfront and upland properties in this segment.

These properties are typically between 5K and 6K sq. ft. Setbacks range from 25' to 105'.

Six of the waterfront properties are primarily impervious surface between the home and OHWM. The final three properties include significant levels of partially functioning areas and perhaps even some native vegetation.

All of these properties include significant concrete wall bulkheads that are 6' to 10' tall.

**Fig 16: The properties in M4-C**

**SW 172nd St (M4-D)**

SW 172nd St begins to move away OHWM at Seacoma Blvd so that it follows the top of the steep slope that intrudes more closely towards the shore. SW 172nd St is generally approximately 250' from OHWM at an altitude of 70' - 90' above the Puget Sound within this segment.

This segment contains 23 waterfront properties and 1 upland property on lots that are typically 13K to 15K sq. ft in area. The waterfront properties are impacted by a steep slope.

Sixteen of the waterfront homes are located at the top of the slope along SW 172nd St with setbacks from OHWM that are generally between 115' and 140'. The land between the home and OHWM is dominated by native vegetation. All of these properties include substantial bulkheads.

The five remaining waterfront homes are at the base of the slope and generally setback 40' - 50' from OHWM. These properties include impervious surfaces, partially functioning areas, and native vegetation adjacent to OHWM. The land between the home and SW 172nd St is dominated by native vegetation. All of the properties include significant bulkheads.

The final two waterfront properties are undeveloped. One is toward the north of the segment, the property labeled 0270 in figure 17, and the other is towards the south. The second property is owned by a corporation on behalf of several local residents that live on the landward side of SW 172nd St. These two properties include bulkheads.

**Fig 17: A representative portion of M4-D**

**SW 174th St / SW 173rd PL (M4-E)**

SW 172nd St moves even further away from OHWM at the southern end of Burien and the slope becomes slightly less steep. This provides space for the final development along the shore.

This segment includes 14 waterfront homes on lots that are typically 10.5K to 20K sq. ft. in area. Most of these properties include modest slopes adjacent to OHWM and the homes tend to be landward of these slopes with typical setbacks of 35' to 65'.

Conditions between the home and OHWM are primarily impervious surface and partially functioning areas but some properties include native vegetation within the first 100' from OHWM.

All of the properties include significant bulkheads.

Fig 18 shows a few properties in this segment. The property labeled 0410, for example, is located behind a modest slope and is perhaps 10' above the level of the land immediately adjacent to OHWM.

**Fig 18: A representative portion of M4-E**

| | Len (ft) | Indicator | Min | Typical | Max |
|---|---|---|---|---|---|
| M4-A | 740 | Depth (ft) | 200 | 200 | 200 |
| | | Area (sq ft) (000's) | 4.5 | 7.1 - 8.3 | 17.3 |
| | | Setback (ft) | 25 | 35 - 55 | 60 |
| M4-B (*) | 1875 | Depth (ft) | 130 | 150 - 215 | 240 |
| | | Area (sq ft) (000's) | 4.4 | 7.2 - 10.4 | 13.8 |
| | | Setback (ft) | 45 | 70 - 95 | 110 |
| M4-C | 438 | Depth (ft) | 95 | 110 - 130 | 185 |
| | | Area (sq ft) (000's) | 4.8 | 5.0 - 5.8 | 14.7 |
| | | Setback (ft) | 20 | 25 - 75 | 105 |
| M4-D | 1390 | Depth (ft) | 125 | 215 - 250 | 260 |
| | | Area (sq ft) (000's) | 6.6 | 13.0 - 15.4 | 18.5 |
| | | Setback (ft) | 25 | 100 - 135 | 150 |
| M4-E | 1026 | Depth (ft) | 125 | 150 - 225 | 320 |
| | | Area (sq ft) (000's) | 7.7 | 10.4 - 19.9 | 69.1 |
| | | Setback (ft) | 15 | 35 - 65 | 125 |

**Table 10: Summary of Dimensional indicators for Waterfront homes for Segments in M4**
**(*) Setbacks are determined by location of SW 172nd St. Areas include SW 172nd St.**

## 8) Summary

Development in Burien's Shoreline can be grouped in to 4 broad categories

Lake Burien consists of a mile of shoreline and the properties around the lake are developed at a level that is consistent with RS-12000. These properties are extensively landscaped.

Approximately 22.5% of the marine shoreline, reach M2, is in a relatively natural condition with extensive natural vegetation that extends for 100's of feet landward of shoreline jurisdiction. 80% of this reach is public park. Seahurst Park has been a focal point for restoration efforts.

Approximately 52.5% of the marine shoreline is developed at a level that is broadly consistent with RS-12000. Many of these properties are impacted to some degree by a steep slope which is often naturally vegetated.

Approximately 25% of the marine shoreline is relatively densely developed at levels that are more consistent with RS-7200.

There is one, small undeveloped parcel on Lake Burien that appears to be unbuildable.

There are ten private undeveloped waterfront properties at various points along the marine shoreline; seven of these are in M3.

The information provided in this report is the basis for the *Supplement to the Shoreline Analysis* that is included as an element of the Shoreline Master Program.

# CITY OF BURIEN
# SHORELINE MASTER PROGRAM UPDATE

# SHORELINE ANALYSIS AND CHARACTERIZATION

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[1] Note that this is a complete list of figures that currently comprise the map folio for the Shoreline Master Program Update. Not all of the figures included at the end of this document are referenced in the text; they were kept together as a group for consistency in figure numbering.

[2] Figures 4A and 10 are in addition to the group of figures that were originally presented in the Shoreline Inventory report dated March 27, 2008.

# 1 INTRODUCTION

This report is intended to provide baseline information on the existing ecosystem and shoreline processes occurring within the City of Burien's (City's) shoreline jurisdiction (Figure 1) to provide a basis for the update of the City's Shoreline Master Program (SMP). This document is supplemental to the Shoreline Inventory, submitted to the Washington State Department of Ecology (Ecology) in March 2008 (revised October 2008) (Grette Associates 2008) as part of the SMP update. This document addresses larger-scale (i.e., watershed) physical and biological processes occurring in the City's shoreline jurisdiction, as well as descriptions of shoreline functions based on a shoreline reach analysis. Finally, this report analyzes opportunities for shoreline protection and restoration, as well as public access and shoreline uses.

In some cases, this report will reiterate information already presented in the Shoreline Inventory (Grette Associates 2008) in order to facilitate review of the larger-scale analysis. In cases where the material is not as pertinent to the analysis presented here, the Inventory will merely be referenced.

## 1.1 STUDY AREA BOUNDARY

The City of Burien is located in south central King County, south of the City of Seattle, north of the City of Normandy Park, and west of the City of SeaTac. Although there are a number of waterbodies, including streams, lakes and marine shorelines, within the City limits only two of these are regulated under the State Shoreline Management Act (SMA). The first is the approximately five-mile stretch of Puget Sound marine shoreline between the north and south City limits. The second is Lake Burien, which is entirely located within the City limits and includes approximately 1.1 miles of shoreline (Figure 1).

Under revisions to the SMA, shoreline jurisdictions have discretion regarding the lateral extent of shoreline zone from the ordinary high water (OHW) mark. The standard shoreline jurisdictional overlay is 200 horizontal feet landward of the OHW mark and the extent of any wetlands with overlap or connection to the 200-foot overlay. In addition, a jurisdiction has the option to include the locally adopted buffers for these wetlands. This analysis will include the wetlands areas and not consider the associated buffers for discussion purposes.

## 1.2 METHODOLOGY

The scope of this document was defined according to the provisions in Washington Administrative Code (WAC) 173-26-201(3)(d). It draws heavily upon the previously presented Inventory of existing information and data from a number of sources, including Geographic Information System (GIS) layers, basin plans, Water Resource Inventory Area (WRIA) documents, relevant consultant reports, and on-line mappers.

## 1.3 REPORT ORGANIZATION

This report is organized to correlate with the required analysis (WAC 173-26-201(3)(d)) and is intended to review large-scale information, and scale down sequentially to smaller reaches (reaches defined below in Section 1.4). This approach is fairly rigorous and ensures consistency between SMPs in adjacent jurisdictions.

## 1.4 SHORELINE REACHES

As presented in the Inventory (Grette Associates 2008), the City's shorelines were divided into lineal reaches according to land use (e.g., zoning and existing land use) and environmental characteristics (e.g., drainages, substrates and drift cells) (Figures 2-4). The marine shoreline was divided into four reaches, whereas Lake Burien was kept as a single reach based on the consistent use and environment around its perimeter (Table 1; Figure 1).

**Table 1. Shoreline inventory reaches in the City of Burien.**

| Location | Reach | Description | Approximate Length (ft) | Approximate Length (mi) |
|---|---|---|---|---|
| Marine | M1 | Primarily residential marine shoreline extending south from City limit to the north edge of Seahurst Park. | 6,001 | 1.14 |
| Marine | M2 | Seahurst Park and primarily undeveloped shoreline south to the point at which consistent shoreline residential development begins again. Corresponds to a line projected west from SW 149th Street to intersection with the shoreline. | 6,382 | 1.21 |
| Marine | M3 | Consistent residential development extending south to the tip of Three Tree Point. | 9,246 | 1.75 |
| Marine | M4 | Consistent residential development from the tip of Three Tree Point to the southern City limit. | 7,597 | 1.44 |
| | | *Marine Subtotal* | *29,226* | *5.54* |
| Lake Burien | LB | Entire perimeter of Lake Burien | 6,172 | 1.67 |
| | | **Total Jurisdictional Shoreline** | **35,399** | **7.21** |

# 2 ECOSYSTEM-WIDE PROCESSES

## 2.1 GEOGRAPHICAL CHARACTERISTICS

The City of Burien is located along Puget Sound, in the Central Puget Lowland ecoregion. Ecoregions are areas defined by having similar ecosystems, including the type, quality and quantity of environmental resources; ecoregions in Washington and Oregon have been determined through analysis of the geology, physiography, vegetation, climate, soils, land use, wildlife, and hydrology of the area (Pater et al. 1998). Ecoregions serve as a spatial framework for the research, assessment, management, and monitoring of ecosystems and ecosystem components (Pater et al. 1998). The Central Puget Sound ecoregion is characterized by well-drained, gravelly soils that exhibit limited moisture holding capacity and rather low agricultural productivity. Within the Seattle area, including Burien, its undulating drift plains are heavily urbanized (Pater et al. 1998).

WRIAs are another spatial framework in which an area can be described; Burien is located within WRIA 9 – Green/Duwamish and Central Puget Sound Watersheds. The Habitat Limiting Factors and Reconnaissance Assessment Report for WRIA 9 (Kerwin and Nelson 2000) describes ecosystem-wide processes for the entire WRIA, and specifically for the Nearshore Sub-watershed in which Burien is located. This WRIA report (Kerwin and Nelson 2000) is referenced heavily below and throughout this document.

Additionally, this section relies upon much of the information presented in The Burien Plan: The Comprehensive Plan for the City of Burien (City of Burien 2006), as it includes extensive information on current conditions within the City.

### 2.1.1 Geology

During the Pleistocene epoch (from about 1 million years to approximately 12,000 years ago), glaciers extending south from British Columbia covered the lowlands around Puget Sound. Advances and retreats by these glaciers scoured existing bedrock and left a complex array of glacial outwash, till, alluvium, and lacustrine (lake) deposits (Kerwin and Nelson 2000).

A composite of several different glacial depositional processes composes the glacial drift plain underlying Burien. Processes include lacustrine deposits, predominantly silt and clay; glacial till, a mixture of sand, gravel, clay, silt and boulders deposited directly by the glacier; and advance and recessional drift, largely sand and gravel deposits made by glacial meltwater (City of Burien 2006).

In the upland areas, glacial till dominates the surficial geology. Surface geology in the Miller Creek and Salmon Creek valleys largely consists of recessional outwash deposits formed by glacial meltwater streams. Erosion along the steep Puget Sound bluffs has removed the more recent glacial deposits; therefore, surface exposures of older advance outwash and glacial lake deposits are common in these areas (City of Burien 2006).

### 2.1.2 Soils

Within Burien, there are distinctive soil differences between the upland areas, major stream valleys, and the Puget Sound bluffs. Soils in upland areas outside of the river valleys are predominantly Alderwood series, derived from glacial till. In general, these soils have very slow permeability, which imposes severe limitations for septic tank drainfields and presents moderate erosion potential in areas with moderately sloping terrain (City of Burien 2006).

Soils within the Miller Creek and Salmon Creek valleys predominantly consist of Everett recessional outwash deposits. These soils are very permeable. As with slow permeable soils, these soils impose severe limitations on the use of septic systems, but for different reasons; very permeable soils may present increased potential for groundwater contamination from septic tank effluent. However, these soils present only a slight erosion potential due to this permeability (City of Burien 2006).

The bluffs and valley walls bordering steep-sloped ravines in the lower reaches of Salmon and Miller Creeks include Alderwood, Kitsap and Indianola series soils. The very slow permeability of these soils imposes severe limitations on the use of septic systems and presents severe erosion hazards. Additionally, coastal beach series soils are found in narrow strips along the base of the bluffs. These soils also present severe limitations for septic systems due to tidal flooding (City of Burien 2006).

### 2.1.3 Topography

The City of Burien's topography is characterized by gently rolling terrain, typical of the glaciated Puget Sound region. Upland elevations within Burien range from 300 to 400 feet mean sea level (MSL). Along the Puget Sound shoreline, the upland areas drop abruptly from 300 feet MSL to sea level. These Puget Sound bluffs have slopes ranging from steep to very steep, often exceeding 40 percent. Spring-fed creeks and upland streams have produced numerous steep-sloped ravines in this marine shoreline area (City of Burien 2006).

### 2.1.4 Climate

The climate in Burien is generally mild, with wet winters and dry, cool summers, typical of other marine west coast climates. Annual precipitation in the surrounding areas varies widely, ranging from over 100 inches in the Cascade foothills and decreasing westward to 35 inches along the marine shoreline (Kerwin and Nelson 2000).

### 2.1.5 Vegetation

The landscape within the City of Burien consists of a variety of natural and disturbed habitats, including wooded areas, wetlands, pastures and urban development. Outside of the areas already protected from development (such as Seahurst Park), few areas of natural vegetation remain. Existing vegetation within the City consists of ornamental plants associated with residential and commercial landscaping. Other vegetation includes the native and/or ornamental trees, plants, shrubs, and grasses within parks and other open spaces. Along the creeks within the City, vegetation common to riparian environments is present (City of Burien 2006).

Tideland/shoreline environments exist along the shoreline of Puget Sound (City of Burien 2006); however, because the majority of the marine shoreline is privately-owned, much of the adjacent upland consists of landscaped yards.

The Central Puget Sound region is home to several sensitive species of plants, including the whitetop aster, the tall bugbane, and the choriso bog-orchid (City of Burien 2006). The potential for these species within the City is considered low.

### 2.1.6 Drainage Patterns

The City of Burien is located within three major drainage basins: Salmon Creek, draining approximately 1,390 acres; Miller Creek, draining approximately 5,230 acres; and Puget Sound (City of Burien 2006). Additionally, Seola Creek (which runs along the northern City limit) drains to the marine shoreline through a culvert (Wild Fish Conservancy 2003). Drainage is predominantly to the west towards Puget Sound.

From its origination in the City of Seattle, Salmon Creek flows through the White Center area and into Puget Sound adjacent to the northwest corner of the City. Flows from this basin are somewhat attenuated by a series of degraded wetlands and small lakes, including Garret Lake, all of which are outside the City of Burien (City of Burien 2006).

Miller Creek originates in numerous bogs, lakes, and depressions in the plateau that comprise the bulk of the Burien-SeaTac land area. Seven tributaries flow into Miller Creek and it receives drainage from the Burien commercial area, State Highway 509, Sea-Tac Airport and an extensive area in unincorporated King County. The main stem of Miller Creek is only partially in the City of Burien, and the mouth of the creek is not located in the City (it drains into Puget Sound south of the City limits) (City of Burien 2006).

Miller and Salmon Creeks are not unlike other urbanized streams, with their stream channels and stream flows extensively modified through channelization, culverting, fill and other man-made changes. During storms, the peak volume of water conveyed by the creeks is both greater and occurs in less time than it would if the drainage basins had remained in a natural or undeveloped state. This increased stream runoff increases the potential for streambed scouring and the amount of flooding and sedimentation that could occur in downstream areas (City of Burien 2006).

A series of small basins composed of steep hillsides sloping down from the Burien Plateau area to the Puget Sound make up the larger Puget Sound drainage basin. Each small basin collects ground water outcroppings and urban runoff, and forms streams of varying sizes, some quite large (as in Seahurst Park) and others as intermittent spring-fed creeks. Increased development within these basins, and the associated impacts (e.g., effects of impervious surfaces), have caused a number of serious erosion and slide problems (City of Burien 2006).

Lake Burien, which is the only lake located within the City, previously served as the drainage basin for a small area until a system of storm water drainage pipes were installed on the northern side to divert runoff flowing into the lake; however, several drainage points to the lake remain along the shoreline (Figure 7E). Underground culverts drain the lake to the southeast (City of Burien 2006).

## 2.2 HISTORIC WATERSHED CONDITIONS

Prior to European settlement of Puget Sound in the 1850s, the lowlands of Puget Sound included a network of sloughs, islands, beaver ponds, and estuaries. Land use was limited to native peoples fishing, hunting and food gathering. The only evidence of forest clearing by Native Americans was maintaining gardens and camas fields. Shellfish and salmon were their primary food sources (Kerwin and Nelson 2000).

Post-European settlement, land use in Burien consisted primarily of timber-based industry. Further development occurred with the coming of the railroad at the turn of the 20th century. Additional settlement occurred with the construction of a north-south road (to become Ambaum Boulevard) connecting Burien to the City of White Center in 1909. Over the years development and urbanization has led to modification of the shorelines. By 1930, the land around Lake Burien and along the northern marine waterfront had been purchased by Jay C. Allen and developed into a large estate called Glennallen; the 400+-acre estate was later broken up and sold off. Development of the marine shoreline north of Salmon Creek occurred primarily throughout the 1950s and 1960s. The southern marine waterfront was not developed extensively due to the steep slopes along the shoreline. By the 1970s, development peaked; that is, almost all the land that is currently developed had been built upon (City of Burien 2004). Burien became an incorporated City in 1993.

Burien is located within the Nearshore Sub-watershed of WRIA 9. Eighty (80) percent of the shoreline is modified within the Nearshore Sub-watershed. Most shoreline modification measures (such as seawalls and bulkheads) were installed to protect residential development from erosion. However, these shoreline modifications have resulted in the alteration of nearshore habitat functions; examples include interruption of habitat-forming processes, destruction of habitat, and degradation of sediment and/or water quality. Within WRIA 9, there are only a minimal number of unaltered shorelines (Kerwin and Nelson 2000).

The Inventory and Assessment of Current and Historic Beach Feeding Sources/Erosion and Accretion Areas for the Marine Shorelines of WRIA 8 & 9 document (Johannessen, MacLennan, and McBride 2005) describes historic shoreforms and processes and compares them to current conditions based on an extensive inventory of existing data and conditions. This document describes historic and existing conditions relative to sediment transport (net short-drift), erosion, and accretion along WRIA 8/9 marine shorelines. City shorelines include three drift cells KI-5-1, KI-7-2, and KI-7-3, from north to south (Figure 4A). KI-5-1 is the longest drift cell in King County (11.2 miles) and extends north from the southern end of Seahurst Park to the northeastern side of the Duwamish Head in Seattle. Net shore-drift in KI-5-1 is from south to north. KI-5-1 includes both Reach M1 and M2 of this inventory. KI-7-2, as well as existing land use patterns, was used to define Reach M3 which extends north from Three Tree Point to approximately Seahurst Park. Net shore-drift in KI-7-2 is generally from the north to the south/southwest. KI-7-3 originates just north of the Des Moines Creek estuary and terminates in the City at Three Tree Point. It is approximately 4.5 miles in length. Net shore-drift in KI-7-3 is from south to north.

It is recognized that "Habitat Limiting Factors and Impacts" in both the freshwater and marine environments include urban and industrial land use practices (Kerwin and Nelson 2000).

Specific to the Burien's shoreline reaches covered by the SMP (which do not include any freshwater tributaries), these urban and industrial land use practices include those described for the Nearshore Sub-watershed by Kerwin and Nelson (2000; below):

- Altering or destroying significant amounts of nearshore habitat;
- Interrupting critical habitat-forming processes;
- Fragmenting or destroying marine riparian corridors; and
- Contributing toxic chemicals and harmful organic compounds to nearshore waters and sediments.

## 2.3 CURRENT LAND USE

The current Comprehensive Plan (City of Burien 2006) states that land use and development in the shoreline areas will be compatible with the SMP, and that adherence to shoreline designations "will ensure that sensitive habitat, ecological systems, and other shoreline resources are protected" (Comprehensive Plan Policy EV 1.2; City of Burien 2006). Existing land use within the entire City of Burien is presented in Table 2, and specific land use information for each shoreline reach is given in Section 3 of this document. Additional general shoreline land use information is presented in Figures 5A-5E and in the Shoreline Inventory (Grette Associates 2008), including sections describing impervious surface; roads and bridges; flood control structures; docks, piers and overwater structures; storm water and sewer outfalls; water and sewer utilities; and culverts.

**Table 2. Existing land use in the City of Burien.**

| Land Use Category | Acres | Percent of Gross Area |
|---|---|---|
| Single Family | 2301.04 | 58.36% |
| High Density MFR | 214.27 | 5.43% |
| Low Density MFR | 37.79 | 0.96% |
| Commercial | 79.31 | 2.01% |
| Retail | 156.47 | 3.97% |
| Industrial | 24.09 | 0.61% |
| Institutional | 135.84 | 3.45% |
| Office | 67.70 | 1.72% |
| School | 119.99 | 3.04% |
| Park | 456.88 | 11.59% |
| Transportation | 12.74 | 0.32% |
| Vacant | 335.86 | 8.52% |
| Other | 0.78 | 0.02% |
| **Gross Area** | **3,942.76** | **100.00%** |

[1] Percentages may not total 100 pe cent due to rounding during GIS anal

# 3 SHORELINE FUNCTIONS

The functions provided by shorelines in the marine environment are different than those provided by shorelines in a freshwater environment (in this case, specifically a lake environment). For this reason, the discussion of shoreline functions is presented in two separate sections below – "Marine Reaches" and "Freshwater – Reach LB."

## 3.1 MARINE REACHES

Per WAC 173-26-201(3)(d)(i)(C), shoreline ecological functions in marine waters include, but are not limited to:

- Hydrologic – Transporting and stabilizing sediment, attenuating wave and tidal energy, removing excessive nutrients and toxic compounds, recruitment, redistribution and reduction of woody debris and other organic material.
- Vegetation – Maintaining temperature, removing excessive nutrients and toxic compound, attenuating wave energy, sediment removal and stabilization, and providing woody debris and other organic matter.
- Habitat for aquatic and shoreline-dependent birds, invertebrates, mammals, amphibians, and anadromous and resident native fish – Habitat functions may include, but are not limited to, space or conditions for reproduction, resting, hiding and migration, and food production and delivery.

Reach-scale shoreline functions are described below for each of the marine reaches (Reach M1-M4).

### 3.1.1 Reach M1

Reach M1 is the northernmost marine reach along the Burien shoreline, extending from Seola Beach to the north end of Seahurst Park. The reach is 1.14 miles in length. Historically, most of Reach M1 was exceptional or potential feeder bluff. Now it is almost entirely modified shoreline (Johannessen, MacLennan, McBride, 2005). Figure 4A depicts historic and current shoreforms from Johannessen, MacLennan, and McBride (2005).

Additional summary information for Reach M1 is presented in Table 3.

**Table 3. Reach M1 summary.**

| Total Acreage / Land Use[1] | Stream Discharges | Public Shoreline Access | Hazard Areas | Habitat / Habitat Potential |
|---|---|---|---|---|
| 25.00 acres<br>Single Family: 72%<br>Vacant: 23%<br>Tracts/Other: 4%<br>Low Density MFR: 1%<br>Institutional: 0.01% | Seola Creek, Salmon Creek, unnamed tribs | None | Landslide, Flood | Wetlands, Stream, Fish and Wildlife Areas (salmonids, forage fish, shellfish, eelgrass, Urban Natural Open Space) |

[1] Percentages may not total 100 percent due to rounding during GIS analysis.

*Current Land Use*

This reach is predominantly single family use, with portions of undeveloped property associated with high gradient slopes and vacant parcels comprising approximately 24 percent of the reach (Figure 5A). Future land use within this reach will likely include development of the remaining parcels as single family structures, then redevelopment of smaller residences as property value increases.

*Hydrologic Function*

The shoreline of Reach M1 is primarily residential, and much of the shoreline is hardened by private bulkheads and boat ramps. These structures affect the hydrological functions of the shoreline, altering the transportation of sediment to and from the shoreline reach. Woody debris and organic material redistribution is restricted to the shoreline area waterward of the bulkheads.

Freshwater input is limited to that from Seola and Salmon Creeks, as well as unnamed tributaries entering Puget Sound from the uplands adjacent to the shoreline. In some cases, small culverts or pipes drain freshwater from the upland through an existing armored structure into Puget Sound (Figure 7A).

Approximately 70 percent of Reach M1 is mapped as 100-year floodplain (Figure 8A). Armoring of the shoreline can contribute to impacts of flooding as an artificial physical boundary can impede the flow during inundation and recession of floodwater.

*Vegetation Function*

Vegetation along Reach M1 is also influenced by the existing land use in that much of the upland consists of the manicured yards of residential properties. Marine shorelines with highly altered vegetation are not as effective in removing excess nutrients, stabilizing sediment and contributing organic matter as unmodified shorelines. However, any trees along the shoreline, whether native or part of a landscaped yard, contributes to overwater shading of the intertidal zone.

Additionally, the entire reach is mapped as a landslide hazard area, a Critical Area type (Figure 8A). Removal of shoreline vegetation, such as that resulting from development, leads to erosion of the shoreline and may contribute to landslide activity.

*Other Habitat Function*

Critical Areas within this reach include the right bank and buffer of Seola Creek, Salmon Creek and associated buffers, and several small unnamed tributaries to Puget Sound. The forested ravines associated with these streams are mapped as Urban Natural Open Space, a Priority Habitat in Washington State (Figure 9A). Deep forested ravines and the associated streams provide small mammal, bird and fish habitat.

A high stream gradient limits opportunities for salmonids in Seola Creek and the unnamed tributaries within Reach M1. Salmon Creek has historically had coho salmon (*Oncorhynchus*

*kisutch*) presence. A private structure near the mouth of Salmon Creek confines the channel and may impede fish passage to habitat upstream.

The physical separation of marine waters from the upland resulting from the armoring of shorelines limits the utilization of the transitional intertidal habitat; however, within Reach M1, there are several areas of quality habitat for shoreline-dependent animals along the marine shoreline (Figure 9A). Below the OHW mark, the entire reach is mapped as having geoduck (*Panopea abrupta*) beds. Eelgrass (*Zostera* sp.) patches are present as a sparse fringe along the reach, and provide habitat for fish spawning, juvenile fish and invertebrates. The southernmost end of Reach M1 is mapped having surf smelt (*Hypomesus pretiosus*) spawning habitat. All of these areas are considered Fish and Wildlife Habitat Conservation Areas, a Critical Area type. In addition, estuarine wetlands associated with the marine aquatic bed are considered Category 1 wetlands (Figure 8A).

### 3.1.2 Reach M2

Reach M2 is a marine shoreline reach comprised of Seahurst Park and the undeveloped shoreline south of the park to SW 149th Street or the northern edge of resumed shoreline development. Reach M2 is 1.21 miles long. Historically, Reach M2 included areas of feeder bluff, potential feeder bluff, and exceptional feeder bluff, some of which has now been modified. An accretion shoreform is present along most of its north end. Figure 4A depicts historic and current shoreforms from Johannessen, MacLennan, and McBride (2005). Additional summary information for Reach M2 is presented in Table 4.

**Table 4. Reach M2 summary.**

| Total Acreage / Land Use[1] | Stream Discharges | Public Shoreline Access | Hazard Areas | Habitat / Habitat Potential |
|---|---|---|---|---|
| 28.72 acres<br>Park: 78%<br>Single Family: 14%<br>Vacant: 9% | Unnamed tribs | Seahurst Park, Eagle Landing Park | Landslide, Flood | Wetlands, Stream, Fish and Wildlife Areas (bald eagle, forage fish, shellfish, eelgrass, Urban Natural Open Space) |

[1] Percentages may not total 100 percent due to rounding during GIS analysis.

*Current Land Use*

Nearly 80 percent of Reach M2 is park, the majority of which is the shoreline of the 152-acre Seahurst Park (Figure 5B). To the south of Seahurst Park is a smaller public park, the 5-acre Eagle Landing Park. This publicly-owned land is set aside for passive recreation and conservation. Seahurst Park is currently in the process of redevelopment and restoration, but it is anticipated to remain parkland for the foreseeable future. The second highest percentage of land use is single family with 14 percent and the remainder of the reach is vacant. Unlike the other marine reaches, the majority of the single family lots within Reach M2 do not extend far into the intertidal zone.

*Hydrologic Function*

Historically, much of the shoreline in Reach M2 incorporated bulkheads or some type of armoring; however, restoration efforts in the publicly-owned parks have been focused on reestablishing the shorelines' natural hydrology through removal of this armoring. As described in Section 3.1.1 for Reach M1, armoring limits the amount of both physical and biological interchange that can occur between the upland and the water. However, in areas where a more natural hydrology has been restored (such as areas within Seahurst Park; please seen Section 4), the shoreline allows for sediment transport, wave attenuation and redistribution of organic materials (including large woody debris) across all tidal elevations. Additionally, the single family lots between Seahurst Park and Eagle Landing Park have very little armoring.

Water flows from the upland onto the marine shoreline of Reach M2 through culverts that have been installed beneath parking lots and road fill embankments, draining water through or under bulkheading (Figure 7B; Wild Fish Conservancy 2003; Anchor 2002). Most of these modifications to drainage within Seahurst Park were made by the early 1970s by King County (Anchor 2002).

Approximately 30 percent of Reach M2 is mapped within the 100-year floodplain (Figure 8B). As explained in Section 3.1.1, armoring of shorelines can intensify the impacts of flooding, as armoring inhibits the natural inundation and recession of floodwater.

*Vegetation Function*

Reach M2 has the largest area of native or unaltered shoreline vegetation of any of the shoreline reaches. The vegetation along the shoreline of the parks provides a source for large woody debris and other organic material that will enter the water, as well as overwater shading. Vegetation located upland of armored shorelines does not function to attenuate wave energy; however, the vegetation of the unaltered or restored shorelines within the reach aids in sediment removal and stabilization.

As with much of the marine shorelines in the City, Seahurst Park is entirely flanked on the upland side with a landslide hazard area (Figure 8B). The restoration and conservation of native vegetation that has occurred in or is planned for Reach M2 decreases the amount of erosion that occurs, and could aid in decreasing the occurrence of landslides.

*Other Habitat Function*

Reach M2 has several important Critical Area types represented within the reach. Two large stream systems dominate the reach, with associated buffers. The riparian ravines surrounding the streams are mapped as Urban Natural Open Space (Figure 9B), providing habitat to wildlife and fish species as well as plant diversity.

The streams within Reach M2 are high gradient, incised streams with salmonid habitat limited to the lowest reaches. The southern stream system has some habitat available at the toe of the slope incline. The northern stream system has been modified to accommodate the fish acclimation facilities at the Marine Occupational Center in the North end of the park. These facilities rear coho salmon as part of the Highline School District marine science curriculum.

Below the OHW mark, the entire reach is mapped as having geoduck beds. Eelgrass patches are present as a sparse fringe along the reach. Most of Reach M2 has surf smelt spawning habitat and a portion of the intertidal in front of the park has been mapped as Pacific sand lance (*Ammodytes hexapterus*) spawning habitat. All of these areas are considered Fish and Wildlife Habitat Conservation Areas, a Critical Area type (Figure 9B). In addition, estuarine wetlands associated with the marine aquatic bed are considered Category 1 wetlands (Figure 8B). A bald eagle (*Haliaeetus leucocephalus*) nest located outside of the shoreline zone near the south end of Reach M2 has a buffer for nest and forage area protection that extends into the shoreline zone and occupies nearly half (southern half) of Reach M2 (Figure 9B).

### 3.1.3 Reach M3

Marine shoreline Reach M3 is the longest shoreline reach within the City of Burien and is delineated by the increased residential development at the south end of Reach M2 and the tip of Three Tree Point at the south end of the reach. Reach M3 is 1.75 miles long. Historically, Reach M3 (KI-7-2) included feeder bluff and potential feeder bluff areas alternating with accretion shoreforms. The bluffs in this reach have been entirely modified, as have some of the accretion shoreforms. Figure 4A depicts historic and current shoreforms from Johannessen, MacLennan, and McBride (2005).Additional summary information for Reach M3 is presented in Table 5.

**Table 5. Reach M3 summary.**

| Total Acreage / Land Use[1] | Stream Discharges | Public Shoreline Access | Hazard Areas | Habitat / Habitat Potential |
|---|---|---|---|---|
| 40.23 acres<br>Single Family: 87%<br>Vacant: 12%<br>Tracts/Other: 1%<br>Low Density MFR: 0.4% | Unnamed tribs | Street ends (several) | Landslide, Seismic, Flood | Wetlands, Stream, Fish and Wildlife Areas (bald eagle, forage fish, shellfish, eelgrass, kelp, Urban Natural Open Space) |

[1] Percentages may not total 100 percent due to rounding during GIS analysis.

*Current Land Use*

Land use in Reach M3 is developed single family residential with 87 percent of the shoreline developed in that land use category (Figure 5C). The remaining areas of the reach are vacant. It is anticipated that the land use in Reach M3 would remain single family residential and that properties will redevelop over time.

*Hydrologic Function*

The marine shoreline of Reach M3 is hardened with private bulkheads and numerous private boat ramps that affect littoral drift and longshore migration during most tidal stages. Reach M3 also has several single family docks. Hydrologic functions including sediment transport, wave attenuation and redistribution of organic materials along the shoreline are decreased by the presence of these artificial structures.

Several unnamed tributaries flow into the Reach M3 and storm water drains onto the shoreline through culverts running under or through bulkheads (Figure 7C).

Twenty-six percent of Reach M3 is mapped as 100-year floodplain (Figure 8C). As addressed in previous sections, armoring of the shoreline can hinder the flow of floodwaters to and from the shoreline.

*Vegetation Function*

The majority of the shoreline is residential; therefore, most of the vegetation within the Reach M3 shoreline consists of highly altered landscapes. Yards maintained with chemical fertilizers and herbicides, can increase the nutrient and toxic load into the shoreline. Further, a decrease in the amount of native vegetation decreases the function of the shoreline, reducing its capacity to attenuate wave energy, stabilize sediments and provide organic materials. However, any trees located along the shoreline can improve habitat conditions by providing overwater shading.

Removal of large amounts of vegetation and replacement with vegetation not as suited for the environment can increase erosion. Increases in erosion can increase the probability of landslides. The entire upland area of Reach M3 is mapped a landslide hazard area (Figure 8C).

*Other Habitat Function*

Critical Areas within Reach M3 include several small unnamed tributaries to Puget Sound and their associated buffers. The forested ravines associated with these streams are mapped as Urban Natural Open Space, a Priority Habitat in Washington State (Figure 9C).

High stream gradients limit opportunities for salmonids in the unnamed tributaries within Reach M3. The intertidal areas utilized by juvenile salmon are separated from uplands functions by the high intensity of vertical bulkheads and the nearshore vegetation maintained in a highly altered (manicured) state.

Despite the separation of upland and marine waters resulting from the armoring of shorelines, there are several Fish and Wildlife Habitat Conservation Areas located with Reach M3 (Figure 9C). Below the OHW mark, almost the entire reach is mapped as having geoduck beds, which extend almost all the way south to the tip of Three Tree Point. Eelgrass patches are present as a sparse fringe along the reach and kelp (order Laminariales) beds are mapped within this reach. The southern half of Reach M3 is mapped as having surf smelt spawning habitat, overlaying a small reach of Pacific sand lance spawning habitat near SW 156th Street. The buffer associated with a bald eagles nest in Reach M2 extends into Reach M3 to approximately SW 156th Street. In addition, estuarine wetlands associated with the marine aquatic bed are considered Category 1 wetlands (Figure 8C).

### 3.1.4 Reach M4

Reach M4 is similar to Reach M3 in that it is characterized by consistent residential development with a south facing aspect. The reach extends from the tip of Three Tree Point to the southern City limits. Reach M4 is 1.44 miles long. Historically, Reach M4 was feeder bluff, which has subsequently been modified, and an accretion shoreform that is still functioning despite shoreline

modifications (Johannessen, MacLennan, McBride, 2005). Figure 4A depicts historic and current shoreforms from Johannessen, MacLennan, and McBride (2005). Additional summary information for Reach M4 is presented in Table 6.

**Table 6. Reach M4 summary.**

| Total Acreage / Land Use[1] | Stream Discharges | Public Shoreline Access | Hazard Areas | Habitat / Habitat Potential |
|---|---|---|---|---|
| 22.41 acres<br>Single Family: 91%<br>Low Density MFR: 5%<br>Vacant: 3%<br>Commercial: 1% | Unnamed tribs | Street end (one) | Landslide, Seismic, Flood | Wetlands, Stream, Fish and Wildlife Areas (forage fish, shellfish, eelgrass) |

[1] Percentages may not total 100 percent due to rounding during GIS analysis.

*Current Land Use*

Land use in Reach M4 is developed single family residential with 91 percent of the shoreline developed in that land use category (Figure 5D). The remaining areas of the reach are split between low density multifamily use (4.99 percent), vacant (2.65 percent) and commercial use (1.23 percent). It is anticipated that the land use in Reach M4 would remain predominantly single family residential and that properties will redevelop over time. Reach M4 is characterized as having narrower parcels than the other marine reaches, which extend into the intertidal south of Three Tree Point.

*Hydrologic Function*

As with the majority of the other marine reaches, the shoreline of Reach M4 is hardened with private bulkheads and a few private boat ramps that affect littoral drift and longshore migration during most tidal stages. Reach M4 also has several single family docks. These alterations to the shoreline affect the hydrology of the reach, as described in Sections 3.1.1 – Section 3.1.3.

Drainage into the reach from upland flows through culverts and from several unnamed tributaries (Figure 7D). SW 172nd Street parallels the shoreline near most of the reach immediately behind the small residential (garage) structures along the beach; storm water runoff from the road enters Puget Sound with no opportunity for treatment.

Forty-eight percent of Reach M4 is mapped as 100-year floodplain (Figure 8D). As discussed previously, armoring can reduce the ability of the shoreline to accommodate floodwater.

*Vegetation Function*

Due to the fact that land use within Reach M4 is similar to that within the other highly modified shorelines discussed above (Reach M1 and Reach M3), the same limitations on shoreline vegetation function exist in Reach M4 as do in the other marine reaches; please see Sections 3.1.1 and 3.1.3 for more details.

Removal or alteration of vegetation can contribute to erosion, thus increasing the chance for landslides. The entire upland area of Reach M4 is mapped a landslide hazard area, excepting the

soils surrounding Three Tree Point and immediately south; those soils are mapped as a seismic hazard zone (Figure 8D).

*Other Habitat Function*

Reach M4 includes few small unnamed tributaries to Puget Sound and their associated buffers. These are very high gradient streams with no associated Urban Natural Open Space. Although none are known as being salmon-bearing streams, they have the potential to provide habitat to other fish species.

The intertidal areas utilized by juvenile salmon are separated from uplands functions by the high intensity of vertical bulkheads and the nearshore vegetation maintained in a highly altered (manicured) state. This separation limits the function provided by the shoreline.

Below the OHW mark, the entire reach is mapped having geoduck beds. Eelgrass patches are present as patchy beds along the Reach M4 shoreline. A small segment of the reach is identified as Pacific sand lance spawning habitat. All of these areas are considered Fish and Wildlife Habitat Conservation Areas, a Critical Area type (Figure 9D). In addition, estuarine wetlands associated with the marine aquatic bed are considered Category 1 wetlands (Figure 8D).

## 3.2 FRESHWATER – REACH LB

Per WAC 173-26-201(3)(d)(i)(C), shoreline ecological functions in lakes include, but are not limited to:

- Hydrologic – Storing water and sediment, attenuating wave energy, removing excessive nutrients and toxic compounds, recruitment of large woody debris and other organic material.
- Shoreline vegetation – Maintaining temperature, removing excessive nutrients and toxic compound, attenuating wave energy, sediment removal and stabilization, and providing woody debris and other organic matter.
- Hyporheic functions – Removing excessive nutrients and toxic compound, water storage, support of vegetation, and sediment storage and maintenance of base flows.
- Habitat for aquatic and shoreline-dependent birds, invertebrates, mammals, amphibians, and anadromous and resident native fish – Habitat functions may include, but are not limited to, space or conditions for reproduction, resting, hiding and migration, and food production and delivery.

Reach LB consists of the entire shoreline of Lake Burien and is the only freshwater shoreline reach in the City. The perimeter of the lake is 1.67 miles long. Additional summary information for Reach LB is presented in Table 7.

**Table 7. Reach LB summary.**

| Total Acreage / Land Use[1] | Stream Discharges | Public Shoreline Access | Hazard Areas | Habitat / Habitat Potential |
|---|---|---|---|---|
| 28.80 acres<br>Single Family: 87%<br>School: 8%<br>Vacant: 3%<br>Tracts/Other: 1%<br>Low Density MFR: 1% | Unnamed tribs | None | None | Wetlands, Aquifer Recharge Area |

[1] Percentages may not total 100 percent due to rounding during GIS analysis.

*Current Land Use*

Lake Burien is occupied almost entirely by single family development (87 percent) and multifamily (1 percent) (Figure 5E). The lone exception to this is at the northeast corner of the lake where the Ruth Dykeman Children's Center is located. The density of single family development along the Lake Burien shoreline is somewhat higher than that along the marine shoreline. Reach LB is almost entirely developed to its maximum potential and is likely to remain in single family residential use.

*Hydrologic and Hyporheic Function*

The shoreline of Reach LB is highly altered, as it is surrounded almost entirely by privately-owned residences. Given the relatively small size of the lake, there is not much wave action affecting the shoreline; however, the shoreline would effectively attenuate any waves produced in the lake. The lakeshore bank is low bank with a very gentle upland gradient. Flooding along the shoreline of the lake is not a documented problem, as Lake Burien is not located within the 100-year floodplain (Figure 8E).

While a system of storm water drainage pipes has been installed to divert runoff flowing into the lake, several drainage points into the lake remain (Figure 7E; City of Burien 2006) and the lake still functions as a water storage area. Lake Burien is mapped as an Aquifer Recharge Area, a Critical Area (Figure 8E). Alterations to the surface conditions within an Aquifer Recharge Area associated with development, such as changes in impervious surface area, channeling of runoff and changes in the soils, can affect the rate and quantity of water entering the aquifer. Additionally, contamination of waters within the Aquifer Recharge Area can adversely impact the entire aquifer.

*Vegetation Function*

Due to the nature of land use surrounding Lake Burien (mostly residential), much vegetation within the shoreline of Reach LB consists of manicured lawns. Maintenance of lawns often increases the input of chemicals (fertilizers and herbicides) into the water and limits the input of organic material (including large woody debris) into the lake. However, any trees present along the shoreline contribute to the shading of the shoreline. Due to the topography around Lake Burien, the lack of native vegetation does not greatly increase erosion along the shore; there are no landslide hazard areas associated with the lake (Figure 8E).

*Other Habitat Function*

Lake Burien in its entirety has been rated a Category 2 wetland (Figure 8E). The buffer associated with a Category 2 wetland is 100 feet. While there are no Priority Habitat and Species documented within Lake Burien or along the shoreline (Figure 9E), wetlands provide habitat for other small mammals, birds and fish (such as feeding, breeding and spawning). There is no fish access into Lake Burien; therefore, anadromous salmonids are not expected within the lake.

# 4 OPPORTUNITIES FOR SHORELINE PROTECTION, RESTORATION, PUBLIC ACCESS AND USE

## 4.1 SHORELINE PROTECTION AND RESTORATION OPPORTUNITIES

Burien has many highly modified shoreline areas almost entirely consisting of privately-owned uplands, as well as tidelands in some cases. Citizen outreach to provide education resources regarding the effects of lawn care practices on water quality within the marine waters and Lake Burien have potential to improve citizen involvement in shoreline protection and restoration.

The WRIA 8/9 shoreforms inventory and assessment (Johannessen, MacLennan, and McBride 2005) identifies a number of specific restoration opportunities including one within City shorelines (see Section 4.1.4). Also recommended in that study are conservation and restoration priorities within and by drift cells within WRIA 8 and 9 to protect and reconnect sediment sources within the region. However, it is important to consider that the analyses are solely based on comparison of current and historic shoreline conditions and do not take into account biological or socioeconomic factors.

Other non-specific restoration opportunities along the marine reaches include bulkhead modification to reduce the effects of hardened vertical structures on sediment transport and nearshore habitat. These modifications include removal, beach reshaping, installing longshore woody debris, and restoring connection of the beach to sediment input systems, including streams and eroding bluffs.

Installing littoral nearshore vegetation, where appropriate, can provide nearshore water quality protection functions to shallow intertidal areas. Stream systems in the City are constrained by ravines, typically hosting invasive vegetation. Restoring native riparian vegetation within these systems benefits export of salmonid prey and improves upland habitat within the shoreline zone.

Shoreline protection and restoration opportunities for each reach are discussed below.

### 4.1.1 Reach M1

Reach M1 includes the segment (49) identified as the highest priority for restoration within drift cell KI-5-1 (Johannessen, MacLennan, and McBride, 2005). This segment also ranked among the top restoration priorities in WRIA 8/9 based on historic conditions. Drift cell KI-5-1 also generally is ranked as moderately high and high prioritization for restoration and conservation respectively by Johannessen, MacLennan, and McBride (2005). The limited public land ownership in Reach M1 constrains opportunities for larger restoration programs. However, modifications to the baseline condition on a small scale can incrementally provide restoration of nearshore and riparian functions within the reach.

Most of the single family residences along Reach M1 are not setback from the shoreline a significant distance and impede bulkhead redesign. Some locations within the reach may be suitable for bulkhead removal or setback, with a contoured shoreline either in place of or in front of the remaining structure. Shoreline native vegetation can be installed in several locations, particularly in the undeveloped shoreline areas where vegetation can overhang shallow intertidal areas and provide the most export function.

Other restoration opportunities include mouths of Seola and Salmon Creeks where sediment transport to the beach and fish passage to the streams is impeded by structures; any opportunities involving reaches of creeks that share buffers with City of Seattle would be coordinated with the City of Seattle. Modifications in both of these locations can serve to avail more habitat to salmonids and allow continued sediment nourishment to the high intertidal zone.

### 4.1.2 Reach M2

Reach M2 includes the segment (48) identified as the third highest priority for restoration within drift cell KI-5-1, as well as the segment (207) ranked as the highest priority for conservation (Johannessen, MacLennan, and McBride, 2005). Although the Seahurst Park Master Plan pre-dates the WRIA 8/9 shoreforms study, it does incorporate elements to address conservation and restoration of sediment sources and transport processes within the Park. The Seahurst Park Master Plan (Anchor 2002) described specific restoration opportunities within Seahurst Park (located in Reach M2). The plan proposed to preserve all the existing undeveloped area, increase the natural habitat area and function through extensive restoration and land acquisitions. Per the Master Plan (Anchor 2002), sustaining and restoring the marine shoreline at Seahurst Park is based on four concepts: removing existing shoreline protection structures; modeling restored beach slopes and substrates after natural conditions; replenishing gravel and sand lost to erosion; and restoring and protecting the natural delivery paths of sediment to the beach. As part of the Seahurst Park Master Plan (Anchor 2002), the long seawall reach south of the south park entrance was removed and the beach reshaped to a more natural shoreline state, including native vegetation and large longshore wood placement. Additional phases of the Master Plan include seawall redevelopment and nearshore restoration for the remainder of the park and are in the planning phases.

Additional restoration opportunities exist at Eagle Landing Park. Since the land was acquired in 2002, the City has opened trails and performed reforestation work for the purposes of preserving salmon habitat and providing public water access. Future plans for the property include restoring native plants and on-going native plant maintenance.

The remainder of Reach M2 has limited restoration opportunity relative to other shoreline reaches within the City. South of the park, nearshore vegetation is intact and provides water quality and biological function to the intertidal areas during most tide stages. Some of the single family residences within Reach M2 are protected by bulkheads (approximately two between Seahurst Park and Eagle Landing Park), yet placement of the homes near the bulkhead presents the same constraints to restoration as described in Reach M1.

### 4.1.3 Reach M3

As Reach M3 and KI-7-2 are in complete overlap, the reach includes all includes segments identified for priority restoration (3) and conservation (1) within the drift cell (Johannessen, MacLennan, and McBride, 2005). Although none of these segments individually are ranked among the top restoration and conservation priorities in WRIA 8/9 based on historic conditions, drift cell KI-7-2 is generally ranked as one of the highest drift cells for restoration and conservation respectively (Johannessen, MacLennan, and McBride 2005). As noted previously, this study is based on comparison between current and historic shoreline conditions and does not

consider biological or socio-economic factors. The limited public land ownership in Reach M3 constrains opportunities for larger restoration programs. However, modifications to the baseline condition on a small scale can incrementally provide restoration of limited nearshore and riparian functions within the reach. Prioritization for restoration and conservation presented by Johannessen, MacLennan, and McBride (2005) can additionally inform where these small scale efforts may reap the most benefit within this reach.

Most of the single family residences along Reach M3 are located immediately behind the bulkheads and can impede bulkhead redesign. There appear to be few locations suitable for bulkhead removal or setback. Some areas may allow for a contoured shoreline, though the elevation of the uplands within the south end of this reach is low, where bulkhead removal could render increased risk to the upland structures. Shoreline native vegetation can be installed in the few areas of undeveloped shoreline areas where vegetation can overhang shallow intertidal areas and provide the most export function.

Other restoration opportunities include the unnamed tributaries where invasive vegetation can be controlled, but the high intensity of maintenance in private property ownership may limit feasibility of these restoration opportunities.

### 4.1.4 Reach M4

Reach M3 does not include any of the top three priority segments for restoration or conservation within drift cell KI-7-3 (Johannessen, MacLennan, and McBride, 2005). Of the three drift cells within the City, KI-7-3 is the relatively lowest priority for restoration (moderate) or conservation (moderately high) within WRIA 8/9. As noted previously, this study is based on comparison between current and historic shoreline conditions and does not consider biological or socio-economic factors. The land ownership pattern (private single family) in Reach M4 constrains opportunities for larger restoration programs. However, modifications to the baseline condition on a small scale can incrementally provide restoration of nearshore and riparian functions within the reach.

The predominate development pattern of Reach M4 is characterized by structures either immediately on or near the OHW mark, between the road and the intertidal zone. Immediately south of Three Tree Point there is a portion of the reach were the development pattern is unique in that dwellings are sited upland of the right-of-way with the remainder of the residential lot located waterward of the road. In many cases the remaining portions of property waterward of the right-of-way contain residential accessory structures and protective bulkheads. There appear to be few locations suitable for bulkhead removal or setback. Those areas with residential structures set further back are characterized as "high bank" waterfront. Johannessen, MacLennan, and McBride (2005) identify a single specific potential restoration opportunity, removal of a number of creosote pile and possible groin removal (number 35), within the City (although this may be in part or entirely on privately owned land). Some areas may allow for a contoured shoreline either in place of or in front of the remaining structure. These are also locations where the City can encourage shoreline native vegetation to overhang shallow intertidal areas and provide the most export function.

### 4.1.5 Reach LB

The intensity of development around the lake and private ownership preclude programmatic habitat restoration. Water quality within Reach LB is affected by storm water input and non-point runoff from maintained property surrounding the shoreline. Typically, these conditions provide opportunity for property owners to maintain water quality through coordinated stewardship and landscape maintenance practices.

## 4.2 PUBLIC ACCESS OPPORTUNITIES

Shoreline public access is the ability of the general public to reach and touch the water and the ability to view the water and shoreline from upland locations. Public access facilities include public parks, boat launches, trails, improved street ends and overlooks. On Burien's shorelines, public access is provided primarily by Seahurst Park, Eagle Landing Park, roadways, several beach access gravel drives and trails in the vicinity of Three Tree Point (see Figure 10). Note that in many locations along the shoreline, the beach itself is privately owned, which may be in conflict with informal recreational use (e.g., beach walking, foraging) of contiguous adjacent public lands waterward of the OHW mark. There is no public access to Lake Burien; however, the water can be viewed from several points from nearby roadways.

Potential new public access opportunities to Burien's shoreline areas would entail expanding and improving facilities at existing sites. Any new shoreline public access sites must minimize effects on adjacent properties, minimize adverse impacts to ecologically sensitive areas and not create a public safety risk.

## 4.3 SHORELINE USE OPPORTUNITIES

Consistent with the currently adopted City of Burien Comprehensive Plan (City of Burien 2006) and implementing zoning, the shoreline areas are planned for single family residential uses and parks and open space, with the only exception being the Ruth Dykeman Children's Center located on Lake Burien. This parcel is designated as Special Planning Area 2. Aquatic shoreline uses would be supportive of residential uses, e.g., boat facilities, including buoys, docks and ramps. Future redevelopment of shoreline properties would be single family residential.

# 5 REFERENCES


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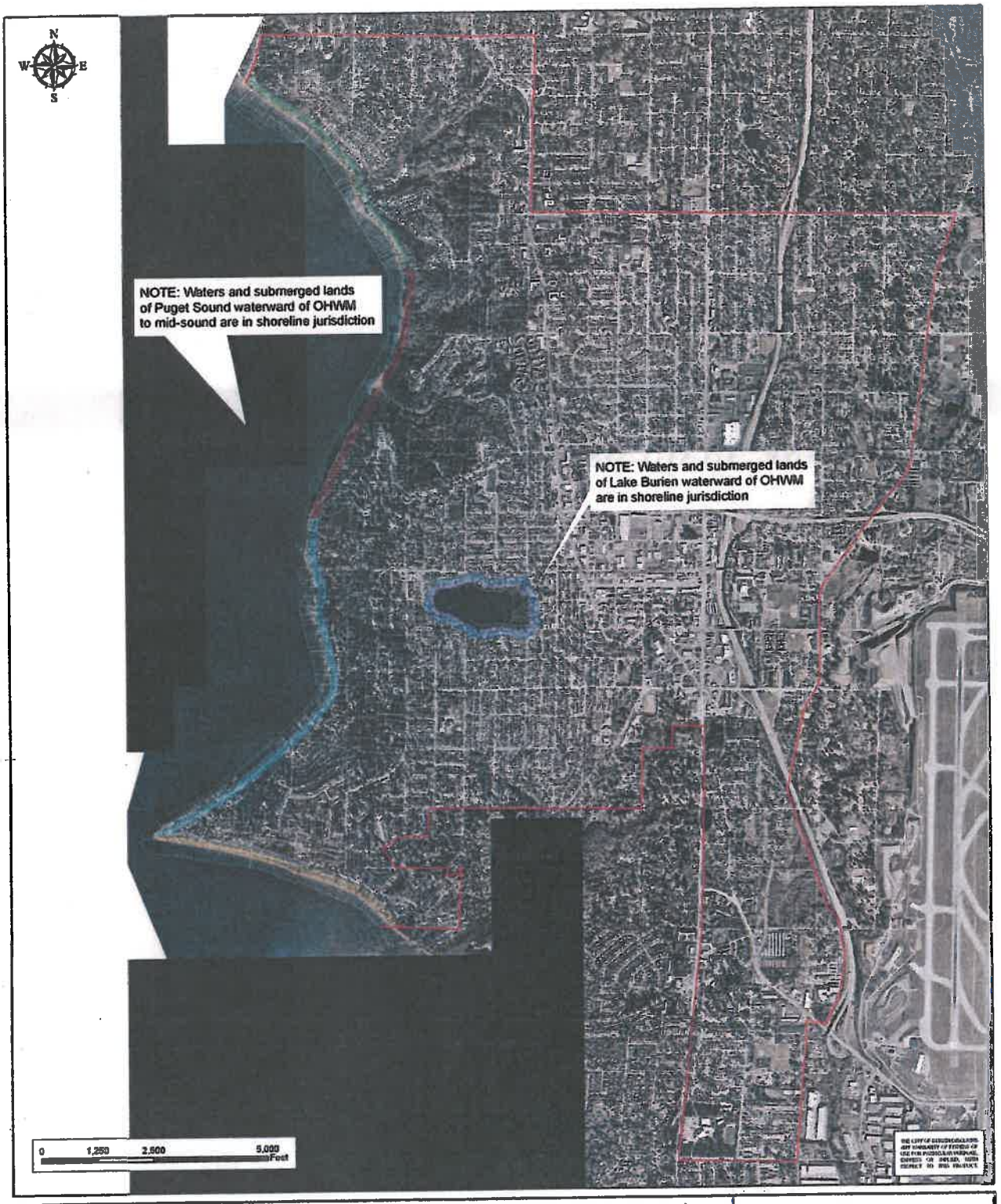
# CITY OF BURIEN
# SHORELINE MASTER PROGRAM UPDATE

## SHORELINE ANALYSIS AND CHARACTERIZATION FIGURES




**Legend**

- Approx Marine OHWM
- Approx Marine OHWM +200'
- Approx Lake OHWM
- Approx Lake OHWM +200'
- Parcels
- City Boundary

*Reaches*

- Lake Burien
- Marine 1
- Marine 2
- Marine 3
- Marine 4

Note: OHWM = ordinary high water mark

Data Sources: City of Burien, King County

City of Burien

**Shoreline Master Program**

*Figure 1*

Preliminary Shoreline Jurisdiction

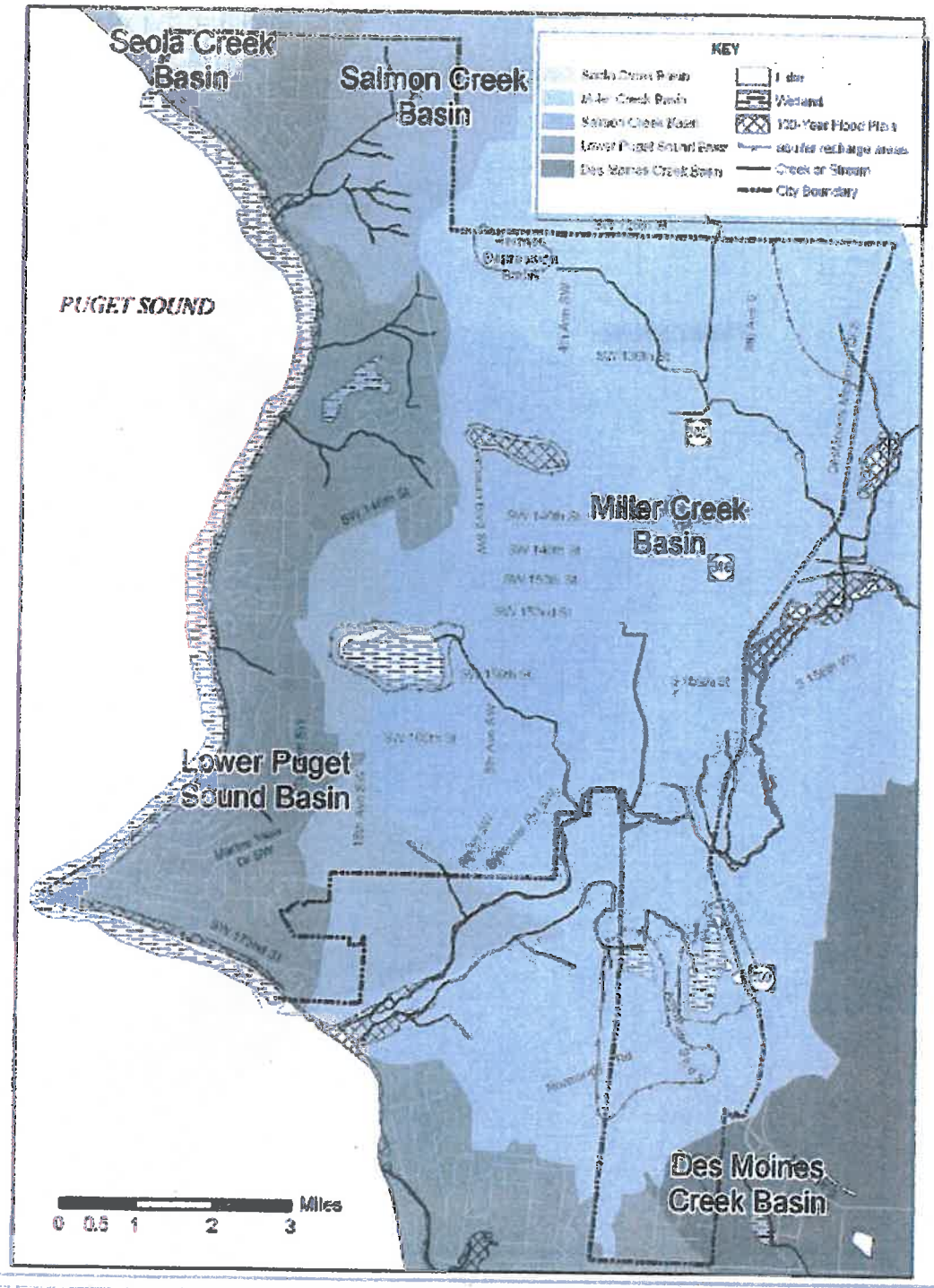



Figure 2 Natural Hydrologic Features/Drainage Basins

(adapted from The Burien Plan; City of Burien 2006)

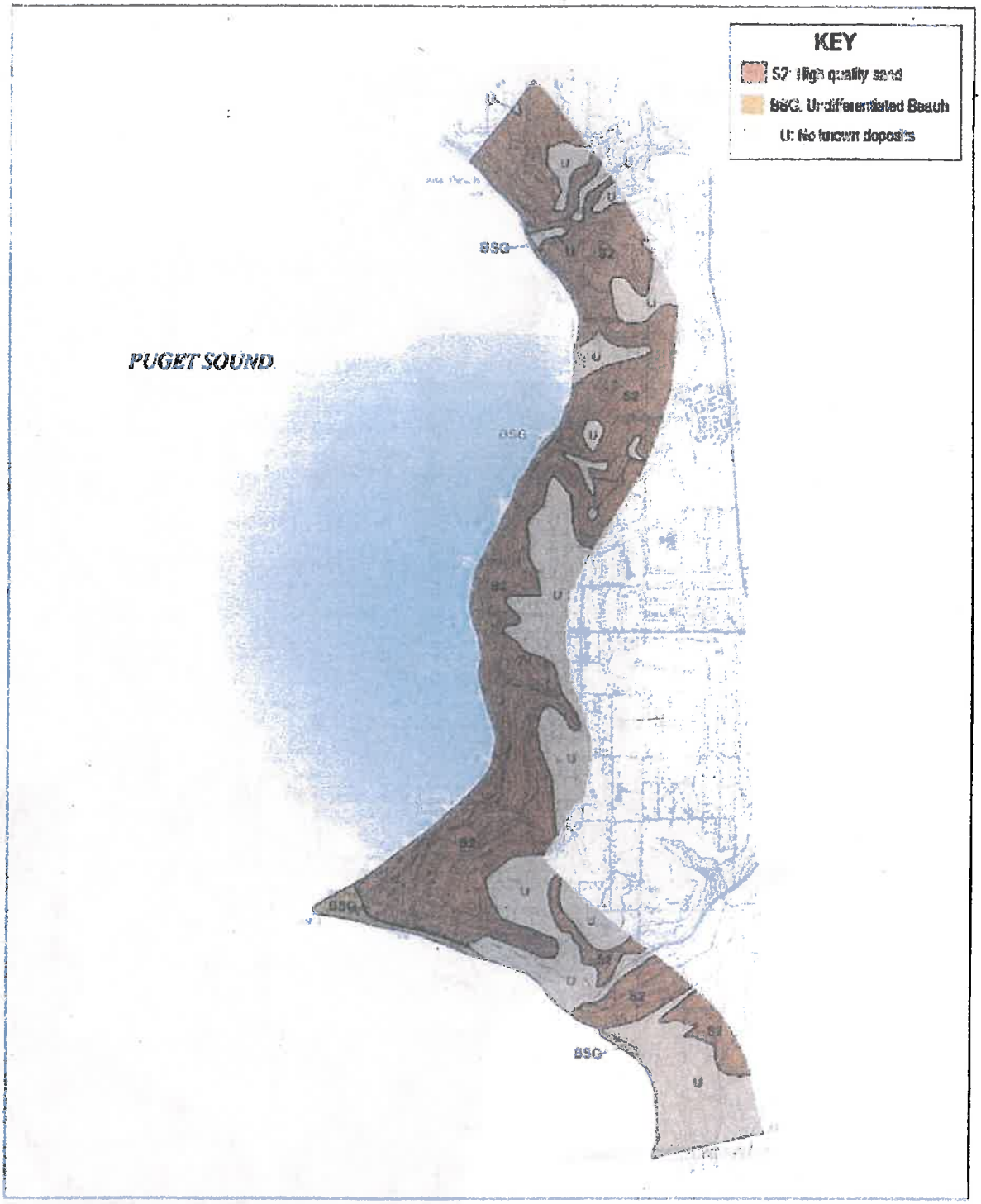



Figure 3 Sand and Gravel Areas

(adapted from The Burien Plan; City of Burien 2006)

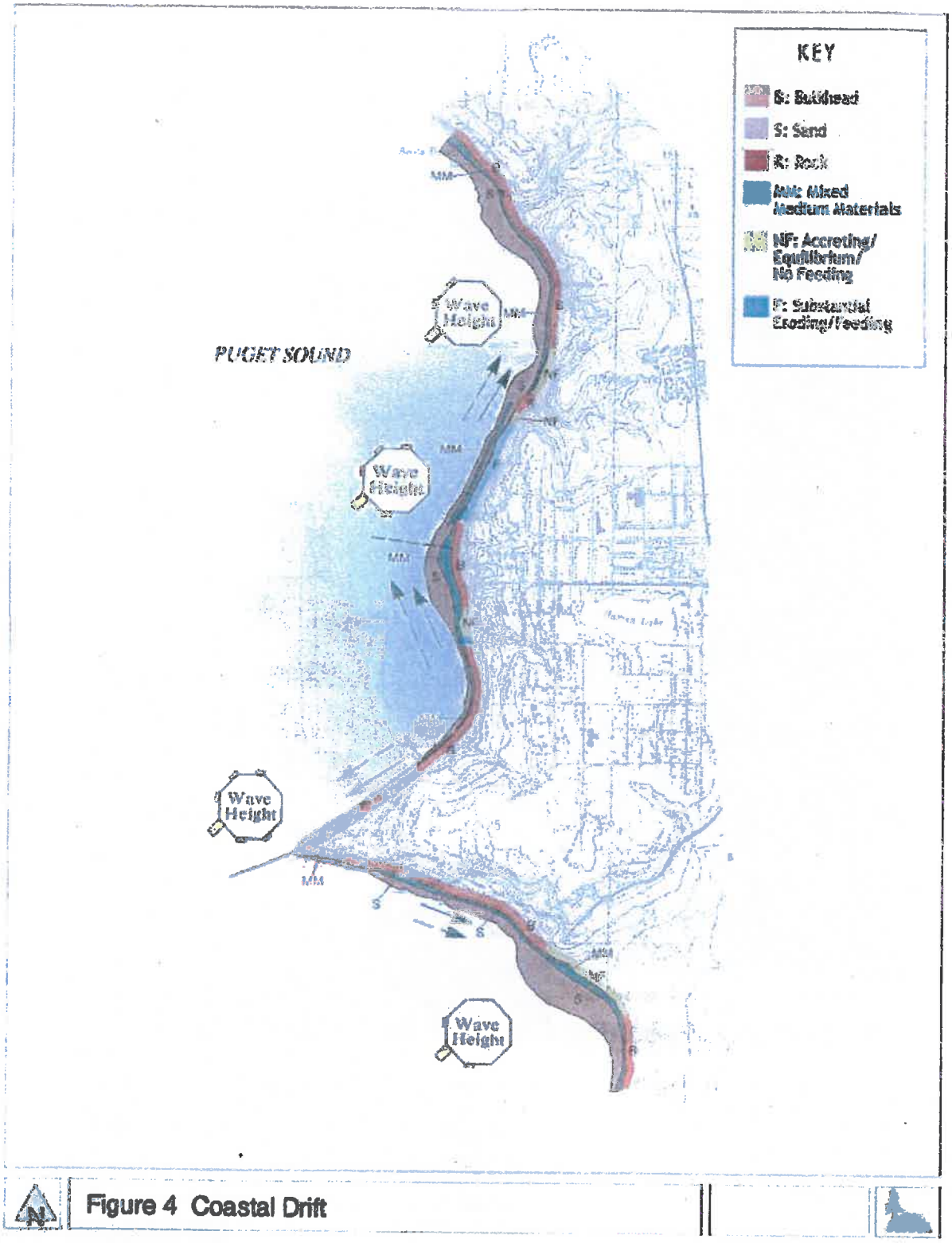
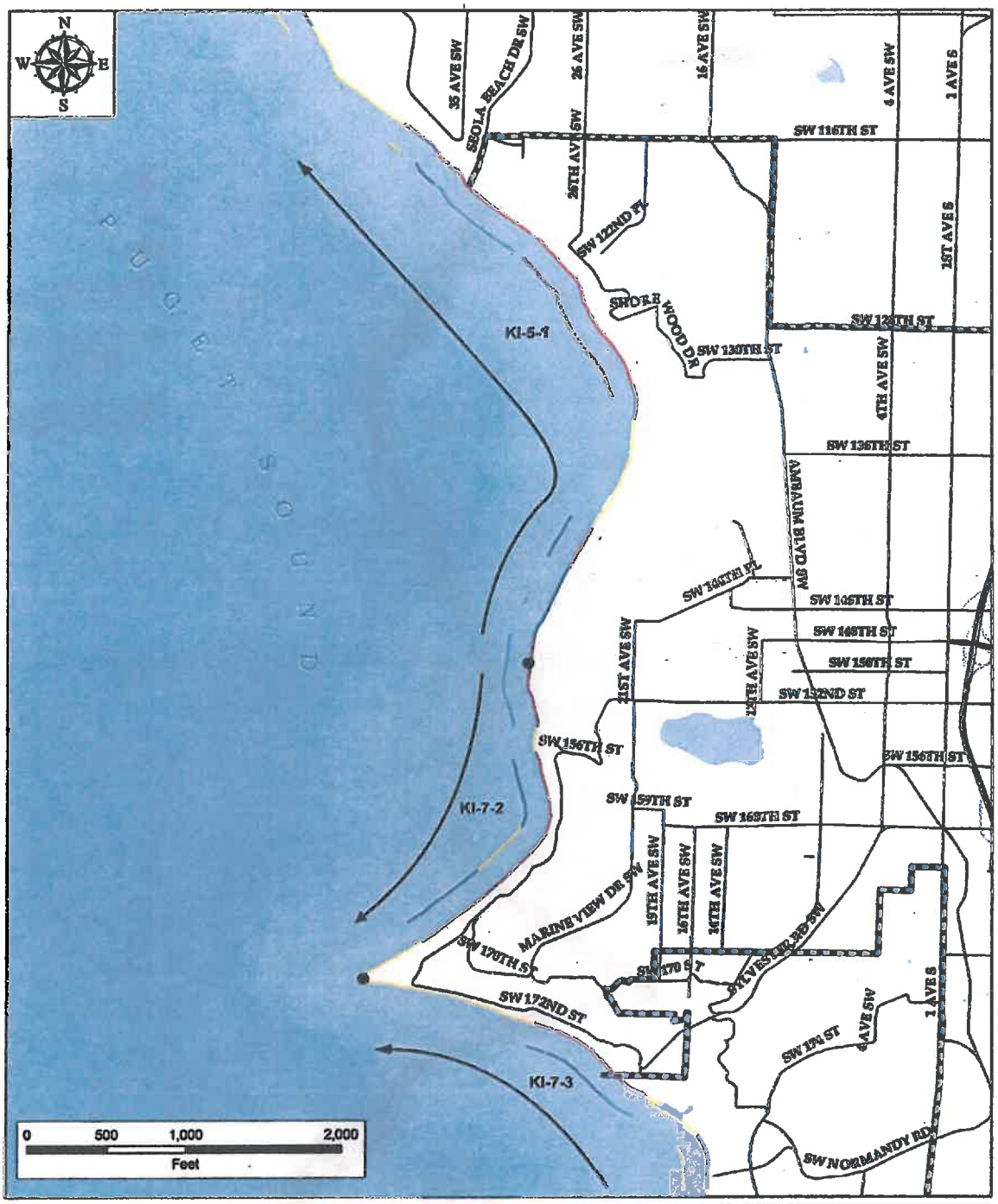



Figure 4 Coastal Drift

(adapted from The Burien Plan; City of Burien 2006)




Boundary of Burien

Drift Cell Boundaries

**Historic Conditions Shoretypes (offshore)**

- Feeder Bluff
- Feeder Bluff Exceptional
- Potential Feeder Bluff
- NOT Feeder Bluff

**Current Conditions Shoretypes**

- Accretion Shoreform
- Feeder Bluff
- Feeder Bluff Exceptional
- Modified

Data Source: Inventory and Assessment of Current and Historic Beach Feeding Sources/Erosion and Accretion Areas for the Marine Shorelines of Water Resource Inventory Areas 8 & 9

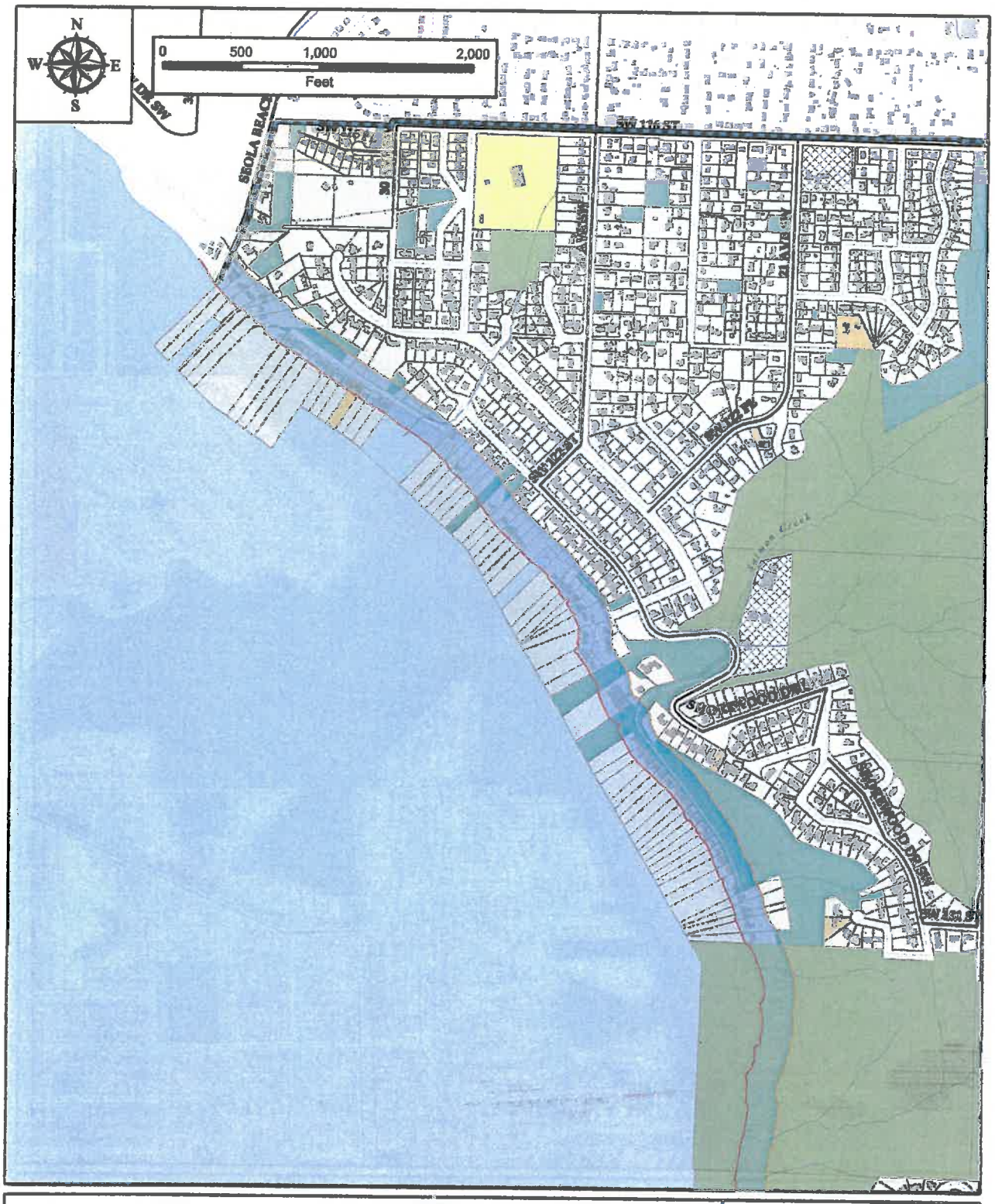
Published: December 2005

City of Burien

Shoreline Master Program

Current & Historic (buffered offshore) Sediment Sources

Figure 4A




Boundary of Burien

Buildings

**Reaches**

- Lake Burien
- Marine 1
- Marine 2
- Marine 3
- Marine 4

**Land Use**

- SFR
- Low Density MFR
- High Density MFR
- Industrial
- Commercial
- Insitutional
- Office
- Park
- Retail
- School
- Transportation
- VACANT
- Other

**City of Burien**

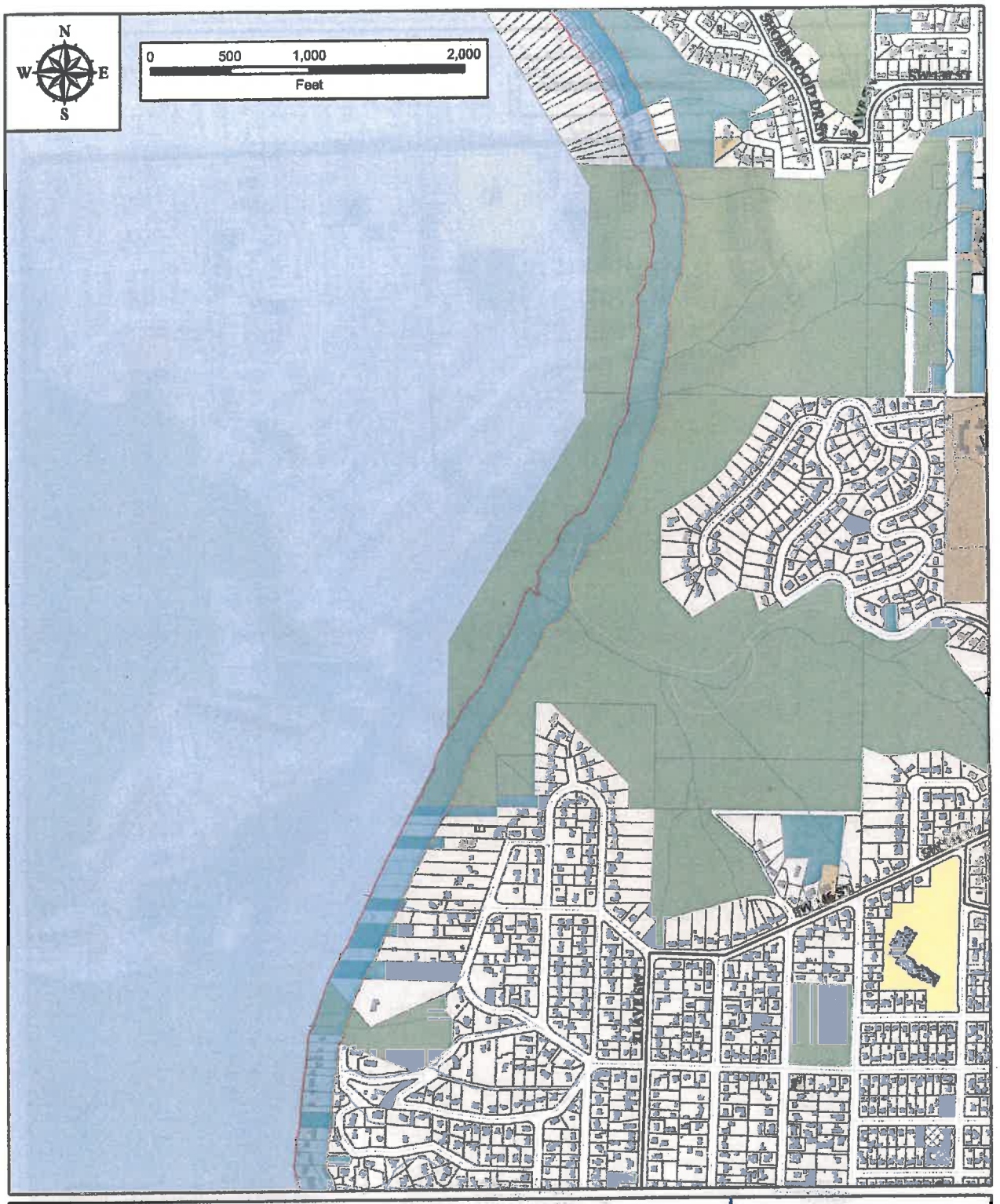
**Shoreline Master Program**

Land Use

*Marine 1*

Date: Mar 31, 2009

Figure 5A




Boundary of Burien

Buildings

**Reaches**

- Lake Burien
- Marine 1
- Marine 2
- Marine 3
- Marine 4

**Land Use**

- SFR
- Low Density MFR
- High Density MFR
- Industrial
- Commercial
- Insitutional
- Office
- Park
- Retail
- School
- Transportation
- VACANT
- Other

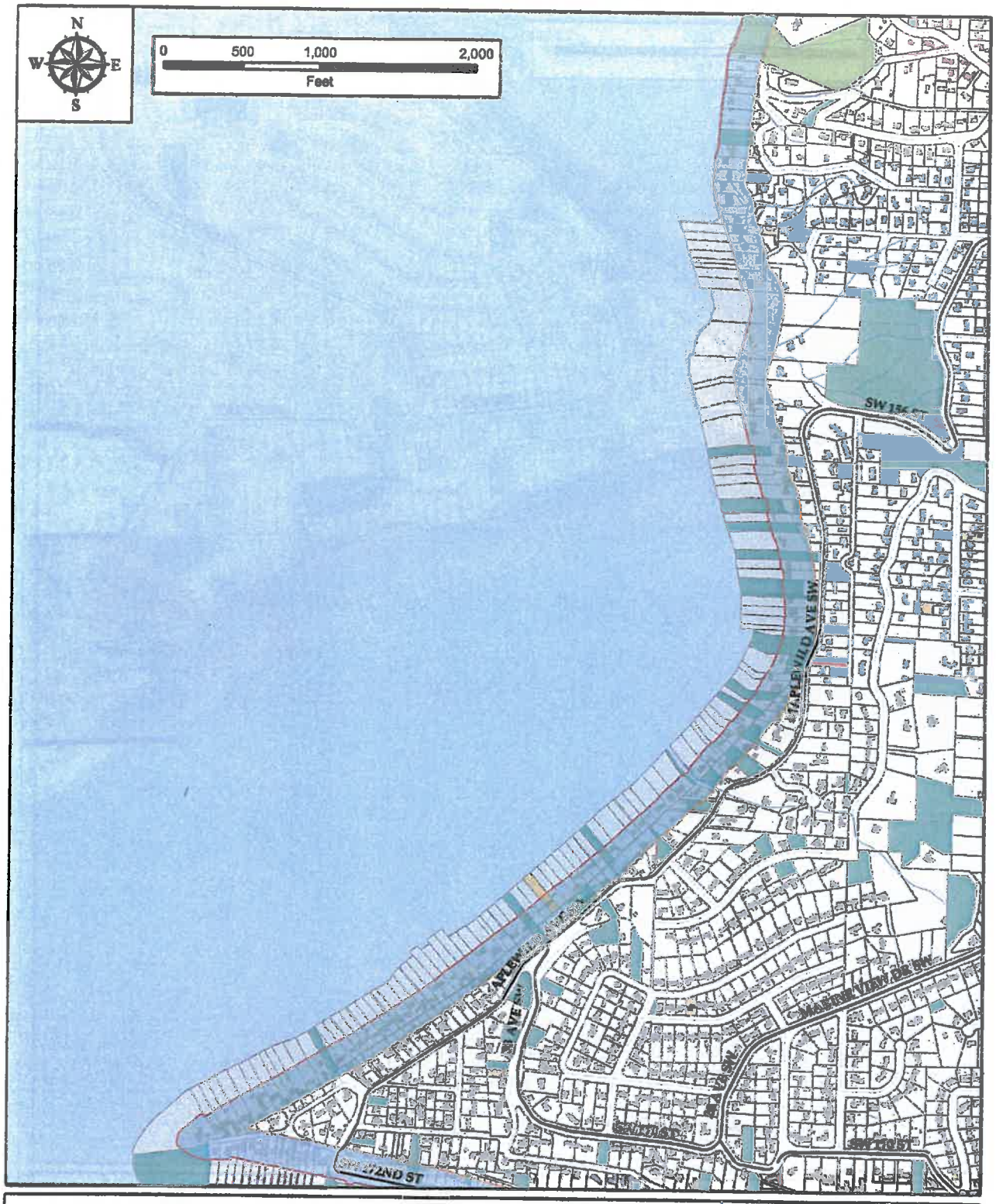
**City of Burien**

**Shoreline Master Program**

**Land Use**

*Marine 2*

Figure 5B




Boundary of Burien

Buildings

**Reaches**

- Lake Burien
- Marine 1
- Marine 2
- Marine 3
- Marine 4

**Land Use**

- SFR
- Low Density MFR
- High Density MFR
- Industrial
- Commercial
- Insitutional
- Office
- Park
- Retail
- School
- Transportation
- VACANT
- Other

**City of Burien**

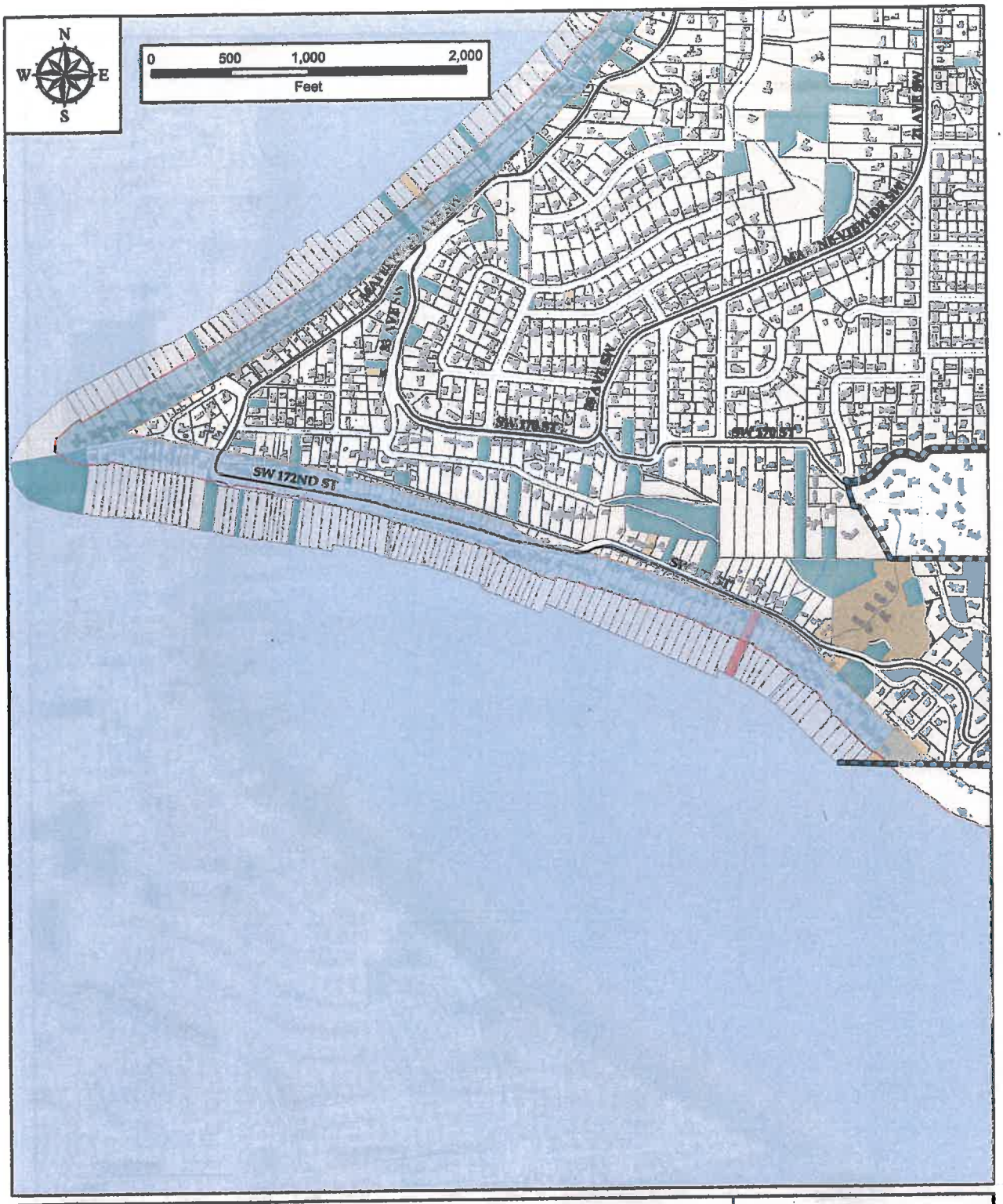
**Shoreline Master Program**

Land Use

*Marine 3*

Date: Mar 24, 2008

Figure 5C




Boundary of Burien

Buildings

**Reaches**

- Lake Burien
- Marine 1
- Marine 2
- Marine 3
- Marine 4

**Land Use**

- SFR
- Low Density MFR
- High Density MFR
- Industrial
- Commercial
- Insitutional
- Office
- Park
- Retail
- School
- Transportation
- VACANT
- Other

**City of Burien**

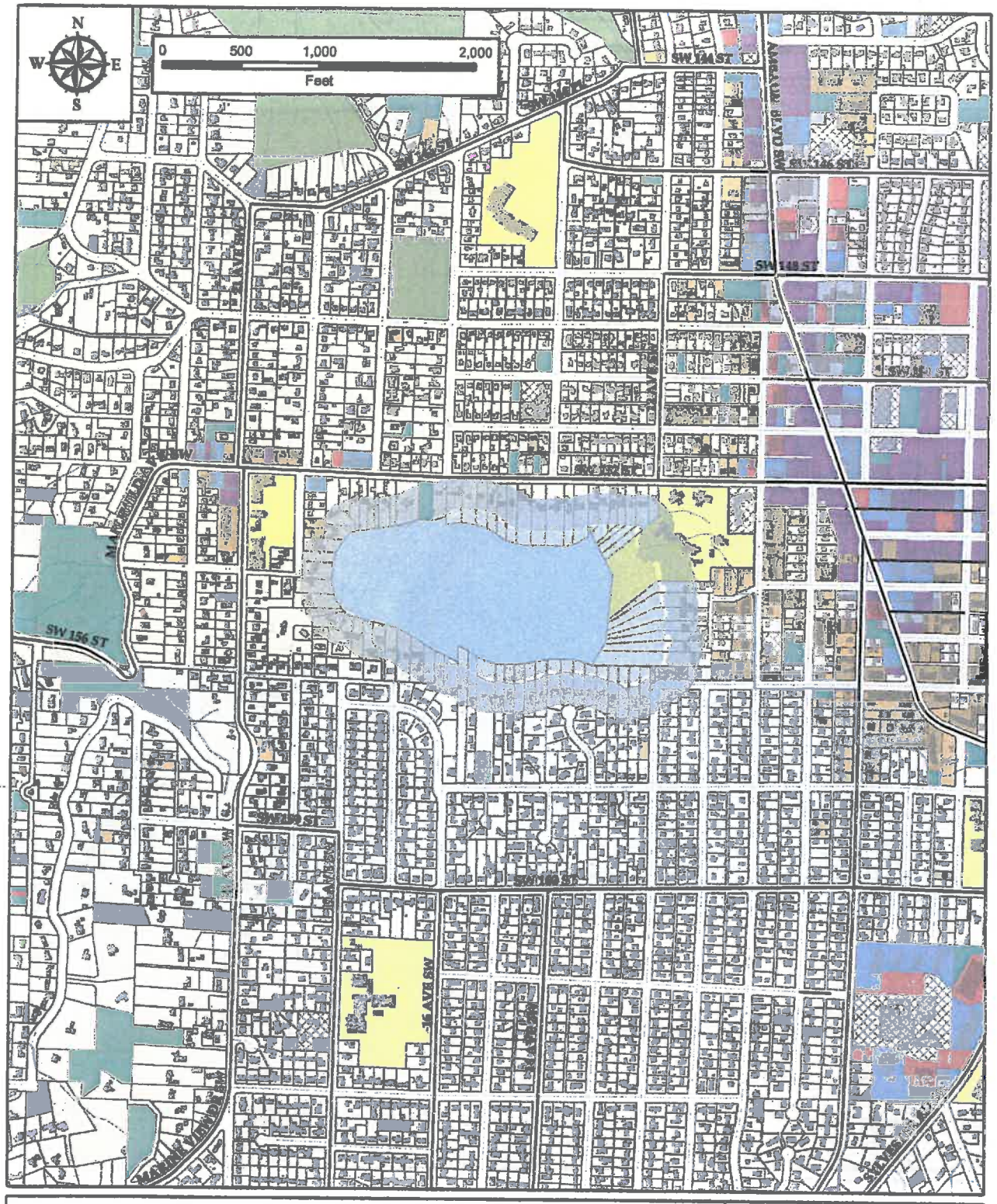
**Shoreline Master Program**

**Land Use**

*Marine 4*

Date: Mar 04 2009

Figure 5D




Boundary of Burien

Buildings

**Reaches**

- Lake Burien
- Marine 1
- Marine 2
- Marine 3
- Marine 4

**Land Use**

- SFR
- Low Density MFR
- High Density MFR
- Industrial
- Commercial
- Insitutional
- Office
- Park
- Retail
- School
- Transportation
- VACANT
- Other

**City of Burien**

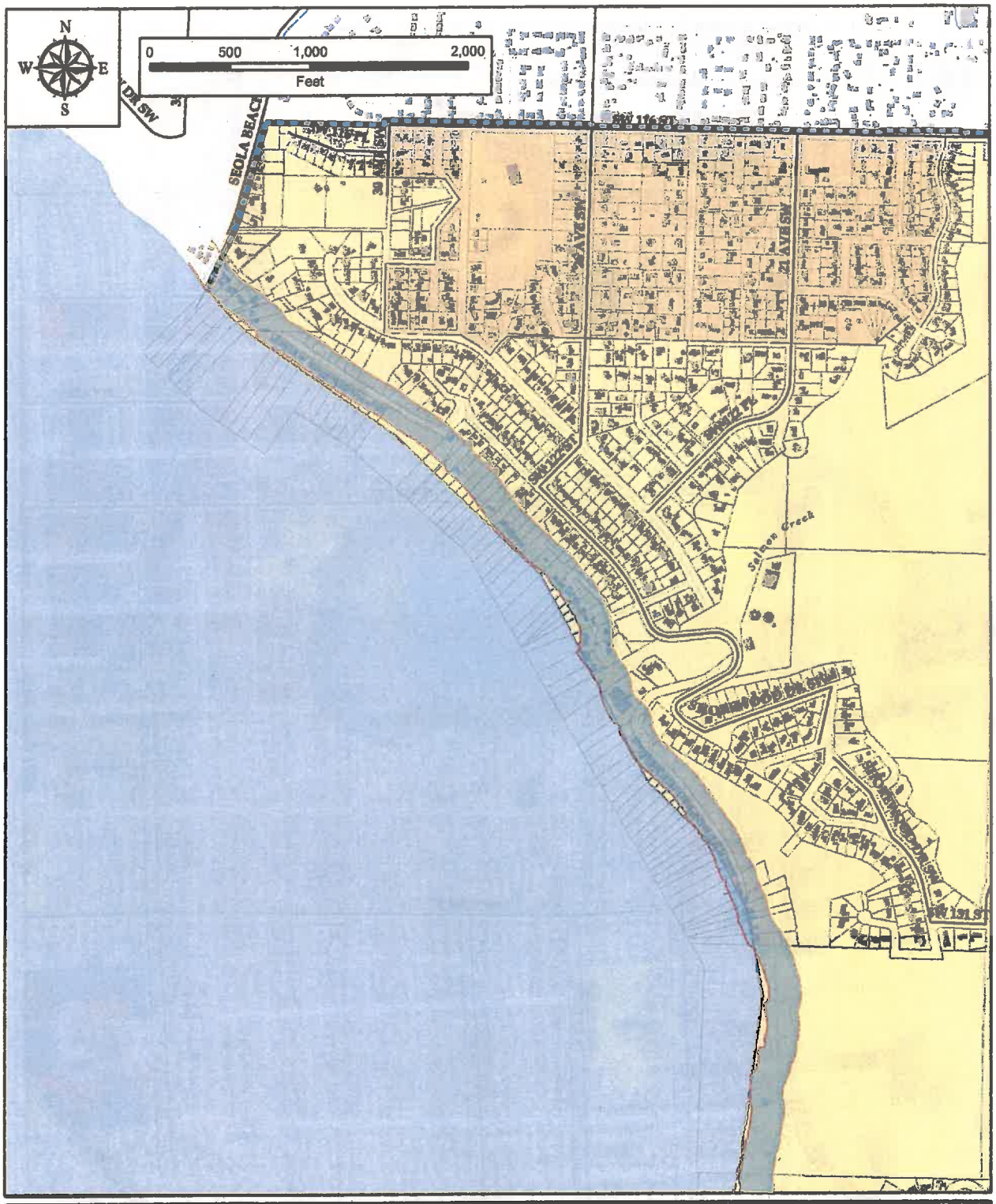
**Shoreline Master Program**

Land Use

*Lake Burien*

Date: Mar 04, 2008

Figure 5E




Boundary of Burien
Buildings

**Reaches**

- Lake Burien
- Marine 1
- Marine 2
- Marine 3
- Marine 4

- RS-A Residential Single-Family
- RS-12,000 Residential Single-Family
- RS-7,200 Residential Single-Family
- RM-12 Residential Multi-Family
- RM-18 Residential Multi-Family
- RM-24 Residential Multi-Family
- CN Neighborhood Center
- CI Intersection Commercial
- DC Downtown Commercial

- CR Regional Commercial
- CC-1 Community Commercial
- CC-2 Community Commercial
- O Office
- I Industrial
- Special Planning Area 1
- Special Planning Area 2
- Special Planning Area 3
- Special Planning Area 4

City of Burien

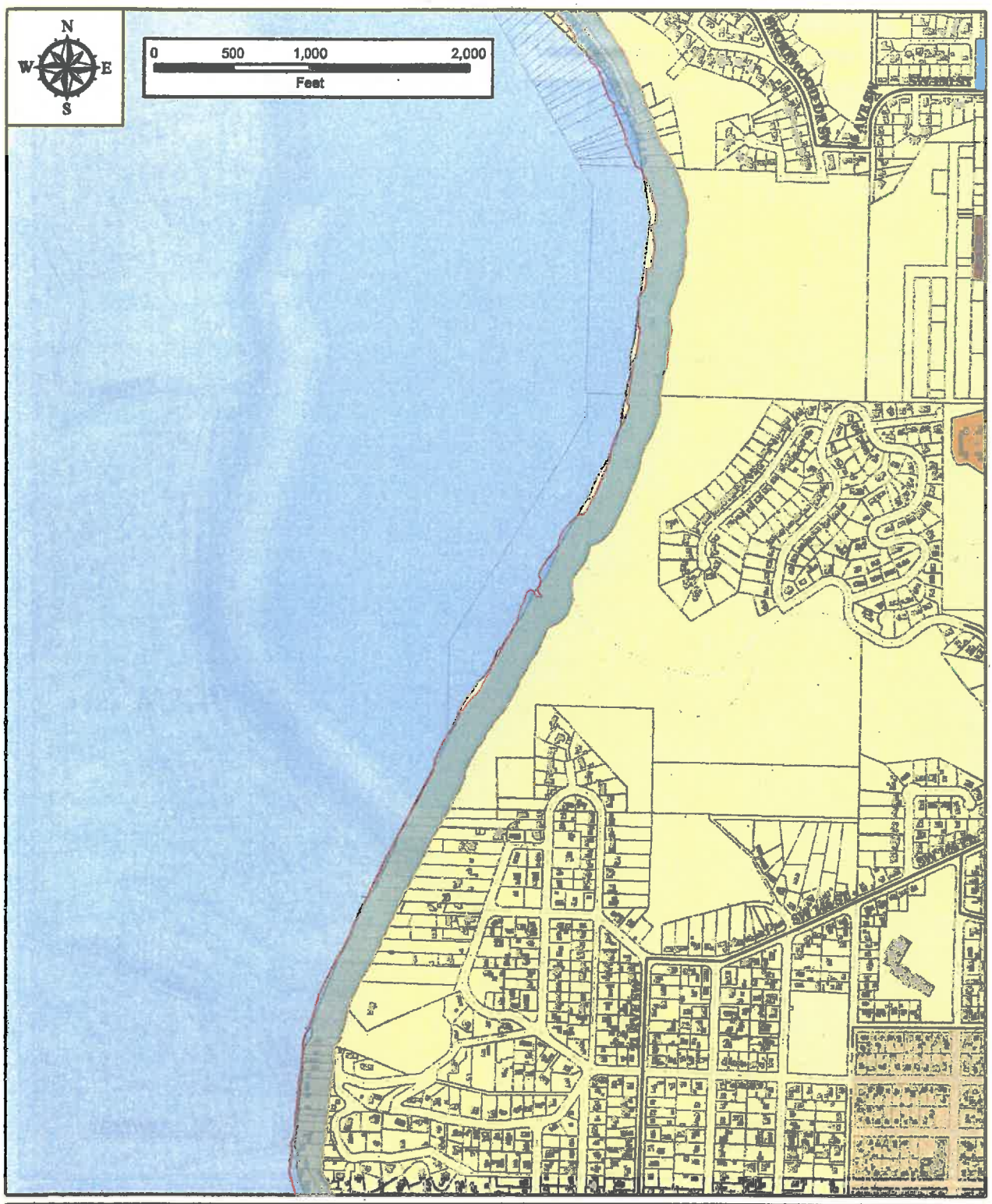
**Shoreline Master Program**

Zoning

*Marine 1*

Date: Mar 04, 2008

Figure 6A




Boundary of Burien
Buildings

**Reaches**

- Lake Burien
- Marine 1
- Marine 2
- Marine 3
- Marine 4

- RS-A Residential Single-Family
- RS-12,000 Residential Single-Family
- RS-7,200 Residential Single-Family
- RM-12 Residential Multi-Family
- RM-18 Residential Multi-Family
- RM-24 Residential Multi-Family
- CN Neighborhood Center
- CI Intersection Commercial
- DC Downtown Commercial

- CR Regional Commercial
- CC-1 Community Commercial
- CC-2 Community Commercial
- O Office
- I Industrial
- Special Planning Area 1
- Special Planning Area 2
- Special Planning Area 3
- Special Planning Area 4

**City of Burien**

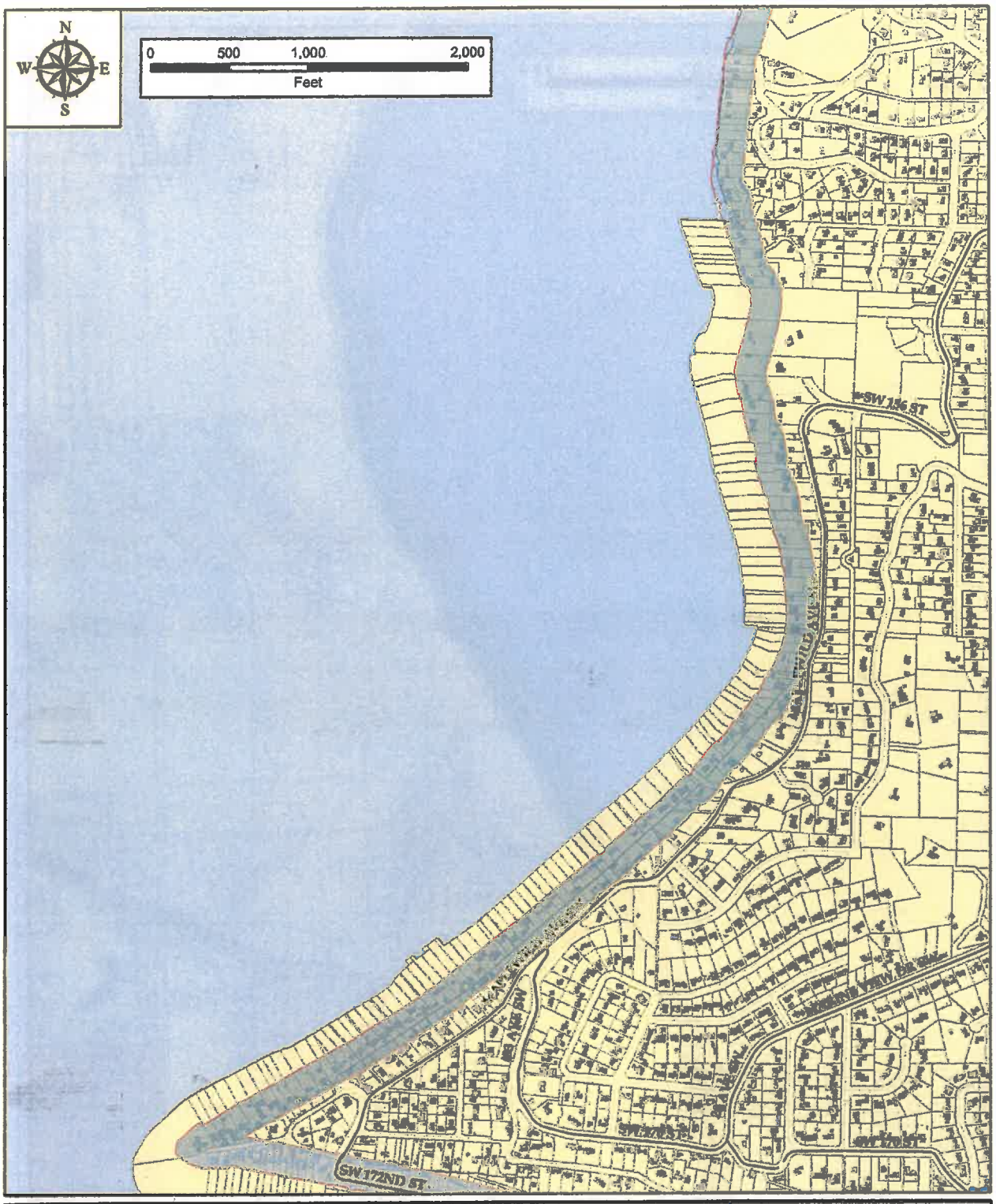
**Shoreline Master Program**

## Zoning

*Marine 2*

Date: May 14, 2008

Figure 6B




Boundary of Burien
Buildings

**Reaches**

- Lake Burien
- Marine 1
- Marine 2
- Marine 3
- Marine 4

- RS-A Residential Single-Family
- RS-12,000 Residential Single-Family
- RS-7,200 Residential Single-Family
- RM-12 Residential Multi-Family
- RM-18 Residential Multi-Family
- RM-24 Residential Multi-Family
- CN Neighborhood Center
- CI Intersection Commercial
- DC Downtown Commercial

- CR Regional Commercial
- CC-1 Community Commercial
- CC-2 Community Commercial
- O Office
- I Industrial
- Special Planning Area 1
- Special Planning Area 2
- Special Planning Area 3
- Special Planning Area 4

**City of Burien**

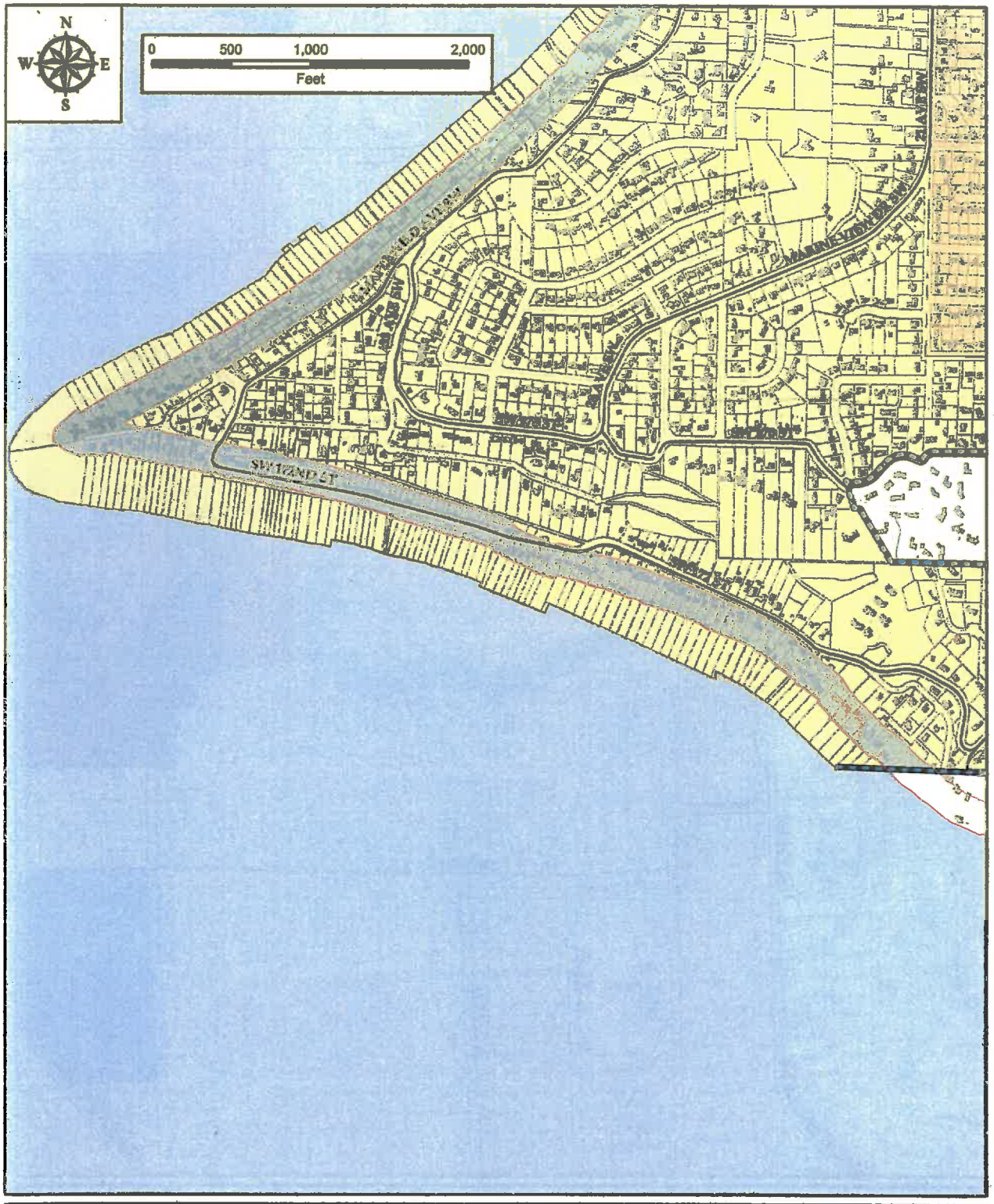
**Shoreline Master Program**

Zoning

*Marine 3*

Date: Mar 01 2008

Figure 6C




Boundary of Burien
Buildings

**Reaches**

- Lake Burien
- Marine 1
- Marine 2
- Marine 3
- Marine 4

- RS-A Residential Single-Family
- RS-12,000 Residential Single-Family
- RS-7,200 Residential Single-Family
- RM-12 Residential Multi-Family
- RM-18 Residential Multi-Family
- RM-24 Residential Multi-Family
- CN Neighborhood Center
- CI Intersection Commercial
- DC Downtown Commercial

- CR Regional Commercial
- CC-1 Community Commercial
- CC-2 Community Commercial
- O Office
- I Industrial
- Special Planning Area 1
- Special Planning Area 2
- Special Planning Area 3
- Special Planning Area 4

**City of Burien**

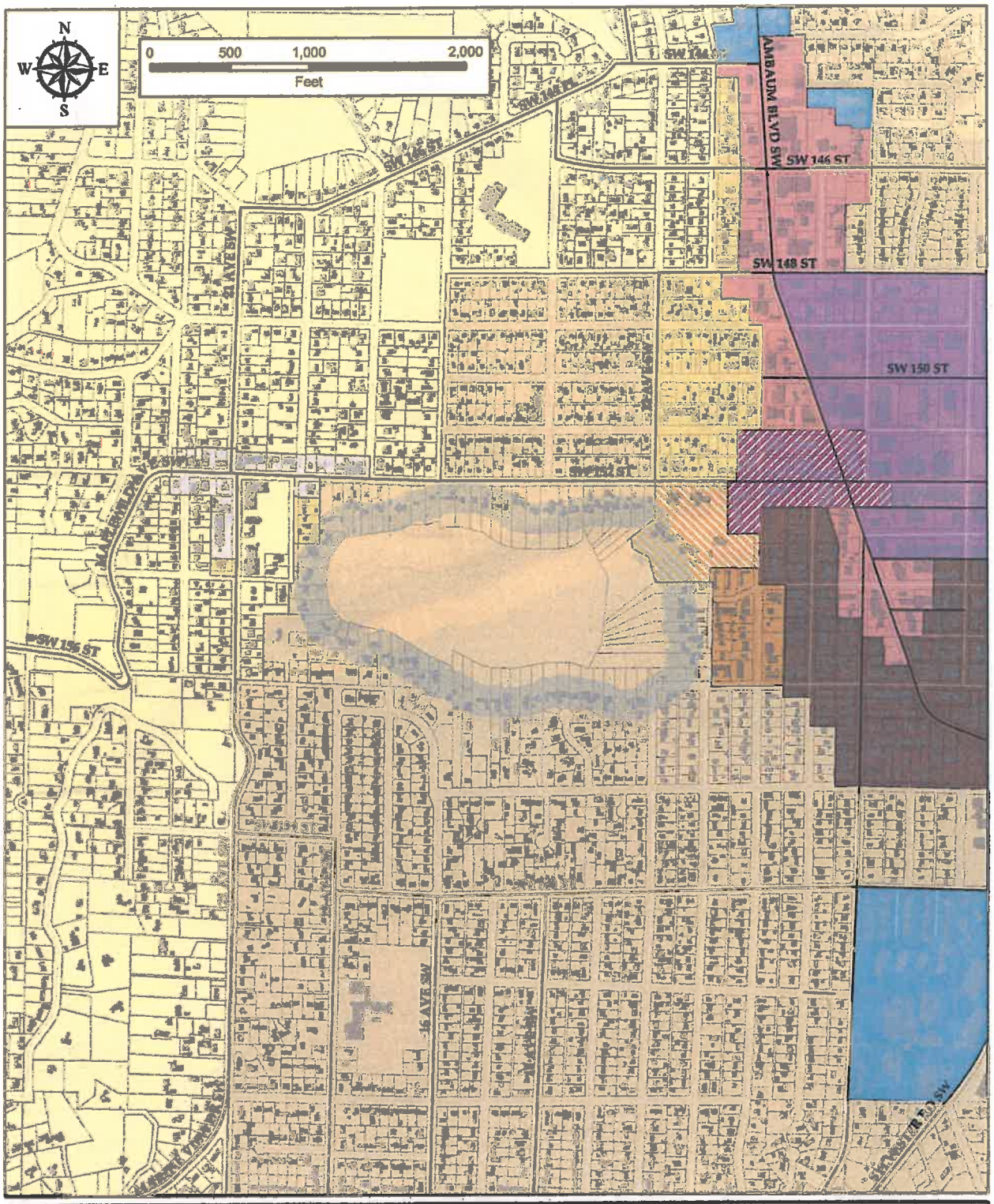
**Shoreline Master Program**

Zoning

*Marine 4*

Date: May 14, 2003

Figure 6D




Boundary of Burien
Buildings

**Reaches**

- Lake Burien
- Marine 1
- Marine 2
- Marine 3
- Marine 4

- RS-A Residential Single-Family
- RS-12,000 Residential Single-Family
- RS-7,200 Residential Single-Family
- RM-12 Residential Multi-Family
- RM-18 Residential Multi-Family
- RM-24 Residential Multi-Family
- CN Neighborhood Center
- CI Intersection Commercial
- DC Downtown Commercial

- CR Regional Commercial
- CC-1 Community Commercial
- CC-2 Community Commercial
- O Office
- I Industrial
- Special Planning Area 1
- Special Planning Area 2
- Special Planning Area 3
- Special Planning Area 4

**City of Burien**

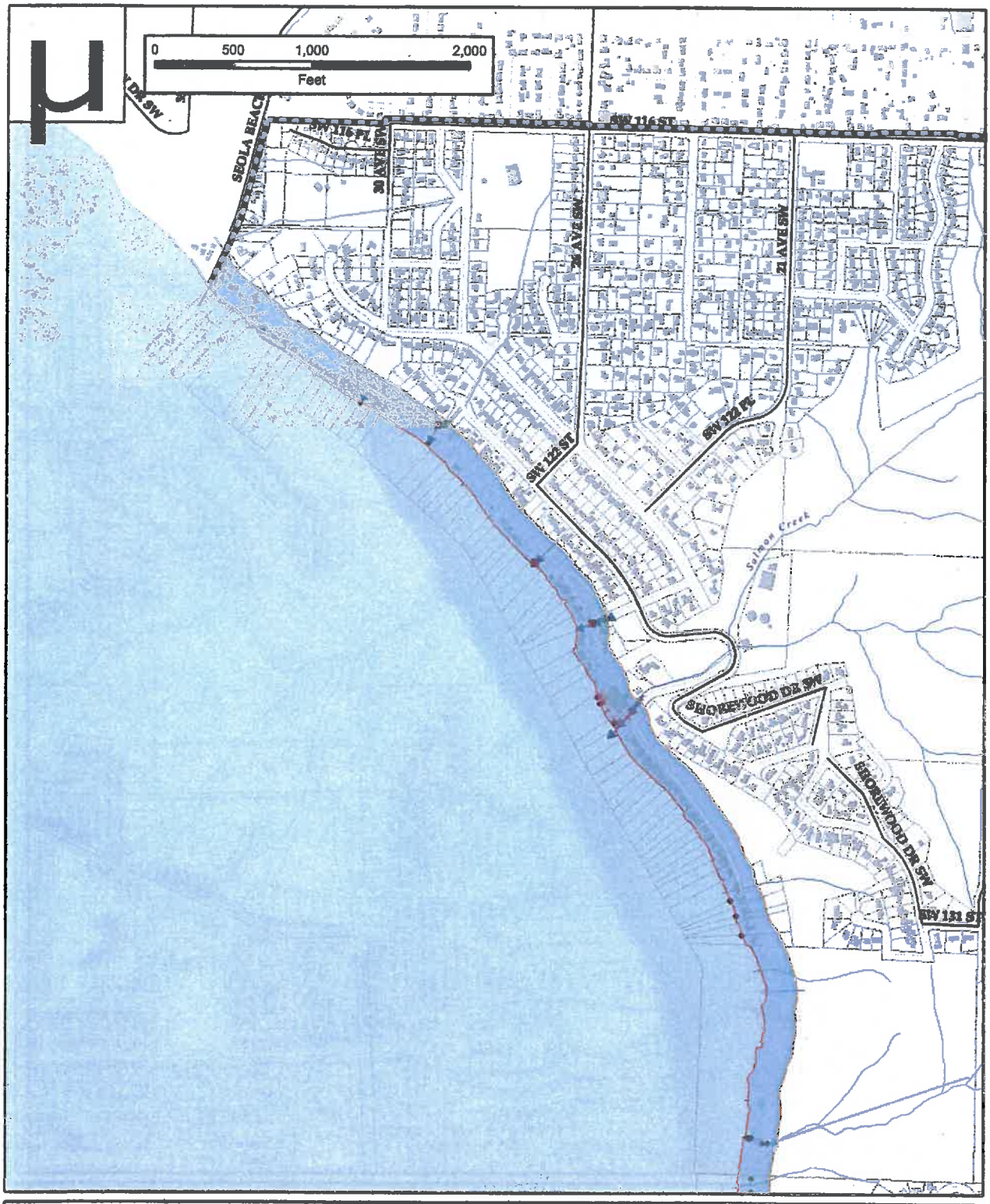
**Shoreline Master Program**

## Zoning

*Lake Burien*

Date: May 24, 2013

Figure 6E




Boundary of Burien
Buildings
Reaches
Lake Burien
Marine 1
Marine 2
Marine 3
Marine 4

**Catchbasin Reach TYPE**

- $ Type 2 Flow Splitter
- Other
- Downstream Defender
- Pump Station
- 2 Stormfilter Vault
- CB Type 1
- S Type 1 FROP
- CB Type 1 Infiltration
- CB Type 1 Inlet
- CB Type 2
- Type 2 FROP
- CB Type 2 Infiltration
- Type 2 Inlet
- 4 Type 3 Infiltration
- N Type 3 Vault
- No Data
- Other
- D Joint

- Salmon Creek
- Miller Creek
- Small Creek
- Open Flow
- Bioswale
- Sheet Flow
- Ditches
- Storm Pipes

**City of Burien**

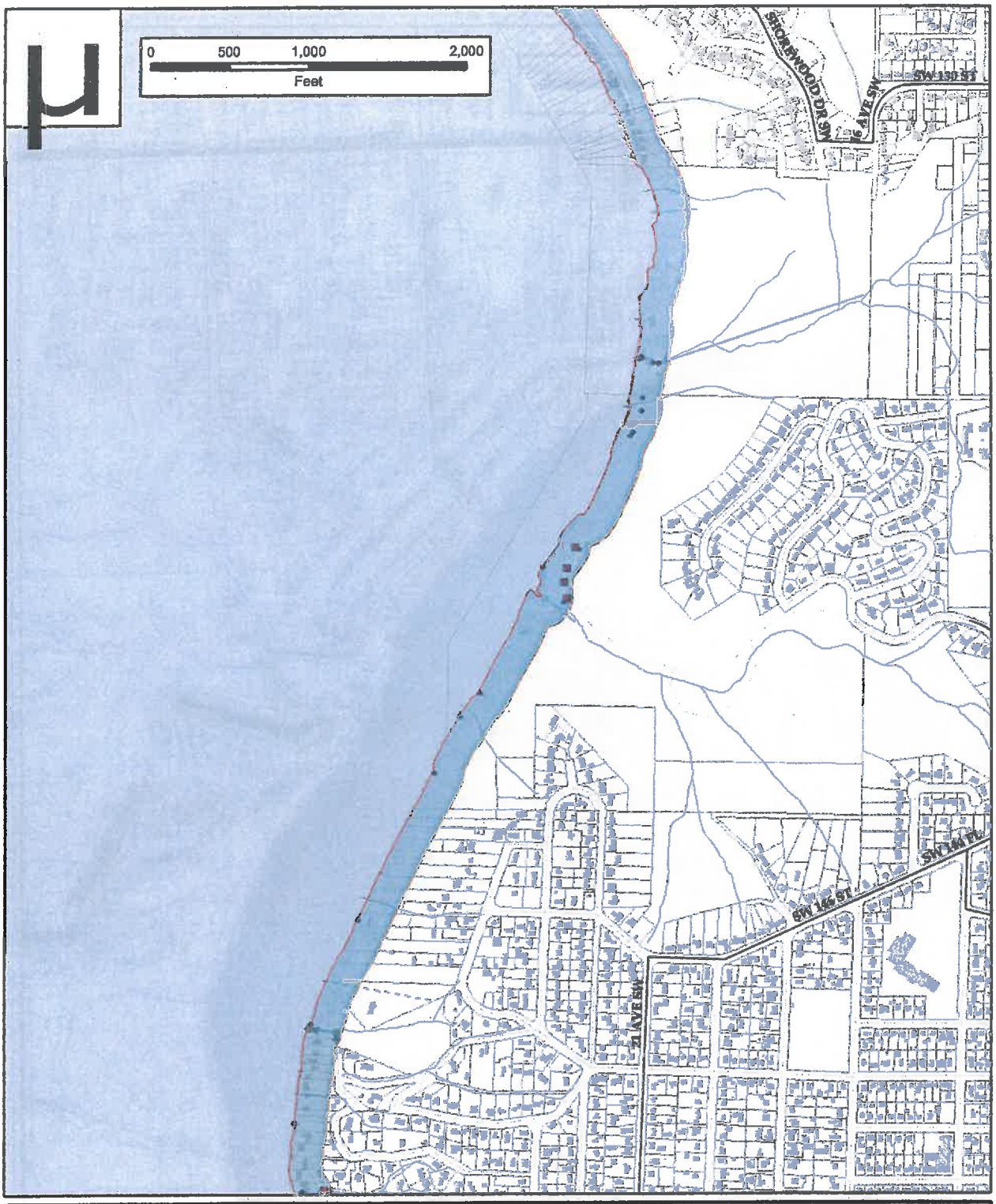
**Shoreline Master Program**

## Stormwater System

*Marine 1*

Date: Mar 24 2008

Figure 7A




Boundary of Burien
Buildings

**Reaches**
- Lake Burien
- Marine 1
- Marine 2
- Marine 3
- Marine 4

**Catchbasin Reach TYPE**
- $ Type 2 Flow Splitter
- Other
- Downstream Defender
- Ú Pump Station
- 2 Stormfilter Vault
- CB Type 1
- S Type 1 FROP
- CB Type 1 Infiltration
- CB Type 1 Inlet
- CB Type 2
- Type 2 FROP
- CB Type 2 Infiltration
- Type 2 Inlet
- 4 Type 3 Infiltration
- N Type 3 Vault
- No Data
- Other
- D Joint

- Salmon Creek
- Miller Creek
- Small Creek
- Open Flow
- Bioswale
- Sheet Flow
- Ditches
- Storm Pipes

City of Burien

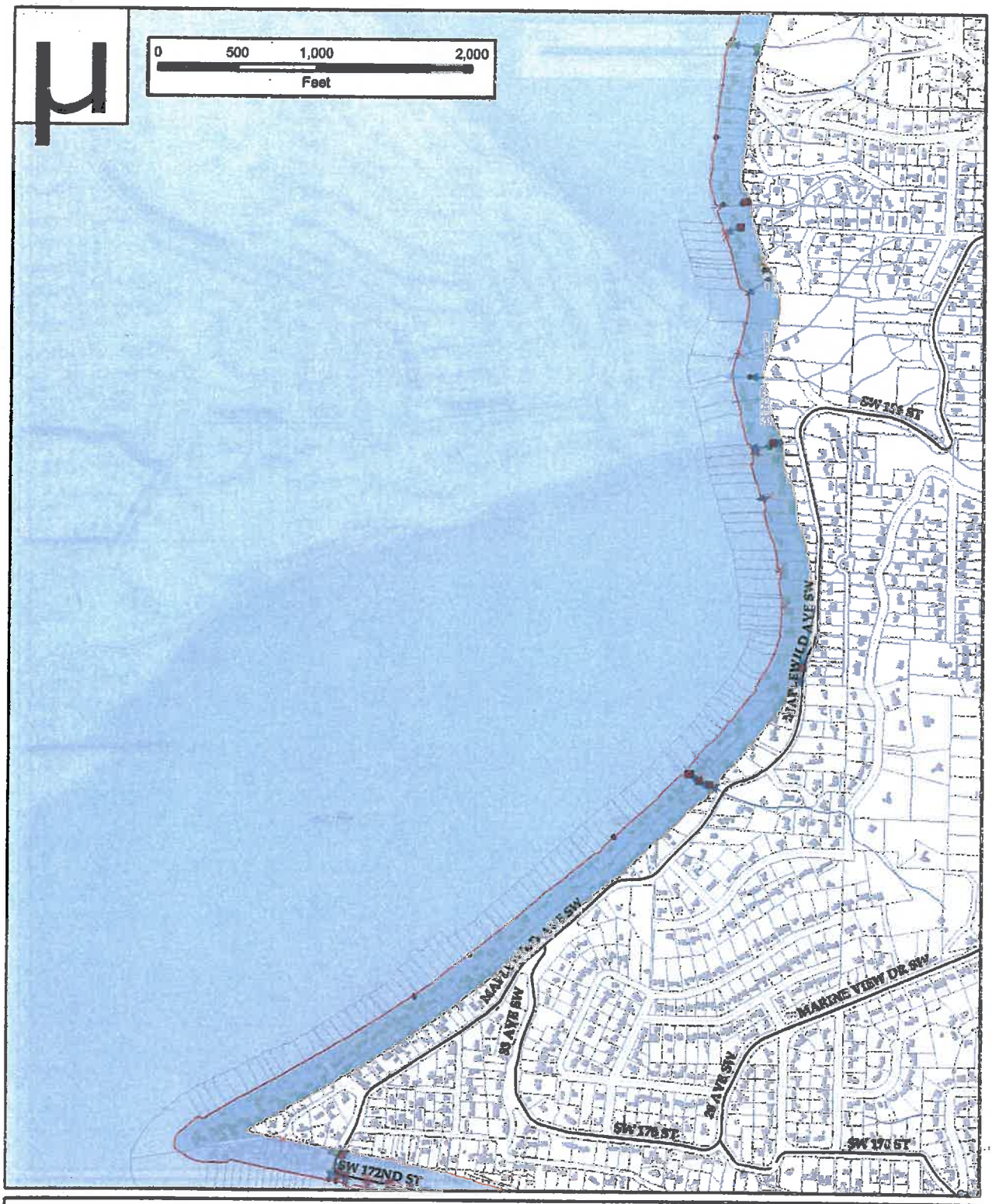
**Shoreline Master Program**

## Stormwater System

*Marine 2*

Date: March 2008

Figure 7B




Boundary of Burien
Buildings

**Reaches**

- Lake Burien
- Marine 1
- Marine 2
- Marine 3
- Marine 4

**Catchbasin Reach TYPE**

- Type 2 Flow Splitter
- Other
- Downstream Defect
- Pump Station
- Stormfilter Vault
- CB Type 1
- Type 1 FROP
- CB Type 1 Infiltration
- CB Type 1 Inlet
- CB Type 2
- Type 2 FROP
- CB Type 2 Infiltration
- Type 2 Inlet
- Type 3 Infiltration
- Type 3 Vault
- No Data
- Other
- Joint

- Salmon Creek
- Miller Creek
- Small Creek
- Open Flow
- Bioswale
- Sheet Flow
- Ditches
- Storm Pipes

**City of Burien**

**Shoreline Master Program**

Stormwater System

*Marine 3*

Figure 7C

Boundary of Burien
Buildings

**Reaches**

- Lake Burien
- Marine 1
- Marine 2
- Marine 3
- Marine 4

**Catchbasin Reach TYPE**

- $ Type 2 Flow Splitter
- Other
- Downstream Defender
- Pump Station
- 2 Stormfilter Vault
- CB Type 1
- S Type 1 FROP
- CB Type 1 Infiltration
- CB Type 1 Inlet
- CB Type 2
- Type 2 FROP
- CB Type 2 Infiltration
- Type 2 Inlet
- 4 Type 3 Infiltration
- Type 3 Vault
- No Data
- Other
- D Joint

- Salmon Creek
- Miller Creek
- Small Creek
- Open Flow
- Bioswale
- Sheet Flow
- Ditches
- Storm Pipes

City of Burien

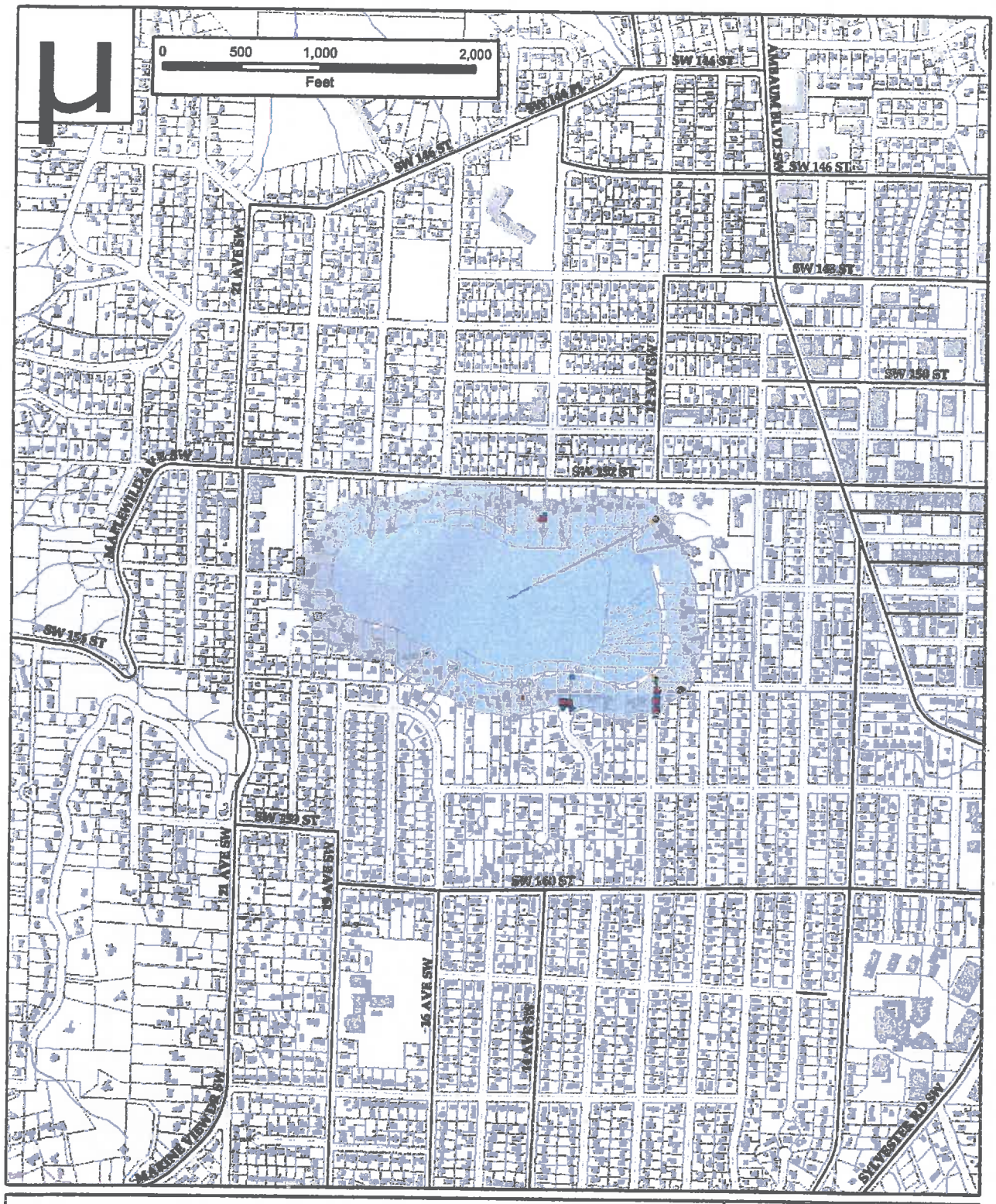
**Shoreline Master Program**

## Stormwater System

*Marine 4*

Date: March 2008

Figure 2D




Boundary of Burien
Buildings

**Reaches**

- Lake Burien
- Marine 1
- Marine 2
- Marine 3
- Marine 4

**Catchbasin Reach TYPE**

- Type 2 Flow Splitter
- Other
- Downstream Defender
- Pump Station
- Stormfilter Vault
- CB Type 1
- Type 1 FROP
- CB Type 1 Infiltration
- CB Type 1 Inlet
- CB Type 2
- Type 2 FROP
- CB Type 2 Infiltration
- Type 2 Inlet
- Type 3 Infiltration
- Type 3 Vault
- No Data
- Other
- Joint

- Salmon Creek
- Miller Creek
- Small Creek
- Open Flow
- Bioswale
- Sheet Flow
- Ditches
- Storm Pipes

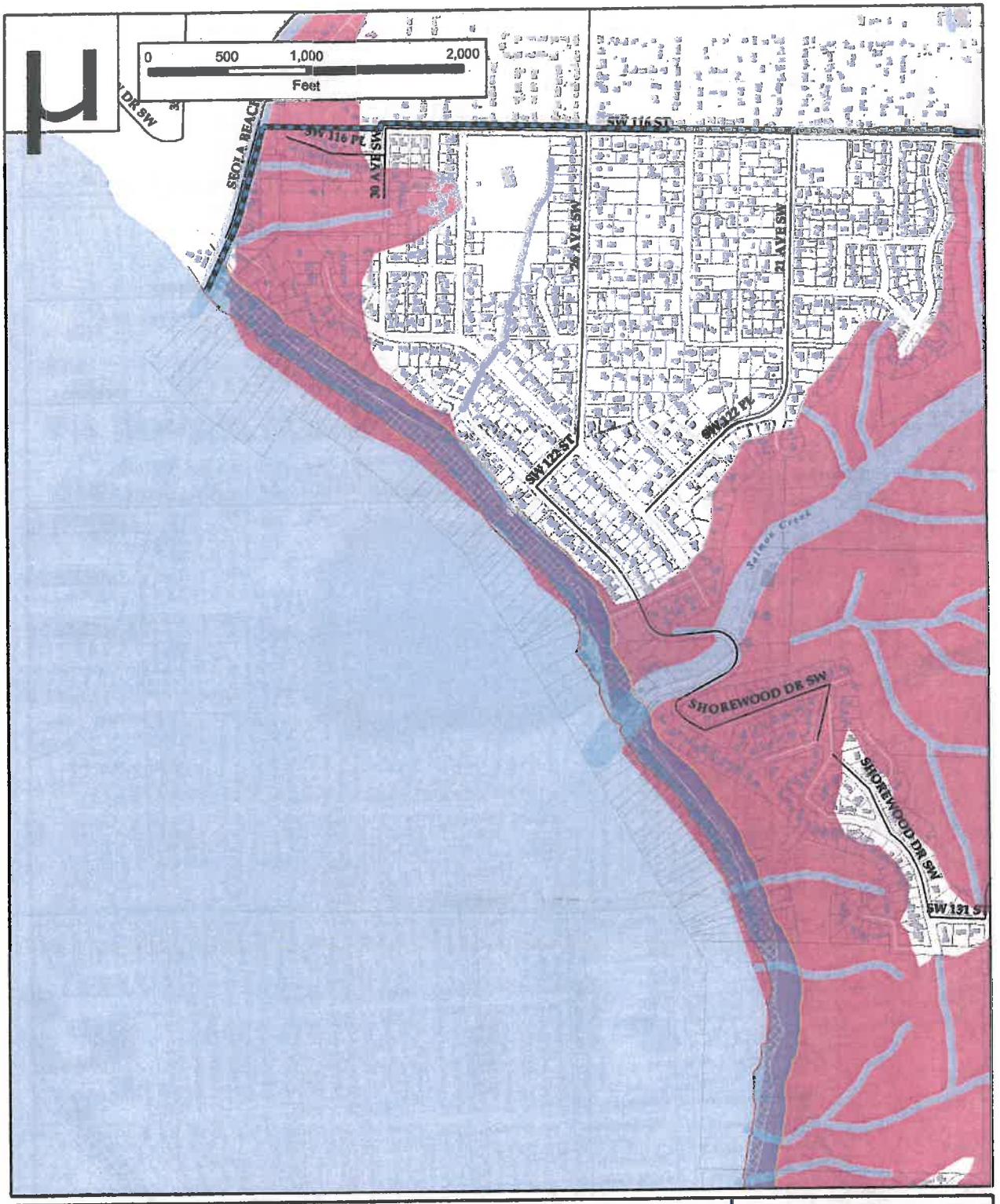
**City of Burien**

**Shoreline Master Program**

Stormwater System

*Lake Burien*

Figure 7E




Boundary of Burien
Buildings

**Reaches**

- Lake Burien
- Marine 1
- Marine 2
- Marine 3
- Marine 4

- Seismic
- Landslide
- Aquifer Recharge Areas
- Wetlands
- Stream Buffers
- 100-Year Flood Area - FEMA

**City of Burien**

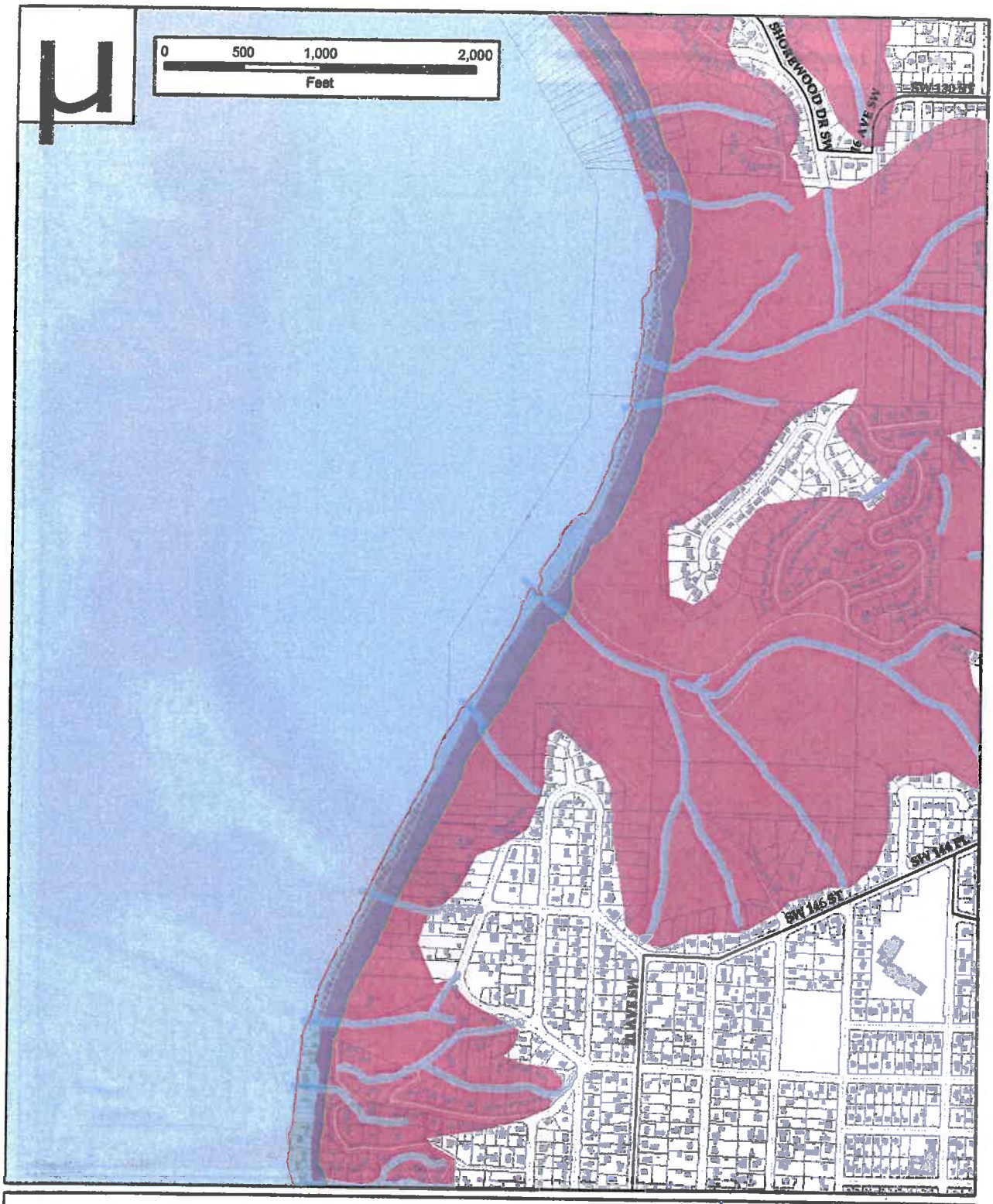
**Shoreline Master Program**

## Critical Areas

*Marine 1*

Date: Mar 04, 2008

Figure 8A




Boundary of Burien
Buildings

**Reaches**

Lake Burien
Marine 1
Marine 2
Marine 3
Marine 4

Seismic
Landslide
Aquifer Recharge Areas
Wetlands
Stream Buffers
100-Year Flood Area - FEMA

**City of Burien**

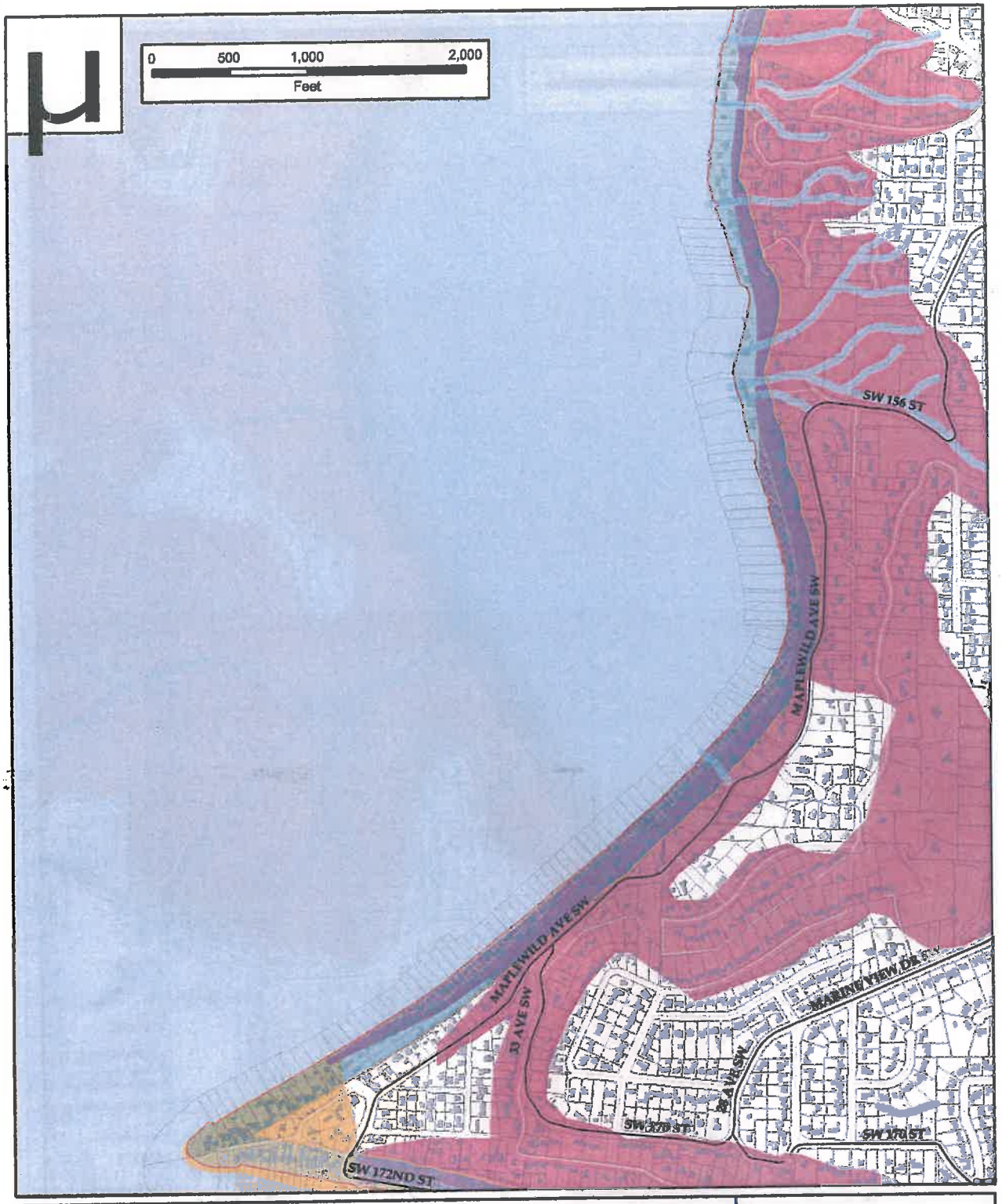
**Shoreline Master Program**

Critical Areas

*Marine 2*

Date: Mar 04, 2008

Figure 8B




Boundary of Burien
Buildings

**Reaches**

Lake Burien
Marine 1
Marine 2
Marine 3
Marine 4

Seismic
Landslide
Aquifer Recharge Areas
Wetlands
Stream Buffers
100-Year Flood Area - FEMA

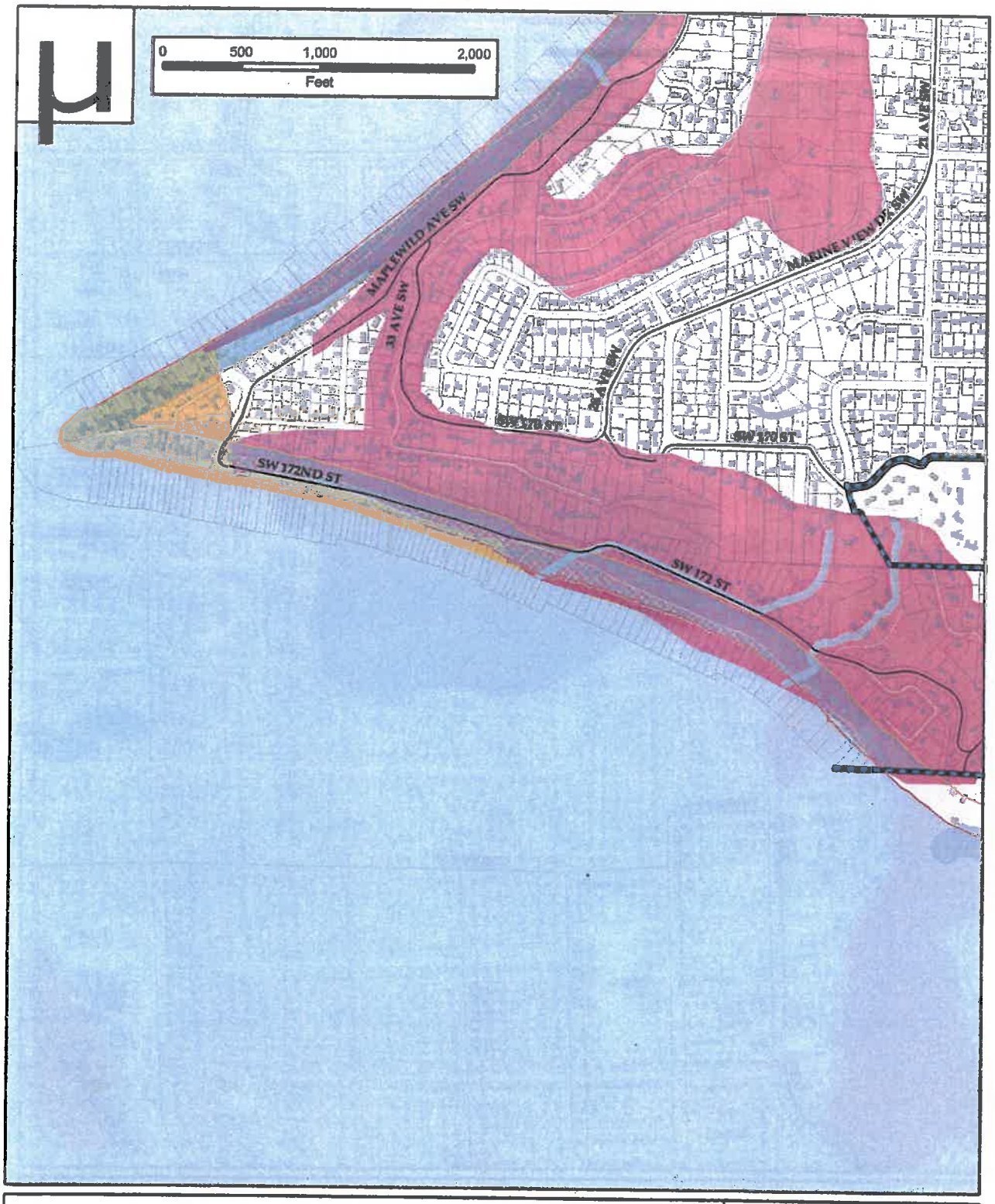
**City of Burien**

**Shoreline Master Program**

## Critical Areas

*Marine 3*

Figure 8C




Boundary of Burien
Buildings

**Reaches**

Lake Burien
Marine 1
Marine 2
Marine 3
Marine 4

Seismic
Landslide
Aquifer Recharge Areas
Wetlands
Stream Buffers
100-Year Flood Area - FEMA

**City of Burien**

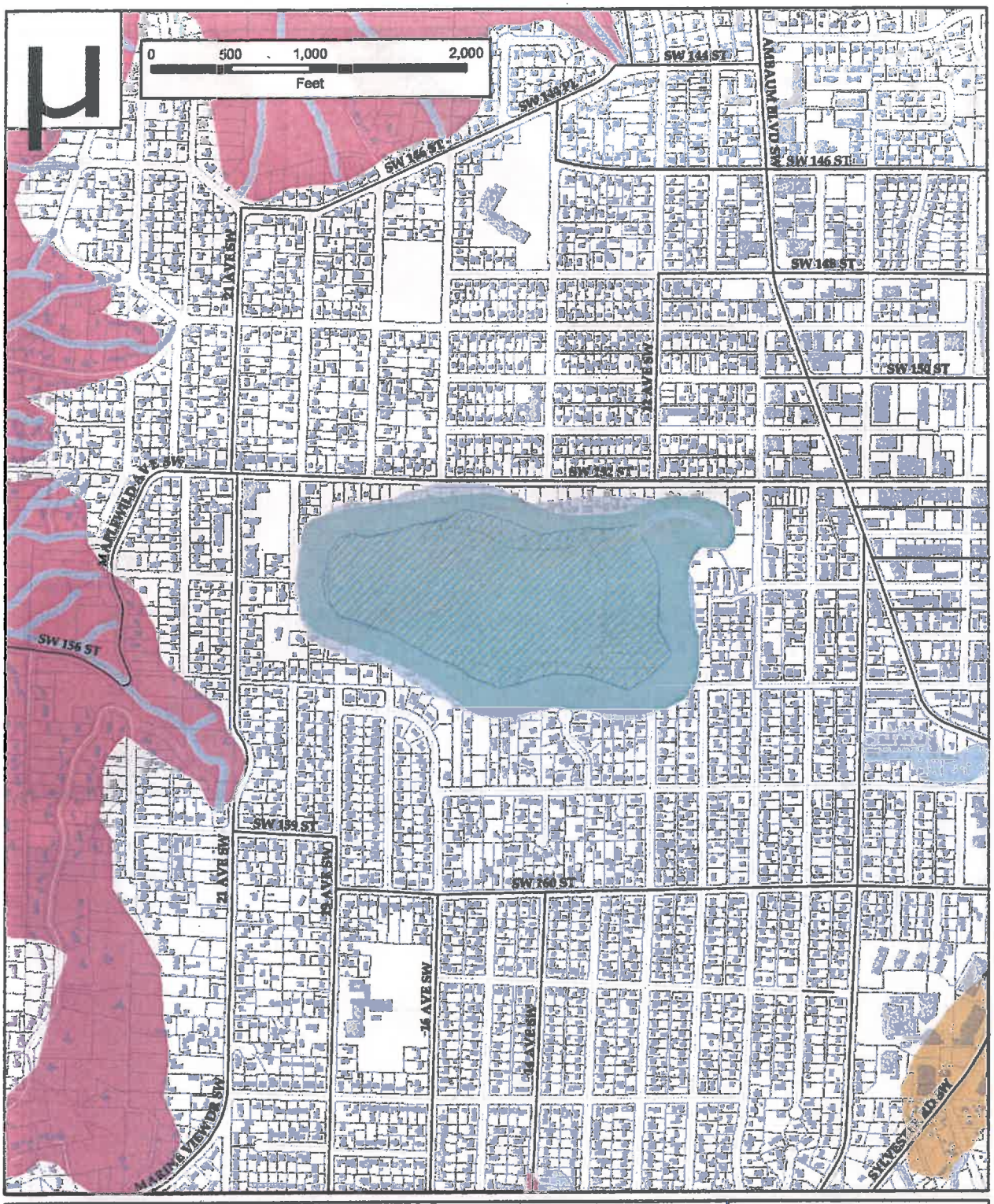
**Shoreline Master Program**

Critical Areas

*Marine 4*

Date: May 24, 2008

Figure 8D




Boundary of Burien
Buildings

**Reaches**

- Lake Burien
- Marine 1
- Marine 2
- Marine 3
- Marine 4

- Seismic
- Landslide
- Aquifer Recharge Areas
- Wetlands
- Stream Buffers
- 100-Year Flood Area - FEMA

**City of Burien**

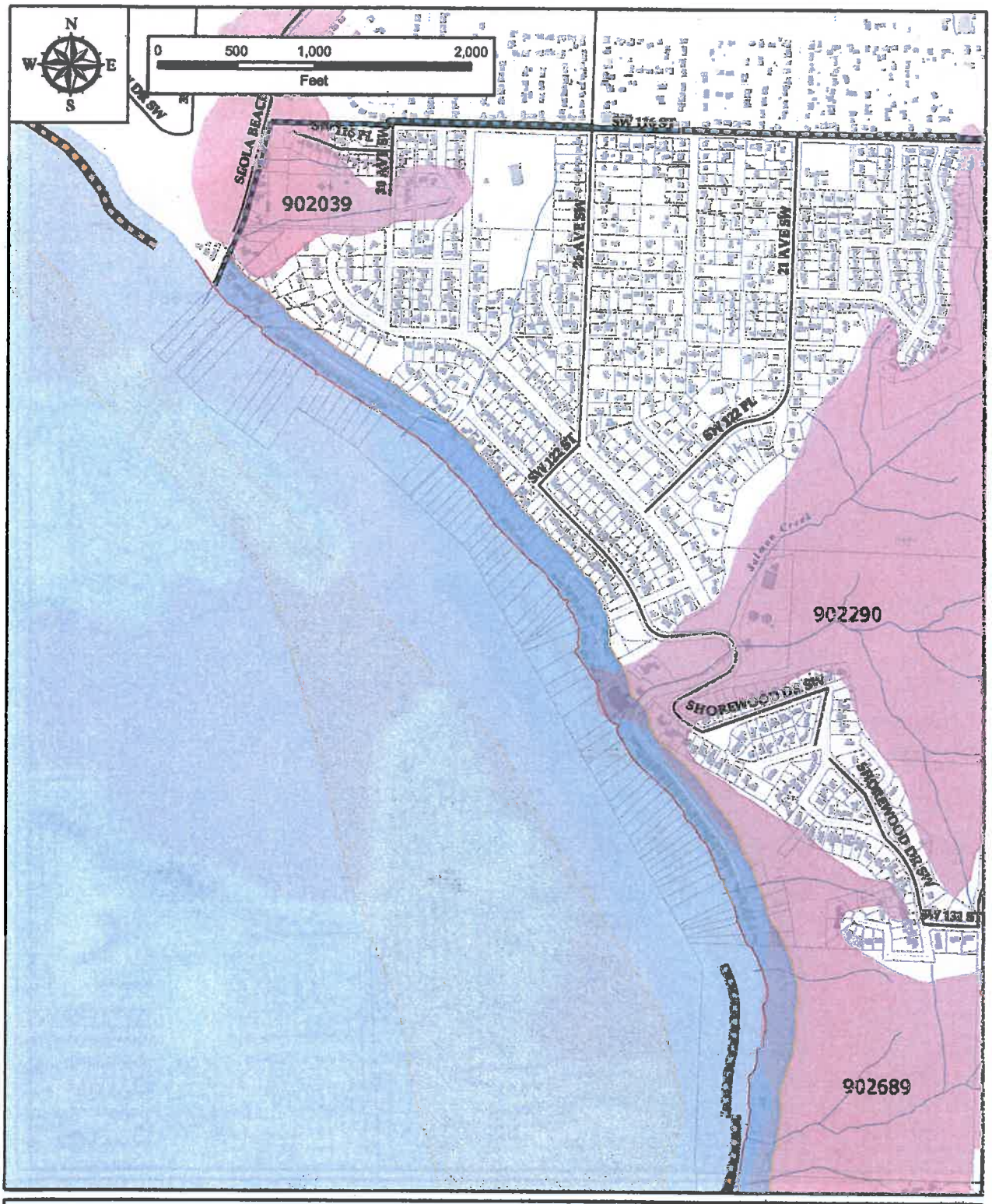
**Shoreline Master Program**

## Critical Areas

*Lake Burien*

Date: Mar 24, 2008

Figure 8E




Boundary of Burien
Buildings

**Reaches**

Lake Burien
Marine 1
Marine 2
Marine 3
Marine 4

Priority Habitats & Species - WDFW
Heritage Buffer
Important Species - WDFW
Surf Smelt
Pacific Sandlance
Geoduck

Data represented on these maps are subject to rules and regulations delineated by The Washington Department of Fish and Wildlife under POLICY - 5210. This product contains sensitive information as determined by WDFW and should not be distributed.

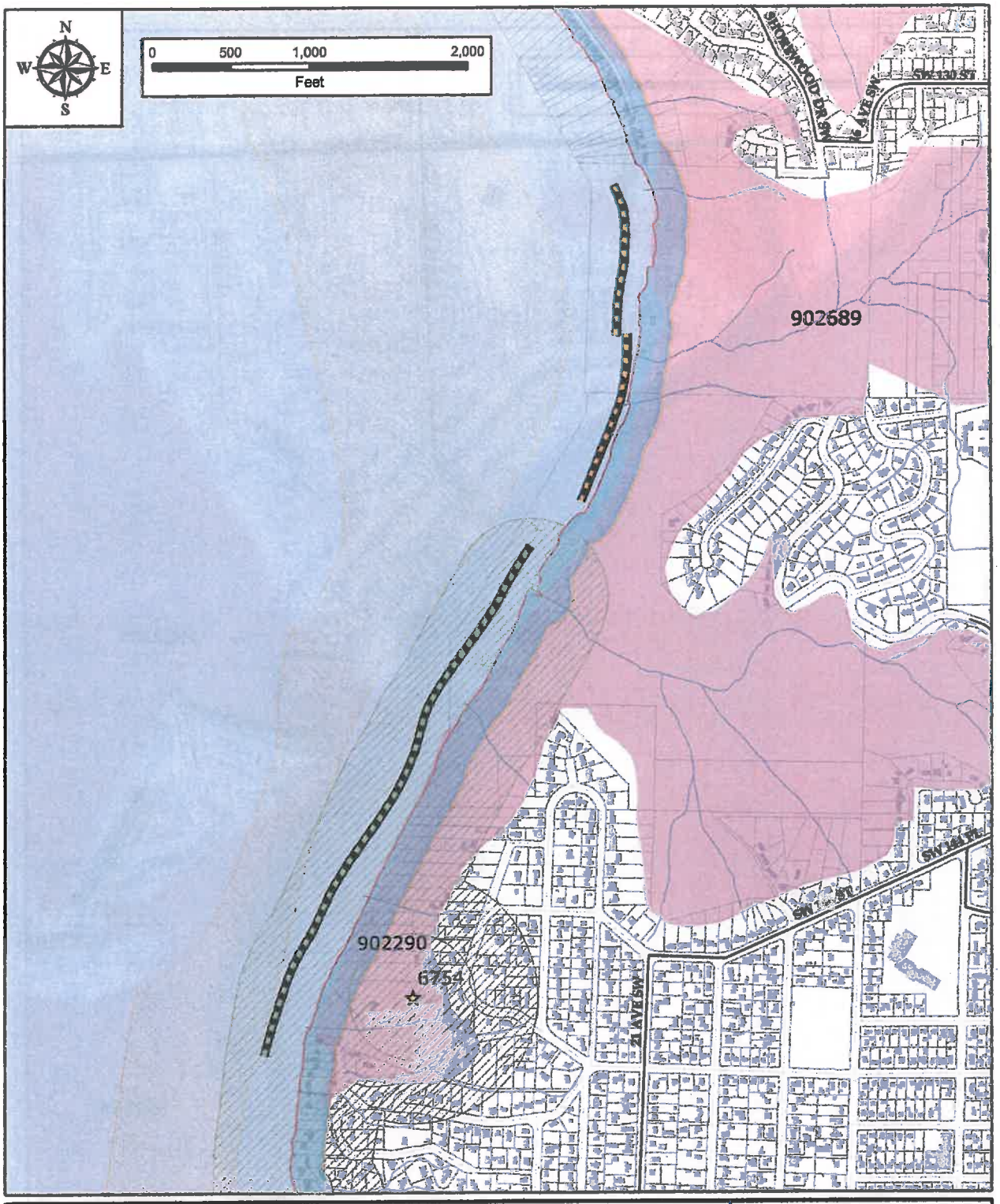
City of Burien

Shoreline Master Program

Fish & Wildlife Habitat Conservation Areas

*Marine 1*

Figure 9A




Boundary of Burien
Buildings

**Reaches**

Lake Burien
Marine 1
Marine 2
Marine 3
Marine 4

Priority Habitats & Species - WDFW
Heritage Buffer
Important Species - WDFW
Surf Smelt
Pacific Sandlance
Geoduck

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**City of Burien**

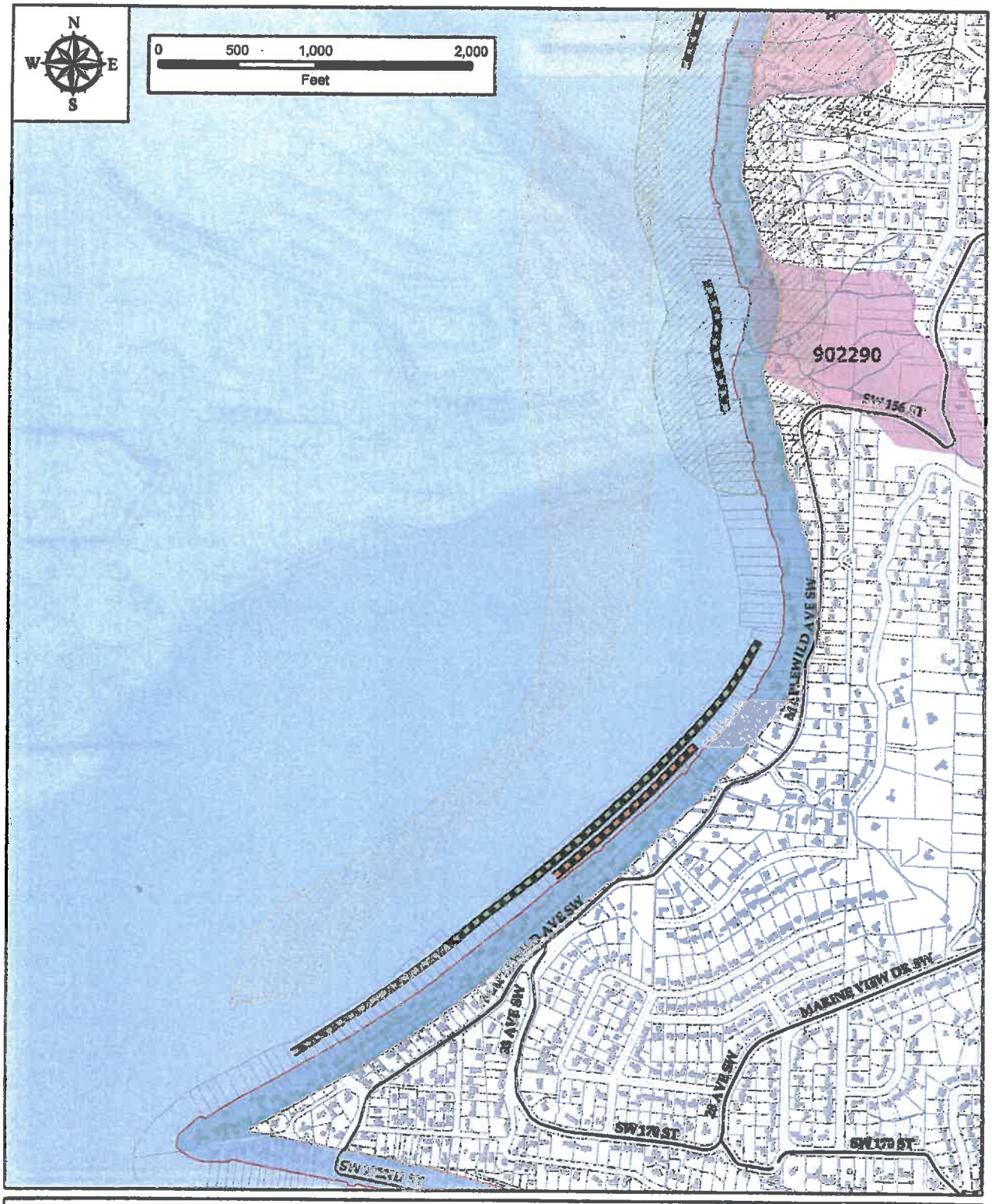
**Shoreline Master Program**

## Fish & Wildlife Habitat Conservation Areas

*Marine 2*

Date: Mar 24, 2008

Figure 9B




Boundary of Burien
Buildings

**Reaches**

Lake Burien
Marine 1
Marine 2
Marine 3
Marine 4

Priority Habitats & Species - WDFW
Heritage Buffer
Important Species - WDFW
Surf Smelt
Pacific Sandlance
Geoduck

Data represented on these maps are subject to rules and regulations delineated by The Washington Department of Fish and Wildlife under POLICY - 5210. This product contains sensitive information as determined by WDFW and should not be distributed.

**City of Burien**

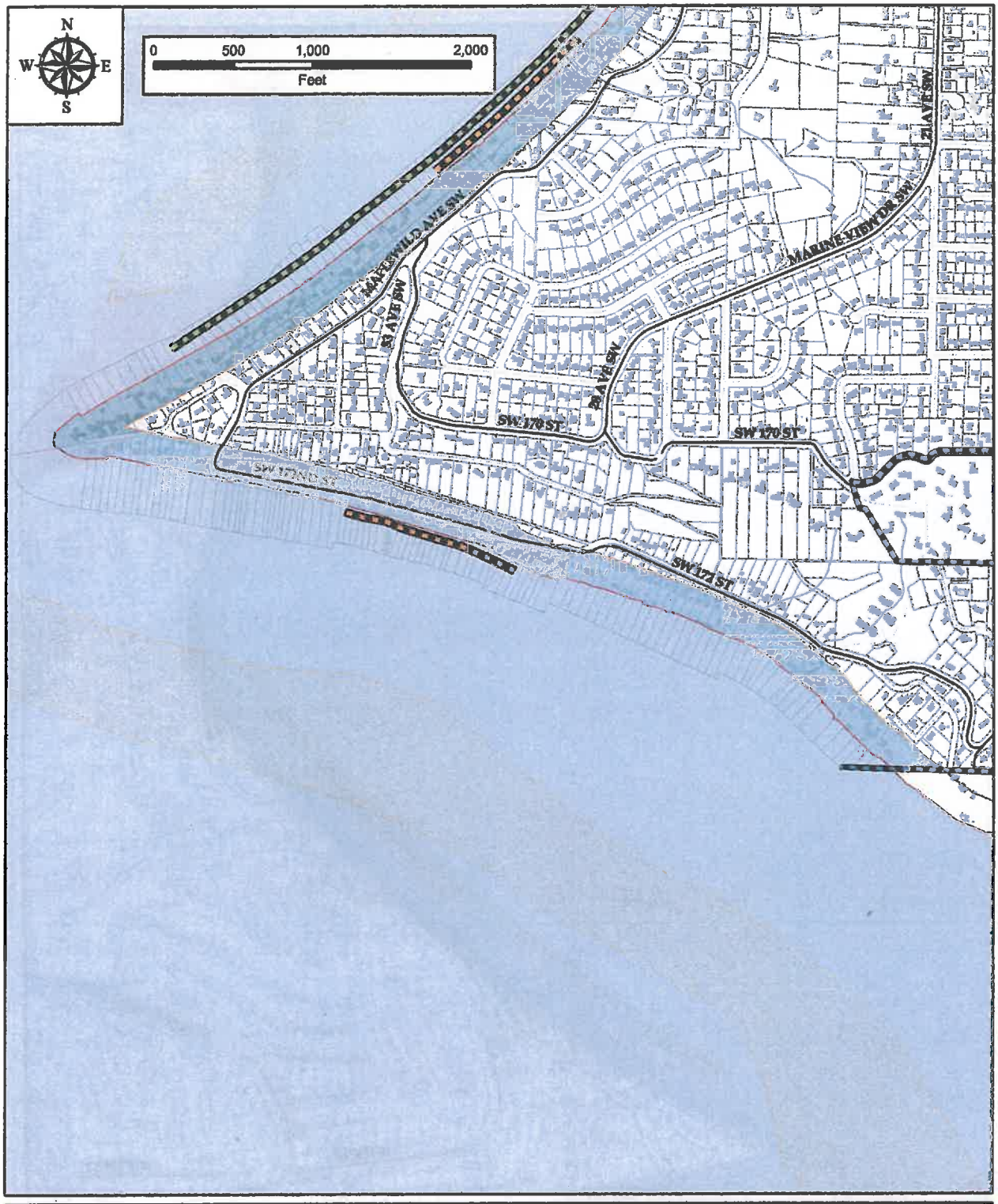
**Shoreline Master Program**

Fish & Wildlife Habitat Conservation Areas

*Marine 3*

Date: Mar 04, 2009

Figure 9C




Boundary of Burien
Buildings

**Reaches**

Lake Burien
Marine 1
Marine 2
Marine 3
Marine 4

Priority Habitats & Species - WDFW
Heritage Buffer
Important Species - WDFW
Surf Smelt
Pacific Sandlance
Geoduck

Data represented on these maps are subject to rules and regulations delineated by The Washington Department of Fish and Wildlife under POLICY - 5210. This product contains sensitive information as determined by WDFW and should not be distributed.

**City of Burien**

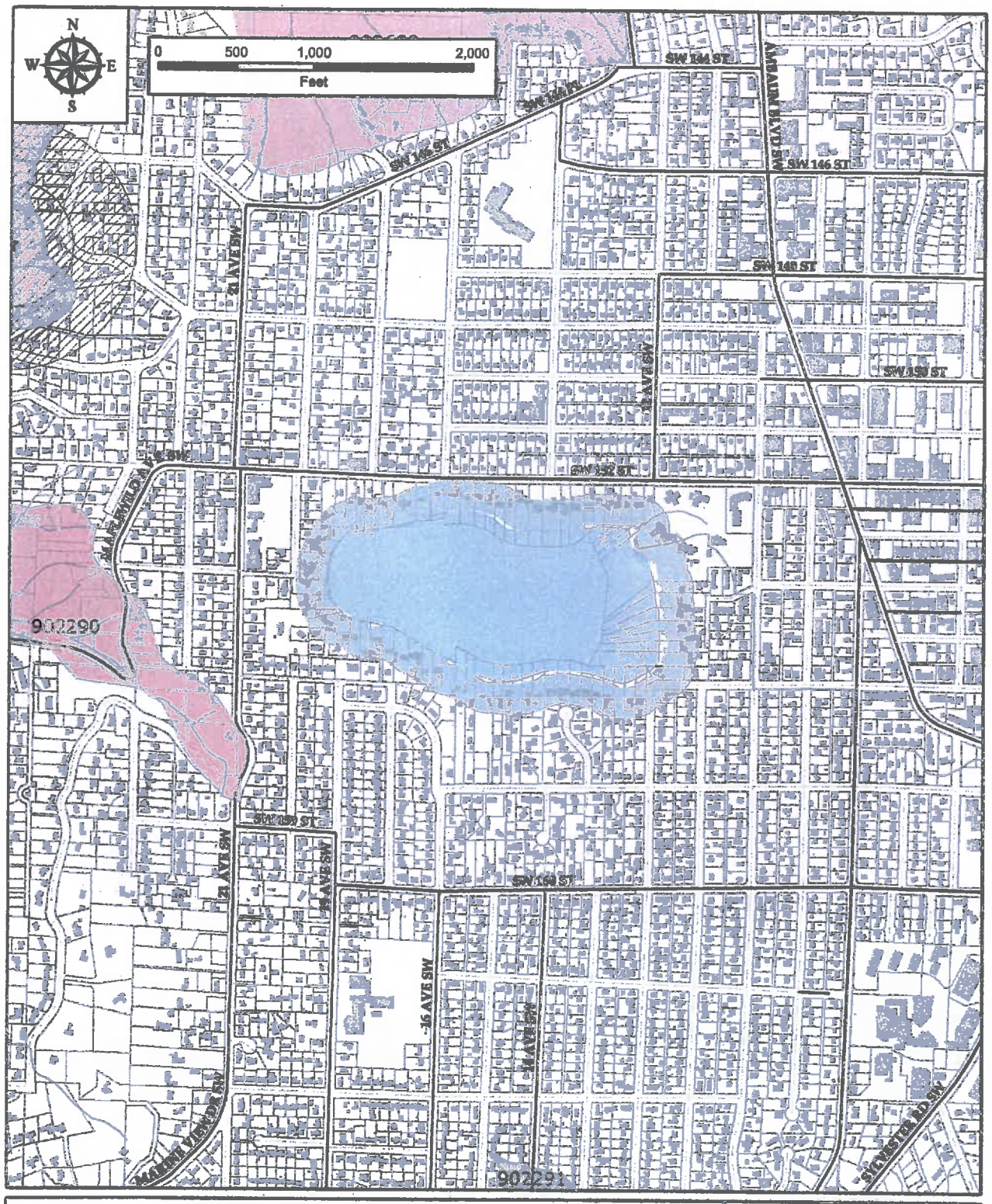
**Shoreline Master Program**

**Fish & Wildlife Habitat Conservation Areas**

*Marine 4*

Date: March 2008

Figure 9D




Boundary of Burien
Buildings

**Reaches**

Lake Burien
Marine 1
Marine 2
Marine 3
Marine 4

Priority Habitats & Species - WDFW
Heritage Buffer
Important Species - WDFW
Surf Smelt
Pacific Sandlance
Geoduck

Data represented on these maps are subject to rules and regulations delineated by The Washington Department of Fish and Wildlife under POLICY - 5210. This product contains sensitive information as determined by WDFW and should not be distributed.

**City of Burien**

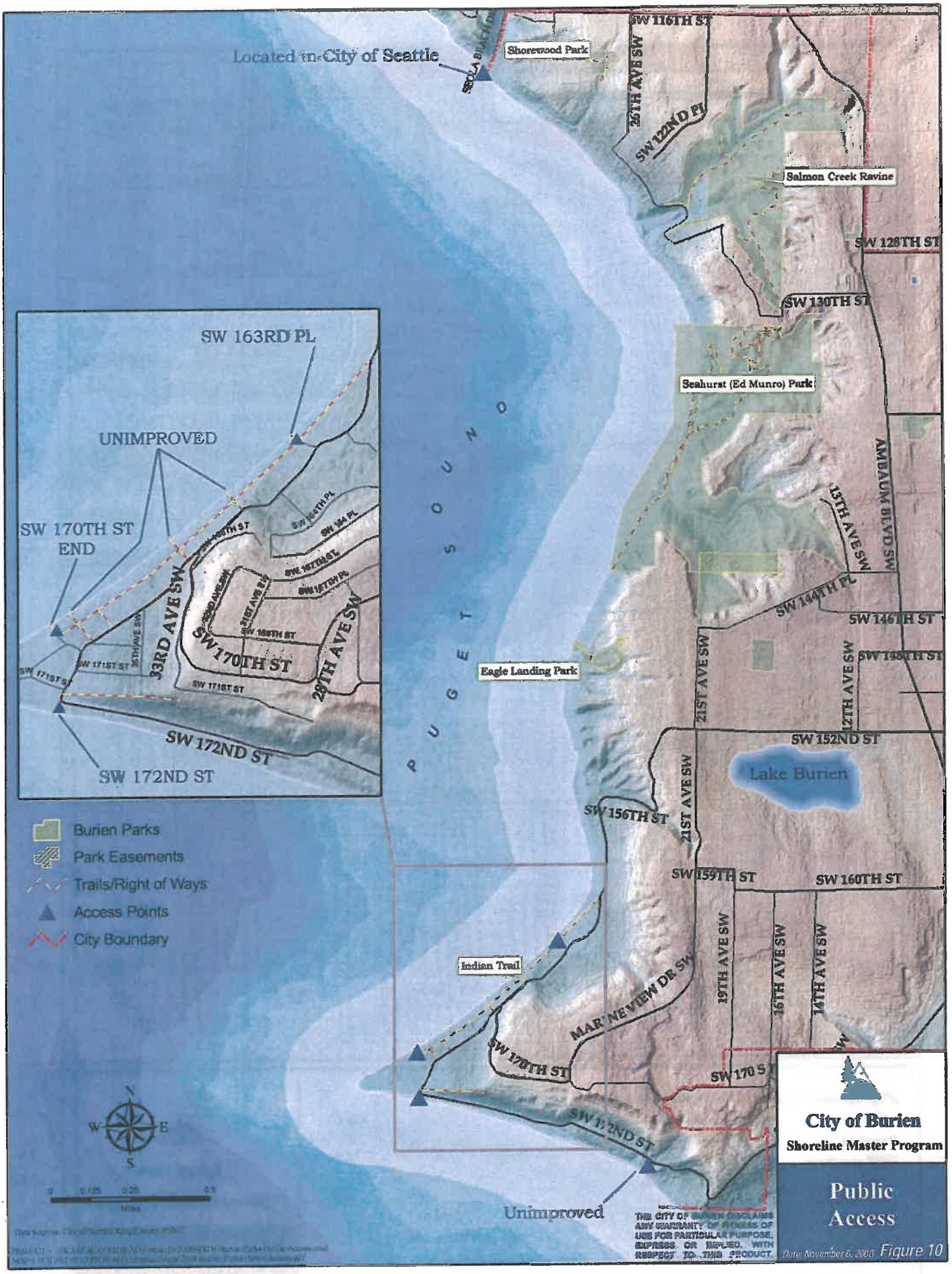
**Shoreline Master Program**

Fish & Wildlife Habitat Conservation Areas

*Lake Burien*

Date: Mar 04, 2008

Figure 9E


Located in City of Seattle
Shorewood Park
SW 116TH ST
25TH AVE SW
SW 122ND PL
Salmon Creek Ravine
SW 128TH ST
SW 130TH ST
Seahurst (Ed Munro) Park
AMBAUM BLVD SW
13TH AVE SW
SW 144TH PL
SW 146TH ST
SW 148TH ST
21ST AVE SW
12TH AVE SW
SW 152ND ST
Lake Burien
SW 156TH ST
SW 159TH ST
SW 160TH ST
19TH AVE SW
16TH AVE SW
14TH AVE SW
MARINEVIEW DR SW
SW 170TH ST
SW 172ND ST
Indian Trail
Eagle Landing Park
PUGET SOUND
Unimproved
SW 163RD PL
UNIMPROVED
SW 170TH ST END
33RD AVE SW
28TH AVE SW
SW 171ST ST
SW 172ND ST
Burien Parks
Park Easements
Trails/Right of Ways
Access Points
City Boundary
City of Burien
Shoreline Master Program
Public Access
Date: November 6, 2008
Figure 10

# Supplement to the Shoreline Analysis and Characterization

This document is a supplement to the *Shoreline Analysis and Characterization* report that was prepared by Grette Associates LLC in 2008 as an element of the City of Burien Shoreline Master Program Update (SMP). This supplement provides

- a refinement to the initial characterization to reflect the diversity along the Puget Sound
- application of DOE's guidance on indicators of No Net Loss (NNL) to Burien's shoreline
- the development of a quantitative planning metric to guide local planning

## 1) Executive Summary

This supplement groups the twenty three Shoreline Inventory Segments that were identified in the *Supplement to the Shoreline Inventory* in to four Inventory Planning Areas based on environment and existing development conditions.

**SR-LB** Development around Lake Burien

**UC-NA** The relatively natural conditions found in the Urban Conservancy designation

**SR-AL** Altered portions of the Marine that generally include meaningful native vegetation

**SR-HA** Highly altered portions of the Marine with relatively little ecological function

The development of this analysis included a review of Chapter 4 from DOE's SMP Handbook; *No Net Loss of Shoreline Ecological Functions.* That chapter includes a section on potential no net loss indicators that were developed by DOE staff and advisors to help during the development of SMP updates. Ten indicators were selected for relevance in Burien's shoreline with five of these being particularly amenable to conventional land use management.

The Supplement to the Inventory provides a discussion of existing development in the Shoreline that is both narrative and quantitative. While this report relies primarily on the understanding that is developed by a careful study of the inventory, we augment it by developing an informal and unscientific *planning metric.* The intent is to provide an additional mechanism to facilitate thoughtful planning in a Shoreline context for the 6 miles of Burien Shoreline.

This metric is informed by the primary No Net Loss indicators and varies between 0 and 10. Higher values are *likely* to be correlated with increased ecological function. There are three components that are added together; an indicator of conditions at the interface to the water that ranges between 0 to 1, an indicator of the level of vegetative function in the first 100' from OHWM that ranges between 0 to 6, and finally an indicator of vegetative function in the second 100' that ranges between 0 to 3.

Care must be taken to avoid treating this metric as if it is a scientific measurement of ecological function. Further, while the metric has been designed to be relevant to both the Puget Sound and Lake Burien shorelines it is unlikely to be useful to attempt to directly compare the value between these shorelines.

Development conditions along Puget Sound are strongly impacted by the location of steep slopes and roadways. There are significant bulkheads along much of this shoreline. Lake Burien is a relatively small fresh water lake. The land around the lake is generally level. There are wetlands adjacent to OHWM. While there are bulkheads and retaining walls on many of the properties, these structures play a markedly different role in the context of a small closed lake than those along Puget Sound.

Table 1 provides a preview of this metric for the three planning areas along the Puget Sound shoreline. This table includes the typical values, the 50% of values between the 25th percentile and the 75th percentile, for several dimensional indicators using data that was collected for the Supplement to the Shoreline Inventory. This table reflects the effect of rounding when reporting the metric.

| | Length | | Setback | Depth (ft) | Area (sq ft) (000's) | Metric | | | |
|---|---|---|---|---|---|---|---|---|---|
| | ft | % | ft | | | W | 1st 100' | 2nd 100' | Total |
| UC-NA | 5,811 | 22.5 | > 200 | 610 - 740 | 46 - 70 | 0.7 | 4.9 | 3.0 | 8.6 |
| SR-AL | 13,562 | 52.5 | 30 - 95 | 135 - 250 | 8 - 18 | 0.1 | 2.9 | 1.5 | 4.6 |
| SR-HA | 6,454 | 25.0 | 25 - 75 | 95 - 200 | 5 - 9 | 0.3 | 0.4 | 2.2 | 2.8 |
| Marine | 25,827 | 100.0 | 30 - 90 | 125 - 235 | 7 - 16 | 0.3 | 2.7 | 2.0 | 5.0 |

**Table 1: Preview of planning areas and the planning metric for Puget Sound**

Table 2 provides a preview of this metric for the Lake Burien planning area. This table reflects the effect of rounding when reporting the metric.

| | Length | | Setback | Depth (ft) | Area (sq ft) (000's) | Metric | | | |
|---|---|---|---|---|---|---|---|---|---|
| | ft | % | ft | | | W | 1st 100' | 2nd 100' | Total |
| SR-LB | 5,454 | 100.0 | 80 - 125 | 185 - 300 | 15 - 26 | 0.6 | 2.4 | 0.4 | 3.5 |

**Table 2: Preview of the planning metric for Lake Burien**

**2) Characterization**

The Grette/Reid evaluation assigned Environmental Designations to each Shoreline Inventory Reach based on the guidelines included in WAC 173-26-211. It was determined that M2 should be designated as Urban Conservancy and the remaining reaches should be designated as Shoreline Residential.

The earlier analysis observed that the Lake Burien reach is a freshwater shoreline and that the remaining reaches are along a marine shoreline but other than this there was little attention to the diversity of conditions that exist across the Shoreline Residential reaches.

The *Supplement to the Shoreline Inventory* demonstrated that existing development conditions along the Marine vary to a significant degree. That work refined the four Marine Shoreline Inventory Reaches into a set of 18 Shoreline Inventory Segments based on patterns of development and well defined geographical identifiers. This effort also defined the Lake Burien Shoreline as a set of 5 Inventory Segments based on geographical identifiers even though the conditions across these segments are relatively uniform.

It is likely to be impractical to develop shoreline planning policies and regulations that are customized to each of the 23 Inventory Segments. A review of the patterns of development across the segments suggests that it is reasonable to define 4 Shoreline Planning Areas and assign each segment to an appropriate area. We define these Shoreline Planning Areas to be:

**SR-LB:** This planning area consists of inventory reach LB. This area is designated as Shoreline Residential along a freshwater shoreline. This reach is zoned as RS-7200 but the current development is consistent with RS-12000 for area, building coverage, and total impervious surface. The impervious structures are generally towards the landward end of each property, and the land between the home and OHWM tends to be partially functioning area e.g. landscaped lawn and flower beds. This shoreline includes wetlands adjacent to OHWM at a number of locations although the extent and scientific categorization of these wetlands is uncertain. Approximately 2/3 of the perimeter, by length, includes bulkheads or retaining walls.

**UC-NA**: This planning area consists of inventory reach M2. This area is designated as Urban Conservancy environmental designation and is in a substantially natural condition.

**SR-AL:** This area consists of inventory segments M1-A, M1-C, M1-E, M4-D, M4-E and all of inventory reach M3. This area is zoned as RS-12000 and current development is consistent with this. Many of the properties in this area are impacted by steep slopes that are heavily vegetated. The remainder of the area is generally impervious surface and partially functioning areas. The majority of this area is armored, often with significant structures of over 6' in height.

**SR-HA**: This area consists of inventory segments M1-B, M1-D, M1-F, M4-A, M4-B, and M4-C. This area is zoned as RS-12000 but current development is closer to the lot-size for RS-7200 with building coverage and total impervious surface that is often denser than even RS-7200 allows. Most of the properties include bulkheads but they tend to be less substantial than those that are common in SR-AL. Segment M4-B, the initial north-west portion of SW 172nd St, presents special development constraints.

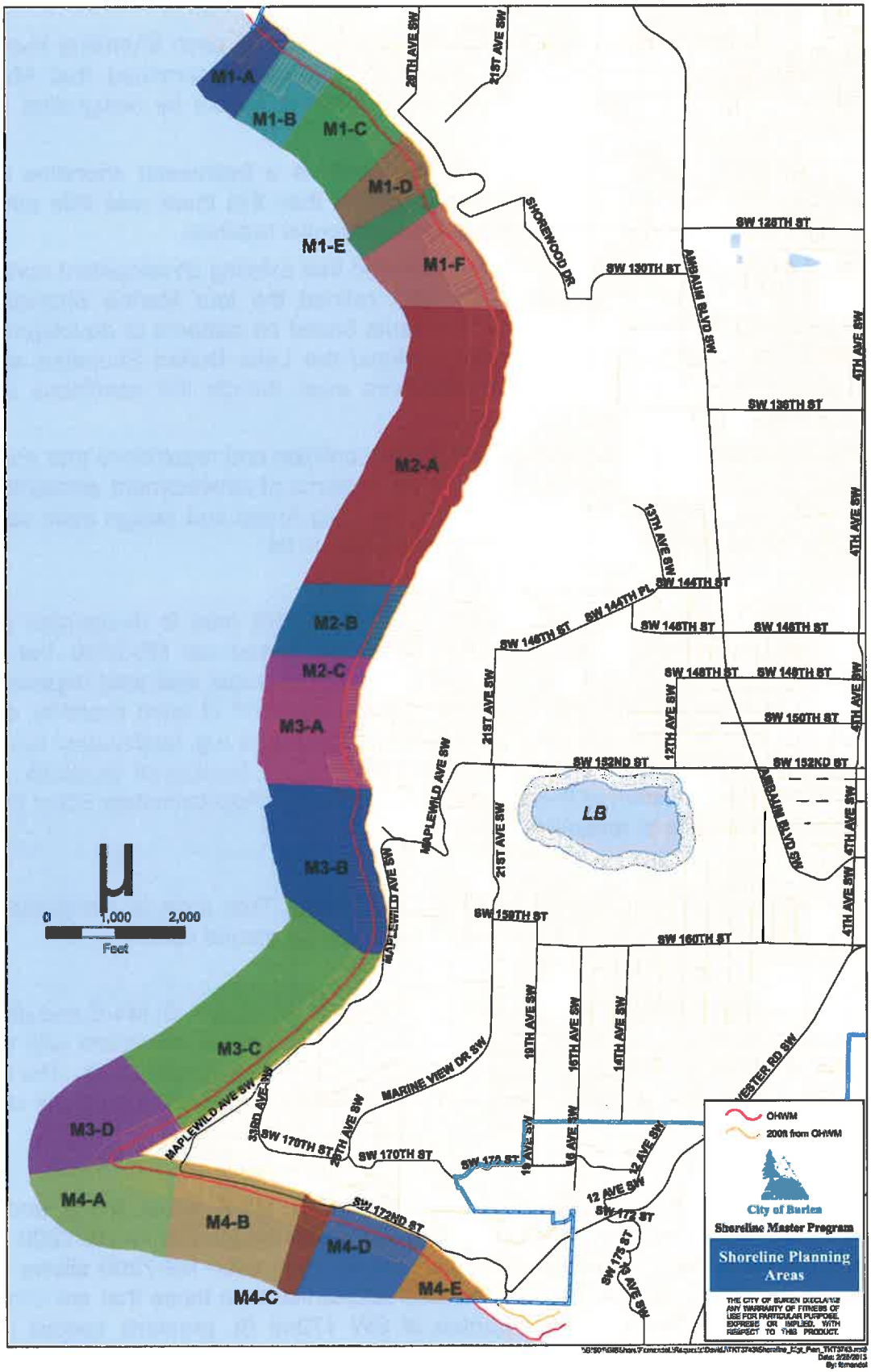



**Figure 1: The 5 Inventory Reaches and 23 Inventory Segments**

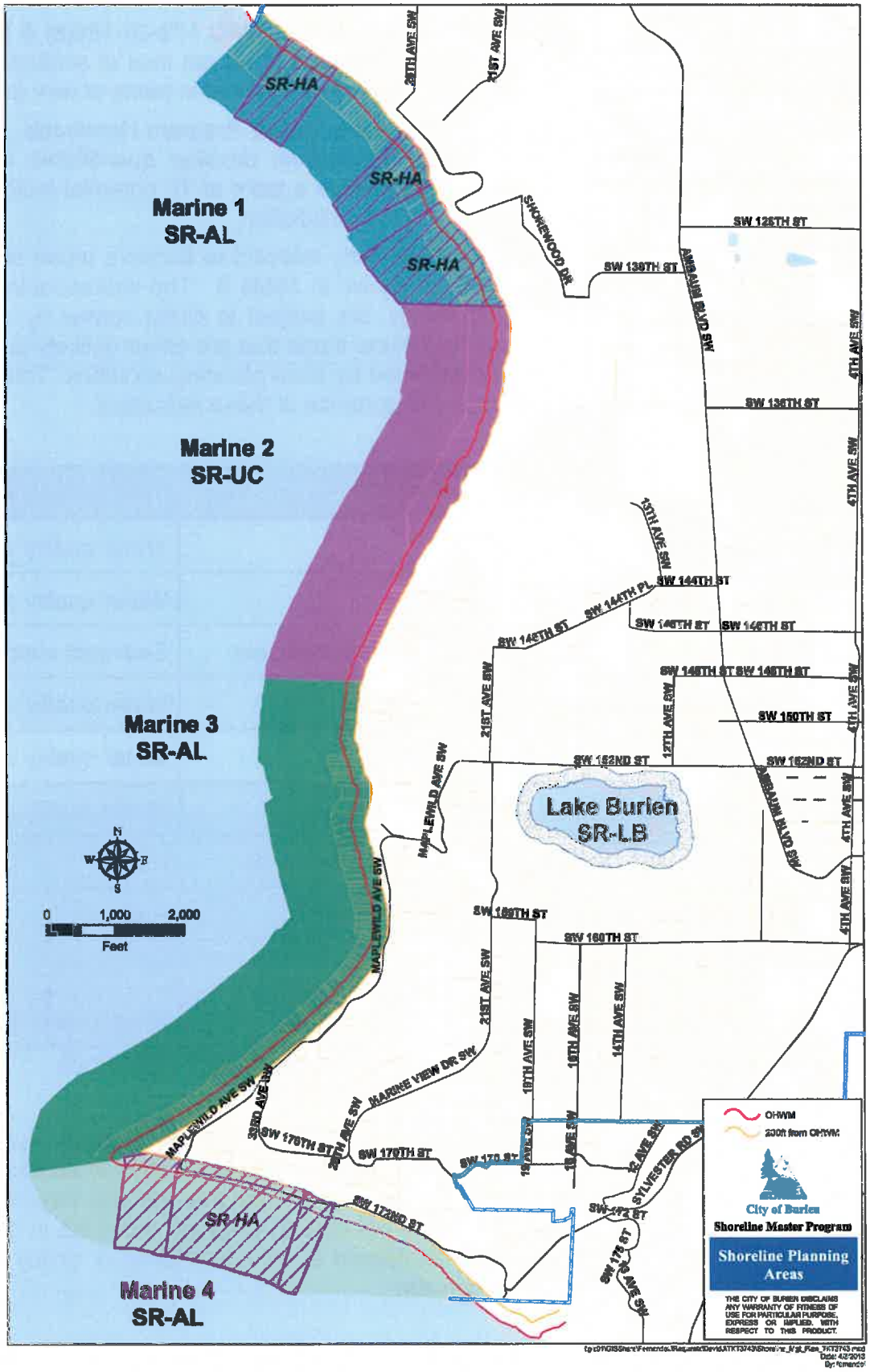



**Figure 2: The 4 Planning Areas**

### 3) No Net Loss Indicators

Under Washington State Shoreline Management Act Guidelines [WAC 173-26-186(8) & 201(2)(c)] all new development, activities and uses must meet the standard of no net loss of ecological functions and shoreline processes, and to meet no net loss, mitigate any adverse impacts of new development.

Chapter 4 of the Department of Ecology's (DOE) Shoreline Master Program Handbook, *No Net Loss of Shoreline Ecological Functions*, suggests that jurisdictions develop quantifiable indicators of Ecological Function and processes. That document provides a table of 15 potential indicators, *Table 4-1 of the handbook*, that might be relevant based on the jurisdiction.

Ten of these indicators were selected as being particularly relevant to Burien's urban shoreline and these were then partitioned these in to two sets as shown in Table 3. The indicators in the first set are relatively easy to measure and, more importantly, are subject to direct control by common city planning techniques. The second set of indicators include those that are either unlikely to change in a 25 year planning horizon or that are indirectly impacted by local planning solutions. This partitioning does not imply any judgment regarding the relative importance of these indicators.

| Indicator | Functions Affected |
|---|---|
| Impervious surface area (acres or percentage) | Water quality and habitat |
| Vegetation coverage; acres/percent by class | Water quality and habitat |
| Shoreline stabilization; Linear feet of bulkheads, retaining walls, etc. | Sediment supply |
| Piers/docks/floats, overwater structures; number or sq. ft. | Water quality and habitat |
| Wetlands acreage | Water quality and habitat |
| Water quality; DOE 303 (d) list | Water quality |
| Bald eagle & osprey nests and roosts & great blue heron rookeries | Habitat |
| Area of sea grasses, kelp, and emergent aquatic vegetation | Habitat |
| Road lengths (ft) within 200' of water body | Water quality |
| Acres of permanently protected areas | Water quality and habitat |

**Table 3: Applicable No Net Loss indicators from SMP Handbook**

Over time it is appropriate that the City of Burien consider trends in all of these indicators in a shoreline context. Improvements in **all** indicators would suggest that restoration of ecological function is being accomplished while declines in **all** indicators would suggest that net loss has occurred. The concept of **net** loss and mitigation suggests that it is possible to trade-off a decline in one indicator with an improvement in another but there does not appear to be any science or policy guidance to provide an objective model for quantifying this concept.

## 4) A Metric to Approximate Ecological Function for Shoreline Evaluation

Solely for the purposes of this report, we convert the guidance on *potential Indicators of No Net Loss* into a simple metric that can be used as a **supplement** to the other descriptive material that is provided. This effort to quantify ecological function is imprecise and subjective and it will be made clear that this is not a scientific measure. However it is believed that, for the planning purpose that is intended, this imperfect metric is better than no metric at all.

This metric was developed to facilitate a quantified evaluation of the varied conditions along Burien's complex shoreline and particularly along the Marine shoreline. It is not intended that this metric be used during the permitting process for a proposed development.

### 4.1) A framework for developing a planning metric

The development of a planning metric proves to be a significant challenge. There is a large range of choices to be made with varying levels of refinement and complexity. It is a near certainty that any particular set of choices will be subject to debate and differences of perspective. This is likely to be less controversial if the choices are at least well defined.

We begin by describing a process for defining such a metric and then we define a particular initial approximation to this metric that we believe supports the development of SMP policies and regulation.

The first step is to imagine applying a uniform grid of square tiles to the entire shoreline. This might be implemented using a set of stakes and strings that are applied physically on each property, or perhaps by laying a piece of translucent graph paper over highly details images of the shoreline. The size of each tile is not of great significance but they should be small enough that conditions within any given tile are reasonably uniform. For the sake of argument we assume that the tiles are 1 foot square.

This grid covers all of the land between OHWM and the landward edge of Shoreline Jurisdiction as well as the area immediately water ward of OHWM.

We then assign a score between 0 and N to each tile based on an understanding of the ecological function that is present in that tile. A score of 0 means there is no ecological function and a score of N means full natural function. The computation of this score can be arbitrarily complex depending on the range of factors that are being considered and the technical sophistication needed to measure those factors.

It is a goal of the Shoreline Master Program to develop policies and regulations that tend to protect existing ecological function i.e. to discourage new development in regions with higher scores for the metric. While this report focuses on a metric that is correlated to ecological function, it would be possible to develop a metric that incorporates other factors that tend to preclude new development e.g. an additional term to reflect the presence of a steep slope.

Developing a database with the raw score for every tile in the Shoreline could be useful in a number of ways but, with more than 6 million one-foot square tiles in Burien's shoreline, it is also a little unwieldy. It is helpful to define an algorithm for computing a weighted average for the score over regions of interest when planning for shoreline management. Once again there are many choices for computing an effective weighted average. When considering the Shoreline Master Program it appears natural to consider algorithms that assign a higher weight to tiles near OHWM compared to those that are further from OHWM.

### 4.2) An initial planning metric for the SMP

We turn to the task of defining a specific metric that is sufficient for this analysis and that can be estimated with adequate precision. This will require a number of simplifying assumptions. In doing so it is important to recognize that the goal is to guide land use planning rather than to develop a science-based study of ecological function.

The first step is to define a score for each tile. We choose a model that is as simple as possible so that it becomes feasible to estimate the value of the score without a careful professional survey. It is believed that this contributes to a metric definition that augments the reader's intuition of the nature of existing conditions, even if the metric itself could be deemed to be imperfect.

For this evaluation the tiles landward of OHWM will be assigned a score between 0 and 3 based on a coarse characterization of existing conditions. The tiles immediately water-ward of OHWM will be assigned a score between 0 and 1 based on the presence of bulkheads, wetlands, and vegetated shallows.

#### 4.2.1) Tiles landward of OHWM

A landward tile is assigned a value of 0 if it is primarily impervious surface e.g. a concrete patio, a driveway, or a primary residence. A tile is assigned a value of 3 if it is primarily mature native vegetation or a functioning wetland. In a strict sense it is necessary to engage the services of a qualified professional to determine that a tile should be assigned a value of 3 but it is practical to achieve a useful evaluation with a basic level of care. We assign a score of 1 to a tile that is neither impervious surface nor native vegetation / wetland.

For the purpose of this evaluation, we choose to present the value of this component of the metric over the first 100' from OHWM and then over the second 100' from OHWM. This decision leads to a natural model for weighting this component of the metric in a shoreline context. For any given portion of the shoreline, we consider the set of tiles with centers within 100' of OHWM and then the set of tiles with centers between 100' and 200' of OHWM; this is quite natural if we imagine that every tile is one foot square.

Consider a sequence of 200 one-foot square tiles that are arranged in a line perpendicularly from OHWM to the landward edge of shoreline jurisdiction. For those 100 tiles with centers within 100' of OHWM we compute the average score over the tiles and then double the result; this will lead to a value between 0 and 6. In a similar fashion we compute the average value of the scores for the tiles between 100' and 200' from OHWM. This will lead to a value between 0 and 3. We add these two results to arrive at a value between 0 and 9 for a strip of land that is 1 foot wide and 200 feet long and perpendicular to OHWM. This value will be close to 0 if this strip of shoreline is strongly dominated by impervious surface and close to 9 if it is in a largely natural condition. In this report we provide tables that provide an estimate for both components of this portion of the metric.

#### 4.2.2) Tiles immediately water-ward of OHWM

Evaluation of the tiles immediately water-ward of OHWM is handled differently for the Marine and Lake Burien shorelines.

A walk along Puget Sound in Burien confirms the presence of bulkheads along many of the properties. In some regions these are one or two feet tall and have the general character of a common concrete wall, while in other areas they are substantial structures that stand over 6 feet and several feet thick. Most of these bulkheads are in contact with the water for a meaningful fraction of each day and are frequently subject to significant wave action. For the Marine Shoreline we assign a value of 0.0 to these tiles if there is a substantial bulkhead, 0.5 for the modest bulkheads, and a score of 1.0 when there is no bulkhead.

A similar traversal of the perimeter of Lake Burien, most likely in a small boat, reveals that much of this Shoreline includes modest bulkheads and retaining walls. These structures are most obvious during the summer when the level of the lake is at its lowest level; in the winter the water level rises to the close to top of these structures. One also observes wetlands and vegetated shallows along much of the perimeter.

These observations suggest a water-ward score with two components for the perimeter of Lake Burien. If the tile does not include a shoreline stabilization structure we add 0.25 to the tile otherwise this component is 0.00. If the tile includes abundant wetlands / vegetated shallows we add 0.75. If the presence of wetlands/vegetated shallows is not immediately apparent without a more careful observation we add 0.50. If there is little or no evidence of wetland / vegetation we add 0.00.

**4.2.3) Summary of the components of the metric**

The discussion of the development of the metric is sufficiently general to allow for tiles of a range of sizes with appropriate mechanisms for approximating weighted averages. For the purpose of summarizing this approach we imagine that the tiles landward of OHWM are one foot square and that the tiles immediately water-ward of OHWM are one foot wide and deep enough to encompass the structures for shoreline stabilization and/or the wetlands/vegetated shallows, if present.

Points are assigned to the shoreline stabilization structure if present

| Shoreline Stabilization | Points |
|---|---|
| Little or no shoreline stabilization. | 1.00 |
| A modest wall that is primarily for the highest tides and storm surge | 0.50 |
| A significant structure that deflects wave energy on a daily basis | 0.00 |

**Table 4: Shoreline Stabilization on Puget Sound**

| Shoreline Stabilization | Points |
|---|---|
| Little or no shoreline stabilization. | 0.25 |
| A small bulkhead or retaining wall at OHWM | 0.00 |

**Table 5: Shoreline Stabilization on Lake Burien**

On Lake Burien points are also assigned to wetlands and vegetated shallows immediately water-ward of OHWM.

| Vegetation immediately Water-ward of OHWM | Points |
|---|---|
| Abundant wetlands / vegetated shallows | 0.75 |
| Levels of wetlands that would require a closer inspection of conditions | 0.50 |
| Little or no wetlands or vegetated shallows | 0.00 |

**Table 6: Wetlands and Vegetated Shallows along perimeter of Lake Burien**

Points are assigned to each square foot of land

| Quality of each Square Foot of Land | Points |
|---|---|
| Mature native vegetation | 3 |
| Partially functioning areas e.g. lawn, landscaping, slat decks [BMC 20.40.101] | 1 |
| Impervious surface | 0 |

**Table 7: Assigning a score to each landward tile (nominally 1 foot square)**

The score for each landward tile is averaged over the first 100' and separately over the second 100'.

The final metric is the sum of three components and will be between 0 and 10.

metric = water-ward score + 2 * average for first 100' + 1 * average for second 100'

**4.2.3) Developing a preliminary estimate of this metric**

To develop a preliminary estimate for this metric we take an approach that is analogous to the concept of placing a sheet of translucent graph paper over highly detailed photographs of each shoreline property.

We rely on high quality imagery available in Google Earth as an approximation to highly detailed photographs. This imagery is augmented with physical observations in some cases, particularly for the Marine Shoreline, but we rarely stepped on to the any of the private properties to conduct a formal survey. Observations were made from the edge of property; primarily from the beach on Puget Sound during low tide but also from a boat on Lake Burien.

There are a number of computational techniques for estimating the average score over a contiguous set of tiles. For example Google Earth includes tools that allow a user to draw polygons over regions of interest, e.g. the boundaries of a large lawn or the footprint of a primary residence, and record the coordinates of each vertex for the polygon. One can then write a computer program to assign a score to the tiles that would be found within these polygons. Simpler schemes can be used for large, uniform areas such as the private properties at the south of M2 that are exclusively mature native vegetation on a steep slope.

## 5) Analysis

In this section the planning areas are analyzed in the context of the indicators of No Net Loss and the proposed planning metric.

### 5.1) SR-LB

This planning area is the Shoreline Inventory Reach for Lake Burien. The *Supplement to the Inventory* provides an overview of primary dimensional indicators for this area. Table 8 provides an overview of the No Net Loss indicators for this area.

| Indicator | Estimate |
|---|---|
| Impervious surface area (%) | 25% - 45% |
| Vegetation coverage; percent by class | Primarily partially functioning |
| Shoreline stabilization; Linear feet of bulkheads, retaining walls, etc. | Approx 3600 ft. |
| Piers/docks/floats, overwater structures; number or sq. ft. | Approx 3/4 of homes |
| Wetlands area | Significant |
| Water quality; DOE 303 (d) list | Unlisted |
| Bald eagle & osprey nests and roosts & great blue heron rookeries | A few roosts present |
| Area of sea grasses, kelp, and emergent aquatic vegetation | Significant |
| Road lengths (ft) within 200' of water body | Less than 500' |
| Acres of permanently protected areas | None |

**Table 8: Overview of NNL indicators for Lake Burien**

It has been noted that Lake Burien is zoned as RS-7200 while existing conditions are typically consistent with RS-12000. This implies that there is some potential for sub-division to occur over the long term although it is difficult to determine how common this is likely to be. While the risk is hotly debated, it appears fair to suggest that significant levels of sub-division and new development would have an adverse impact on several of these indicators.

Approximately 67% of the perimeter, 75% of the properties, includes minor bulkheads or retaining walls.

Land within the first 100' of OHWM is primarily partially functioning area although conditions consistent with wetlands are common over the first 10 to 30 feet from OHWM. A professional survey would be required to delineate the full extent of the wetland at a particular site. Impervious surface accounts for perhaps 10% of the area, on average, and then primarily towards the rear of this region. There are limited levels of native vegetation.

Land within the second 100' from OHWM includes substantially higher levels of impervious surface and could account for as much as 50% of the area. The remaining area is primarily partially functioning area.

Table 9 provides a preliminary estimate of the value for the planning metric for the Lake Burien planning area as well as a few dimensional indicators from the Supplement to the Inventory. The metric was approximated by reference to a primitive database of conditions for each property. A simple computer program was used to evaluate the database and compute average values over the shoreline. There may be an opportunity to develop a more refined estimate of the metric in the future.

Table 9 indicates the proportions of each category, the typical setbacks, and the components for the planning metric where **W** is the indicator for conditions immediately water-ward of OHWM, **P** is the score for partially functioning areas, and **N** is for native vegetation. The components for **P** and **N** are presented for the first 100' and the second 100' from OHWM. The table shows the effect of rounding.

| | Length | | Setbacks | Metric | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | W | First 100' | | Second 100' | | Total |
| | ft | % | | | P | N | P | N | |
| Perimeter | 5,454 | 100.0 | 80 - 125 | 0.6 | 1.5 | 0.9 | 0.4 | 0.0 | 3.5 |

**Table 9: A preliminary estimate of the planning metric for Lake Burien**

### 5.2) UC-NA

This planning area is the Shoreline Inventory Reach M2.

| Indicator | Estimate |
|---|---|
| Impervious surface area (%) | Low |
| Vegetation coverage; percent by class | Primarily native |
| Shoreline stabilization; Linear feet of bulkheads, retaining walls, etc. | Approx 1,750 |
| Piers/docks/floats, overwater structures; number or sq. ft. | None |
| Wetlands acreage | None or Low |
| Water quality; DOE 303 (d) list | Unlisted |
| Bald eagle & osprey nests and roosts & great blue heron rookeries | Multiple nest and roosts |
| Area of seagrasses, kelp, and emergent aquatic vegetation | Present |
| Road lengths (ft) within 200' of water body | Road and parking lots |
| Acres of permanently protected areas | Approx 20 acres |

**Table 10: Overview of NNL indicators for M2**

Seahurst Park is just under 75% of the reach by length. This park provides the primary opportunity for recreation and public access in Burien's shoreline. Conditions are somewhat altered with parking lots, paved walking trails, a small number of structures, and significant levels of armoring. This park has been a focus of restoration efforts for many years and there is ongoing work to reduce the impact due to armoring.

Approximately 40% of Seahurst Park is armored

Within the first 100' Seahurst Park is approximately 10% impervious surface and approximately 10% partially functioning. The remainder of the land is mature, dense, native vegetation. Land within the second 100' from OHWM is primarily dense mature native vegetation

The remainder of the reach is almost completely natural for the first 200' from OHWM.

Table 11 provides an estimate of the components of the metric for UC-NA.

| | Length | | Setbacks | Metric | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | W | First 100' | | Second 100' | | Total |
| | ft | % | | | P | N | P | N | |
| Total | 5,811 | 100.0 | > 200' | 0.7 | 0.3 | 4.6 | 0.0 | 3.0 | 8.6 |

**Table 11: A preliminary estimate of the planning metric for UC-NA**

### 5.3) SR-AL

This planning area consists of all of M3, just over 37% of M1, and approximately 44% of M4. This area is zoned as RS-12000 and existing development is consistent with this zoning. Development in a large fraction of this area is impacted to some degree by steep slopes.

| Indicator | Estimate |
|---|---|
| Impervious surface area (%) | < 20% |
| Vegetation coverage; percent by class | Varied |
| Shoreline stabilization; Linear feet of bulkheads, retaining walls, etc. | Approx 11,500 ft |
| Piers/docks/floats, overwater structures; number or sq. ft. | Limited but present |
| Wetlands acreage | None or Low |
| Water quality; DOE 303 (d) list | Unlisted |
| Bald eagle & osprey nests and roosts & great blue heron rookeries | Multiple nests and roosts |
| Area of sea grasses, kelp, and emergent aquatic vegetation | Present |
| Road lengths (ft) within 200' of water body | < 500' |
| Acres of permanently protected areas | Limited |

**Table 12: Overview of NNL indicators for SR-AL**

Additional insights emerge if the private properties in this area are partitioned into four sets; homes on generally **level** terrain, homes generally towards the **low** side of a steep slope, homes generally towards the **high** side of a steep slope, and **undeveloped** properties.

| | Length | | Setbacks | Metric | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | W | First 100' | | Second 100' | | Total |
| | ft | % | | | P | N | P | N | |
| Level | 3,339 | 24.8 | 40 - 90 | 0.3 | 1.0 | 0.2 | 0.2 | 0.3 | 2.0 |
| Low | 6,698 | 49.6 | 20 - 50 | 0.0 | 0.2 | 2.5 | 0.1 | 1.8 | 4.7 |
| High | 2,197 | 15.7 | 125 - 235 | 0.0 | 0.1 | 4.6 | 0.1 | 1.1 | 6.0 |
| Undev (Pri) | 803 | 5.9 | NA | 0.0 | 0.2 | 5.4 | 0.2 | 2.6 | 8.2 |
| Undev (Other) | 525 | 3.9 | NA | 0.8 | 0.2 | 4.9 | 0.0 | 2.3 | 8.1 |
| Total | 13,562 | 100.0 | 30 - 95 | 0.1 | 0.4 | 2.5 | 0.1 | 1.4 | 4.6 |

**Table 13: Indicators for four categories of development in the Altered portion of the Marine**

### 5.4) SR-HA

This planning area consists of approximately 63% of M1 plus 56% of M4. This area is zoned as RS-12000 but existing development is more consistent with RS-7200. Development in a large fraction of this area is impacted to a significant degree by steep slopes and roadways.

| Indicator | Estimate |
|---|---|
| Impervious surface area (%) | Dominates area |
| Vegetation coverage; percent by class | Limited and partially functioning were present |
| Shoreline stabilization; Linear feet of bulkheads, retaining walls, etc. | Approx 6,500' |
| Piers/docks/floats, overwater structures; number or sq. ft. | None |
| Wetlands acreage | None or Low |
| Water quality; DOE 303 (d) list | Unlisted |
| Bald eagle & osprey nests and roosts & great blue heron rookeries | None |
| Area of sea grasses, kelp, and emergent aquatic vegetation | Present |
| Road lengths (ft) within 200' of water body | 5,600 |
| Acres of permanently protected areas | None |

**Table 14: Overview of NNL indicators for SR-HA**

The three segments in M1 are constrained to the rear by roadways that run at the base of steep slopes. The water ward side of the road is highly altered and the landward side is heavily vegetated. Two of the segments in M4 are on level ground and are constrained to the rear by roads. Homes along SW 172nd St are constrained by a roadway in the front and a steep slope to the rear.

| | Length | | Setback | Metric | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | W | First 100' | | Second 100' | | Total |
| | ft | % | | | P | N | P | N | |
| Rest | 4,644 | 72.0 | 25 - 35 | 0.2 | 0.3 | 0.2 | 0.0 | 2.2 | 2.9 |
| SW 172nd St | 1,810 | 28.0 | 70 - 95 | 0.5 | 0.0 | 0.0 | 0.0 | 2.1 | 2.6 |
| Total | 6,454 | 100.0 | 25 - 75 | 0.3 | 0.2 | 0.1 | 0.0 | 2.2 | 2.8 |

**Table 15: Indicators for the Highly Altered portion of the Marine**

### 6) Summary for the Planning Areas

Table 16 provides a summary of the setbacks and the planning metric for the three planning areas along Puget Sound ordered by the planning metric.

Area UC-NA scores highest for this metric. Two of the segments, totaling about 25% of this area, are almost completely unaltered. Seahurst Park, the primary opportunity for public access along Burien's shoreline, is somewhat altered within the first 100' of OHWM.

Area SR-AL demonstrates a relatively high level of ecological function but this is primarily due to the significant levels of native vegetation on the steep slopes that dominate this planning area. The position of the slope relative to OHWM tends to alter the location of the native vegetation within the first 200'. It is intriguing to note that typical setbacks are larger for **level** parcels than for the **low** parcels; it appears that many property owners prefer to include lawns between the primary structure and OHWM if there is sufficient space to do so.

Area SR-HA achieves a relatively high measure on this planning metric. This can be seen to be a consequence of the abundant native vegetation that exists on the steep slopes behind 30th Ave SW and Standring Lane SW, and hence further than 100' from OHWM, and the relatively less substantial bulkheads.

| | Style | Length | | Setback | Area (sq. ft.) (000's) | Metric | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | (ft) | (%) | | | W | 1st 100' | 2nd 100' | Total |
| UC-NA | Natural | 5,811 | 22.5 | > 200 | 46.3 - 69.6 | 0.7 | 4.9 | 3.0 | 8.6 |
| SR-AL | Level | 3,339 | 12.9 | 41 - 90 | 11.3 - 19.0 | 0.3 | 1.1 | 0.5 | 2.0 |
| | Low | 6,698 | 25.9 | 20 - 50 | 6.8 - 15.6 | 0.0 | 2.7 | 1.9 | 4.7 |
| | High | 2,197 | 8.5 | 126 - 233 | 13.9 - 21.2 | 0.0 | 4.8 | 1.2 | 6.0 |
| | Undev | 1,328 | 5.1 | NA | 11.4 - 32.1 | 0.4 | 5.3 | 2.6 | 8.3 |
| | Total | 13,562 | 52.5 | 30 - 94 | 8.2 - 17.5 | 0.1 | 2.9 | 1.5 | 4.6 |
| SR-HA | Exc 172 | 4,644 | 18.0 | 25 - 35 | 5.0 - 8.5 | 0.2 | 0.5 | 2.2 | 2.9 |
| | 172nd | 1,810 | 7.0 | 70 - 95 | 7.2 - 10.4 | 0.5 | 0.1 | 2.1 | 2.6 |
| | Total | 6,454 | 25.0 | 25 - 75 | 5.2 - 9.4 | 0.3 | 0.4 | 2.2 | 2.8 |
| Marine | Total | 25,827 | 100.0 | 30 - 90 | 7.4 - 15.0 | 0.3 | 2.7 | 2.0 | 5.0 |

**Table 16: Indicators for Burien's Marine Shoreline**

Table 17 provides a summary of the setbacks and the planning metric for the Lake Burien planning area.

| | Style | Length | | Setback | Area (sq. ft.) (000's) | Metric | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | (ft) | (%) | | | W | 1st 100' | 2nd 100' | Total |
| SR-LB | Level | 5,454 | 100.0 | 80 - 125 | 15.1 - 26.1 | 0.6 | 2.4 | 0.4 | 3.5 |

**Table 17: Indicators for the Lake Burien Shoreline**

## 7) Primary challenges to No Net Loss from Future Development

Meeting the no net loss standard in Burien's altered urban shoreline requires attention to a limited number of issues. Burien does not have any commercial or industrial development within the shoreline jurisdiction and there are no plans for such development within a 25 year planning horizon.

The shoreline is primarily public parks and private properties that are developed as single family residences. The Ruth Dykeman Children's Center on Lake Burien is a non-profit group home on a relatively large parcel. It is developed at a level that is comparable to the other private properties on the lake but there is concern that it could be a target for future development. Fortunately this parcel is subject to special planning rules in Burien's comprehensive plan and development efforts would be subject to additional public scrutiny.

Meeting the No Net Loss requirement is therefore primarily a matter of considering the patterns of development that are typical of redevelopment of private properties consistent with current zoning regulations.

### 7.1) Development Creep

Consideration of the No Net Loss standard in an altered urban environment comparable to Burien's suggests a focus on the question of *development creep*; a presumption by some parties that over time there is a natural desire for property owners to move towards OHWM. While some may debate the particulars of this pressure it is hard to claim that this concern is invalid. The question then is where this potential pressure will have the most influence in Burien.

#### 7.1.1) Undeveloped private properties

There are 11 undeveloped private properties; one is a small unbuildable property on Lake Burien and the other 10 are in the Marine shoreline and specifically in SR-AL.

The private properties along the marine have a total footage of just over 800' i.e. approximately 3.1% of the marine shoreline by length. All of the properties include significant bulkheads. It is difficult to guess how any of these properties might be developed over a 20 year planning horizon. Seven of these properties are in an unaltered state with the exception of the bulkheads but the remaining three are being maintained in a less natural condition.

Three properties have not had any sales transactions in the last 30 years, three have not had transactions in over 20 years, and the remaining four have had more recent transfers. One of the undeveloped properties in M3-A was purchased in 2012.

#### 7.1.2) Relocation of existing structures

Several elements of the SMP guidelines concern the possibility of existing homes being relocated; either the risk of adverse impacts if a home is relocated substantially closer to OHWM or the restorative benefit that might occur if a home is relocated substantially further from OHWM whether voluntarily or after unplanned destruction.

**SR-LB:** The properties around Lake Burien are on generally level ground with typical setbacks of 80 - 125'. The sewer pipe for this neighborhood is approximately 45' from OHWM which limits adverse alterations beyond that point.

**UC-NA:** It appears relatively unlikely that any of the structures in this area will be relocated. There is one private residence towards OHWM that was developed by subdividing an existing parcel on the extremely steep slope. This property could not be relocated at the top of the slope.

**SR-AL:** Almost 10% of this area is undeveloped; this includes the community beach. Approximately 65% of this area is impacted by steep slopes with homes at either the top or bottom of the slope. Nearly 1/2 of these homes are further constrained by the Indian Trail. It is believed that relocation of the homes across the slope will be relatively unusual. The final 25% of this area is generally level. Homes are typically towards the rear of these properties, with setbacks of 41' to 90' and these are candidates for relocation towards OHWM.

**SR-HA:** The proximity of roads and/or steep slopes means that none of these homes are plausible candidates for relocation.

### 7.1.3) Expansion of existing structures

This is likely to be the most common pressure for new development that presents a risk of adverse impacts.

**SR-LB:** This area is zoned as RS-7200 but existing development is generally consistent with RS-12000. The homes are typically setback 80' - 125' from OHWM on generally level ground. It is reasonable to expect that some of these homes will be candidates for expansion in a 20 year planning horizon.

**UC-NA:** Twelve of the thirteen private properties in this area are well outside shoreline jurisdiction. The remaining home is located on a challenging slope and hence is unlikely to be expanded.

**SR-AL:** This area is 52.5% of the marine shoreline and 50% of the properties are developed towards OHWM at the base of a steep slope. Many of these residences occupy a substantial fraction of the buildable space. However there are a number of more modest structures, some of which have not been renovated in many years that are candidates for meaningful redevelopment.

**SR-HA**: These properties are developed with levels of building coverage and impervious surface that approach or exceed the standards for RS-12000. If any of these homes are expanded it is likely to be on to existing impervious surface.

### 7.1.4) New accessory structures and appurtenances

It is reasonable to anticipate some desire for new accessory structures such as garages, beach cabanas, and tool sheds within shoreline jurisdiction.

**SR-LB:** Many of the homes around Lake Burien include garages and it is expected that new garages would be placed on the landward side of the existing primary residence. It has already been noted that the typical home is setback by more than 80' from OHWM and that the terrain is generally level with partially functioning areas. It is reasonable to anticipate that some residents will have an interest in erecting small structures on the water ward side of the existing sewer pipe, i.e. within 45' of OHWM, if the updated SMP allows this.

**UC-NA:** The location of the existing homes and the steep terrain make it highly unlikely that private property owners will attempt to construct new accessory structures with 200' of OHWM..

**SR-AL:** It has been noted that approximately 25% of this planning area is on relatively level ground with typical setbacks of over 40'. A number of these homes include cabanas and it can be imagined that other property owners may have an interest in adding a structure of this type.

Approximately 50% of this planning area is developed with homes at the base of a steep slope. Typical setbacks are between 20' and 50' and the home tends to back in to the slope. This leaves relatively little room to add an accessory structure towards OHWM.

Approximately 20% of this planning area is developed with homes at the top of a steep slope. Many of these properties include an accessory structure at the base of the slope that is accessed by tram or steep walkway. It is feasible that other property owners would seek to add modest cabanas if allowed.

**SR-HA**: These properties are highly developed towards OHWM and it is relatively unlikely that residents will attempt to add accessory structures between the primary residence and OHWM. Most of the properties in this planning area either have garages or have relatively little room to construct a garage without major renovation to the home.

**7.2) Shoreline stabilization**

The SMP guidelines include several sections that are intended to limit the creation or expansion of new structures for flood hazard reduction or shoreline stabilization.

**SR-LB:** The level of Lake Burien varies by approximately 3' during the year. Approximately 3/4 of the properties include a bulkhead or retaining wall to stabilize the shore. The longevity of development around the lake suggests that the level of stabilization has achieved a steady state.

**UC-NA:** Most of the bulkheads in this area are located in Seahurst Park. These bulkheads are being removed or reconfigured over time to reduce the possible impacts of these structures.

**SR-AL:** With the exception of M1-A, the last few hundred feet of M3-C and all of M3-D, the properties in this planning area include substantial bulkheads. These are frequently well over 4' tall, some are over 8' tall, and experience heavy wave action on a regular basis. There is little likelihood that these structures can be removed.

**SR-HA:** Nearly every property in this planning area includes a bulkhead. These are relatively modest in size for M1-B, M4-A, and M4-B, somewhat more significant in M1-D, and stand well over 6' in M4-C. With typical setbacks of 25' - 35', excluding SW 172nd St, there is little likelihood that these structures can be removed

There is a concern that climate change will raise sea level over time and/or increase the severity of storms. This may introduce pressure to expand and reinforce existing bulkheads along the Marine. There is debate about the specifics of this effect but it is anticipated that, if necessary, this issue will be accommodated by changes to state regulation and hence should not receive particular attention in this update.

## 8) Summary

This analysis synthesizes the information provided in the *Supplement to the Shoreline Inventory* in a manner that facilitates an understanding of the broad patterns of development to be found in Burien's shorelines. The nineteen inventory segments are grouped in to four planning areas based on environment and development conditions.

Lake Burien is a fresh water lake and development conditions are relatively uniform. The lake is zoned as RS-7200 but current conditions are broadly consistent with RS-12000. These properties include significant levels of partially functioning area between the primary residence and OHWM. Many of the properties may include wetlands adjacent to OHWM but there is little data on the extent of these wetlands. The majority of the properties include shoreline stabilization but these are relatively modest structures that protect the property during the annual cycle of change in the level of the lake.

Approximately 22.5% of the marine shoreline, by length, is in a relatively natural condition with abundant native vegetation. The primary alterations in this area are to support public access at Seahurst Park. This park has received significant attention to restore conditions with a focus on reconfiguring the bulkheads.

Approximately 52.5% of the marine shoreline is altered. This area is zoned as RS-12000 and conditions are generally consistent with this designation. Much of this area is impacted by steep slopes and these slopes are where native vegetation is particularly common. The majority of these properties include substantial bulkheads.

The final 25% of the marine shoreline is highly altered particularly in the first 100' from OHWM. Most of these properties include bulkheads but they are generally less substantial than in the remainder of the marine Shoreline Residential environmental designation.

The variety of conditions within these planning areas suggests that it is appropriate to define four dimensional standards for regulating new development within Shoreline Jurisdiction.

# CITY OF BURIEN
# SHORELINE MASTER PROGRAM

# RESTORATION PLAN

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# 1 INTRODUCTION

This report is intended meet the requirements of Restoration Planning component of the City of Burien's (City's) Shoreline Master Program (SMP) update. It builds upon other elements, draft or final, of the City's SMP update completed to date including the draft Shoreline Inventory (March 2008, revised October 2008) (Grette Associates 2008a) and Shoreline Analysis and Characterization (June 2008, revised October 2008) (Grette Associates 2008b). The report is organized in such a way that it clearly follows Ecology's guidance for Restoration Planning, based on WAC 173-26-201 (2) F, which is presented below in *italics* for reference:

*[WAC 173-26-201 (2)] F. Shoreline restoration planning. Consistent with principle WAC 173-26-186 (8)(c), master programs shall include goals, policies and actions for restoration of impaired shoreline ecological functions. These master program provisions should be designed to achieve overall improvements in shoreline ecological functions over time, when compared to the status upon adoption of the master program. The approach to restoration planning may vary significantly among local jurisdictions, depending on:*

- *The size of the jurisdiction;*
- *The extent and condition of shorelines in the jurisdiction;*
- *The availability of grants, volunteer programs or other tools for restoration; and*
- *The nature of the ecological functions to be addressed by restoration planning.*

*Master program restoration plans shall consider and address the following subjects:*

*(i) Identify degraded areas, impaired ecological functions, and sites with potential for ecological restoration;*

*(ii) Establish overall goals and priorities for restoration of degraded areas and impaired ecological functions;*

*(iii) Identify existing and ongoing projects and programs that are currently being implemented, or are reasonably assured of being implemented (based on an evaluation of funding likely in the foreseeable future), which are designed to contribute to local restoration goals;*

*(iv Identify additional projects and programs needed to achieve local restoration goals, and implementation strategies including identifying prospective funding sources for those projects and programs;*

*(v) Identify timelines and benchmarks for implementing restoration projects and programs and achieving local restoration goals;*

*(vi) Provide for mechanisms or strategies to ensure that restoration projects and programs will be implemented according to plans and to appropriately review the effectiveness of the projects and programs in meeting the overall restoration goals.*

## 1.1 RESTORATION PLANNING AND THE BUILT ENVIRONMENT

It is important to approach SMP-mandated Restoration Planning using the definitions for restoration provided for that purpose in the WAC, as it is different from definitions that exist in other regulatory realms (e.g., critical areas regulations, federal Clean Water Act). WAC 173-026-020 (27) reads: *"Restore," "restoration" or "ecological restoration" means the reestablishment or upgrading of impaired ecological shoreline processes or functions. This may be accomplished through measures including, but not limited to, revegetation, removal of intrusive shoreline structures and removal or treatment of toxic materials. Restoration does not imply a requirement for returning the shoreline area to aboriginal or pre-European settlement conditions.* Under this definition, restoration includes actions which improve degraded shoreline processes or functions and does not require a complete reversal to pre-development conditions. This is important, particularly in built environments such as the City of Burien where reestablishment of pre-development processes and functions may not be feasible. There are substantial constraints in terms of property ownership and development condition for the vast-majority of Burien's shorelines. In this case, the incremental benefits of smaller-scale actions, such as shoreline revegetation or structure removal on the scale of individual residential lots, must be acknowledged. There is added benefit to these smaller scale actions where the science addressing larger processes and functions within shoreline environments can inform their relative benefits, for instance restoring sediment transport to potential forage fish spawning areas.

The approach of this document is to consider all previously identified restoration opportunities within the context of both the built environment and the available science informing shoreline processes and function, building directly on the Inventory (Grette Associates 2008a) and Analysis and Characterization (Grette Associates 2008b) already prepared as part of this SMP update. Note that although this document is not organized by sections according to SMP reach (Table 1), reach is used as a descriptor for each restoration opportunity.

**Table 1. Shoreline inventory reaches in the City of Burien.**

| Location | Reach | Description | Approximate Length (ft) | Approximate Length (mi) |
|---|---|---|---|---|
| Marine | M1 | Primarily residential marine shoreline extending south from City limit to the north edge of Seahurst Park. | 6,001 | 1.14 |
| Marine | M2 | Seahurst Park and primarily undeveloped shoreline south to the point at which consistent shoreline residential development begins again. Corresponds to a line projected west from SW | 6,382 | 1.21 |
| Marine | M3 | Consistent residential development extending south to the tip of Three Tree Point. | 9,246 | 1.75 |
| Marine | M4 | Consistent residential development from the tip of Three Tree Point to the southern City limit. | 7,597 | 1.44 |
| | | *Marine Subtotal* | *29,226* | *5.54* |
| Lake Burien | LB | Entire perimeter of Lake Burien | 6,172 | 1.17 |
| | | **Total Jurisdictional Shoreline** | **35,429** | **6.71** |

## 1.2 REPORT ORGANIZATION

This document is organized as follows. First, the overall goals and priorities as described earlier in the SMP process are described (Section 2). This is followed by a detailed discussion of the on-going restoration and conservation activities within City shorelines, namely Seahurst Park and Eagle Landing Park (Section 3). Other areas identified as degraded or impaired under the Inventory (Grette Associates 2008 a), and Analysis and Characterization (Grette Associates 2008 b) are summarized in Section 4, along with discussion of restoration and/or conservation measures to address them.

Because this document is not explicitly organized around the six required subjects identified under WAC 173-26-201 (2) F (see page 1), Table 2 provides a summary of how this restoration maintains consistency with those requirements.

**Table 2. Consistency with WAC 173-26-201 (2) F.**

| Restoration Plan Requirement | How and where addressed |
|---|---|
| (i) Identify degraded areas, impaired ecological functions, and sites with potential for ecological restoration; | For Seahurst Park and Eagle Landing, described in Section 3. For all others summarized from Inventory (Grette Associates 2008 a) and Analysis and Characterization (Grette Associates 2008 b) in Section 3 (Table 3). |
| (ii) Establish overall goals and priorities for restoration of degraded areas and impaired ecological functions; | Already completed under SMP process, provided in Section 2. |
| (iii) Identify existing and ongoing projects and programs that are currently being implemented, or are reasonably assured of being implemented (based on an evaluation of funding likely in the foreseeable future), which are designed to contribute to local restoration goals; | Applies only to Seahurst Park and Eagle Park activities as described in Section 3. |
| (iv) Identify additional projects and programs needed to achieve local restoration goals, and implementation strategies including identifying prospective funding sources for those projects and programs; | Summarized from Inventory (Grette Associates 2008 a) and Analysis and Characterization (Grette Associates 2008 b) and expanded upon in Section 4 (Table 3). Potential funding sources identified in Section 4 (Table 4). |
| (v) Identify timelines and benchmarks for implementing restoration projects and programs and achieving local restoration goals; | Seahurst and Eagle Landing Parks as described in Section 3; other restoration opportunities are not yet well enough defined for detailed planning. |
| (vi) Provide for mechanisms or strategies to ensure that restoration projects and programs will be implemented according to plans and to appropriately review the effectiveness of the projects and programs in meeting the overall restoration goals. | Seahurst and Eagle Landing Parks as described in Section 3; other restoration opportunities are not yet well enough defined for detailed planning. |

# 2 GOALS AND POLICIES

The City's Shoreline Advisory Committee (SAC) has approved the following goal and associated policies for the restoration element of the SMP update, as of November 5, 2008.

**Goal**

Restore areas which are ecologically degraded to the greatest extent feasible while maintaining appropriate use of the shoreline

**Policies**

- Promote restoration actions that are doable, practical, and effective.
- The City shall be a good steward of public lands and should integrate restoration and/or enhancement of fish and wildlife habitats into capital improvement projects whenever feasible.
- For new development or redevelopment activities in the shoreline, establish incentives that provide opportunities to restore impaired ecological functions and processes. Incentives might include, but are not limited to: flexible development standards (e.g., setbacks, height limits, lot coverage), reduced or waiver of permit fees, and tax relief.
- The City shall promote voluntary shoreline enhancement projects through educational and incentive programs for individuals and organizations.
- The City should implement the restoration plan associated with this Shoreline Master Program.
- Improve natural stream and shoreline conditions to an environmental quality level that supports the return and continuation of salmon runs.
- Eliminate fish blockages.
- Stream banks and stream channels should be maintained or restored to their natural conditions wherever such conditions or opportunities exist.
- Increase availability of large woody debris and opportunities for recruitment in the nearshore zone.
- Restore degraded shoreline areas with native species.
- The City should investigate partnerships with local environmental groups, city, state, or county agencies, or tribes to implement projects and conduct follow-up monitoring and reporting.
- Project monitoring should be required for any action which is undertaken as mitigation for development impacts.

# 3 EXISTING AND ONGOING RESTORATION PROGRAMS

## 3.1 SEAHURST PARK

The vast majority of existing and ongoing shoreline restoration efforts within the City has been focused on, and are currently planned for, Seahurst Park. The park provides nearly one mile of Puget Sound shoreline, habitat for rearing salmonids, including Chinook salmon. The park contained a sea-wall or bulkhead, constructed in the 1970s. Since that time, beach elevations in Seahurst Park have dropped three to four feet due to wave scouring and the disconnection of the beach from primary sediment sources. These changes had significantly degraded habitat quality for salmon and the organisms they depend on, particularly forage fish.

The Seahurst Park Master Plan (Anchor 2002) described specific restoration opportunities within Seahurst Park (located in Reach M2). The plan proposed to preserve all the existing undeveloped area, increase the natural habitat area and function through extensive restoration and land acquisitions. The plan describes that sustaining and restoring the marine shoreline at Seahurst Park is based on four concepts: removing existing shoreline protection structures; modeling restored beach slopes and substrates after natural conditions; replenishing gravel and sand lost to erosion; and restoring and protecting the natural delivery paths of sediment to the beach. Since adoption of the Master Plan, the City has added an additional concept: to preserve existing functioning nearshore habitats including unstable forested bluffs, eelgrass beds, and stream deltas. These concepts now form a five-pronged strategy for the City to restore and protect nearshore habitats and restore habitat forming processes (S. Roemer, City of Burien Parks Planner).

As part of implementation of the master plan, the long seawall reach south of the south park entrance was removed and the beach reshaped to a more natural shoreline state, including the addition of native vegetation and large longshore wood placement. The Seahurst Park Bulkhead Removal and Beach Restoration Project was constructed between November 2004 and February 2005 made possible by funding from the City ($190,500), the state and the $190,500 funded by the state Salmon Recovery Funding Board ($190,500), and $707,000 from the U.S. Army Corps of Engineers. The project included removal of about 1,400 feet of failing seawall (including approximately 8,200 cubic yards of gabion and toe stone in addition to fill materials); and installation of approximately 9,350 cubic yards of washed gravels and coarse sand to mimic slope and surface substrates at reference beaches. Volunteers and contractors together installed over 8,300 trees, shrubs, groundcovers, and dune grasses as part of revegetation efforts.

The project goal is to restore self-sustaining nearshore habitat and ecological processes to avoid the need for on-going human intervention. Through reconnecting the sediment supply, the beach will now be naturally replenished. A series of pre-project monitoring reports were prepared to document baseline conditions for topics such as beach topography, eelgrass, benthic invertebrates, and forage fish use. Monitoring at Seahurst Park was mostly funded by grants. The monitoring reports also established post-restoration monitoring to quantify and evaluate the benefits from the project.

Before and after photos from the project (compliments of Jim Johannessen, Coastal Geologic Services)

Additional phases of the Master Plan include seawall redevelopment and nearshore restoration for the remainder of the park. The City is developing a project feasibility analysis for activities at the Park's northern shoreline. A number of alternatives are currently under consideration by the City and various state and federal regulatory agencies. The proposal potentially would include the removal of up to 1,800 feet of shoreline protection structures including concrete bulkheads, riprap revetments, and rock groins. Once these structures are removed, substrates would be placed and slopes shaped similar to what was completed at the south end of the park shoreline. In some locations, these actions would restore the natural delivery paths of sediments from the creeks and bluffs. All of the alternatives included in the feasibility analysis incorporate conservation of the bluff at the north end of the park, which is the segment ranked as the highest conservation priority within drift cell KI-5-1 (Johannessen, MacLennan, and McBride, 2005). Although the alternatives under consideration vary in the degree of restoration to be implemented, all alternatives include a substantial improvement from the existing condition.

In addition to the restoration actions being undertaken as part of the Master Plan, park staff and volunteers have conducted on-going vegetation management within shoreline areas, including invasive species removal and native plant installation.

### 3.1.1 Timeline, Benchmarks, and Funding

The feasibility evaluation of the Seahurst North Shoreline project has been reviewed in its draft form with the project stakeholders and permitting agencies, and will be coordinated with the Army Corps of Engineers (COE) and finalized in 2009. Following this task the project will progress into 30% design documents, a funding and phasing plan, and environmental review, all of which are anticipated to be completed during 2009.

All phases of current and future project development incorporate review by stakeholders and permitting agencies. In addition, project funding partners currently including the COE, Washington Department of Fish and Wildlife (WDFW), King Conservation District (KCD), as well as anticipated Puget Sound Partnership (PSP), will be provided restoration goals, benchmarks and timelines. Current project funding includes $1,100,000 from WDFW and $150,000 from KCD, with an additional $2,000,000 request submitted to the Puget Sound Partnership. Final project design and construction is anticipated to begin in summer 2010.

### 3.1.2 Implementation and Review Mechanisms

Throughout the Seahurst North Shoreline project there are in place mechanisms that provide for stakeholder and permitting agency reviews. Project alternatives, design development and environmental checklists will be shared with multiple internal and external partners and agencies. The monitoring of natural processes, which have been an ongoing process in the recently completed Seahurst South Shoreline restoration, will continue to occur with the restoration of the north shoreline. Processes currently monitored include; eelgrass, beach profile, benthic macroinvertebrate surveys and forage fish. Monitoring has and will occur on a pre and post construction basis in order to evaluate restoration success and to share this information with local and regional entities.

## 3.2 EAGLE LANDING PARK

Eagle Landing Park, acquired by the City in 2002, consists of approximately 5 acres of land set aside for passive recreation and conservation. Since that time the City has opened trails and performed reforestation work for the purposes of preserving salmon habitat and providing public water access. During the last four years a substantial effort based on community volunteer labor, largely coordinated through the City's Adopt-A-Park program and local community volunteers, has been focused on removing invasive vegetation and planting native shrubs and trees. The Parks Department is planning to complete a Vegetative Management Plan (VMP) for the Park in 2009, which will provide site-specific habitat evaluations and recommendations for the property. The City is currently acquiring funding and identifying consultants to complete this work.

### 3.2.1 Timeline, Benchmarks, and Funding

Restoration efforts at Eagle Landing Park continue to be included as on-going Adopt-A-Park work parties to remove invasive plant species and planting of native species. These efforts occur three times a year, with the next work party scheduled for February 27, 2009. In addition to these volunteer efforts, the more comprehensive VMP is anticipated for completion in 2009, with partial funding acquired from the Washington Department of Natural Resources (WDNR) and staff seeking additional funds through other local granting agencies. The VMP will establish a baseline for current vegetative habitat conditions and development a multi-year work plan to guide future funding and management priorities.

### 3.2.2 Implementation and Review Mechanisms

The VMP will comprehensively assess current habitat types and conditions, identify publicly accepted restoration goals and develop a strategy for implementing restoration efforts based on resource capabilities. This will guide future restoration efforts within a variety of economic climates to ensure constant forward progress towards habitat management goals.

# 4 ADDITIONAL RESTORATION OPPORTUNITIES

Both the Shoreline Inventory (Grette Associates 2008a) and Shoreline Analysis and Characterization (Grette Associates 2008b) describe general and specific restoration opportunities within the City of Burien in addition to the existing and ongoing Seahurst and Eagle Landing Parks activities discussed previously (Section 3). Currently, there are no specific plans in place to fund or implement any of these activities apart from those described in Section 3. This list should not be considered exhaustive of all restoration potential within the City, but does reflect a thorough review of those documented opportunities gathered during the Shoreline Master Plan process.

Restoration opportunities based on degraded conditions and/or impaired function, as identified earlier in the Shoreline Master Plan process, are described in Table 3. This table is geographically by shoreline reach. The restoration projects are ranked from 1 (highest priority) to 4 (lowest priority) based on the assessment of the following criteria: benefit to shoreline ecological functions and values; site owned by city or ability of city to accomplish project with property owner's consent; feasibility related to built environment (e.g., existing SFRs, protective bulkheads); and ability to fund or finance project. The table also includes a column for special considerations, for instance property ownership issues or that areas have been identified as high priority for restoration or conservation actions. For consistency, Seahurst Park and Eagle Landing Park are included in this table.

It is important to note that Draft Cumulative Impacts Analysis for this SMP update concludes that adverse cumulative impacts resulting from reasonably foreseeable development activity are expected to be limited, particularly given benefits of the planned restoration activities within Seahurst and Eagle Landing Parks (Reid Middleton 2008). While implementation of the actions for which no current formal plans exist may not be necessary to offset cumulative impacts, the City should use this information to identify or prioritize restoration efforts as opportunities for funding arise and/or as the need for restoration in order to mitigate for development impacts occurs.

As plans for implementing restoration actions are developed, either as actions in and of themselves or as mitigation for impacts associated with development or, more likely, redevelopment, timelines and benchmarks for implementation will be developed. Project monitoring would be a requirement for any action which is undertaken as mitigation for development impacts. For projects which are implemented solely as restoration actions, the City should ensure that appropriate monitoring is conducted to demonstrate the actions have been effective. In some cases, for instance removal of creosote pile, monitoring may not be appropriate.

**Table 3. Additional shoreline restoration opportunities in the City of Burien.**

| Reach | Type & Rank (1-4) | Location; Degraded Condition and/or Impaired Function | Description of Impaired/Degraded Condition | Special Considerations | Restoration Opportunities |
|---|---|---|---|---|---|
| Marine, All | General 1 | All shorelines, water quality | Category 5 (Fecal Coliform), Category 4 (Fish Habitat), generally associated with M3, but applicable to all shorelines. | Private property ownership for majority of shoreline area limits non-voluntary restoration actions.<br>Note also that actions (voluntary or otherwise) outside of the shoreline zone but draining to shorelines could improve shoreline water quality. | Voluntary actions for shoreline users: vegetation enhancement (run-off buffer), pet-waste management. |
| Marine, All | General 2 | All shorelines, water quality | While most of the shoreline area is serviced by the Southwest Suburban Sewer District (SWSSD), there are areas within draining to the shoreline areas of all marine reaches that are not (http://www.swssd.com/misc-pdf/sewer-map-20080718a.pdf). The SWSSD continues to receive reports of failing septic systems above reach M3 which corresponds to an area of mapped by King County Department of Health as having failing septic features between the 1970s – 1990 (D. Johanson, City of Burien Senior Planner). | Extension of sewer services can be costly dependent on a number of different factors, and requires significant neighborhood coordination, including formation of a Utility Local Improvement District (ULID). | Monitor for and repair failing septic systems (near term); work toward incorporating shoreline users into the SWSSD (long term). |
| M1 | Specific 3 | Salmon Creek Mouth, fish access | Fence at mouth of Salmon Creek and large rock impede upstream access for salmonids. | Fence is located on private property. Current status of fence unknown (D. Johanson, City of Burien Senior Planner). | Remove fence and boulder.<br>Other restoration activities (vegetation enhancement, stream channel restoration) may be possible, no specific plans describe these activities |

| Reach | Type & Rank (1-4) | Location; Degraded Condition and/or Impaired Function | Description of Impaired/Degraded Condition | Special Considerations | Restoration Opportunities |
|---|---|---|---|---|---|
| M1 | General 2 | Entire reach; sediment transport, shoreline armoring | Modified shorelines including bulkheads and bluff residential development (toe and top) degrade sediment source and transport; this may affect potential/documented forage fish spawning areas.<br>Some opportunities for conservation of existing function. | High priority for feeder bluff restoration (Johannessen, MacLennan, and McBride, 2005[1]); property ownership limits non-voluntary actions; development pattern limits opportunities based on continued safe occupation and use of property.<br>Large-scale reestablishment of historic feeder bluff conditions not feasible, but benefit may be had from incremental, voluntary actions as well as conservation of relatively intact areas. Forage fish spawning areas may receive additional benefit from incremental actions. | Conserve areas north of Seahurst Park that are not currently bulkheaded;<br>Encourage voluntary bulkhead removal and/or setback where appropriate to improve function including sediment transport.<br>Consider beach recontouring and/or substrate placement to improve conditions for forage fish spawning.<br>Conserve existing function. |
| M1 | General 1 | Entire reach; degraded shoreline vegetation | Residential development with highly modified vegetation (native vegetation limited/absent, ornamental and invasive vegetation present). | Private property ownership for majority of shoreline area limits non-voluntary restoration actions. | Encourage voluntary vegetation enhancement and restoration actions on private property to improve shoreline function.<br>Conserve existing function. |

| Reach | Type & Rank (1-4) | Location; Degraded Condition and/or Impaired Function | Description of Impaired/Degraded Condition | Special Considerations | Restoration Opportunities |
|---|---|---|---|---|---|
| M2 | Specific 1 | Seahurst Park; sediment transport, shoreline armoring, degraded vegetation, degraded habitat conditions | Historic development in the park resulted in substantial shoreline modifications including shoreline hardening, fill, disconnection between uplands and marine areas, and other modifications. Restoration and park redevelopment actions are described in the park's Master Plan. See Section 3.1 for additional discussion of Seahurst Park. | South Seawall actions completed in 2005 (cooperation with ACOE) included restoration in high priority feeder bluff restoration area (Johannessen, MacLennan, and McBride, 2005[1]).<br>North shoreline of the Park is high priority for feeder bluff conservation (Johannessen, MacLennan, and McBride, 2005[1]).<br>Alternatives for the North Seawall are currently in consideration (see Section 3.1). | Elements of planned restoration include removal of shoreline protection structures, restoration of beach slopes and substrates, and native vegetation enhancement and restoration, as well as preservation of existing functioning habitat elements (see Section 3.1). |
| M2 | General 4 | South of Seahurst Park; shoreline armoring, | Residential lots primarily with development outside of the shoreline zone; very limited armoring with largely undeveloped shoreline (some vacant lots). Includes potential/documented forage fish spawning areas. Opportunity for conservation of existing function. | Private property ownership for limits non-voluntary restoration actions. | Relatively low priority for restoration of sediment source/transport (Johannessen, MacLennan, and McBride, 2005[1]), voluntary bulkhead removal and/or setback would require evaluation for safety of continued use of developed site.<br>Consider beach recontouring and/or substrate placement to improve conditions for forage fish spawning.<br>Conserve existing function. |

| Reach | Type & Rank (1-4) | Location; Degraded Condition and/or Impaired Function | Description of Impaired/Degraded Condition | Special Considerations | Restoration Opportunities |
|---|---|---|---|---|---|
| M2 | General 3 | South of Seahurst Park; degraded shoreline vegetation | Likely degraded vegetation (invasive vegetation) as has been typical in similar conditions at Seahurst and Eagle Landing Parks. Opportunity for conservation of existing function. | Private property ownership for majority of shoreline area limits non-voluntary restoration actions. | Encourage voluntary vegetation enhancement and restoration actions on private property to improve shoreline function.<br>Conserve existing function. |
| M2 | Specific 2 | Eagle Landing Park; degraded vegetation | Native vegetation limited, invasive vegetation present | On-going efforts in the park at large to remove invasive species and plant native vegetation see Section 3.2); City acquiring funding for vegetation management plan (S. Roemer, City of Burien Parks Planner). | Continued volunteer-supported vegetation management, integrate implementation of the vegetation management plan once it is available (see Section 3.2). |

| Reach | Type & Rank (1-4) | Location; Degraded Condition and/or Impaired Function | Description of Impaired/Degraded Condition | Special Considerations | Restoration Opportunities |
|---|---|---|---|---|---|
| M3 | General 3 | Entire reach; sediment transport, shoreline armoring | Reach is almost entirely developed with single family residences located near or within the shoreline zone; most of which have armored shorelines. Includes potential/documented forage fish spawning areas. | High priority for feeder bluff restoration and conservation (Johannessen, MacLennan, and McBride, 2005[1]), property ownership limits non-voluntary actions; development pattern limits opportunities based on continued safe occupation and use of property.<br>Large-scale reestablishment of historic feeder bluff conditions not feasible, but benefit may be had from incremental, voluntary actions as well as conservation of relatively intact areas. Forage fish spawning areas may receive additional benefit from incremental actions. | Although high priority for restoration and conservation (Johannessen, MacLennan, and McBride, 2005[1]), bulkhead removal and/or setback generally not appropriate due to development pattern.<br>Consider beach recontouring and/or substrate placement to improve conditions for forage fish spawning. |
| M3 | General 2 | Degraded shoreline vegetation (native vegetation limited/absent, invasive vegetation present) | Residential development with highly modified vegetation (native vegetation limited/absent, ornamental and invasive vegetation present). | Private property ownership for majority of shoreline area limits non-voluntary restoration actions. | Encourage voluntary vegetation enhancement and restoration actions on private property to improve shoreline function. |
| M3 | General 1 | Mouths of unnamed tributaries; degraded vegetation | Native vegetation limited, invasive vegetation present | Private property ownership limits non-voluntary restoration actions | Encourage voluntary vegetation enhancement and restoration actions on private property to improve shoreline function. |

| Reach | Type & Rank (1-4) | Location; Degraded Condition and/or Impaired Function | Description of Impaired/Degraded Condition | Special Considerations | Restoration Opportunities |
|---|---|---|---|---|---|
| M4 | General 4 | Entire reach; sediment transport, shoreline armoring | Reach is almost entirely developed with single family residences located near or within the shoreline zone; most of which have armored shorelines. Includes potential/documented forage fish spawning areas. | Property ownership limits non-voluntary actions; development pattern limits opportunities based on continued safe occupation and use of property.<br>Benefit may be had from incremental, voluntary actions. Forage fish spawning areas may receive additional benefit from incremental actions. | Relatively low priority for restoration of sediment source/transport (Johannessen, MacLennan, and McBride, 2005[1]).<br>Bulkhead removal and/or setback generally not appropriate due to development pattern.<br>Consider beach recontouring and/or substrate placement to improve conditions for forage fish spawning. |
| M4 | General 1 | Degraded shoreline vegetation (native vegetation limited/absent, invasive vegetation present) | Residential development with highly modified vegetation (native vegetation limited/absent, ornamental and invasive vegetation present). | Private property ownership for majority of shoreline area limits non-voluntary restoration actions. | Encourage voluntary vegetation enhancement and restoration actions on private property to improve shoreline function. |
| M4 | Specific 3 | Sediment transport; water quality | Removal of a groin and/or a number of creosote pile would improve shoreline conditions (Johannessen, MacLennan, and McBride (2005). | May be located in-part or entirely on private land; limits non-voluntary restoration actions. | Remove groin and/or creosote pile. |
| M4 | Specific 2 | SW 172nd Street; water quality | Untreated storm water runoff from the road enters Puget Sound | | Implement treatment measures along this stretch of roadway. |

| Reach | Type & Rank (1-4) | Location; Degraded Condition and/or Impaired Function | Description of Impaired/Degraded Condition | Special Considerations | Restoration Opportunities |
|---|---|---|---|---|---|
| LB | General 1 | Water quality | Water quality is affected by storm water input and non-point runoff from maintained property surrounding the shoreline. | Private property ownership limits non-voluntary restoration actions and precludes programmatic restoration. | Opportunity for property owners to maintain water quality through coordinated stewardship and landscape maintenance practices. |

[1] Analyses in this document are based solely on comparison of current and historic shoreline conditions and do not take into account biological or socioeconomic factors.

**Table 4. Potential funding sources for shoreline restoration projects.**

| Grant Name | Allocating Entity | Contact |
|---|---|---|
| Aquatic Lands Enhancement Account | Washington State Recreation and Conservation Office | Leslie Ryan-Connelly<br>Phone: (360) 902-3080<br>E-mail: leslie.ryan-connelly@rco.wa.gov |
| Bring Back the Natives | National Fish and Wildlife Foundation | Barrett Bohnengel<br>Phone: (503) 417-8700<br>E-mail: Barrett.Bohnengel@nfwf.org |
| Community-Based Restoration Program | National Oceanic and Atmospheric Administration | Polly Hicks<br>Phone: (206) 526-4861<br>E-mail: Polly.Hicks@noaa.gov |
| Cooperative Endangered Species Conservation Fund | United States Fish and Wildlife Service | Heather Hollis<br>Phone: (503) 231-2372<br>E-mail: Heather_Hollis@fws.gov |
| Estuarine and Salmon Restoration Program | Washington Department of Fish and Wildlife; Puget Sound Nearshore Partnership | Jenna Norman<br>Phone: (360) 902-2658<br>E-mail: ESRP@dfw.wa.gov<br>Paul Cereghino<br>Phone: (360_ 902-2603<br>E-mail: ceregprc@dfw.wa.gov |
| Five-Star Restoration Program | National Fish and Wildlife Foundation | Amanda Bassow<br>Phone: (202) 857-0166<br>E-mail: Amanda.Bassow@nfwf.org |
| King County Community Salmon Fund | National Fish and Wildlife Foundation | Cara Rose<br>Phone: (503) 417-8700<br>E-mail: Cara.Rose@nfwf.org |
| Landowner Incentive Program | Washington Department of Fish and Wildlife, Lands Division | Ginna Correa<br>Phone: (360) 902-2478<br>E-mail: corregcc@dfw.wa.gov<br>Jeff Skriletz<br>Phone: (360) 902-8313<br>E-mail: skriliks@dfw.wa.gov |

| Grant Name | Allocating Entity | Contact |
|---|---|---|
| Puget Sound Coastal Program | United States Fish and Wildlife Service | Ginger Phalen<br>Phone: 360-753-9008<br>E-mail: Ginger_phalen@fws.gov |
| Salmon Recovery Funding Board | Washington State Recreation and Conservation Office | Tara Galuska<br>Phone: (360) 902-2953<br>E-mail: Tara.Galuska@rco.wa.gov |
| Water Quality Grants and Loans | Washington Department of Ecology | Jeff Nejedly<br>Phone: (360) 407-6566<br>E-mail: jnej461@ecy.wa.gov |

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Grette Associates. 2008b. City of Burien Shoreline Master Program Update Shoreline Analysis and Characterization. Prepared for the City of Burien. June 12, 2008, revised October 23, 2008.

Johannessen, J.W., MacLennan, A., and McBride, A. 2005. Inventory and Assessment of Current and Historic Beach Feeding Sources/Erosion and Accretion Areas for the Marine Shoreline of Water Resource Inventory Areas 8 & 9, Prepared by Coastal Geologic Services, Prepared for King County Department of Natural Resources and Parks, Seattle, WA. December 2005.

City of Burien Shoreline Master Program

# Cumulative Impacts Analysis

**August 2009**

*SMA Grant No. G0800116*

*Task 4.1*

Reid Middleton

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# 1. Introduction

The Washington State *Shoreline Master Program Guidelines* state that local Shoreline Master Programs are required to "evaluate and consider" the cumulative impacts of reasonably foreseeable future development on shoreline ecological functions and other shoreline functions promoted by the Shoreline Management Act. The guidelines further state that "to ensure no net loss of ecological functions and protection of other shoreline functions and/or uses, master programs shall contain policies, programs, and regulations that address adverse cumulative impacts and fairly allocate the burden of addressing cumulative impacts among development opportunities."

Specifically, the guidelines state that the evaluation of cumulative impacts should consider:

i. Current circumstances affecting the shorelines and relevant natural processes;
ii. Reasonably foreseeable future development and use of the shoreline; and
iii. Beneficial effects of any established regulatory programs under other local, state, and federal laws.

Additionally, the guidelines indicate that an appropriate cumulative impacts analysis will also consider the effects of unregulated activities and development exempt from permitting on shoreline ecological functions and other shoreline functions and uses. Furthermore, the guidelines indicate that particular attention should be paid to policies and regulations concerned with the platting or subdividing of property, laying of utilities, and mapping of streets that establish a pattern for future development.

The guidelines note that methods for determining reasonably foreseeable future development may vary depending on local circumstances, including demographic and economic characteristics and the nature and extent of shorelines.

This cumulative impacts analysis is organized into five sections:

1. Introduction
2. Current Circumstances Affecting the Shorelines and Relevant Natural Processes
3. Reasonably Foreseeable Future Development and Use of the Shoreline
4. Beneficial Effects of Any Established Regulatory Programs Under Other Local, State, and Federal Laws
5. Cumulative Impacts Summary

# 2. Current Circumstances Affecting the Shorelines and Relevant Natural Processes

The City of Burien *Shoreline Inventory* and *Shoreline Analysis and Characterization* describe in-depth current circumstances affecting Burien's shorelines and relevant natural processes. This section of the cumulative impacts analysis references the shoreline reach-scale information documented in the *Shoreline Analysis and Characterization*. For more details regarding current circumstances affecting Burien's shorelines and relevant natural processes, please consult the *Shoreline Inventory* and *Shoreline Analysis and Characterization* documents.

In both of these documents, Burien's shorelines were divided into five lineal reaches according to land use and environmental characteristics (Table 2.1). The first four reaches are contiguous and together constitute Burien's shoreline situated along Puget Sound. The fifth reach consists of the Lake Burien shoreline.

**Table 2.1. Shoreline Inventory Reaches in the City of Burien.**

| Location | Reach | Description | Approximate Length (ft) | Approximate Length (mi) |
|---|---|---|---|---|
| Marine | M1 | Primarily residential marine shoreline extending south from city limit to the north edge of Seahurst Park. | 6,001 | 1.14 |
| Marine | M2 | Seahurst Park and primarily undeveloped shoreline south to the point at which consistent shoreline residential development begins again. Corresponds to a line projected west from SW 149th Street to intersection with the shoreline. | 6,382 | 1.21 |
| Marine | M3 | Consistent residential development extending south to the tip of Three Tree Point. | 9,246 | 1.75 |
| Marine | M4 | Consistent residential development from the tip of Three Tree Point to the southern city limit. | 7,597 | 1.44 |
| | | *Marine Subtotal* | *29,226* | *5.54* |
| Lake Burien | LB | Entire perimeter of Lake Burien | 6,172 | 1.17 |
| | | **Total Jurisdictional Shoreline** | **35,429** | **6.71** |

## 2.1 Marine Reaches

According to WAC 173-26-201(3)(d)(i)(C), shoreline ecological functions in marine waters include, but are not limited to:

- Hydrologic – Transporting and stabilizing sediment, attenuating wave and tidal energy, removing excessive nutrients and toxic compounds, recruitment, redistribution and reduction of woody debris and other organic material.

- Vegetation – Maintaining temperature, removing excessive nutrients and toxic compound, attenuating wave energy, sediment removal and stabilization, and providing woody debris and other organic matter.
- Habitat for aquatic and shoreline-dependent birds, invertebrates, mammals, amphibians, and anadromous and resident native fish – Habitat functions may include, but are not limited to, space or conditions for reproduction, resting, hiding and migration, and food production and delivery.

Reach-scale shoreline functions are described below for each of the marine reaches (Reach M1 through M4).

### *2.1.1 Reach M1*

Reach M1 is the northernmost marine reach along the Burien shoreline, extending from Seola Beach to the north end of Seahurst Park. The reach is 1.14 miles in length. The following two aerial photos from July 2007 indicate the extent of primarily single-family development along the shoreline.

**Reach M1 (North)**

**Reach M1 (South)**

Historically, most of Reach M1 was exceptional or potential feeder bluff; now it is almost entirely modified shoreline as illustrated in the aerial photos. Additional summary information for Reach M1 is presented in Table 2.2.

**Table 2.2. Reach M1 Summary.**

| Total Acreage/ Land Use[1] | Stream Discharges | Public Shoreline Access | Hazard Areas | Habitat/Habitat Potential |
|---|---|---|---|---|
| 25.00 acres<br>Single-family: 72%<br>Vacant: 23%<br>Tracts/Other: 4%<br>Low Density MFR: 1%<br>Institutional: 0.01% | Seola Creek, Salmon Creek, unnamed tributaries | None | Landslide, Flood | Wetlands, Stream, Fish and Wildlife Areas (salmonids, forage fish, shellfish, eelgrass, Urban Natural Open Space) |

[1] Percentages may not total 100 percent due to rounding during GIS analysis.

*Current Land Use*

This reach is predominantly single-family use, with portions of undeveloped property associated with high gradient slopes and vacant parcels comprising approximately 24 percent of the reach.

*Hydrologic Function*

The shoreline of Reach M1 is primarily residential, and much of the shoreline is hardened by private bulkheads and boat ramps. These structures affect the hydrological functions of the shoreline, altering the transportation of sediment to and from the shoreline reach. Woody debris and organic material redistribution is restricted to the shoreline area waterward of the bulkheads.

Freshwater input is limited to that from Seola and Salmon Creeks and unnamed tributaries entering Puget Sound from the uplands adjacent to the shoreline. In some cases, small culverts or pipes drain freshwater from the upland through existing armored structures into Puget Sound.

Approximately 70 percent of Reach M1 is mapped as 100-year floodplain. Armoring of the shoreline can contribute to impacts of flooding, as an artificial physical boundary can impede the flow during inundation and recession of floodwater.

*Vegetation Function*

Vegetation along Reach M1 is also influenced by the existing land use in that much of the upland consists of the manicured yards of residential properties. Marine shorelines with highly altered vegetation are not as effective in removing excess nutrients, stabilizing sediment, and contributing organic matter as unmodified shorelines. However, any trees along the shoreline, whether native or part of a landscaped yard, contributes to overwater shading of the intertidal zone.

Additionally, the entire reach is mapped as a landslide hazard area, a Critical Area type. Removal of shoreline vegetation, such as that resulting from development, leads to erosion of the shoreline and may contribute to landslide activity.

*Other Habitat Function*

Critical Areas within this reach include the southerly bank and buffer of Seola Creek, Salmon Creek and associated buffers, and several small unnamed tributaries to Puget Sound. The forested ravines associated with these streams are mapped as Urban Natural Open Space, a Priority Habitat in Washington State. Deep forested ravines and the associated streams provide small mammal, bird, and fish habitat.

A high stream gradient limits opportunities for salmonids in Seola Creek and the unnamed tributaries within Reach M1. Salmon Creek historically had coho salmon (*Oncorhynchus kisutch*) present. A private structure near the mouth of Salmon Creek confines the channel and may impede fish passage to habitat upstream.

The physical separation of marine waters from the upland resulting from the armoring of shorelines limits the utilization of the transitional intertidal habitat; however, within Reach M1, there are several areas of quality habitat for shoreline-dependent animals along the marine shoreline. Below the ordinary high water mark, the entire reach is mapped as having geoduck (*Panopea abrupta*) beds. Eelgrass (*Zostera* sp.) patches are present as a sparse fringe along the reach and provide habitat for fish spawning, juvenile fish, and invertebrates. The southernmost

end of Reach M1 is mapped having surf smelt (*Hypomesus pretiosus*) spawning habitat. All of these areas are considered Fish and Wildlife Habitat Conservation Areas, a Critical Area type. In addition, estuarine wetlands associated with the marine aquatic bed are considered Category 1 wetlands.

### *2.1.2 Reach M2*

Reach M2 is a marine shoreline reach comprised of Seahurst Park and the relatively undeveloped shoreline south of the park to SW 149th Street or the northern edge of resumed shoreline development. Reach M2 is 1.21 miles long. Historically, Reach M2 included areas of feeder bluff, potential feeder bluff, and exceptional feeder bluff, some of which has now been modified. An accretion shoreform is present along most of its north end.

**Reach M2 (Seahurst Park)**

**Reach M2 (Seahurst Park, South)**

Additional summary information for Reach M2 is presented in Table 2.3:

**Table 2.3. Reach M2 Summary.**

| Total Acreage/ Land Use[1] | Stream Discharges | Public Shoreline Access | Hazard Areas | Habitat/Habitat Potential |
|---|---|---|---|---|
| 28.72 acres<br>Park: 78%<br>Single-family: 14%<br>Vacant: 9% | Unnamed tributaries | Seahurst Park, Eagle Landing Park | Landslide, Flood | Wetlands, Stream, Fish and Wildlife Areas (bald eagle, forage fish, shellfish, eelgrass, Urban Natural Open Space) |

[1] Percentages may not total 100 percent due to rounding during GIS analysis.

*Current Land Use*

Nearly 80 percent of Reach M2 is park, the majority of which is the shoreline of the 152-acre Seahurst Park. To the south of Seahurst Park is a smaller public park, the 5-acre Eagle Landing Park. This publicly owned land is set aside for passive recreation and conservation. Seahurst Park is currently in the process of redevelopment and restoration of the shoreline area. The second highest percentage of land use is single-family residential, with 14 percent, and the remainder of the reach is vacant. Unlike the other marine reaches, the majority of the single-family lots within Reach M2 do not extend far into the intertidal zone.

*Hydrologic Function*

Historically, much of the shoreline in Reach M2 incorporated bulkheads or some type of armoring; however, restoration efforts in the publicly-owned parks have been focused on reestablishing the shorelines' natural hydrology through removal of this armoring. As described in Section 2.1.1 for Reach M1, armoring limits the amount of both physical and biological interchange that can occur between the upland and the water. However, in areas where a more natural hydrology has been restored (such as areas within Seahurst Park), the shoreline allows for sediment transport, wave attenuation, and redistribution of organic materials (including large woody debris) across all tidal elevations. Additionally, the single-family lots between Seahurst Park and Eagle Landing Park have very little armoring.

Water flows from the upland onto the marine shoreline of Reach M2 through culverts that have been installed beneath parking lots and road fill embankments, draining water through or under bulkheading. Most of these modifications to drainage courses within Seahurst Park were made in the early 1970s by King County.

Approximately 30 percent of Reach M2 is mapped within the 100-year floodplain. As explained in Section 2.1.1, armoring of shorelines can intensify the impacts of flooding, as armoring inhibits the natural inundation and recession of floodwater.

*Vegetation Function*

Reach M2 has the largest area of native or unaltered shoreline vegetation of any of the shoreline reaches. The vegetation along the shoreline of the parks provides a source for large woody debris and other organic material that will enter the water, as well as overwater shading. Vegetation located upland of armored shorelines does not function to attenuate wave energy; however, the vegetation of the unaltered or restored shorelines within the reach aids in sediment removal, stabilization, and habitat for insects that serve as a supplemental food source.

As with much of the marine shorelines in the City, Seahurst Park is entirely flanked on the upland side with a landslide hazard area. The restoration and conservation of native vegetation that has occurred in or is planned for Reach M2 decreases the amount of erosion that occurs and could aid in decreasing the occurrence of landslides.

*Other Habitat Function*

Reach M2 has several important Critical Area types represented within the reach. Two large stream systems dominate the reach, with associated buffers. The riparian ravines surrounding the streams are mapped as Urban Natural Open Space, providing habitat to wildlife and fish species as well as plant diversity.

The streams within Reach M2 are high gradient, incised streams, with salmonid habitat limited to the lowest reaches. The southern stream system has some habitat available at the toe of the slope incline. The northern stream system has been modified to accommodate the fish acclimation facilities at the Marine Occupational Center in the North end of the park. These facilities rear coho salmon as part of the Highline School District marine science curriculum.

Below the ordinary high water mark, the entire reach is mapped as having geoduck beds. Eelgrass patches are present as a sparse fringe along the reach. Most of Reach M2 has surf smelt spawning habitat and a portion of the intertidal in front of the park has been mapped as Pacific sand lance (*Ammodytes hexapterus*) spawning habitat. All of these areas are considered Fish and Wildlife Habitat Conservation Areas, a Critical Area type. In addition, estuarine wetlands associated with the marine aquatic bed are considered Category 1 wetlands. A bald eagle (*Haliaeetus leucocephalus*) nest located outside of the shoreline zone near the south end of Reach M2 has a buffer for nest and forage area protection that extends into the shoreline zone and occupies nearly half (the southern half) of Reach M2. The nest is located within the boundaries of Eagle Landing Park.

### *2.1.3 Reach M3*

Marine shoreline Reach M3 is the longest shoreline reach within the City of Burien, delineated by the increased residential development at the south end of Reach M2 and the tip of Three Tree Point at the south end of the reach. Reach M3 is 1.75 miles long. Historically, Reach M3 (KI-7-2) included feeder bluff and potential feeder bluff areas alternating with accretion shoreforms. The bluffs in this reach have been entirely modified, as have some of the accretion shoreforms.

**Reach M3 (North)**

**Reach M3 (Middle Section)**

**Reach M3 (South Portion)**

Additional summary information for Reach M3 is presented in Table 2.4.

**Table 2.4. Reach M3 Summary.**

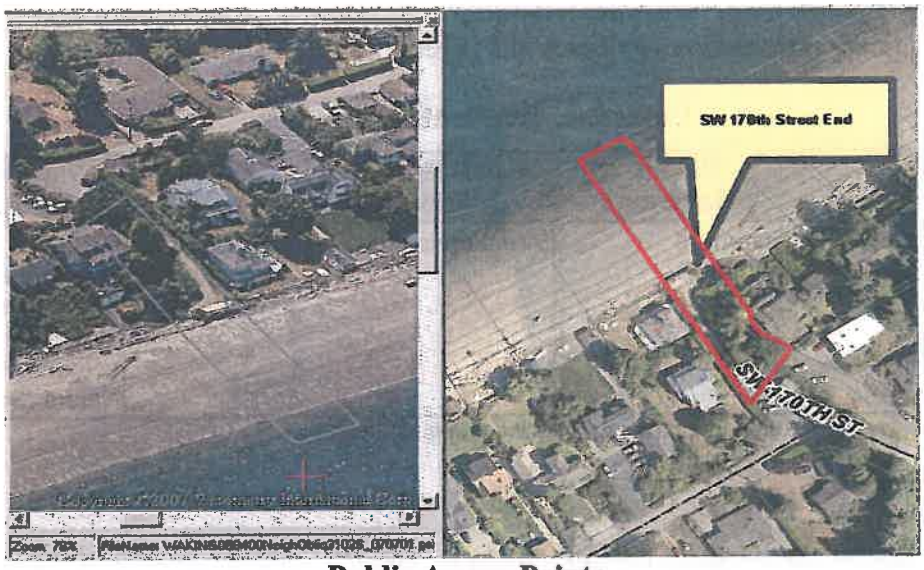
| Total Acreage/ Land Use[1] | Stream Discharges | Public Shoreline Access | Hazard Areas | Habitat/Habitat Potential |
|---|---|---|---|---|
| 40.23 acres<br>Single-family: 87%<br>Vacant: 12%<br>Tracts/Other: 1%<br>Low Density MFR: 0.4% | Unnamed tributaries | Street ends (several) | Landslide, Seismic, Flood | Wetlands, Stream, Fish and Wildlife Areas (bald eagle, forage fish, shellfish, eelgrass, kelp, Urban Natural Open Space) |

[1] Percentages may not total 100 percent due to rounding during GIS analysis.

*Current Land Use*

Land use in Reach M3 is developed single-family residential, with 87 percent of the shoreline developed in that land use category. The remaining areas of the reach are vacant.

The following aerial photos depict the public access points available from publically owned street ends.




**Public Access Points**

*Hydrologic Function*

The marine shoreline of Reach M3 is hardened with private bulkheads and numerous private boat ramps that affect littoral drift and longshore migration during most tidal stages. Reach M3 also has several single-family docks. Hydrologic functions, including sediment transport, wave attenuation, and redistribution of organic materials along the shoreline, are decreased by the presence of these artificial structures.

Several unnamed tributaries flow into Reach M3, and stormwater drains onto the shoreline through culverts running under or through bulkheads.

Twenty-six percent of Reach M3 is mapped as 100-year floodplain. As addressed in previous sections, armoring of the shoreline can hinder the flow of floodwaters to and from the shoreline.

*Vegetation Function*

The majority of the shoreline is residential; therefore, most of the vegetation within the Reach M3 shoreline consists of highly altered landscapes. Yards maintained with chemical fertilizers and herbicides can increase the nutrient and toxic load into the shoreline. Further, a decrease in the amount of native vegetation decreases the function of the shoreline, reducing its capacity to attenuate wave energy, stabilize sediments, and provide organic materials. However, any trees located along the shoreline can improve habitat conditions by providing overwater shading.

Removal of large amounts of vegetation and replacement with vegetation not as suited for the environment can increase erosion. Increases in erosion can increase the probability of landslides. The entire upland area of Reach M3 is mapped a landslide hazard area.

*Other Habitat Function*

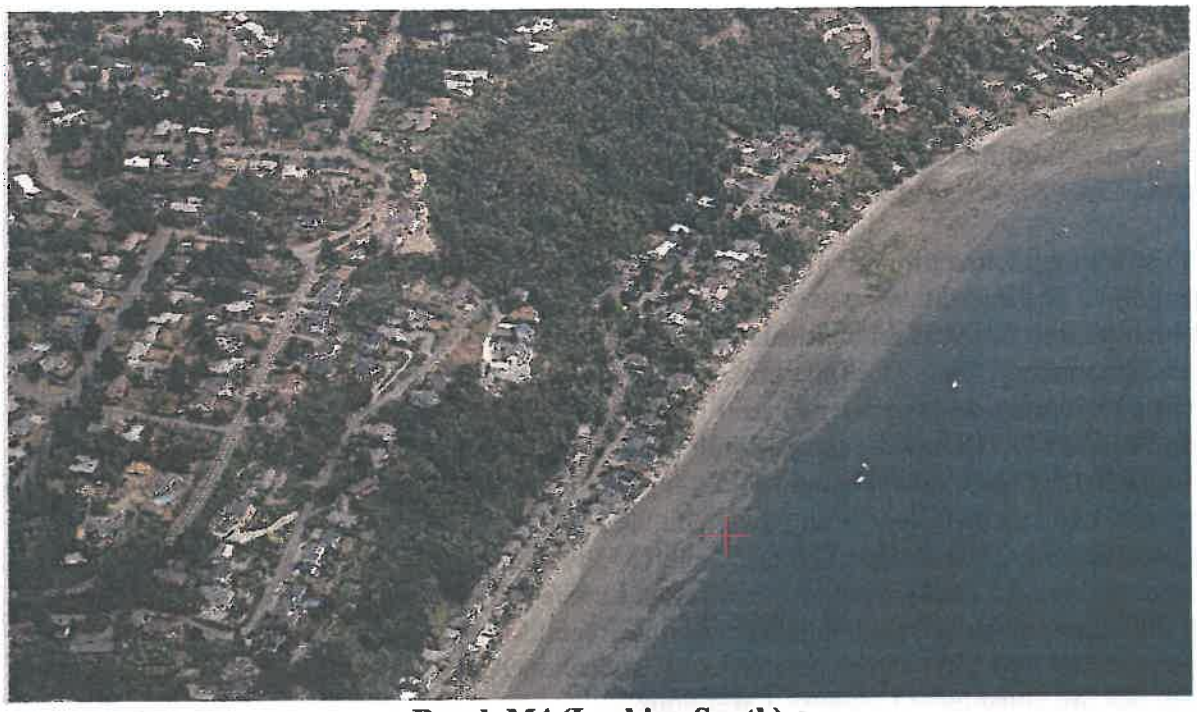
Critical Areas within Reach M3 include several small unnamed tributaries to Puget Sound and their associated buffers. The forested ravines associated with these streams are mapped as Urban Natural Open Space, a Priority Habitat in Washington State.

High stream gradients limit opportunities for salmonids in the unnamed tributaries within Reach M3. The intertidal areas used by juvenile salmon are separated from uplands functions by the high intensity of vertical bulkheads and the nearshore vegetation maintained in a highly altered (manicured) state. Despite the separation of upland and marine waters resulting from the armoring of shorelines, there are several Fish and Wildlife Habitat Conservation Areas located within Reach M3. Below the ordinary high water mark, almost the entire reach is mapped as having geoduck beds, which extend south almost to the tip of Three Tree Point. Eelgrass patches are present as a sparse fringe along the reach, and kelp (order Laminariales) beds are mapped within this reach. The southern half of Reach M3 is mapped as having surf smelt spawning habitat, overlaying a small reach of Pacific sand lance spawning habitat near SW 156th Street. The buffer associated with a bald eagles nest in Reach M2 extends into Reach M3 to approximately SW 156th Street. In addition, estuarine wetlands associated with the marine aquatic bed are considered Category 1 wetlands.

*2.1.4 Reach M4*

Reach M4 is similar to Reach M3 in that it is characterized by consistent residential development with a south-facing aspect. The reach extends from the tip of Three Tree Point to the southern city limits. Reach M4 is 1.44 miles long. Historically, Reach M4 was feeder bluff, which has subsequently been modified, and an accretion shoreform that is still functioning despite shoreline modifications.

**Reach M4 (East)**



**Reach M4 (Looking South)**

Additional summary information for Reach M4 is presented in Table 2.5.

**Table 2.5. Reach M4 Summary.**

| Total Acreage/ Land Use[1] | Stream Discharges | Public Shoreline Access | Hazard Areas | Habitat/Habitat Potential |
|---|---|---|---|---|
| 22.41 acres<br>Single-family: 91%<br>Low Density MFR: 5%<br>Vacant: 3%<br>Commercial: 1% | Unnamed tributaries | Street end (one) | Landslide, Seismic, Flood | Wetlands, Stream, Fish and Wildlife Areas (forage fish, shellfish, eelgrass) |

[1] Percentages may not total 100 percent due to rounding during GIS analysis.

*Current Land Use*

Land use in Reach M4 is developed single-family residential, with 91 percent of the shoreline developed in that land use category. The remaining areas of the reach are split between low density multifamily use (4.99 percent), vacant (2.65 percent), and commercial use (1.23 percent). Reach M4 is characterized as having narrower parcels than the other marine reaches, which extend into the intertidal area south of Three Tree Point.

The street end access to the beach is shown in the following photos; however, parking restrictions greatly limit ease of use.

**Street End Access to the Beach**

*Hydrologic Function*

As with the majority of the other marine reaches, the shoreline of Reach M4 is hardened with private bulkheads and a few private boat ramps that affect littoral drift and longshore migration during most tidal stages. Reach M4 also has several single-family docks. These alterations to the shoreline affect the hydrology of the reach, as described in Section 2.1.1 through Section 2.1.3.

Upland drainage into the reach flows through culverts and from several unnamed tributaries. SW 172nd Street parallels the shoreline near most of the reach immediately behind the small residential (garage) structures along the beach; stormwater runoff from the road enters Puget Sound with no opportunity for treatment.

Forty-eight percent of Reach M4 is mapped as 100-year floodplain. As discussed previously, armoring can reduce the ability of the shoreline to accommodate floodwater.

*Vegetation Function*

Land use within Reach M4 is similar to that within the other highly modified shorelines discussed above (Reach M1 and Reach M3); therefore, the same limitations on shoreline vegetation function exist in Reach M4 as do in the other marine reaches (please see Sections 2.1.1 and 2.1.3 for more details).

Removal or alteration of vegetation can contribute to erosion, increasing the chance for landslides. The upland area of Reach M4 is mapped a landslide hazard area; the soils surrounding Three Tree Point and immediately south are mapped as a seismic hazard zone.

*Other Habitat Function*

Reach M4 includes a few small unnamed tributaries to Puget Sound and their associated buffers. These are very high gradient streams with no associated Urban Natural Open Space. Although none are known to be salmon-bearing streams, they have the potential to provide habitat to other fish species.

The intertidal areas used by juvenile salmon are separated from upland functions by the high intensity of vertical bulkheads and the nearshore vegetation maintained in a highly altered (manicured) state. This separation limits the function provided by the shoreline.

Below the ordinary high water mark, the entire reach is mapped having geoduck beds. Eelgrass patches are present as patchy beds along the Reach M4 shoreline. A small segment of the reach is identified as Pacific sand lance spawning habitat. All of these areas are considered Fish and Wildlife Habitat Conservation Areas, a Critical Area type. In addition, estuarine wetlands associated with the marine aquatic bed are considered Category 1 wetlands.

## 2.2 Freshwater Reaches

According to WAC 173-26-201(3)(d)(i)(C), shoreline ecological functions in lakes include, but are not limited to:

- Hydrologic – Storing water and sediment, attenuating wave energy, removing excessive nutrients and toxic compounds, recruitment of large woody debris and other organic material.
- Shoreline vegetation – Maintaining temperature, removing excessive nutrients and toxic compound, attenuating wave energy, sediment removal and stabilization, and providing woody debris and other organic matter.

- Hyporheic functions – Removing excessive nutrients and toxic compound, water storage, support of vegetation, and sediment storage and maintenance of base flows.
- Habitat for aquatic and shoreline-dependent birds, invertebrates, mammals, amphibians, and anadromous and resident native fish – Habitat functions may include, but are not limited to, space or conditions for reproduction, resting, hiding and migration, and food production and delivery.

### *2.2.1 Reach LB*

Reach LB consists of the entire shoreline of Lake Burien and is the only freshwater shoreline reach in the city that meets the State's definition of "shorelines of the state." The Lake Burien perimeter is approximately 1.17 miles long.

**Lake Burien (View Looking West)**

**Lake Burien (View Looking East)**

Additional summary information for Reach LB is presented in Table 2.6.

**Table 2.6. Reach LB Summary.**

| Total Acreage/ Land Use[1] | Stream Discharges | Public Shoreline Access | Hazard Areas | Habitat/Habitat Potential |
|---|---|---|---|---|
| 28.80 acres<br>Single-family: 87%<br>School: 8%<br>Vacant: 3%<br>Tracts/Other: 1%<br>Low Density MFR: 1% | Unnamed tributaries | None | None | Wetlands, Aquifer Recharge Area |

[1] Percentages may not total 100 percent due to rounding during GIS analysis.

*Current Land Use*

Lake Burien is occupied almost entirely by single-family (87 percent) and multifamily (1 percent) development. The exception is the Ruth Dykeman Children's Center located at the northeast portion of the lake. The density of single-family development along the Lake Burien shoreline is somewhat higher than that along the marine shoreline. Reach LB is almost developed to its maximum potential. Approximately 60 overwater structures are located around

the perimeter of the lake. Additionally, there are approximately 5 overwater structures in the lake that are unattached to the surrounding uplands.

*Hydrologic and Hyporheic Function*

The shoreline of Reach LB is highly altered and is surrounded almost entirely by privately-owned residences. Given the relatively small size of the lake, there is not much wave action affecting the shoreline; however, the shoreline would effectively attenuate any waves produced in the lake. The lakeshore bank is low bank with a very gentle upland gradient. Flooding along the shoreline of the lake is not a documented problem, as Lake Burien is not located within the 100-year floodplain.

While a system of stormwater drainage pipes has been installed to divert runoff flowing into the lake, several drainage points into the lake remain and the lake still functions as a water storage area. Lake Burien is mapped as an Aquifer Recharge Area, a type of critical area. Alterations to the surface conditions within an Aquifer Recharge Area associated with development, such as changes in impervious surface area, channeling of runoff, and changes in the soils, can affect the rate and quantity of water entering the aquifer. Additionally, contamination of waters within the Aquifer Recharge Area can adversely impact the aquifer.

*Vegetation Function*

Due to the mostly residential land use surrounding Lake Burien, much of the vegetation within the shoreline of Reach LB consists of manicured lawns. Maintenance of lawns often increases the input of chemicals (fertilizers and herbicides) into the water and limits the input of organic material (including large woody debris) into the lake. However, any trees present contribute to the shading of the shoreline. Due to the topography around Lake Burien, the lack of native vegetation does not greatly increase erosion along the shore; there are no landslide hazard areas associated with the lake.

*Other Habitat Function*

Lake Burien in its entirety has been rated a Category 2 wetland. The buffer associated with a Category 2 wetland is 100 feet. While there are no Priority Habitat and Species documented within Lake Burien or along the shoreline, wetlands provide habitat for other small mammals, birds, and fish (such as feeding, breeding, and spawning). There is no fish access into Lake Burien; therefore, anadromous salmonids are not expected within the lake.

**Table 2.7: Shoreline Master Program Reach Summary.**

| Reach | Total Parcels (adjacent to OHWM) | Average Setback to SFR | Minimum Setback | % Impervious (between SFR & OHWM) | Area of Structures Beyond OHWM | Average Setback to Accessory Structures | Buoys |
|---|---|---|---|---|---|---|---|
| M1 | 67 | 55.34 | 1 | 44% | 6,435 | N/A | 11 |
| M2 | 14 | 429.79 | 50 | 4% | 39 | N/A | 0 |
| M3 | 118 | 68.16 | 1 | 22% | 1,713 | 18.8 | 40 |
| M4 | 103 | 82.29 | 9 | 52% | 503 | 26.78 | 46 |
| | | | | | | | |
| Lake Burien | 67 | 100 | 35 | 5% | 28,723 | 43 | 2 rafts |
| | | | | | | | |
| TOTALS | 369 | 183.90 | | 31.75% | 37,413 | 44.29 | 24.25 |

Based on: July 2007 Aerial Photo

# 3. Reasonably Foreseeable Future Development and Use of the Shoreline

This section describes the reasonably foreseeable future development and use in each of Burien's five shoreline reaches.

In general, Burien's shorelines have little potential for new future development since they are already largely developed to their current potential. The predominant single-family residential use of the shoreline is not expected to change significantly; therefore, the majority of the reasonably foreseeable future shoreline development activity is expected to consist of the redevelopment of existing structures. Neither activities that would establish a pattern for future development (such as the platting or subdividing of property, laying of utilities, and construction of new neighborhood streets), nor effects of unregulated activities and development exempt from permitting affecting shoreline functions, are expected to occur to a significant extent.

## 3.1 Reach M1

The zoning designation for Reach M1 is RS 12,000 Residential Single-Family; the comprehensive plan designations for Reach M1 are Low Density Residential Neighborhood and Public Park/Schools/Recreation/Open Space. Additional shoreline development and use information for Reach M1 is summarized in Table 3.1.

Because the comprehensive plan designations closely match current land uses, reasonably foreseeable future use is not expected to change significantly.

Reasonably foreseeable future development in this reach is expected to consist of the redevelopment of existing structures and the possible development of some of the currently vacant parcels (approximately 18). However, the development of the currently vacant parcels is expected to be limited, as they generally have development constraints that would make construction expensive.

**Table 3.1. Reach M1 Shoreline Development and Use Summary.**

| Total Acreage/ Current Land Use[1] | Current Vacant Parcels | Current Zoning Designation(s) | Comprehensive Plan Designation(s) |
|---|---|---|---|
| 25.00 acres<br>Single-family: 72%<br>Vacant: 23%<br>Tracts/Other: 4%<br>Low Density MFR: 1%<br>Institutional: 0.01% | Approximately 18 (all privately owned) | RS 12,000 Residential Single-Family | Low Density Residential Neighborhood & Public Park/Schools/Recreation/Open Space |

[1] Percentages may not total 100 percent due to rounding during GIS analysis.

## 3.2 Reach M2

The zoning designation for Reach M2 is RS 12,000 Residential Single-Family; the comprehensive plan designations for Reach M2 are Low Density Residential Neighborhood and Public Park/Schools/Recreation/Open Space. Additional shoreline development and use information for Reach M2 is summarized in Table 3.2.

Because the comprehensive plan designations closely match current land uses, reasonably foreseeable future use is not expected to change significantly.

Reasonably foreseeable future development in this reach is expected to consist of the redevelopment of existing structures and the possible development of some of the currently vacant parcels (approximately 6). However, the development of the currently vacant parcels is expected to be limited, as they generally have development constraints (such as steep slopes) that would make construction expensive. Additionally, Seahurst Park is currently in the process of redevelopment and restoration.

**Table 3.2. Reach M2 Shoreline Development and Use Summary.**

| Total Acreage/ Current Land Use[1] | Current Vacant Parcels | Current Zoning Designation(s) | Comprehensive Plan Designation(s) |
|---|---|---|---|
| 28.72 acres<br>Park: 78%<br>Single-family: 14%<br>Vacant: 9% | Approximately 6 (all privately owned) | RS 12,000 Residential Single-Family | Low Density Residential Neighborhood & Public Park/Schools/Recreation/Open Space |

[1] Percentages may not total 100 percent due to rounding during GIS analysis.

## 3.3 Reach M3

The zoning designation for Reach M3 is RS 12,000 Residential Single-Family; the comprehensive plan designation for Reach M3 is Low Density Residential Neighborhood. Additional shoreline development and use information for Reach M3 is summarized in Table 3.3.

Because the comprehensive plan designation closely matches current land uses, reasonably foreseeable future use is not expected to change significantly.

Reasonably foreseeable future development in this reach is expected to consist of the redevelopment of existing structures and the possible development of some of the currently vacant parcels (approximately 31). However, the development of the currently vacant parcels is expected to be limited, as they generally have development constraints (such as steep slopes).

**Table 3.3. Reach M3 Shoreline Development and Use Summary.**

| Total Acreage/ Current Land Use[1] | Current Vacant Parcels | Current Zoning Designation(s) | Comprehensive Plan Designation(s) |
|---|---|---|---|
| 40.23 acres<br>Single-family: 87%<br>Vacant: 12%<br>Tracts/Other: 1%<br>Low Density MFR: 0.4% | Approximately 31 (1 city-owned, remainder privately owned) | RS 12,000 Residential Single-Family | Low Density Residential Neighborhood |

[1] Percentages may not total 100 percent due to rounding during GIS analysis.

## 3.4 Reach M4

The zoning designation for Reach M4 is RS 12,000 Residential Single-Family; the comprehensive plan designation for Reach M4 is Low Density Residential Neighborhood. Additional shoreline development and use information for Reach M4 is summarized in Table 3.4.

Because the comprehensive plan designation closely matches current land uses, reasonably foreseeable future use is not expected to change significantly.

Reasonably foreseeable future development in this reach is expected to consist of the redevelopment of existing structures and the possible development of some of the currently vacant parcels (approximately 12). However, the development of the currently vacant parcels is expected to be limited, as they generally have development constraints (such as steep slopes).

**Table 3.4. Reach M4 Shoreline Development and Use Summary.**

| Total Acreage/ Current Land Use[1] | Current Vacant Parcels | Current Zoning Designation(s) | Comprehensive Plan Designation(s) |
|---|---|---|---|
| 22.41 acres<br>Single-family: 91%<br>Low Density MFR: 5%<br>Vacant: 3%<br>Commercial: 1% | Approximately 12 (2 city-owned, remainder privately owned) | RS 12,000 Residential Single-Family | Low Density Residential Neighborhood |

[1] Percentages may not total 100 percent due to rounding during GIS analysis.

## 3.5 Reach LB

The zoning designation for Reach LB is RS 7,200 Residential Single-Family; the comprehensive plan designations for Reach LB are Moderate Density Residential Neighborhood and Special Planning Area 2. Additional land development and use information for Reach LB is summarized in Table 3.5.

Because the comprehensive plan designations closely match current land uses, reasonably foreseeable future use is not expected to change significantly. Reasonably foreseeable future development in this reach is expected to consist primarily of the redevelopment of existing structures and the possible development of some of the currently vacant parcels (approximately 3). Private docks on Lake Burien are already at a density of close to one per residence, so any development of new docks on Lake Burien would be greatly limited.

**Table 3.5. Reach LB Shoreline Development and Use Summary.**

| Total Acreage/ Current Land Use[1] | Current Vacant Parcels | Current Zoning Designation(s) | Comprehensive Plan Designation(s) |
|---|---|---|---|
| 28.80 acres<br>Single-family: 87%<br>School: 8%<br>Vacant: 3%<br>Tracts/Other: 1%<br>Low Density MFR: 1% | Approximately 3 (all privately owned) | RS 7,200 Residential Single-Family & Special Planning Area 2 | Moderate Density Residential Neighborhood & Special Planning Area 2 |

[1] Percentages may not total 100 percent due to rounding during GIS analysis.

# 4. Beneficial Effects of Any Established Regulatory Programs Under Other Local, State, and Federal Laws

In addition to the Shoreline Management Act, several other established regulatory programs yield beneficial effects on the City's shorelines. Some of these regulatory programs are briefly described below.

## 4.1 Local Programs and/or Laws

*City of Burien Comprehensive Plan*

Burien's first comprehensive plan was adopted in November 1997, following months of town meetings, workshops, and public hearings. The plan has been amended several times, most significantly in December 2007 due to growth management requirements for plan updates. The plan is based on the *Burien Vision*, an expression by the community of what the community should be in 20 years. The plan reflects the goals and guidelines of Washington's 1990 Growth Management Act (see below). A major plan concept is the creation of a sustainable community (a community that is socially, economically, and environmentally healthy).

*City of Burien Municipal Code*

There are several sections of the Burien Municipal Code (BMC) with provisions that specifically apply to Burien shoreline areas. BMC Title 19 is the zoning code that implements the City's comprehensive plan. The zoning code contains numerous regulations with beneficial effects on Burien's shorelines, including lot coverage, building height, and landscaping. It also includes critical areas regulations that are largely incorporated into the shoreline master program. BMC Title 17 contains regulations regarding subdivision of land and BMC Chapter 15.55 addresses flood damage prevention. Chapter 7.30 contains rules governing use of park facilities that specify prohibited activities in the marine reserve areas.

*King County Countywide Planning Policies*

In order to effectively balance land use, infrastructure, and finance between a county and its cities, the Growth Management Act requires that an overall vision be established through a collaborative planning process involving the county and its cities. This process, formalized as the King County Countywide Planning Policies, is intended to serve as a framework for the development of each jurisdiction's comprehensive plan, ensuring consistency between a county's comprehensive plan and the comprehensive plans of the incorporated jurisdictions within its boundary.

## 4.2 State Programs and/or Laws

*Growth Management Act*

Many of Washington's cities and counties, including Burien, plan according to the Growth Management Act (GMA). While the goals and policies of the Shoreline Management Act are themselves a goal of the GMA, other goals of the GMA are relevant in shoreline jurisdictions. Those goals include: "Encourage economic development consistent with resources and facilities throughout the state," and "Protect the environment and enhance quality of life." To meet the goals of the GMA, jurisdictions planning under the GMA are required to designate and protect critical areas and use the best available science in developing policies and regulations to protect their functions and values. Also, the land use element of comprehensive plans is required to consider stormwater management and discharges into waters of the state.

*State Environmental Policy Act*

The State Environmental Policy Act (SEPA) aims to maintain and improve environmental quality by requiring procedures designed to ensure governmental agencies give proper consideration to environmental matters when making decisions on development actions. If initial governmental review of a proposed action indicates the action will have probable and significant adverse environmental impacts, preparation of a detailed environmental impact statement is required. The Burien Municipal Code Title 14 addresses environmental protection through the use of SEPA. The review of projects in the shoreline area triggering SEPA affords Burien's shorelines additional environmental protection.

*Water Pollution Control Laws*

The state also has water pollution control laws (RCW 90.48) with beneficial effects on Burien's shorelines. In enacting these laws, the legislature declared that it is "public policy of the state of Washington to maintain the highest possible standards to ensure the purity of all waters of the state consistent with public health and public enjoyment thereof, the propagation and protection of wild life, birds, game, fish and other aquatic life, and the industrial development of the state, and to that end require the use of all known available and reasonable methods by industries and others to prevent and control the pollution of the waters of the state of Washington. Consistent with this policy, the state of Washington will exercise its powers, as fully and as effectively as possible, to retain and secure high quality for all waters of the state."

## 4.3 Federal Programs and/or Laws

*Coastal Zone Management Act*

The United States Congress recognized the importance of meeting the challenge of continued growth in the coastal zone by passing the Coastal Zone Management Act (CZMA) in 1972. The CZMA, administered by the National Oceanic and Atmospheric Administration's Office of Ocean and Coastal Resource Management, provides for the management of the nation's coastal resources and balances economic development with environmental conservation.

The CZMA outlines two national programs, the National Coastal Zone Management Program and the National Estuarine Research Reserve System. The 34 coastal programs aim to balance competing land and water issues in the coastal zone, while estuarine reserves serve as field laboratories to provide a greater understanding of estuaries and how humans impact them. The overall program objectives of CZMA remain balanced to "preserve, protect, develop, and where possible, to restore or enhance the resources of the nation's coastal zone."

*Federal Water Pollution Control Act*

The objective of the Federal Water Pollution Control Act, commonly referred to as the Clean Water Act, is to restore and maintain the chemical, physical, and biological integrity of the nation's waters by preventing point and nonpoint pollution sources, providing assistance to publicly owned treatment works for the improvement of wastewater treatment, and maintaining the integrity of wetlands.

*Endangered Species Act*

The Endangered Species Act protects shoreline flora and fauna by requiring all projects permitted, funded, or authorized by the federal government to protect threatened and endangered species.

*Magnuson-Stevens Fisheries Conservation and Management Act*

The Magnuson-Stevens Fisheries Conservation and Management Act requires federally funded, authorized, or permitted projects that may adversely affect Essential Fish Habitat to be consulted upon by National Oceanic and Atmospheric Administration Fisheries.

# 5. Cumulative Impacts Summary

As discussed in Section 3, Burien's shorelines are already largely developed consistent with the existing comprehensive plan, shoreline program and adopted zoning. Accordingly, shoreline use is not expected to change significantly in the reasonably foreseeable future. In addition, the proposed SMP provides an increased level of protection to shoreline areas and will result in no net loss of shoreline ecological functions. Ongoing shoreline restoration efforts removing portions of the seawall and installing a more natural beach at Seahurst Park as well as the preservation of the nearshore and beach at Eagle Landing Park, should yield beneficial effects on shoreline ecological functions that have been degraded in the past.

It should be noted that there is some potential of further residential development near Lake Burien since the developed lots are typically larger than the current zoning of 7,200 square feet. Any residential redevelopment would be subject to the provisions of this shoreline program with a building setback of 15 feet from the existing 30 buffer. These buffers will apply to any new development in the shoreline area and establish a buffer where one may not exist today.
In addition, there is a new requirement that native trees, shrubs and ground cover, instead of lawn, be planted in the shoreline buffer. Under the new regulations, joint use docks are encouraged over single owner/use docks, no new covered moorage would be allowed and the total surface area of any new overwater structure could not exceed 150 square feet of surface area.

In fact, redevelopment along the shorelines can be expected to result in improved ecological functions over the long term with the application of more restrictive development standards at the local, state and federal levels. The installation of seasonal mooring buoys for recreational use will be more closely regulated to minimize damage to underwater lands and marine vegetation.

To minimize the potential for adverse cumulative effects to occur as a result of reasonably foreseeable development activity, and to foster activity that might yield beneficial cumulative effects, the Burien Shoreline Master Program contains several policies and regulations that will require a higher level of environmental protection. Some uses and activities are specifically prohibited in shoreline jurisdiction as shown in BMC 2.30.001 Shoreline Permit Matrix. In addition, new dimensional standards such as a 50 foot marine riparian buffer and a 30 foot Lake Burien riparian buffer combined with a 15 ft. building setback from the buffer and a 150-200 foot vegetation conservation buffer (BMC 20.30.040) will maintain and potentially improve existing shoreline functions.

Current scientific evidence indicates that the length, width, and species composition of a shoreline vegetation community contribute substantively to the aquatic ecological functions. The riparian buffers and vegetation conservation areas will enhance existing fish and wildlife habitat conservation areas that are currently protected by critical area regulations. Having shoreline vegetation will provide many of the following functions depending on the particular species:

bank stabilization; fine sediment filtering; uptake of nutrients and pollutants; large woody debris; shade; habitat; organic inputs. The vegetation conservation areas proposed in this shoreline master program will help assure no net loss of shoreline ecological functions while allowing reasonable use of shoreline properties. In addition, the shoreline policies and regulations, as well as potential non-regulatory measures that could have beneficial effects on shoreline functions degraded due to cumulative impacts, are shown in the following Table 5.1.

**Table 5.1. Cumulative Impacts**

| Shoreline Process and Function | Potential Alteration | Proposed SMP Policies & Regs. | Potential Non-Regulatory Measures | Resulting Change |
|---|---|---|---|---|
| Hydrologic (Hyporheic in freshwater)<br>Storing water & sediment transport (water quality)<br><br>Attenuating wave energy | Shoreline protection structures (e.g., bulkheads) | Policies:<br>Pgs. IV-15-16 Promote nonstructural measures and locate buildings to avoid the need for armoring.<br>Chp. II<br>REC 7 Trails and pathways on steep shoreline bluffs should be located, designed and maintained to protect bank stability without the need for shoreline armoring.<br><br>USE 15 City should have development standards that promote the siting of new structures such that they will not require shoreline stabilization and protective measures in the future.<br><br>USE 16 Shoreline stabilization and protective measures should be limited in number and extent. The use of "soft" stabilization and protective measures, such as vegetation, is preferred over the use of "hard" measures, such as concrete bulkheads.<br><br>CON 5 New development or redevelopment should avoid or mitigate additional loss of shoreline ecological functions. Developments should be encouraged to improve ecological functions and restore riparian buffers.<br><br>Regulations:<br>Prohibit breakwaters, jetties and groins.<br>Pgs. IV-16-18<br>For bulkheads not subject to the single-family residence exemption, a shoreline conditional use permit is required. | Conduct a shoreline stewardship program to educate property owners about nonstructural approaches to shoreline protection.<br><br>Education on proper lawn care practices. | Some bulkheads will not be constructed because of the new regs. and process.<br>Replacement bulkheads constructed to better avoid adverse impacts on ecological functions and neighboring property.<br>Greater potential for naturalized beaches with LWD and avoid disturbance of littoral drift.<br><br>Height restriction on bulkheads may result in less wave attenuation.<br><br>Hydrologic processes along the marine shoreline will likely remain the same with potentially some improvement with bioengineering replacing hard surfaces.<br><br>Maintenance of base flows in Lake Burien. |

| Shoreline Process and Function | Potential Alteration | Proposed SMP Policies & Regs. | Potential Non-Regulatory Measures | Resulting Change |
|---|---|---|---|---|
| | | Structures shall not result in a net loss of critical saltwater habitat or ecological functions.<br><br>Construction materials that come in direct contact with the water shall not be treated or coated with toxic materials.<br><br>Non-structural methods to stabilize the shoreline are used if feasible.<br><br>Minimize size, height and quantity of material utilized for the bulkhead.<br><br>Replacement bulkheads are generally not allowed waterward of the existing structure. | | |
| Water Quality | Boat ramps | <u>Regulation:</u><br>Prohibit construction of new boat ramps.<br><br>Mooring buoys preferred and installed using DNR approved systems. | | By prohibiting any new boat ramps, there will be no change in ecological functions. Removal, instead of repair of an existing boat ramp would result in an improvement to water quality. More mooring buoys could result in a reduction in water quality with more boats stored in the water for a longer period of time. |

| Shoreline Process and Function | Potential Alteration | Proposed SMP Policies & Regs. | Potential Non-Regulatory Measures | Resulting Change |
|---|---|---|---|---|
| Temperature regulation and aquatic habitat | Overwater structures (e.g. docks) | Policies:<br>Pg. IV-18<br>Minimize size and need for maintenance dredging.<br><br>Mooring buoys are the preferred method to provide moorage instead of constructing new residential docks, piers or floats.<br><br>Regulations:<br>Pg. IV-18 and 19<br><br>Shoreline conditional use permit would be required for non-exemption docks.<br><br>Docks allowed within riparian buffer.<br><br>No covered moorage is allowed waterward of the ordinary high water mark.<br><br>Only one dock or float is allowed for each single-family detached residential lot, but not over critical saltwater habitat.<br><br>Only joint use docks or floats are allowed for attached dwelling unit developments. | Provide information regarding construction alternatives to chemically treated wood. | With replacement of existing docks, there could be an improvement in water quality and habitat with less toxic materials in contact with the water and reduced overwater coverage. |
| Water Quality | Impervious surface area | Policies:<br><br>PA 2 Publicly owned shorelines should be limited to water dependent or public recreational uses, otherwise such shorelines should remain protected open space. | Educate public on stormwater and its impact on water quality.<br><br>Compliance with NPDES Phase II requirements will | Less impervious cover in shoreline jurisdiction over time with redevelopment under new standards.<br><br>More native plants in shoreline areas and less lawn. |

| Shoreline Process and Function | Potential Alteration | Proposed SMP Policies & Regs | Potential Non-Regulatory Measures | Resulting Change |
|---|---|---|---|---|
| | | REC 11 Development of recreational facility along City shorelines should implement Low Impact Development techniques whenever feasible.<br><br>CI 1 Minimize impacts to the topography and other natural characteristics of the shoreline by appropriately locating transportation routes. New roadways for vehicle circulation should be located outside of or minimized within the shoreline area.<br><br>CI 7 Parking facilities should be located and designed to minimize adverse impacts, including those related to: stormwater runoff; water quality; visual qualities; public access; and vegetation and habitat maintenance.<br><br>CI 8 Parking should be planned to achieve optimum use. Where possible, parking should serve more than one use.<br><br>CI 12 Parking for non water dependent uses should be located as far away as feasible from shorelines.<br><br>CON 5 New development or redevelopment should avoid or mitigate additional loss of shoreline ecological functions. Developments should be encouraged to improve ecological functions and restore riparian buffers.<br><br>CON 10 The City should provide education and technical assistance on low-impact development techniques.<br><br>CON 11 Provide public outreach and education about shoreline ecological functions and processes, and engage the public in stewardship and | result in improvements to municipal stormwater operations. | |

| Shoreline Process and Function | Potential Alteration | Proposed SMP Policies & Regs. | Potential Non-Regulatory Measures | Resulting Change |
|---|---|---|---|---|
| | | enhancement activities.<br><br>CON 12 Encourage minimizing the amount of impervious surfaces in new development through the use of appropriate low-impact development techniques and removing paved areas or using retrofit options in existing developments, where applicable, to minimize runoff.<br><br>CON 13 The City shall consider the impacts of new development on water quality as part of its environmental review process and require where appropriate any mitigation measures.<br><br>CON 14 Educate the public on water quality issues and impacts of stormwater flow.<br><br><u>Regulations:</u><br><br>The removal or modification of existing vegetation and the alteration of topography shall be the minimum necessary.<br><br>Parking, storage, loading and service areas and facilities serving commercial or office uses should minimize their visual impact on the shorelines, utilize low impact development approaches and be placed a minimum of 200 feet away from the water.<br><br>50 ft. marine riparian buffer and a 30 ft. Lake Burien riparian buffer. 15 ft. building setback from the buffer.<br><br>Establishment of a shoreline vegetation conservation buffer plantings of native trees, shrubs and groundcover plants. | | |

| Shoreline Process and Function | Potential Alteration | Proposed SMP Policies & Regs | Potential Non-Regulatory Measures | Resulting Change |
|---|---|---|---|---|
| Vegetation Function (water quality improvement) | Clearing of native vegetation | <u>Policies:</u><br><br>BMC 20.30.050<br><br>CON 5 New development or redevelopment should avoid or mitigate additional loss of shoreline ecological functions. Developments should be encouraged to improve ecological functions and restore riparian buffers.<br><br>CON 17 The City will protect wetlands by maximizing infiltration opportunities and promoting the conservation of forest cover and native vegetation.<br><br>CON 19 The City shall consider the impacts of new development on the quality of land, wildlife and vegetative resources as a part of its environmental review process and require any appropriate mitigating measures. Such mitigation may involve the retention of significant habitats.<br><br>CON 20 The City shall encourage an increase in tree canopies through the addition and the preservation of existing vegetation and use of landscaping as an integral part of development plans.<br><br>CON 21 The City should require development proposals to include non structural measures to stabilize soils, hillsides, bluffs and ravine sidewalls and to promote wildlife habitat by removing invasive vegetation and retaining or restoring native vegetation.<br><br>CON 22 The City should consider developing policies that balance the removal of vegetation to | Planting schemes and recommended plant types more widely distributed and utilized by waterfront homeowners. | More native plants in shoreline areas and less lawn. |

| Shoreline Process and Function | Potential Alteration | Proposed SMP Policies & Regs. | Potential Non-Regulatory Measures | Resulting Change |
|---|---|---|---|---|
| | | preserve and enhance views with the need to retain vegetation to promote slope stability and open space.<br><br>CON 23 Enhance riparian vegetation to improve shoreline ecological functions and processes where possible.<br><br>CON 29 Native plant communities and wildlife habitats shall be integrated with other land uses where possible. Development shall protect wildlife habitat through site design and landscaping. Landscaping, screening, or vegetated buffers required during development review shall retain, salvage and/or reestablish native vegetation whenever feasible. Development within or adjacent to wildlife habitat networks shall incorporate design techniques that protect and enhance wildlife habitat values.<br><br>REST 9 Increase availability of large woody debris and opportunities for recruitment in the nearshore zone.<br><br>REST 10 Restore degraded shoreline areas with native species.<br><br><u>Regulations:</u><br><br>BMC 20.30.050<br><br>Require submittal of a vegetation management plan.<br><br>The removal or modification of existing vegetation and the alteration of topography shall be the minimum necessary. | | |

| Shoreline Process and Function | Potential Alteration | Proposed SMP Policies & Regs | Potential Non-Regulatory Measures | Resulting Change |
|---|---|---|---|---|
| | | All clearing, grading and vegetation removal shall be the minimum necessary except for the removal of noxious and invasive vegetation using hand equipment if feasible.<br><br>Place priority on retention of snags and trees that provide overhanging vegetation and/or nesting or perching branches for eagles, other raptors, or priority species.<br><br>Private access from single-family detached residences shall avoid removal of trees and other woody vegetation when feasible. | | |
| | Chemical fertilizers and herbicides | <u>Policies:</u><br><br>CON 11 Provide public outreach and education about shoreline ecological functions and processes, and engage the public in stewardship and enhancement activities.<br><br>CON 14 Educate individuals and households about different ways to reduce pollution.<br><br><u>Regulations:</u><br><br>Limit use of pesticides and herbicides within and adjacent to the shoreline jurisdiction.<br><br>The City shall give preference to mechanical means rather than the use of herbicides for roadside brush control on City streets in shoreline areas. | | |
| Habitat Function | Shoreline protection structures | Under "Hydrologic (and Hyporheic in freshwater) Function" | | |

| Shoreline Process and Function | Potential Alteration | Proposed SMP Policies & Regs. | Potential Non-Regulatory Measures | Resulting Change |
|---|---|---|---|---|
| Habitat Function | Barriers to fish passage | Policies:<br><br>CON 5 New development or redevelopment should avoid or mitigate additional loss of shoreline ecological functions. Developments should be encouraged to improve ecological functions and restore riparian buffers.<br><br>REST 6 Improve natural stream and shoreline conditions to an environmental quality level that supports the return and continuation of salmon runs.<br><br>REST 7 Eliminate fish blockages.<br><br>Regulations:<br><br>Navigation channels shall be kept free of hazardous or obstructing uses and activities.<br><br>Culverts shall be located and installed in accordance with City of Burien standards and specifications. | | |
| | Aquaculture | BMC 20.30.065<br>Policies:<br>Aquaculture should not be permitted in areas where it would result in a net loss of ecological functions, adversely impact eelgrass and macroalgae.<br><br>Facilities designed and located to not spread disease.<br><br>Regulations: Shoreline conditional use permit limited to geoduck harvesting and tribal approved plans for recovery of a native aquatic population. | | |

| Shoreline Process and Function | Potential Alteration | Proposed SMP Policies & Regs. | Potential Non-Regulatory Measures | Resulting Change |
|---|---|---|---|---|
| | Habitat alteration, destruction | <u>Policies:</u><br><br>CON 3 The City of Burien's Critical Areas Map shall be used as a reference for identifying the City's critical areas. Other unmapped critical areas do exist throughout the City. Any site containing critical areas are subject to the special development regulations and conditions found in the City's Critical Areas Ordinance.<br><br>CON 4 Development should be directed toward areas where their adverse impacts on critical areas can be minimized.<br><br>CON 5 New development or redevelopment should avoid or mitigate additional loss of shoreline ecological functions. Developments should be encouraged to improve ecological functions and restore riparian buffers.<br><br>CON 6 The City shall maintain a system of development regulations and a permitting system to prevent the destruction of critical areas. Development regulations should at a minimum address wetland protection, aquifer recharge areas important for potable water, fish and wildlife habitat conservation areas, frequently flooded areas, and geologically hazardous areas.<br><br>CON 7 The City shall require permit review approval before any activity or construction is allowed to occur in, adjacent to, or impact a critical area. | | |

| Shoreline Process and Function | Potential Alteration | Proposed SMP Policies & Regs. | Potential Non-Regulatory Measures | Resulting Change |
|---|---|---|---|---|
| | | CON 19 The City shall consider the impacts of new development on the quality of land, wildlife and vegetative resources as a part of its environmental review process and require any appropriate mitigating measures. Such mitigation may involve the retention of significant habitats.<br><br>CON 24 The City should maintain and enhance existing species and habitat diversity including fish and wildlife habitat that supports the greatest diversity of native species.<br><br>CON 25 All development activities shall be located, designed, constructed and managed to avoid disturbance of adverse impacts to fish and wildlife resources, including spawning, nesting, rearing and habitat areas and migratory routes.<br><br>CON 26 Fish and wildlife habitat should be protected, conserved and enhanced, including: a. Habitats for species which have been identified as endangered, threatened, or sensitive by the state or federal government; b. Priority species and habitats listed in the Adopted King County Comprehensive Plan, November 1994; c. Shellfish areas; d. Kelp and eel-grass beds; e. Herring and smelt spawning areas; and f. Wildlife habitat networks designated by the City.<br><br>CON 27 Fish and wildlife should be maintained through conservation and enhancement of terrestrial, air and aquatic habitats.<br><br>CON 29 Native plant communities and wildlife | | |

| Shoreline Process and Function | Potential Alteration | Proposed SMP Policies & Regs. | Potential Non-Regulatory Measures | Resulting Change |
|---|---|---|---|---|
| | | habitats shall be integrated with other land uses where possible. Development shall protect wildlife habitat through site design and landscaping. Landscaping, screening, or vegetated buffers required during development review shall retain, salvage and/or reestablish native vegetation whenever feasible. Development within or adjacent to wildlife habitat networks shall incorporate design techniques that protect and enhance wildlife habitat values.<br><br>CON 31 The City shall promote voluntary wildlife enhancement projects which buffer and expand existing wildlife habitat, through educational and incentive programs for individuals and businesses.<br><br>CON 32 The City shall seek to retain as open space, those areas that provide essential habitat for any rare, threatened or endangered plant or wildlife species.<br><br>CON 33 The City should maintain, protect and enhance greenbelts riparian corridors and wildlife habit corridors so that the extent and intensity of the built environment is balanced by these natural features.<br><br><u>Regulations:</u><br>Development shall not intrude into or over critical saltwater habitats except when an alternative alignment or location is not feasible.<br><br>Use the best available technology to avoid adverse impacts.<br><br>Development of underwater pipelines and cables on | | |

| Shoreline Process and Function | Potential Alteration | Proposed SMP Policies & Regs. | Potential Non-Regulatory Measures | Resulting Change |
|---|---|---|---|---|
| | | tidelands is prohibited except for deepwater outfalls and facilities where no other reasonable alternative exists. | | |
| | Habitat fragmentation | <u>Policies:</u><br><br>CON 25 All development activities shall be located, designed, constructed and managed to avoid disturbance of adverse impacts to fish and wildlife resources, including spawning, nesting, rearing and habitat areas and migratory routes.<br><br>CON 26 Fish and wildlife habitat should be protected, conserved and enhanced, including: a. Habitats for species which have been identified as endangered, threatened, or sensitive by the state or federal government; b. Priority species and habitats listed in the Adopted King County Comprehensive Plan, November 1994; c. Shellfish areas; d. Kelp and eel-grass beds; e. Herring and smelt spawning areas; and f. Wildlife habitat networks designated by the City.<br><br>CON 28 The City should ensure that habitat networks throughout the City are designated and mapped. The network should be of sufficient width to protect habitat and dispersal zones for small mammals, amphibians, reptiles, and birds. These networks should be protected through incentives, regulation and other appropriate mechanisms. Site planning should be coordinated during development review to ensure that connections are made or maintained amongst segments of the network. | | Less adverse impact on critical saltwater habitats. |

| Shoreline Process and Function | Potential Alteration | Proposed SMP Policies & Regs. | Potential Non-Regulatory Measures | Resulting Change |
|---|---|---|---|---|
| | | Regulations:<br><br>Development shall not intrude into or over critical saltwater habitats except when an alternative alignment or location is not feasible.<br><br>Utilities shall be placed underground whenever possible. | | |

# Supplement to the Cumulative Impacts Analysis

This document is a supplement to the Cumulative Impacts Analysis that was prepared by Reid Middleton in August 2009 as an element of the City of Burien Shoreline Master Program (SMP) Update. This supplement provides an additional level of detail and an updated analysis based on the latest version of the Burien SMP.

## 1) Executive Summary

The Burien SMP consists of a package of policies and regulations that are designed to meet or exceed the goals of the Shoreline Management Act of 1971 (RCW 90.58) as reflected in the Shoreline Master Program Guidelines of 2003 and 2011 (WAC 173-26).

The policies and regulations in the Burien SMP include, but are not limited to

1) a variable width Shoreline Buffer
2) a variable width Vegetation Conservation Buffer
3) adoption of Burien's Critical Area Ordinances (CAO) by reference with minor exceptions
4) regulation for flood hazard reduction and shoreline stabilization

The preparation of the *Supplement to the Shoreline Inventory* demonstrated that development conditions in Burien's urban shoreline vary considerably particularly along the Puget Sound shoreline. The inventory identified 23 Shoreline Inventory Segments, 18 of them along the Marine and 5 along Lake Burien, based on typical setbacks, density of impervious surfaces, density of natural vegetation, impacts based on terrain, and development impacts from existing roadways. The boundaries of these segments are based on these development conditions and well defined geographical markers.

The *Supplement to the Shoreline Analysis and Characterization* demonstrated that it is reasonable to assign each Inventory Segment to one of four Shoreline Planning Areas based on existing development patterns.

The SMP includes new regulations that place particular limits on new development within a Shoreline Buffer and a Vegetation Conservation Buffer. The dimensions of these buffers is fixed within a given Shoreline Planning Area but vary along the Shoreline.

This analysis will consider each planning area in turn and demonstrate that the SMP includes the policies and regulations that are required to meet the SMP guidelines, with particular attention to the no net loss standard, in the context of reasonably foreseeable future development.

**2) Review of the Supplements to the Shoreline Inventory and Analysis**

The original Shoreline Inventory developed by Grette Associates LLC partitioned Burien's shoreline in to five Shoreline Inventory Reaches; one for all of Lake Burien and four for the shoreline along Puget Sound. The original Shoreline Analysis and Characterization noted that Inventory Reach M2 is in a comparatively natural condition and assigned this reach to the Urban Conservancy environmental designation while the remaining reaches were assigned to Shoreline Residential. However most of the remaining discussion treated these reaches as if the environment and existing conditions were relatively consistent.

The *Supplement to the Shoreline Inventory* confirmed the decision to use two environmental designations and verified that development conditions around Lake Burien are reasonably uniform. However the additional detail in this supplement demonstrated that conditions within M1, M3, and M4 vary to a degree that was not evident in the initial inventory. The Supplement to the Shoreline Inventory surfaced this variation by refining the 5 Inventory Reaches into 23 Inventory Segments; 5 segments for Lake Burien and the remaining 18 segments are along Puget Sound.

The *Supplement to the Shoreline Analysis* organized these segments in to 4 planning areas; one for Lake Burien (SR-LB), one for M2 (UC-NA), and two for the segments in M1, M3, and M4 based on the intensity of development adjacent to OHWM (SR-HA and SR-AL).

Figure 1 provides an indication of the boundaries of the 5 Inventory Reaches and the 23 Inventory Segments. Figure 2 indicates the aggregation of the Inventory Segments in to 4 Shoreline Planning Areas. Note that there are cases in which two or more adjacent Inventory Segments may be assigned to the same Shoreline Planning Area.

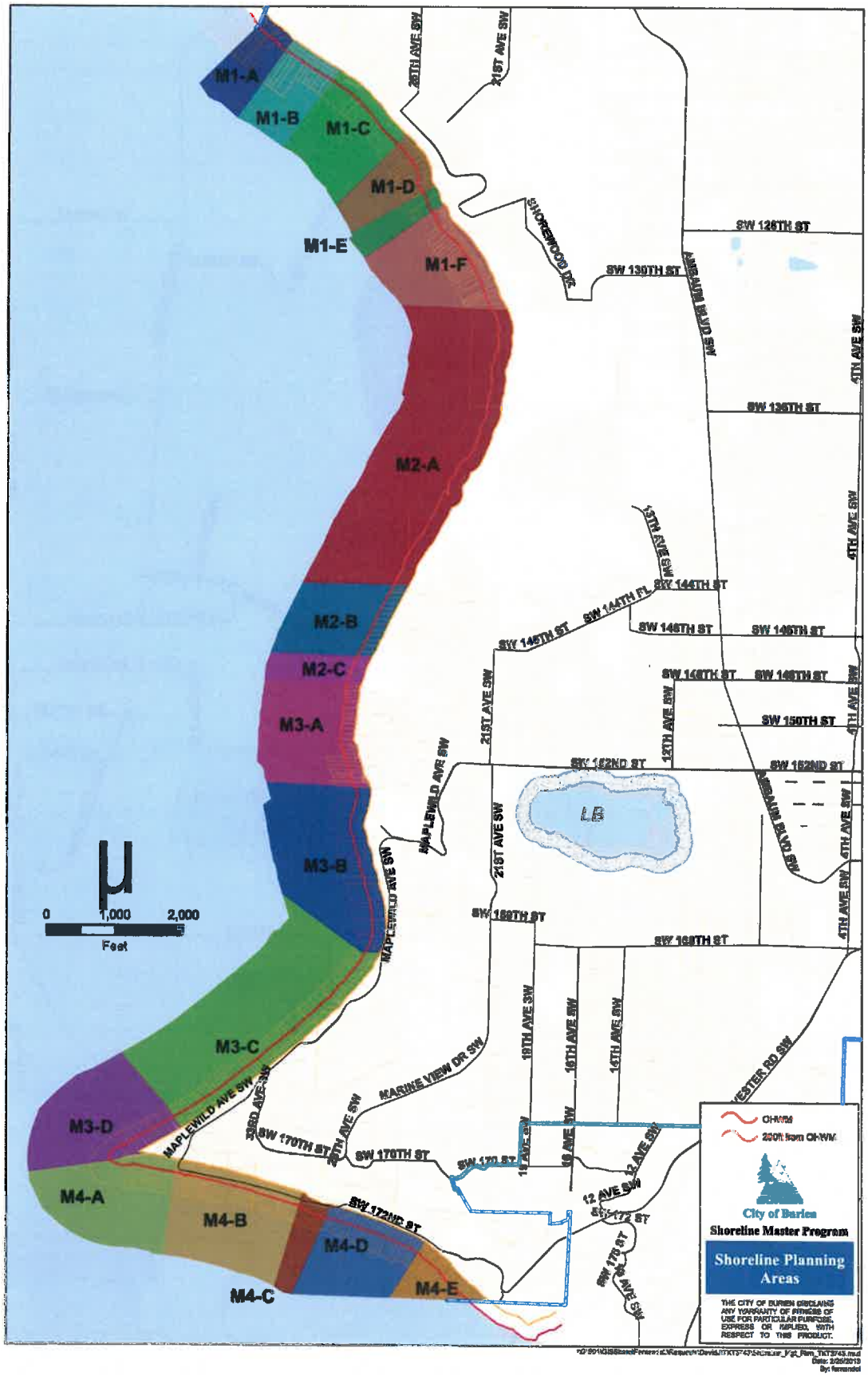



**Figure 1: The Shoreline consists of 5 Inventory Reaches and 23 Inventory Segments**

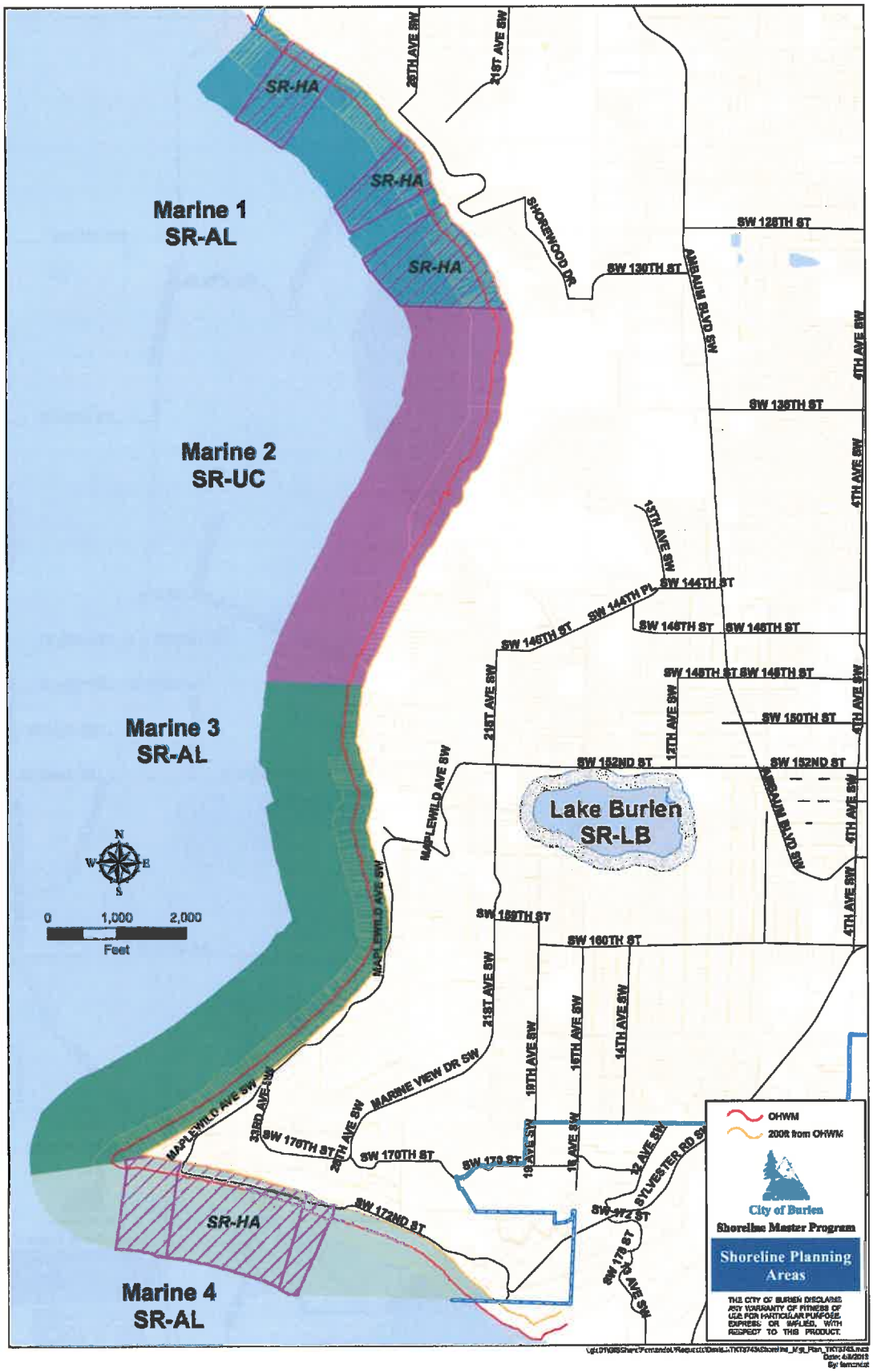



**Figure 2: The Shoreline consists of 4 Planning Areas**

The *Supplement to the Shoreline Analysis and Characterization* introduced a *Planning Metric* that provides a numerical measure that is correlated to the level of ecological function. A metric value of 0 implies little or no remaining ecological function and 10 implies largely natural function. Please refer to the analysis document for more detail on the developments of estimation of this metric.

Table 1 provides a review of a few of the more significant indicators of existing development for the Marine Shoreline grouped by Planning Area and style of development. This information is adapted form the Supplement to the Shoreline Characterization and Analysis. Recall that the indicators for setbacks and area are *typical* values, values between the 25th and 75th percentile, and not the full range of values. The table may show the effects of rounding.

| | Style | Length | | Setback | Area (sq. ft.) (000's) | Metric | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | (ft) | (%) | | | W | 1st 100' | 2nd 100' | Total |
| UC-NA | Natural | 5,811 | 22.5 | > 200 | 46.3 - 69.6 | 0.7 | 4.9 | 3.0 | 8.6 |
| SR-AL | Level | 3,339 | 12.9 | 40 - 90 | 11.3 - 19.0 | 0.3 | 1.1 | 0.5 | 2.0 |
| | Low | 6,698 | 25.9 | 20 - 50 | 6.8 - 15.6 | 0.0 | 2.7 | 1.9 | 4.7 |
| | High | 2,197 | 8.5 | 125 - 235 | 13.9 - 21.2 | 0.0 | 4.8 | 1.2 | 6.0 |
| | Undev | 1,328 | 5.1 | NA | 11.4 - 32.1 | 0.4 | 5.3 | 2.6 | 8.3 |
| | Total | 13,562 | 52.5 | 30 - 95 | 8.2 - 17.5 | 0.1 | 2.9 | 1.5 | 4.6 |
| SR-HA | Exc 172 | 4,644 | 18.0 | 25 - 35 | 5.0 - 8.5 | 0.2 | 0.5 | 2.2 | 2.9 |
| | 172nd | 1,810 | 7.0 | 70 - 95 | 7.2 - 10.4 | 0.5 | 0.1 | 2.1 | 2.6 |
| | Total | 6,454 | 25.0 | 25 - 75 | 5.2 - 9.4 | 0.3 | 0.4 | 2.2 | 2.8 |
| Marine | Total | 25,827 | 100.0 | 30 - 90 | 7.4 - 15.0 | 0.3 | 2.7 | 2.0 | 5.0 |

**Table 1: Indicators for Burien's Marine Shorelines**

Table 2 shows the same information for Lake Burien.

| | Style | Length | | Setback | Area (sq. ft.) (000's) | Metric | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | (ft) | (%) | | | W | 1st 100' | 2nd 100' | Total |
| SR-LB | Level | 5,454 | 100.0 | 80 - 125 | 15.1 - 26.1 | 0.6 | 2.4 | 0.4 | 3.5 |

**Table 2: Indicators for the Lake Burien Shoreline**

The supplement to the analysis also considered the applicability of the Department of Ecology's Potential No Net Loss Indicators from chapter 4 of the SMP Handbook to Burien's shoreline. Ten of the indicators were determined to be particularly relevant to Burien's Shoreline and five of those were deemed to be particularly amenable to development planning activities. These five indicators are repeated in Table 3.

| Indicator | Functions Affected |
|---|---|
| Impervious surface area (acres or percentage) | Water quality and habitat |
| Vegetation coverage in shoreline buffer; acres/percent by class | Water quality and habitat |
| Shoreline stabilization; Linear feet of bulkheads, retaining walls, etc. | Sediment supply |
| Piers/docks/floats, overwater structures; number or sq. ft. | Water quality and habitat |
| Wetlands acreage | Water quality and habitat |

**Table 3: Applicable No Net Loss indicators from SMP Handbook**

More information on Inventory Segments, planning areas, and Indicators for No Net Loss can be found by reference to the aforementioned documents.

The Burien SMP incorporates a strategy for managing new development in the shoreline that includes a Shoreline Buffer, a Vegetation Conservation Buffer, and standards for flood hazard reduction and shoreline stabilization. This strategy is tailored to the four planning areas by customization of the sizes of the Shoreline Buffer and Vegetation Conservation Buffer as reflected in BMC 20.30.050 Dimensional Standards for Shoreline Development. Table 4 repeats that information with the addition of the allowed total impervious surface coverage for the underlying zoning designations.

| | UC-NA | SR-AL | SR-HA | SR-LB |
|---|---|---|---|---|
| Shoreline Buffer Zone 1 | 50 ft | 30 ft | 20 ft | 30 ft |
| Shoreline Buffer Zone 2 | 100 ft | 15 ft | 15 ft | 15 ft |
| Vegetation Conservation | 200 ft | 150 ft | 150 ft | 150 ft |
| Lot Size | RS-12,000 | RS-12,000 | RS-12,000 | RS-7,200 |
| Building Coverage | 30% | 35% | 35% | 35% |
| Impervious Surface Coverage | 45% | 45% | 45% | 70% |

**Table 4: Dimensional Standards for Shoreline Development**

**UC-NA**: Urban Conservancy
**SR-AL:** Shoreline Residential - Marine altered
**SR-HA:** Shoreline Residential - Marine highly altered
**SR-LB**: Shoreline Residential - Lake Burien

### 3) No Net Loss and Reasonably Foreseeable Future Development

The Department of Ecology is required to review the proposed updates to every jurisdiction's Shoreline Master Program to assure that it is consistent with Shoreline Master Program Guidelines of 2003 and 2011 (WAC 173-26).

A central element of this review is to verify that the SMP will assure no net loss of ecological function as a result of reasonably foreseeable future development. Presentations by the Department of Ecology (DOE) in Burien and discussions with representatives of DOE indicate that a primary concern is that, over time, there is a common trend for development to move closer and closer to OHWM and hence impact the ecological function and habitat of the shoreline.

This section considers the likely pressures for future development, evaluate the effectiveness of the update to the SMP to manage these pressures, and demonstrate that the no net loss standard is likely to be achieved. It is convenient to consider this standard for each Planning Area in turn.

This evaluation considers four dominant styles of possible development

- Development of currently undeveloped properties
- Maintenance and redevelopment of existing structures
- Addition of new structures to developed properties
- Restoration activities

In each case the attention is focused on the likelihood that the development activity will increase the overall levels of impervious surface and partially functioning surfaces at the cost of existing natural vegetation. This concern grows as the new development approaches OHWM.

It is important to note that Burien's shoreline is primarily public parks and privately owned parcels that are zoned as, and developed as, single family residences. There is no commercial development in Burien's shoreline and there is no expectation that commercial activities or multi-family residences will be allowed in the future.

### 3.1) Lake Burien (SR-LB)

Lake Burien is a fresh water lake of slightly over 1 mile in perimeter with 70 waterfront properties and 8 upland properties within Shoreline Jurisdiction. The lake is zoned as RS-7200 but existing development conditions are generally consistent with RS-12000; typical lot sizes are 15K to 26K sq. ft., building coverage is generally close to 35%, and impervious surface coverage is generally closer to 45% than 70%.

These properties are extensively landscaped and there is little mature native vegetation. Approximately 2/3 of the properties include bulkheads or retaining walls and approximately 2/3 of the properties include docks.

There is clear evidence of the presence of wetlands at multiple sites around the lake; as of July 2012 the King County Tax Assessor's Database indicates that 47 of the waterfront properties include a wetland. These wetlands are protected by the Critical Area Ordinances that are adopted by reference into the SMP.

**Undeveloped properties**

There are two vacant waterfront properties on the lake; one is a TRCT parcel that is co-owned by the three properties directly behind it, and the other is a small parcel that appears to be unbuildable.

The RS-7200 zoning code provides opportunities for sub-division. While it must be assumed that this will occur over a 20 year planning horizon, it is believed that it will be relatively uncommon in practice. Excluding the Ruth Dykeman Center, the typical property is 60' - 86' wide and 185' - 290' deep with a building setback of 80' - 125' from OHWM. This suggests that if subdivision were to occur on a typical property, it would tend to create new upland properties rather new waterfront properties and would tend to impose the expense of relocating the existing primary structure. This is expected to dampen enthusiasm for this activity. When sub-division does occur it is unlikely to impact many of the indicators in Table 2 other than total impervious surface area in shoreline jurisdiction.

The Ruth Dykeman Children's Center is defined as a special planning area in Burien's comprehensive plan and hence will be subject to special oversight if there are ever efforts to redevelop this property.

If these assumptions prove to be incorrect then the City will have the ability to revisit the zoning code and dampen the opportunity for sub-division.

**Redevelopment of existing structures**

It appears that the primary driver for new development over a 20 year planning horizon will be redevelopment and renovation of existing primary structures. Many properties are already developed at a level that approaches the allowed building coverage and there is little reason to believe that there will be significant efforts to increase total impervious coverage in the absence of building expansion.

Reference to Table 3, the primary indicators of no net loss, suggests that this class of redevelopment will have little impact on any of the indicators other than incremental increases in total impervious surface area. This will primarily come at the expense of the total area of lawns and flower beds.

**Addition of new structures**

The Shoreline Analysis identified two primary drivers for additional structures in SR-LB; cabanas and garages. BMC 20.30.095 (2.g) specifically precludes the addition of new accessory structures within the Shoreline Buffer. New garages are likely to be constructed on the landward side of the primary structure.

**Opportunities for Restoration**

Public comment during the development of the Burien SMP focused attention on the role of storm water management to maintain water quality; a common theme in SMPs in urban jurisdictions. Although the city's Storm Drainage Master Plan is not part of the SMP the requirements of this plan may well represent the best single opportunity to maintain the health of this shoreline over time.

### 3.2) Marine Reach M2 (UC-NA)

This reach represents approximately 22.5% of the length of the marine shoreline. The abundant dense native vegetation which continues for many 100's of feet beyond shoreline jurisdiction means that this reach contains a substantially larger fraction of the total ecological function along this shoreline than its length would suggest.

Seahurst Park is just under 75% of the reach and, slightly ironically, this park contains most of the alterations along the reach. The Seahurst Park Master Plan, initiated in 2002, called for the expenditure of over $11M of public money to restore the natural quality of this park with a focus on removing and reconfiguring the bulkheads and seawall.

The remainder of the reach is in a nearly natural condition and this is unlikely to change in a 20 year planning period. This portion of the reach includes particularly steep slopes and all but one of the private homes along this reach have been constructed at the top of this slope. The combination of the steep slope, the city's Critical Area Ordinances for steep slopes, the 150' shoreline buffer, and the 200' vegetation conservation buffer all but eliminates the likelihood that there will be adverse impacts from new development along this portion of the reach.

**Undeveloped properties**

All of the private waterfront properties in UC-NA have been developed, primarily along 25th Ave SW and 100's of feet from OHWM. These properties are considerably larger than 12,000 sq. ft. but most of the area is on the very steep slopes adjacent to OHWM. This suggests that it is unlikely that there will be significant pressure to sub-divide and then develop adjacent to OHWM.

**Redevelopment of existing structures**

All but one of the private properties are developed along 25th Ave SW. The steep slopes, the vegetative conservation buffer, and the shoreline buffer make it unlikely that these homes will be relocated towards OHWM. Any expansion of these homes will be well outside shoreline jurisdiction.

**Addition of new structures**

New accessory structures are expected to be constructed towards the current location of the existing structures and hence generally well outside of shoreline jurisdiction. There is one private residence within shoreline jurisdiction but the challenging terrain makes it unlikely that there will be an effort to construct an accessory structure.

**Opportunities for Restoration**

The primary opportunities for continued restoration are within Seahurst Park.

There is an additional opportunity for the public to create new permanently protected areas. This would require offering to purchase private land at the base of the steep slopes in M2-B with the associated sub-division to create tax parcels. This would not have an immediate impact on ecological function but it would add this land to permanently protected areas within shoreline jurisdiction.

### 3.3) Highly altered portions of the Marine (SR-HA)

Shoreline inventory segments M1-B, M1-D, M1-F, M4-A, M4-B, an M4-C have been identified as being highly altered, to contain little or no environmental function within the first 100' from OHWM, and to be relatively immune to adverse impacts from new development. In total these represent approximately 25% of the length of the marine shoreline and a substantially smaller fraction of the existing ecological function.

M4-B is the set of homes on the landward side of SW 172$^{nd}$ St and the remaining segments consist of relatively densely packed homes between a roadway and OHWM.

The Burien SMP replaces the existing 20' setback from OHWM with a 35' shoreline buffer. The first 20' of this buffer, zone 1, plays a role that is comparable to the current setback, and the next 15' of the shoreline buffer provides for limited expansion with mitigation if required. This planning area is also subject to the steep slope elements of the adopted CAO and a vegetation conservation buffer of 150'.

The *Supplement to the Shoreline Inventory* and the *Supplement to the Shoreline Analysis and Characterization* demonstrated that SR-HA has little or no ecological function and is dominated by impervious surface. Almost all of this portion of the shoreline includes bulkheads although they are generally less substantial than is typical for the Marine.

**Undeveloped properties**

There are no undeveloped waterfront properties in this planning area. However there are substantial levels of mature native vegetation on the landward side of the roads in M1-B and M1-F and behind the homes in M1-D and M4-B. The steep slopes and the vegetation conservation buffer will limit new development on those portions of this planning area.

**Redevelopment of existing structures**

This planning area is zoned as RS-12000 and the existing structures and total impervious surface coverage are generally at, or perhaps beyond, the allowed limits. The majority of the area around the structures is impervious surface and limited levels of partially functioning area. Any expansion of the existing structures, in the event it is allowed, is unlikely to create new impervious surface.

**Addition of new structures**

There is relatively little room to construct new structures towards OHWM in this planning area and BMC 20.30.095 (2.g) explicitly disallows new accessory structures within the Shoreline Buffer. The presence of roadways and steep slopes on the landward side of the primary residences is likely to limit applications to construct additional structures.

**Opportunities for Preservation**

The land adjacent to the structures are constrained by roads and/or steep slopes and there is limited space to install native vegetation between the homes and OHWM. There are few if any opportunities for incremental restoration adjacent to the structures e.g. installation of native vegetation.

It is conceivable that the public could choose to make offers to the existing property owners to purchase those portions of this planning area that are in relatively natural condition and hence add this land to the permanently protected area.

### 3.4) Altered portions of the Marine (SR-AL)

This planning area represents approximately 52.5% of the length of the marine shoreline. Conditions are substantially altered with single family residences but there are meaningful levels of native vegetation within shoreline jurisdiction. The variety of development patterns within this planning area adds some complexity to the evaluation.

The Burien SMP replaces the existing 20' setback from OHWM with a 45' shoreline buffer. The first 30' of this buffer, zone 1, plays a role that is comparable to the current setback, and the next 15' of the shoreline buffer provides for limited expansion with mitigation if required. This planning area is also subject to the steep slope elements of the adopted CAO and a vegetation conservation buffer of 150'.

**Undeveloped private waterfront properties**

All of the undeveloped waterfront properties in the Marine shoreline are in this planning area totaling approximately 3% of this shoreline by length. There are ten undeveloped parcels; one in M1-C, two in M3-A, three in M3-B, two in M3-C, and two in M4-D. All of these properties are substantially impacted by steep slopes and include substantial bulkheads.

*M1-C*: this property is approximately 60' wide and 330' long and stretches over a steep slope between Shorewood Dr SW and OHWM. Neighboring properties are generally developed towards the street, outside shoreline jurisdiction and the constraints of the Burien SMP will drive new development towards this location. Development at the bottom of the slope will require a shoreline variance.

*M3-A*: these two properties are adjacent to each other. The neighboring properties are developed at the bottom of the steep slope; perhaps because of constraints imposed by the slopes and the location of 28th Ave SW. If these properties are developed it appears it will be necessary to rely on the shoreline variance process.

*M3-B*: The first undeveloped property is approximately 200' wide and 600' deep. It is on a steep slope and is fully vegetated and is separated from the local roadways. Development within shoreline jurisdiction appears to be challenging without a shoreline variance.

The second property is at about the midpoint of this segment and is located along Mapelwild Ave SW. It is approximately 60' wide and 260' deep. Neighboring properties are developed at both the top and the bottom of the slope but the immediately adjacent properties are developed at the base of the slope. The common line setback element of the Burien SMP would appear to support development at the base of the slope although doing so is likely to result in an adverse impact.

The final undeveloped property in this segment consists of 2 waterfront tax parcels and 4 upland tax parcels. Development on the waterfront parcels would likely require a shoreline variance.

*M3-C*: The two undeveloped properties in this segment are located towards the steepest portion of the Indian Trail. Both of these properties consist of two tax parcels; one on either side of the Indian Trail. Both properties are significantly impacted by steep slopes and include bulkheads. Development of these properties will be constrained by the adopted CAO, the vegetation conservation buffer, and the shoreline buffer.

*M4-D*: The first property, towards the north end of this segment, is approximately 60' wide and 260' deep. This property consists of two sections of relatively level ground with a narrow steep slope approximately half-way between OHWM and SW 172nd St. The slope includes significant native vegetation but the level portions are partially functioning areas that appear to be maintained. The lower portion shows evidence of a legacy foundation although the King County assessors database does not include a record of a structure. The property includes a bulkhead.

The second property is approximately 60' wide and slightly over 200' deep. The property is relatively level for 125' from SW 172nd St. The remaining land is a steep slope to the significant bulkhead. A *club house* has been constructed adjacent to the bulkhead. It appears that this property is co-owned by several properties on the landward of SW 172nd St.

It is to be expected that some, or even all, of these properties will be developed during a 20 year planning horizon although it must be noted that, with the exception of the club-house in M4-D, none of these properties have been developed during the previous 20 years. A strict application of the Burien SMP will be an obstacle to development towards OHWM for all of these properties. If development occurs then it is likely to be towards the rear of the property, often beyond shoreline jurisdiction, or the development effort will require a shoreline variance.

**Relocation of existing structures**

The *Supplement to the Shoreline Analysis* partitioned these properties into four categories based on the location of the primary residence and provided several indicators of development; this is repeated as Table 1 of this document. Consideration of these categories reveal five important patterns for relocation of an existing structure:

1) Relocation of a home on **level** ground
2) Relocation of a **low** home to another location at the base of the slope
3) Relocation of a **high** home to another location at the top of the slope
4) Relocation of a **low** home to the top of the slope so that it becomes a **high** home
5) Relocation of a **high** home to the bottom of the slope so that it becomes a **low** home

Level properties are approximately 24.6% of SR-AL and 12.9% of the marine shoreline by length. The typical setback from OHWM is 41' to 90' and homes are currently generally towards the rear of the property with mature landscaping to OHWM. The homes within each segment tend to be developed at a consistent distance from OHWM which allows each home to enjoy an unhindered view; this tends to relieve some of the pressure that would cause homes to creep forward over time.

The shoreline buffer for this planning area is 45' deep. Although the SMP allows for new impervious surface within zone 2 of this buffer, the requirements for mitigation sequencing prefers that the adverse impact not be made. This indicates a preference not to relocate the structure to impose on the shoreline buffer at all. If the structure were to enter zone 2, there would be a requirement to mitigate the adverse impact with new native vegetation in zone 1 hence achieving No Net Loss.

Low properties are approximately 49.4% of SR-AL and 25.9% of the marine shoreline. The typical setback for these properties 20' to 50' i.e. the majority of the homes are already partially within the shoreline buffer. Further the home is typically a substantial fraction of the width of the property. This all but eliminates the pressure to relocation of a low home elsewhere at the base of the slope.

High properties are approximately 16.2% of SR-AL and 8.5% of the marine shoreline. There is generally relatively little space at the top of the slopes and so it is also unlikely that there much effort to relocate a home at the top of the slope to some other location at the top of the slope.

It is unlikely that many home owners will be inclined to relocate a home that is at the base of s steep slope to the top of the slope. However even if this were desired many of these homes could not be moved to the top of the slope due to property boundaries or a lack of space at the top of the slope.

It is to be expected that some of the owners of homes at the top of a steep slope would be interested in having homes at the base of a steep slope. These properties are heavily vegetated at the base of the slope and there is generally relatively little land available. The 45' shoreline buffer can be expected to eliminate this class of re-development without the use of a shoreline variance.

**Expansion of existing structures**

A consideration of the impact of expanding existing structures follows a similar pattern but with fewer combinations.

The majority of homes on level ground are currently landward of the shoreline buffer. A significant fraction of these are unlikely to intrude on the buffer for typical levels of expansion. Expansion of the few homes that are currently close to the shoreline buffer might create new impervious surface in Zone 2 but this will trigger compensatory mitigation with a preference for restoration in Zone 1 to achieve no net loss.

A similar line of argument applies to homes that are located at the base of a steep slope. However the typical setback of these homes is currently 20' to 50' which means that many of these homes are already partially in Zone 2. Some expansion may occur, with compensatory mitigation as required, but the SMP will curtail this pattern of development.

The typical setback for the high homes is approximately 125' to 235' which means that expansion of these homes will be well outside shoreline jurisdiction.

**Addition of new structures**

The Supplement to the Shoreline Analysis and Characterization partitioned the developed properties into three broad categories; those on generally level ground, those that are developed at the base of a steep slope and generally towards OHWM, and those that are developed at the top of a steep slope towards the landward edge of Shoreline Jurisdiction.

The properties on level ground have typical setbacks of 40' to 90' and generally have little or no native vegetation. BMC 20.30.095 (2.g) explicitly disallows new accessory structures within the Shoreline Buffer i.e. within 45' of OHWM which will tend to leave very little space for new structures between the primary residence and OHWM. Most of the homes have garages on the landward side of the primary residence and this is the expected location for any new garages.

The properties at the base of the steep slopes have typical setbacks of 20' to 50' i.e. tend to overlap with the new Shoreline Buffer. There is therefore little opportunity to construct new accessory structures on the waterward side of the primary residence and little room for new structures between the primary structure and the slope. This will tend to force any new structures towards the top of the slope and, generally, towards the landward edge of Shoreline Jurisdiction.

Many of the properties that are developed at the top of the slope include accessory structures at the base of the slope and within the new Shoreline Buffer. BMC 20.30.095 (2.g) will prevent the creation of new accessory structures in this region.

**Opportunities for Preservation**

Ignoring the few small public street ends the shoreline properties in this planning area are privately owned. Ten properties, approximately 5.9% of this planning area by length or 3.1% of the marine shoreline, is undeveloped excluding the two community owned properties. These ten properties have been discussed in some detail in this report and it was noted that 8 of these are in a relatively natural condition. The public could consider seeking opportunities to purchase one or more of these properties and safeguard them from future development.

In addition there are a small number of developed properties with significant native vegetation that include a primary structure that is in a distressed condition. The public could choose to purchase some of these properties, remove the structure, and safeguard them from future development.

Focusing on preservation of these undeveloped or distressed properties may be more cost efficient than efforts to purchase developed properties and then restoring them to natural conditions.

**4) Summary**

This supplement has supports the conclusion that the update to the Burien SMP, as a package, meets the goals of the SMA and the requirements of the SMP Guidelines. The policies and regulations of Burien's SMP can be expected to assure No Net Loss from reasonably foreseeable future development.

# DATA ANALYSIS REPORT

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# Introduction

The Lake Burien Shore Club has for many decades taken an active role in protecting water quality and ecological functions of Lake Burien. The Draft Shoreline Master Program (Reid Middleton 2009) currently before the Burien Planning Commission includes policy and regulation provisions for establishment of public access to Lake Burien. However, it did not identify existing lake conditions or address potential impacts to those conditions from physical access to the lake by the general public.

The Lake Burien Shore Club (Shore Club) requested that Rob Zisette of Herrera Environmental Consultants (Herrera) summarize existing information on conditions of the lake and identify potential impacts to those conditions as a result of public access to the lake. This report summarizes the existing physical, water quality, aquatic plant, and fish and wildlife conditions in Lake Burien. Based on these conditions, potential impacts to the lake from establishing public access are then addressed.

Information presented in this report is based on review of readily available data and reports. Additional information was obtained by Rob Zisette during a site visit on March 13, 2010. This report was prepared by Rob Zisette, who is a limnologist with 30 years of lake research experience.

Per the detailed discussion below, Lake Burien presents several contraindications for adding public access to the burdens it must carry. One is the increased potential for the introduction and facilitation through public access of non-native, invasive aquatic plants and animals, which could severely impair habitat, water quality, aesthetics, and recreational activities in the lake. Another is the presence of the bluegreen algae *Anabaena* and *Aphanizomenon,* which account for the vast majority of bluegreen blooms in Washington lakes, and can produce the toxins microcystin and anatoxin-a.

# Physical Characteristics

According to historical reports by King County (2010), Lake Burien is 44 acres in size with a mean depth of 13 feet (4.0 meters) and a maximum depth of 29 feet (8.8 meters). Features listed for Lake Burien in Lakes of Washington (Wolcott 1973) include an area of 43.7 acres, a maximum depth of 33 feet (10.0 meters), and a lake surface elevation of 320 feet mean sea level. Bathymetric (water depth) contours are shown in Figure 1 (Messick 2010).

The lake watershed is approximately 250 acres in size (King County 2010) as shown in Figure 2 (Messick 2010). The watershed boundary shown as the yellow line in Figure 2 reasonably agrees with the storm drain maps prepared by the City of Burien (Burien 2010). Thus, the watershed area is approximately six times the lake area. The watershed consists entirely of urban land use and no streams currently drain into the lake. The City of Burien (2010) has located 11 stormwater outfalls in the lake (see Figure 7E in Grette 2008).

Lake Burien drains to an outlet channel located at the northeast corner of the lake (see blue line in Figure 2). Lake water flows from this short channel over a weir that was installed in the 1960s to reduce the lake level drawdown during the dry summer months (Warren 2010). Flow from the weir enters a culvert that drains southeast to Miller Creek. Recent observations indicate that there has been no surface outflow from the lake from approximately late April to early November (Warren 2010).

The lake level typically decreases approximately 2 feet during the summer. During the wet winter months, the lake level is generally maintained within 0.2 feet of the weir elevation, which is approximately equivalent to the ordinary high water mark. No flooding of shoreline properties has been observed (Warren 2010). Based on 1 year of lake level data from October 1994 through September 1995 (King County 2010), the lake level increased from to a minimum elevation of 69 centimeters (2.3 feet) below the weir in October 1994 to a maximum elevation of 5 centimeters (0.2 feet) above weir in January 1995, and then decreased to a minimum elevation of 58 centimeters (1.9 feet) below the weir by the end of September 1995.

Lake Burien is located in an aquifer recharge area (Burien 2009). The lake may not receive much groundwater inflow because of the shallow surrounding topography. It is likely that stormwater drainage is the primary hydrologic input to Lake Burien, with additional input from direct precipitation.

# Water Quality

### Eutrophication and Phosphorus Cycling

The principal water quality concern for lakes is eutrophication. Eutrophication is a process of nutrient enrichment and increased productivity that can occur naturally, and is commonly accelerated in urban lakes. Phosphorus is the primary nutrient controlling eutrophication of lakes because it is typically the nutrient that limits algae growth, since large pools of carbon and nitrogen are available in the atmosphere. Stormwater runoff is the primary source of phosphorus in most urban lakes, including Lake Burien. Other external sources of phosphorus in Lake Burien include direct precipitation and shallow ground water, which enters the lake via storm drain outfalls and may also enter the lake via seeps in the nearshore zone of the lake. An additional external source of phosphorus is waterfowl feces, which can be a significant source for small shallow lakes.

Internal loading is also a common source of phosphorus to urban lakes. Internal loading refers to processes inside the lake that contribute phosphorus to the water and includes various components in the lake phosphorus cycle. Typically, the primary source of internal loading is the release of iron-bound phosphorus from anoxic (i.e., low or no oxygen) sediments. Anoxic sediment release of phosphorus typically occurs in deep portions of the lake where oxygen is consumed by decomposing microorganisms, but can also occur in shallow sediments that are highly enriched with organic matter or located under aquatic plant canopies. Other sources of internal phosphorus loading include shallow (oxygenated) sediment release during algae blooms

that create high pH conditions (greater than 9), vertical migration of bluegreen algae (cyanobacteria) from the sediments up into the water column, and decay of algae and aquatic plants in the water column.

In the Puget Sound lowlands, most of the external phosphorus loading to lakes occurs during the wet winter months. Most of that external load settles to the lake bottom and then recycles back into the water column as internal loading during the dry summer months when lakes are thermally stratified. Lakes of sufficient depth, such as Lake Burien, become thermally stratified in the late spring when the surface waters warm and become less dense than the cooler deep waters. As water temperature and density differences increase in the water column during the summer, a thermocline becomes established that separates the epilimnion (surface layer) and hypolimnion (bottom layer). A strong thermocline (high thermal gradient) dramatically reduces the transport of phosphorus from deep sediments in the hypolimnion to algae growing in the epilimnion. A weak thermocline can temporarily degrade during cool, windy periods of the summer, causing the movement of the phosphorus-rich hypolimnion waters into the epilimnion. Ultimately, the thermocline breaks down in the fall when the lake temperature cools, and the lake becomes completely mixed in November. Many lakes experience rapid growth (blooms) of algae in the fall in response to both internal (mixing) and external (stormwater) phosphorus sources.

Insufficient amounts of temperature profile data are available from King County (2010) to evaluate the location or strength of the thermocline in Lake Burien. Temperature was measured in the surface (1 meter depth) and the bottom (8 meter depth) water samples on two occasions per year during the summer of 2000 through 2004. Surface water temperatures ranged from 16 to 23°C and bottom water temperatures ranged from 10 to 18°C, and there was typically a 5°C difference between the surface and bottom water sample. Based on these data, it is unknown whether the 5°C change is abrupt or gradual and represents a strong or weak thermocline, respectively.

### Trophic State

Lakes are classified into the following three categories of trophic state that represent increasing amounts of eutrophication:

- Oligotrophic (not enriched)
- Mesotrophic (moderately enriched)
- Eutrophic (highly enriched)

Trophic state is determined using summer (June through September) mean values of three parameters:

- Total phosphorus concentration in the epilimnion (surface layer)
- Chlorophyll *a* concentration in the epilimnion (phytoplankton pigment in the surface layer)

- Secchi depth (water transparency measured by lowering an 8-inch Secchi disk in the water until it disappears from view)

A trophic state index (TSI) is calculated for each of these parameters where values less than 40 represent an oligotrophic lake, values between 40 and 50 represent a mesotrophic lake, and values greater than 50 represent a eutrophic lake.

Trophic state parameters were measured in Lake Burien during the summers of 1998, 2000, 2001, 2002, 2003, and 2004 as part of the King County Lake Stewardship Program. Water samples were collected by lake stewards (residents) and analyzed by the King County Environmental Laboratory. Data quality is reviewed and posted on the stewardship program website (King County 2010). The Lake Burien data are presented for surface (1 meter) total phosphorus concentration in Figure 3, surface (1 meter) chlorophyll *a* concentration in Figure 4, Secchi depth in Figure 5, and trophic state index (TSI) in Figure 6.

### *Total Phosphorus*

Surface (1-meter depth) phosphorus concentrations in Lake Burien typically ranged from 10 to 15 micrograms per liter (ug/L) in April through July, and typically increased to a range of 15 to 20 ug/L in September and October (see Figure 3). A minimum concentration of 7 ug/L was observed in May 2002 and a maximum concentration of 29 ug/L observed in October 2001.

Bottom (8-meter depth) water samples were also analyzed for total phosphorus on two occasions each year and exhibited a much higher mean concentration (33 ug/L) than the surface water samples (14 ug/L) collected concurrently. Higher concentrations of phosphorus are typically observed in bottom water samples due to the decay of settled organic matter. Much higher total phosphorus concentrations likely would have been observed in bottom water samples if the hypolimnion had become anoxic during the summer. In addition, mean total phosphorus concentrations were the same (33 ug/L) for bottom water samples collected in May and June compared to those collected in August and September. These results suggest that internal loading from anoxic sediment release may not have been a significant source of phosphorus in Lake Burien.

### *Cholorophyll a*

Chlorophyll *a* is the primary photosynthetic pigment present in all species of algae. Concentrations of chlorophyll *a* are used as a measure of phytoplankton (free-floating algae) biomass. Surface (1-meter depth) chlorophyll *a* concentrations in Lake Burien typically ranged from 2 to 4 micrograms per liter (ug/L) in May through August, and typically increased to a range of 4 to 8 ug/L in September and October (see Figure 4). Surface chlorophyll *a* concentrations exceeded 8 ug/L on one occasion in October 2000 (12.8 ug/L) and October 2003 (12.2 ug/L).

Bottom (8-meter depth) water samples were also analyzed for chlorophyll *a* on two occasions in each of 3 years (2002-2004). The mean summer (August/September) chlorophyll *a*

concentrations were much higher in the bottom water samples (18.5 ug/L) than in the surface water samples (3.4 ug/L) collected concurrently. Higher concentrations of chlorophyll *a* may be observed in bottom water samples due to settling of phytoplankton, but this large of a difference suggests that phytoplankton may have been growing at the low light levels and high phosphorus concentrations near the bottom of the lake.

### *Phytoplankton*

Water samples were also analyzed for phytoplankton composition by King County. Phytoplankton analysis results are presented in reports but not in the online database (King County 2010). A list of observed phytoplankton species has been compiled by lake resident Christine Edgar (Edgar 2010). Phytoplankton identified in Lake Burien include common genera in the following groups:

- Diatoms: *Fragilaria*, *Asterionella*, *Cyclotella*
- Chlorophytes (greens): *Botryococcus*, *Crucigenia*
- Cryptophytes: *Cryptomonas*
- Dinoflagellates: *Peridineum*, *Ceratium*
- Chrysophytes: *Dinobryon*
- Bluegreens (cyanobacteria): *Anabaena*, *Aphanizomenon*, *Aphanothece*, *Anacystis*

Phytoplankton succession in Lake Burien appears to generally follow the following pattern of dominance common to mesotrophic lakes: diatoms in the spring, dinoflagellates and greens in the summer, and bluegreens in the fall. There have been no reports of bluegreen algae blooms in Lake Burien.

Observations of the bluegreens *Anabaena* and *Aphanizomenon* in Lake Burien are of particular interest. These two genera (along with *Microcystis*, which has not been reported in Lake Burien) account for the vast majority of bluegreen blooms in Washington lakes, and both genera can produce the toxins microcystin and anatoxin-a (Ecology 2010b). Toxic algae blooms have been documented at an increasing rate in Washington lakes over the past 25 years and are an emerging public health issue. Although most blooms are not toxic, pets and wildlife have died after exposure to toxic bluegreens in Washington lakes, and people have become ill after swimming in lakes with blooms of toxic bluegreens (Ecology 2010b).

### *Secchi Depth*

Secchi depth is a measure of water transparency or clarity that is primarily affected by phytoplankton concentrations, but it can also be affected by water color (tannins), bacteria, inorganic colloidal matter, and suspended fines (silt and clay). Typically, Secchi depth decreases as chlorophyll *a* increases when water transparency is primarily affected by phytoplankton, but the effects of phytoplankton biomass on Secchi depth can vary widely depending on the size the dominant phytoplankton cells or colonies.

Secchi depths in Lake Burien are shown on an inverse scale in Figure 5 for comparison with temporal patterns in total phosphorus and chlorophyll *a*. Secchi depths showed a general pattern of decreasing from 4 to 6 meters in May to 2 to 3 meters in October. However, the temporal pattern in Secchi depth is not as consistent as it is for total phosphorus and chlorophyll *a*. Unusual observations include a particularly low Secchi depth of 2.0 meters in May 2000 and a particularly high Secchi depth of 6.0 meters in October 2004.

### *Trophic State Index*

Trophic state indices (TSIs) are presented for total phosphorus, chlorophyll *a*, Secchi depth, and the mean value for these three TSIs in Figure 6. Trophic state indices ranged from 39 to 43, which is in the lower range of mesotrophic status (40 to 50). Overall, the mean summer TSI did not exhibit a substantial increasing or decreasing trend between 1998 and 2004. The lower mesotrophic status of Lake Burien is rather unusual considering it is located in a totally developed basin within King County.

King County (2001) evaluated the trophic status and water quality trends in 49 small lakes that participated in volunteer lake monitoring activities. Ratings included 14 oligotrophic lakes, 20 mesotrophic lakes (including Lake Burien), 13 eutrophic lakes, and 2 hypereutrophic lakes (TSI greater than 60). Trend analysis of data for 1996 through 2000 identified a statistically significant increase in the mean TSI for four lakes and a significant decrease for one lake. Although more than 5 years of data may be needed to detect a change in the TSI, mesotrophic lakes such as Lake Burien are much more susceptible to changes in trophic state than are eutrophic lakes.

## Aquatic Plants

Aquatic plants are an important component of lakes because they provide habitat for invertebrates and fish, supply food for waterfowl, and can affect the phosphorus cycle and algae growth in lakes. Excessive growth of aquatic plants can severely impair habitat, water quality, aesthetics, and recreational activities. For example, many lakes in King County and throughout Washington have been infested with the non-native, invasive plant Eurasian watermilfoil (*Myriophyllum spicatum*), which typically grows in large monotypic (single species) stands that form a dense canopy. In addition, another non-native plant Brazilian elodea (*Egeria densa*) has more recently invaded local lakes where jurisdictions have undertaken a substantial effort at eradication. Information on invasive plant species identification, occurrence, impacts, and control methods are provided on websites maintained by King County (2010) and the Washington Department of Ecology (2010a).

King County (1999) conducted an aquatic plant survey of Lake Burien on August 12, 1999. The aquatic plant map is presented in Figure 7. Eighteen plant species were identified including 5 submergent types, 2 floating-leaved types, and 10 emergent types. The submergent types included a dwarf spike rush (*Eleocharis*), one pondweed species (*Potamogeton pusillus*), common waterweed (*Elodea canadensis*), and two genera of macroalgae (*Nitella* and *Chara*).

These native submergent plants were present to a maximum depth of 6 meters and covered a total of 30.8 acres, representing 70 percent of the lake area. Although the number of submergent plant species was relatively low, the high coverage of submergent plants and absence of a non-native species are indicative of high habitat quality.

The floating leaved types included a native water lily (*Nuphar lutea*) and the non-native white water lily (*Nymphaea odorata*) covering a total of only 0.3 acres. The low coverage of white water lily indicates that this non-native species does not impair habitat or recreational activities in the lake.

Three non-native plants designated as noxious weeds were observed among the emergent types. Purple loosestrife (*Lythrum salicaria*) and garden loosestrife (*Lysimachia vulgaris*) were observed along much of the north and south shores (see Figure 7). Reed canarygrass (*Phalaris arundinacea*) was also observed at one location on the north shore and one location on the east shore. Lake Burien residents have recently been working with Katie Messick of King County to map and control these noxious weeds. A map of the most recent survey conducted in July and September 2009 by King County is presented in Figure 8 (Messick 2010). The number of observed plants was similar, but many plant locations have changed since the 1999 survey.

Overall, the aquatic plant community in Lake Burien provides excellent habitat for fish and wildlife, and does not appear to impair aesthetic or recreational benefits of the lake. The excellent condition of this community is not common for other lakes located within developed basins within King County. The principal reason for its excellent condition is that an invasive submergent plant such as milfoil has not become established in the lake. To prevent and address potential introductions of invasive plants, the Shore Club should continue to educate residents and survey the lake for the presence of invasive species.

## Fish and Wildlife

Lake Burien provides habitat for numerous fish and wildlife. An inventory of fish and wildlife observed in the immediate vicinity of Lake Burien has been recently compiled by lake resident Christine Edgar (Edgar 2010). This information is briefly summarized here and is currently being evaluated by Dr. Sarah Cooke, a senior wetland biologist with Cooke Scientific Services located in Seattle, Washington.

Fish species observed in Lake Burien by lake residents include the following types of warm water fish: largemouth bass, perch, crappie, pumpkinseed sunfish, and catfish (Edgar 2010). A bass inventory conducted approximately 12 years ago by R.L. Steater identified only healthy largemouth bass weighing 3 to 8 pounds each. In addition, small numbers of lake trout have been planted on occasion by lake residents (Warren 2010).

Numerous aquatic animals have been observed in the lake, including turtles, frogs, crayfish, otter, waterfowl, and water-dependent birds. Two species of note include the western painted

turtle, which is an endangered species in Washington, and the bull frog, which is a non-native species that impacts native amphibian populations.

## Public Access Impacts

Lake Burien is surrounded by private property and currently there is no public property for physical access to the lake by the general public. As noted in the Introduction, the Draft Shoreline Master Program (Reid Middleton 2009) currently before the Burien Planning Commission includes policy and regulation provisions for establishment of public access to Lake Burien. Although public access could increase recreational benefits of the lake, it would threaten the existing habitat for aquatic organisms in the lake.

The primary threat of public access to aquatic habitat would be the increased opportunity for introductions of non-native, nuisance species to the lake. Of primary concern would be the introduction of Eurasian watermilfoil (milfoil). Milfoil is very abundant in nearby lakes and small fragments of this invasive plant are commonly present on watercraft and readily transported to other lakes where viable fragments are released to establish a new population. Introductions of milfoil or other aquatic nuisance species do not occur solely through motorized watercraft or large crowds; it is now recognized that less intensive uses can result in the introduction of harmful species, with harmful results to the water body. As noted above, information about milfoil and other invasive plant species is provided on websites maintained by King County (2010) and the Washington Department of Ecology (2010a).

If milfoil or other invasive plant species became established in the lake it would likely have significant, direct impacts on aquatic habitat and indirect impacts on water quality in Lake Burien. Milfoil can grow to a depth of at least 6 meters and would likely occupy most of the lake area within a relatively short period of time (e.g., less than 10 years). The aquatic plant biomass would likely increase in the lake to an excessive amount that could dramatically increase internal phosphorus loading, and ultimately fuel nuisance growths of filamentous algae and blooms of toxic bluegreen algae.

Public access would also increase the potential for introductions of aquatic invertebrates that can have devastating effects on aquatic habitat and water quality. Washington lakes are currently threatened by introductions of the quagga mussel, zebra mussel, New Zealand mudsnail, rusty crayfish, spiny water flea, and others (WDFW 2010). There is no reason to assume that Lake Burien would be immune from effects of these organisms and, due to its relatively small size, it may have less capacity to accommodate them.

A study of aquatic invasive species transport by small-craft boats and trailers was recently conducted in northern Wisconsin and the Upper Peninsula of Michigan (Rothlisberger et al. 2010). This research confirmed the widespread understanding that boats are an important vector in the spread of aquatic invasive species. A total of 13 aquatic plant species and 51 taxa of small-bodied organisms were observed on the tested boats.

In summary, any public access scenario for Lake Burien would entail significant risk of degradation to the lake's ecological functions as described above. And once set in motion the processes resulting in such degradation are not easily reversed.

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# Figures

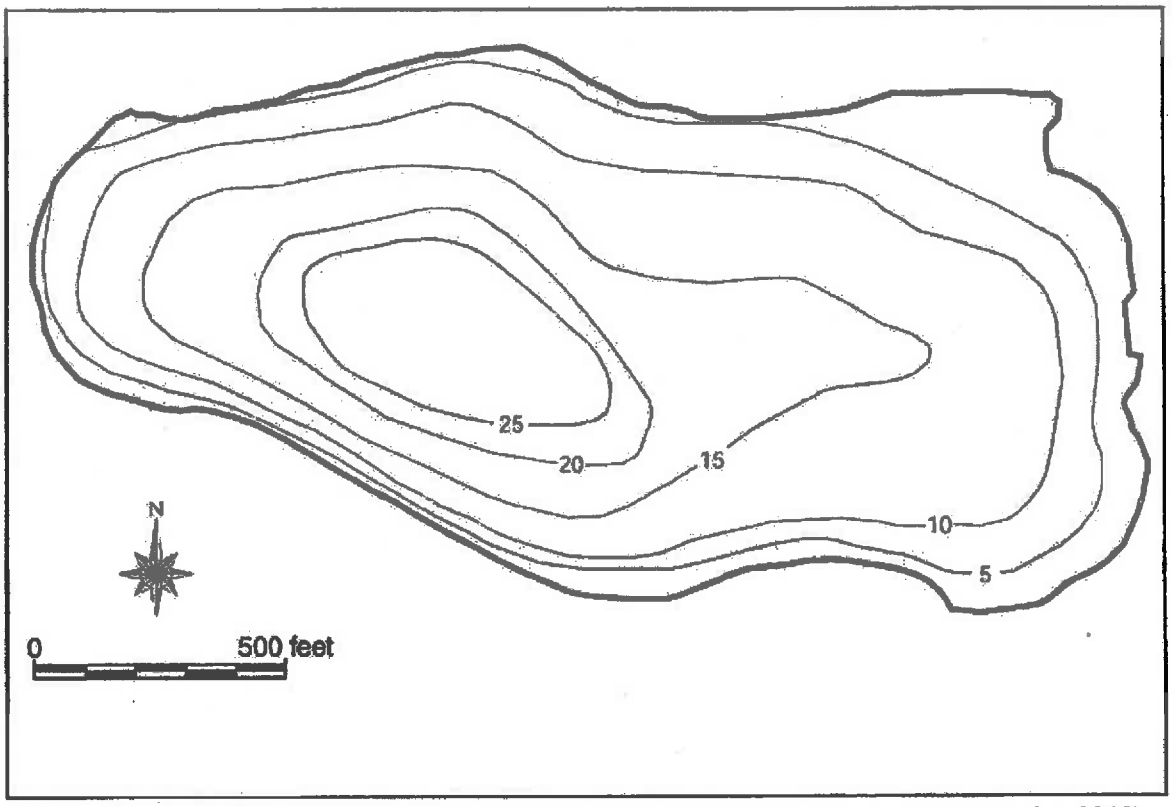


**Figure 1. Lake Burien bathymetry showing depth contours in feet (source: Messick 2010).**

**Figure 2. Lake Burien watershed (source: Messick 2010).**

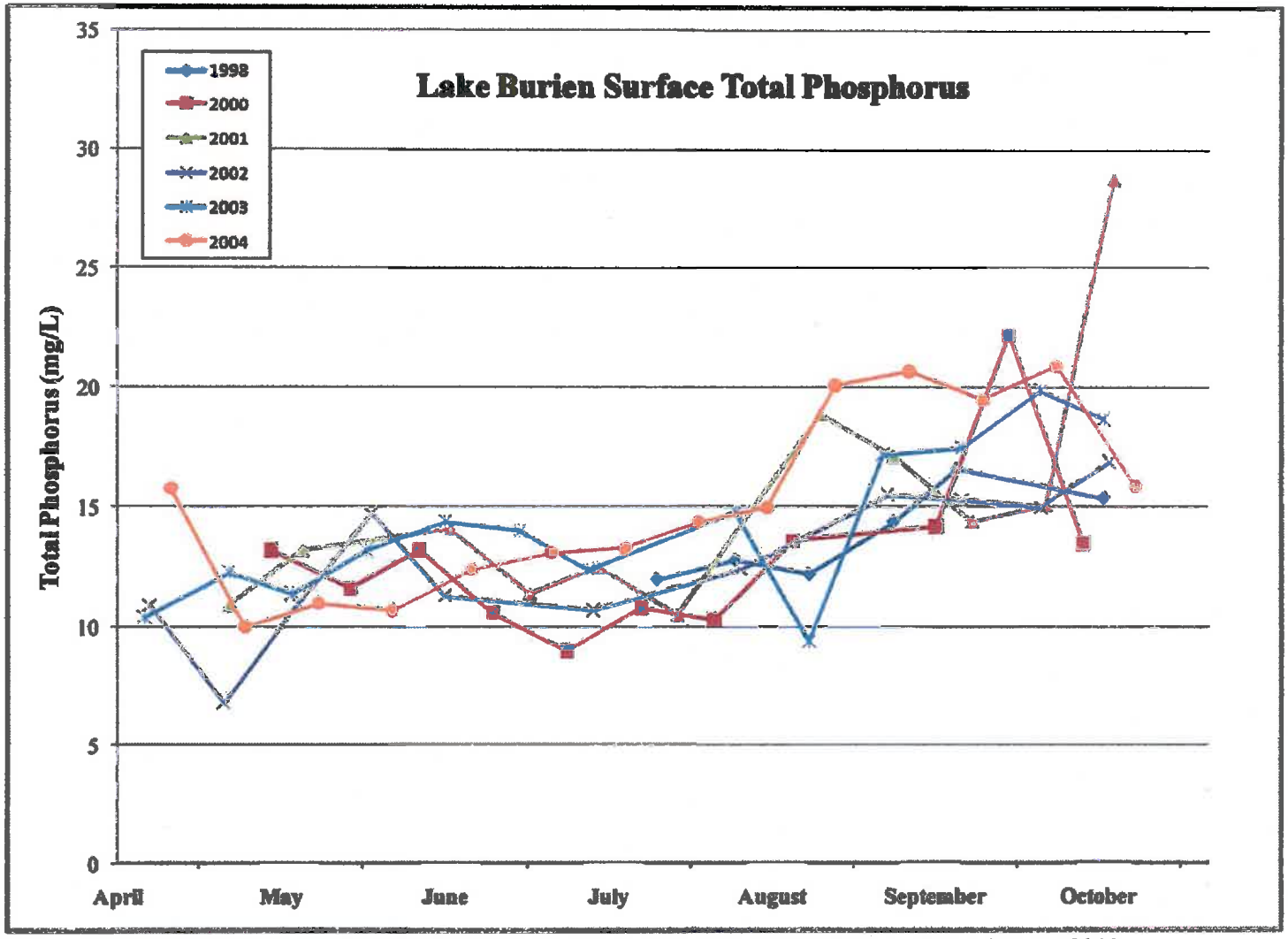


**Figure 3. Lake Burien total phosphorus concentrations at 1 meter depth (source: King County 2010).**

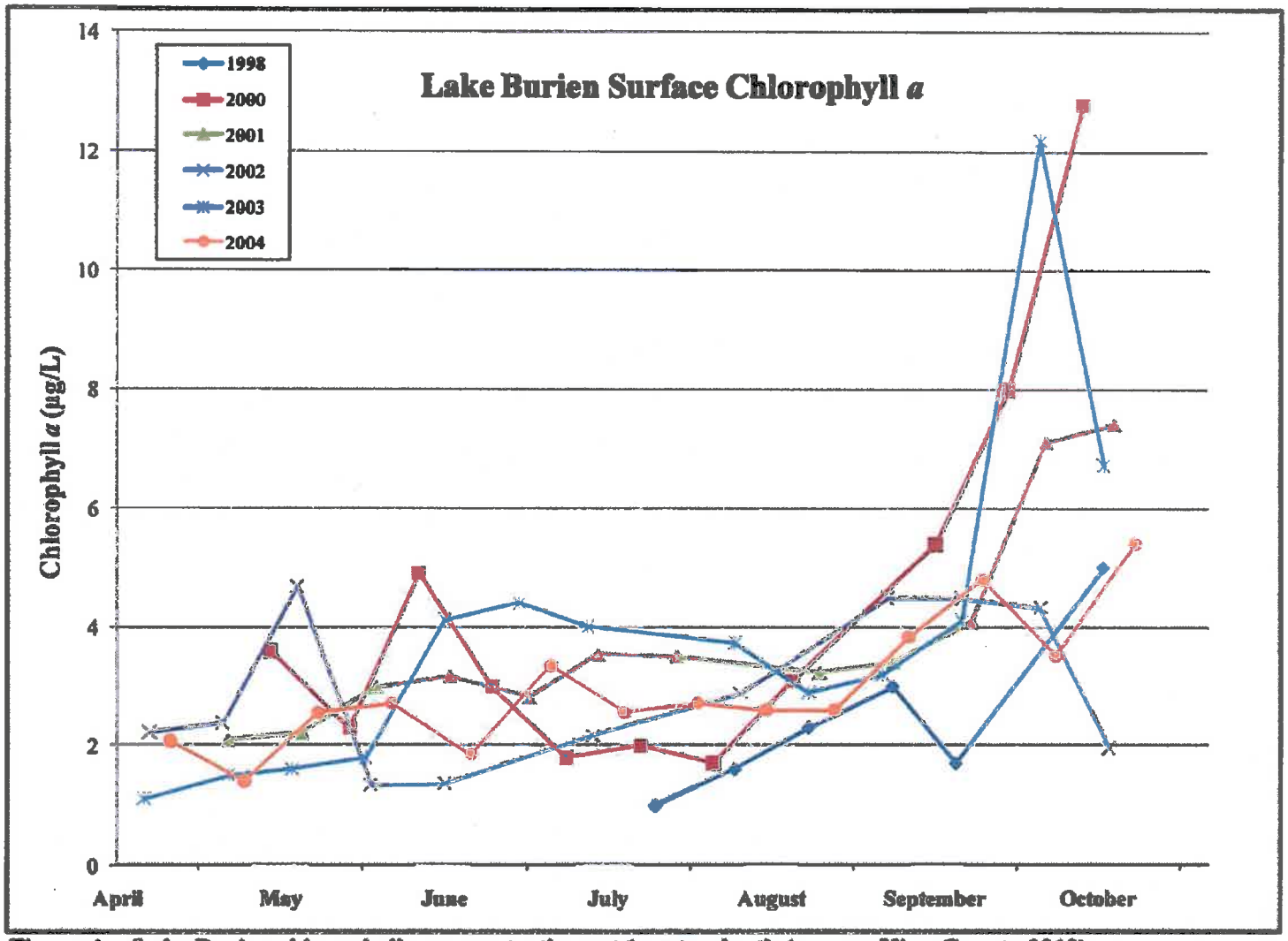


**Figure 4. Lake Burien chlorophyll *a* concentrations at 1 meter depth (source: King County 2010).**

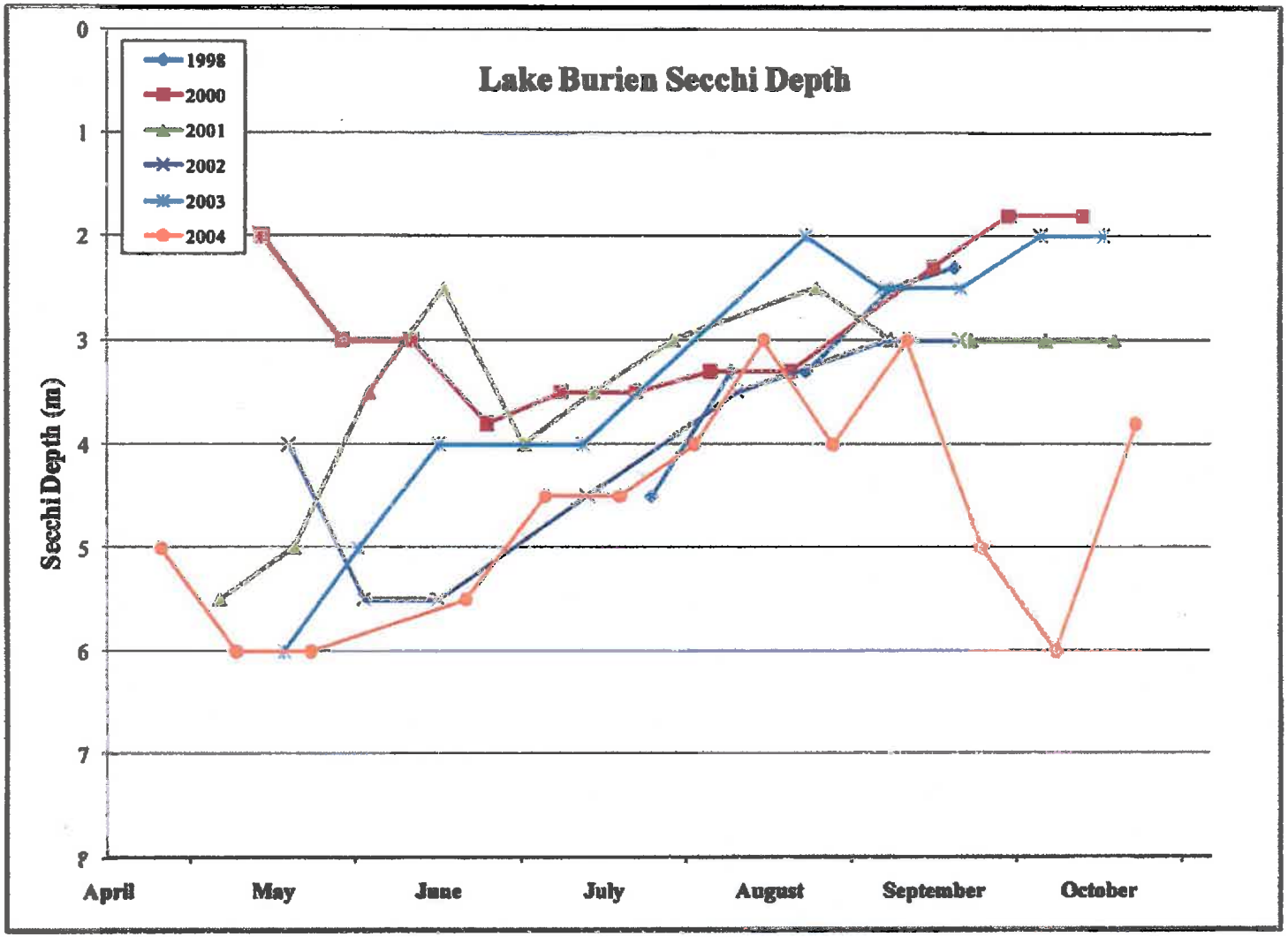


**Figure 5. Lake Burien Secchi depths (source: King County 2010).**

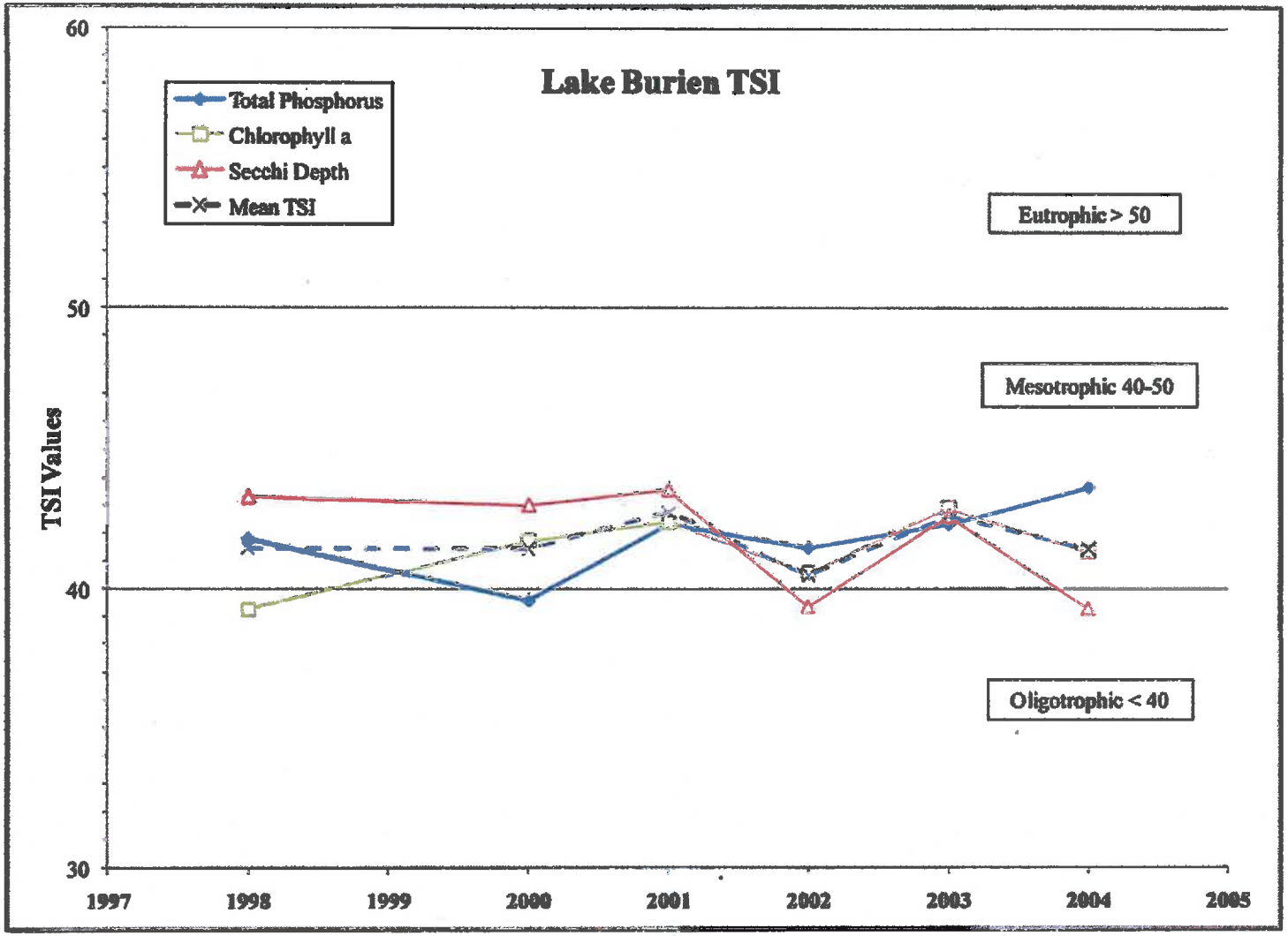


**Figure 6. Lake Burien trophic state indices.**

**Figure 7. Lake Burien 1999 aquatic plant map (source: King County 1999).**

**Lake Burien**
**Weed Location Map**

LEGEND

*Lythrum salicaria*
(Purple Loosestrife)

*Lysimachia vulgaris*
(Garden Loosestrife)

*Phalaris arundinacea*
(Reed Canary Grass)

Stream
Section boundary
Transect line
Floating
Emergent
Submergent
No plants or sparse
No plants—deep
Parcel boundary

N

0 100 200 300 Feet

October 1999

Produced by:
GIS/Visual Communications Unit, WLR
King County Department of Natural Resources

File Name: 9910 Burien AquaPlantMap.mp

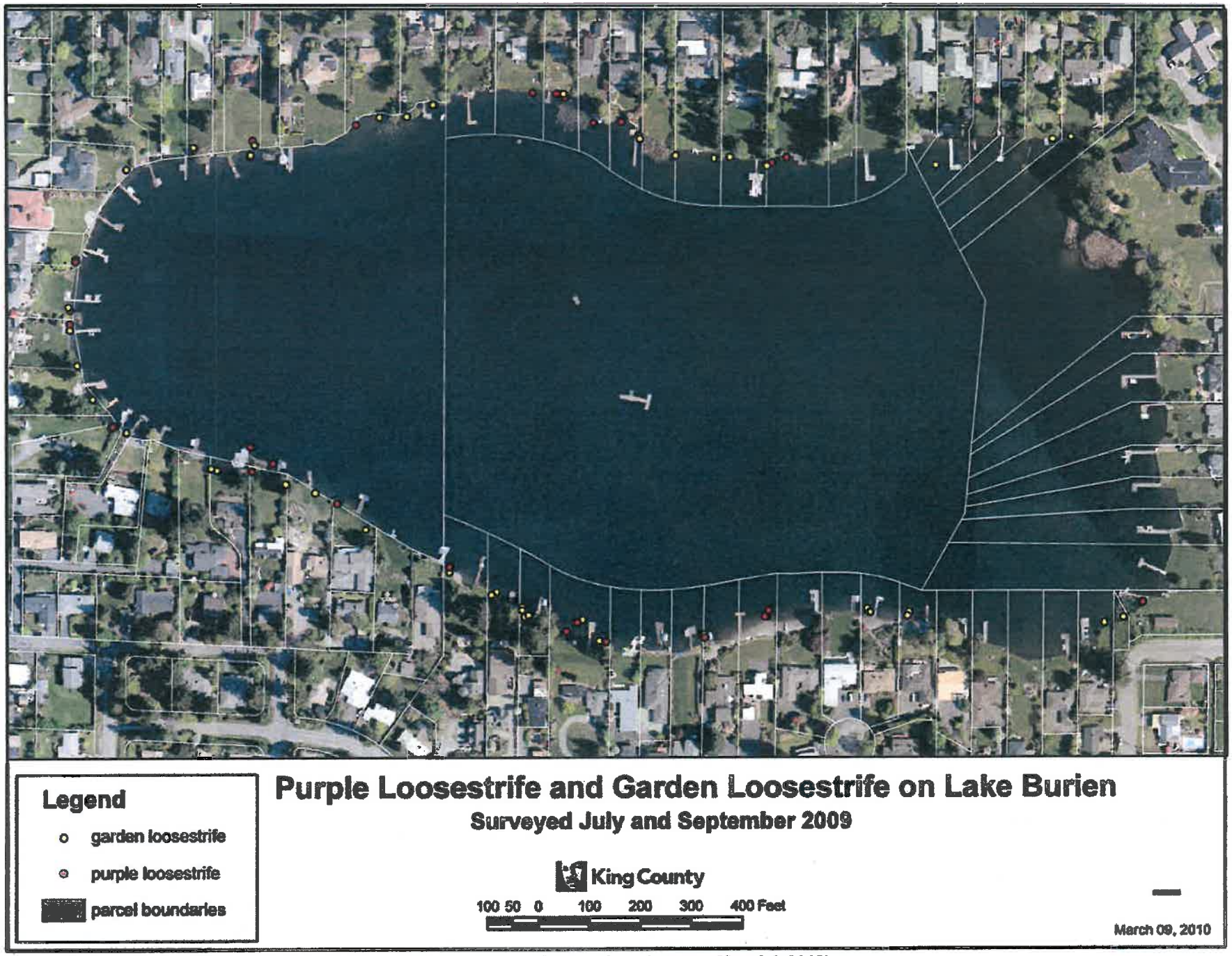


**Figure 8. Lake Burien 2009 purple loosestrife and garden loosestrife locations (source: Messick 2010).**

**COOKE SCIENTIFIC**
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March 23, 2010

Attn: Don Warren, President & Lake Steward
Lake Burien Shore Club
Burien, WA

**RE: Review of the City of Burien's Draft Shoreline Master Plan (SMP) as it applies to Public Access for Lake Burien**

Dear Mr. Warren:

The Lake Burien Shore Club is concerned that the Draft Shoreline Master Program (SMP) adopts a policy of public access for Lake Burien without an investigation into the impacts it might have on the Lake ecosystem and water quality. The Shore Club asked me, in my capacity as a professional wetlands scientist, to review the portions of the Draft SMP amendments pertaining to Lake Burien, and to determine what data, if any, exists to support the City's proposed public access policies. As detailed below, my review and analysis of the existing data and my own field investigation lead me to the conclusion that there is insufficient information to support adoption of these policies and that such adoption would likely be inconsistent with the level of protection required to maintain the sensitive lake, it's adjacent wetlands, streams, and associated wildlife, in sound ecological health.

## Findings Summary

It is apparent that the Burien Shoreline Master Program Update relies on the following reports generated by City's Consultants:

- Shoreline Inventory (Grette Associates 2008)
- Shoreline Analysis and Characterization (Grette Associates 2008)
- Cumulative impacts Analysis (Grette Associates 2009)
- Shoreline Restoration Plan (Grette Associates 2009)

These documents do not reflect analysis of existing data and conditions with respect to Lake Burien as is required under the Shoreline Management Act (SMA) and outlined in the Shoreline Management Plan Guidelines adopted by the Department of Ecology (WAC 173-26-201, Comprehensive Process to Prepare or Amend Shoreline Master Programs, Section 3C and D).

The City is proposing public physical access to the Lake without studying the impacts to the Lake functions that could result, and therefore, without addressing measures necessary to mitigate such impacts. The Draft SMP is therefore, not in

compliance with the Shoreline Management Act (SMA) (RCW 890.58), and SMP Guidelines (WAC 173-26, Part III). The SMA and SMP Guidelines require current scientific-based or a "Best Available Science" (BAS) -based characterization of shoreline ecological functions, adoption of a no-net-loss policy with respect to these ecological functions, recognition of potential consequences from proposed management actions, and adoption of appropriate mitigation measures.

Focusing primarily on the Lake's wetland functions. I have reviewed all the documents and web-based resources listed in the reference section at the end of this document in addition to undertaking the personal communications listed there. I also conducted reconnaissance field research at the Lake and its wetlands on March 3, 2010. Most of the wetlands information I have reviewed (and gathered) is notably not referenced in the City's or its consultant's characterization and resultant analysis. The Lake's aquatic resources, and potential impacts to them from the proposed public access, were finally addressed in a report by limnologist Rob Zisette of Herrera Environmental Consultants, which was submitted to the Planning Commission by the Shore Club on March 17, 2010. This report concluded that providing public access to Lake Burien could have adverse and unintended impacts on its ecological well-being in terms of the introduction of invasive, non-native plant and animal species, and the potential for water quality degradation.

## Analysis

1. **Proposed SMP Policies are not based on current and best available science.** In reading the four reports listed above which formed the basis for the Draft SMP Update, it is apparent that very little attempt was made to find the available data for the Lake, let alone do additional studies required by the SMA and SMP guidelines. Rather, the City's consultant team stated that they only needed to comply with the characterization of the Lake found in the City's Municipal Code and Comprehensive Plan. In my own discussions with Department of Ecology scientists, (Pers. Comm. With Eric Stockdale, March 2010), it has been made clear that an SMP developed without analysis of current lake conditions and functions (e.g., water quality, hydrology, and wildlife habitat) would be unlikely to survive Ecology's mandatory SMP review process.

   There is little evidence that Grette staff reviewed existing Lake data or coordinated their recommendations with any other scientists with expertise of the Lake. The SMP guidelines specifically identify this collaboration as being essential to the characterization and impact assessment for developing the SMP. King County has an on-line a report that covers ten years of study data and analysis of the Lake. There is only one apparent reference to other studies in the Grette reports and this is regarding phosphorus concentrations in the Lake. This data likely comes from the King County Lake Report, although it is not listed in the bibliography. The Coastal Atlas (Wa. DOE Web resource 2010) similarly is not referenced and it shows the quality of Lake Burien to be excellent, in stark

contrast to all other lakes in the urban corridor. The Lake shore is completely surrounded by private property and no residents report seeing Grette staff on their properties to collect data.

As part of the Impact analysis, it is important to know what wildlife currently exists on the lake. No wildlife censuses were done as part of the lake characterization and there was no attempt to collect existing data from King County and/or local residents regarding the Lake's resident birds, migratory birds, mammals, fish, amphibians, reptiles or insects. The residents and a local fish expert, Richard Streater, have identified trout, bass, sunfish and perch, yet the City in their Municipal Code, Comprehensive Plan, and Draft SMP state there are no fish in the Lake. As discussed below, shore residents regularly observe eagles, hawks, and heron preying on fish in the Lake. The Lake Steward has not been contacted by anyone from the City's consultant team, despite the fact that he has a significant amount of data after years of monitoring the Lake.

2. **Lake Reconnaissance and other data discoveries.** In addition to reviewing and analyzing existing data respecting Lake Burien, I visited the Lake on March 3, 2010; met with shore residents and circumnavigated the shoreline in a boat. I took photographs, recorded vegetation types, shoreline characteristics, water visibility, the presence of invasive plant species: aquatic, wetland, and upland plant and animal taxa. I ran the wetland data through the Wetland Rating form for Western Washington (Hruby 2004) and I took notes on birds and fish and reptiles. A neighbor showed me photos of the painted turtles that lay eggs on her beach, and there are reports that red slider turtles may also be present. There are bullfrogs and Cascade frogs, and crayfish in the Lake. None of this information is included in Grett's Shoreline Inventory or Shoreline Analysis and Characterization. One wonders how Grette developed the Impact Analysis without being aware of the wildlife and water quality of the Lake.

   For more than 60 years, shore residents have tracked wildlife use of the lake and environs and recently have been taking bird census data, some using Audubon Guidelines. Priority species, including bald eagles, osprey, and blue heron use this lake for perching and feeding. These species are observed regularly. Although not documented in the City's record, the residents give first hand reports of this. I saw both blue heron and bald eagles the day I visited. Lake residents have identified over 80 different species of birds. Long-term residents report bird sightings have increased since the development of the third runway and filling of many of the wetlands at SeaTac. An animal inventory was compiled by the residents and included bats, mice, rats, voles, shrews, raccoons, weasels, opossums, squirrels (grey), and a historic sighting of otter in the 90's.

   There are existing patches of undisturbed wetlands scattered around the Lake, especially in the northeast corner in front of the Ruth Dykeman Center. This area has a large aquatic plant community dominated by hardstem bulrush (a native plant), with an associated riparian corridor that leads to the outlet and Burien Creek which has both upland and wetland components. The other lakeshore vegetation patches are both herb and shrub dominated, ranging from 1/5 to ½ of

the lakeshore frontage of a particular lot. The herbaceous patches are dominated by softrush and yellow-flag iris, but native rushes, grasses and sedges can also be found. There are scattered sandy beaches around the Lake and resident reports indicate that turtles nest on most.

The Lake water quality is remarkably good, according to the Department of Ecology Coastal Atlas and King County Lake Monitoring Data, as well as the analysis recently prepared by Rob Zisette at Herrera Environmental Consultants. The only motors allowed in the Lake are electric. The lake residents do not move their boats from Lake Burien to outside lakes and back. This means that there are few to no opportunities for invasive weeds to be introduced into the Lake. Mr. Zisette's limnology report addresses the ecosystem effects of introduction of invasive species, plant and animal.

The Lake residences are on sewer so there is no septic effluent leaching into the Lake, a common occurrence in other lakes throughout the County. There were no algal blooms, and I could see the bottom in areas where the depth is reported to be at least 10 feet (King County Web site bathymetry). There appear to be only a few patches of pond lily (as seen on aerial photographs from the summer). I saw no algae, milfoil or elodea (common noxious aquatic weeds in urban lakes)

The Lake is currently entirely developed with residences, with the exception of the Ruth Dykeman parcel in the northeast corner. The dominant activity on the Lake is by personal boats, most using electric motors. Electric motors make very little wake as they tend to move very slowly through the water. Additionally, the local residents and Lake Steward monitor the Lake for any irregular activity. Residents for the most part, keep their dogs from the Lake, so there is no dog fecal matter entering the lake and according to residents there is relatively little disturbance of the birds by dogs or cats.

3. **SMP Public Access provisions should not be adopted in absence of required scientific support and analysis**

Based on my research and observations, I find Lake Burien to be in surprisingly good condition for an urban lake and the water quality, habitat, and the number of species of wildlife present are not matched in the urban setting. In a case such as this, public access would result in (potentially irreparable) impacts to the ecosystem. It would be unwise to introduce public access which could upset the current balance, especially without investigating what the potential impacts might be.

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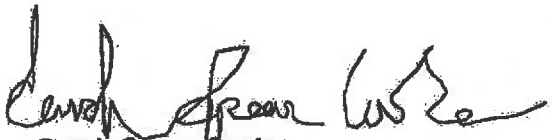
**Personal communications**

Erik Stockdale, Washington State Department of Ecology, Bellevue staff. Staff assigned to review the Burien SMP. March 3 and 11.

Richard Streater, fishing lures author and fish expert. March 2010



Sarah Spear Cooke
Certified Wetland Professional and Fellow
Society of Wetland Scientists

City Council
City of Burien
400 SW 152nd St
Suite 300
Burien, WA 98166

RECEIVED
JUL 19 2010
CITY OF BURIEN

BMHA
BURIEN MARINE HOMEOWNERS ASSOCIATION

Re: Memorandum Describing Existing Conditions of Burien Marine Shoreline

Honorable City Councilmembers,

I am a member of the Burien Marine Homeowners Association. Over the course of the last several months we have developed a detailed assessment of the Burien shoreline in which we have gathered factual information that is relevant to the City's update of its SMP. The attached memorandum is the result of hundreds of hours of work gathering data and synthesizing it for your consideration. Mayor McGilton welcomed this type of citizen-compiled scientific data at a recent Council meeting on June 14, 2010.

The information summarized in the attached memorandum is designed to supplement and correct the shoreline inventory prepared by the City's consultant, Grette and Associates (the "Grette Inventory"). The Grette Inventory is largely narrative in structure and fails to provide as much quantified detail as is required to understand existing conditions. A clear understanding of existing conditions is crucial to the City's update of its SMP because it is the standard from which no net loss is measured. Without a clear picture of the existing conditions of our shoreline that are provided in the attached memorandum, the City cannot determine what is required to ensure no net loss of shoreline ecology. It is our hope that the attached information will help the Council better understand the baseline from which no net loss should be measured.

In summary, and as is explained in detail in the attached memorandum the Burien nearshore is more fully developed than is suggested in the inventory prepared by Grette and Associates. Outside of Seahurst Park, the shoreline of Burien is almost as fully developed as the terrain will allow. Additionally, the attached memorandum demonstrates the following points:

- Almost 85% of the privately owned land within 65' of the OHWM (the area that would be within the proposed no-touch area) is already modified (i.e., it contains a primary structure, accessory structures, concrete patios, or landscaping. For the purpose of this memorandum we use the term landscaping to refer to lawns, flower beds, and small to medium sized ornamental shrubs and trees.
- Nearly 75% of the homes on waterfront lots would be non-conforming structures, due solely to their proximity to OHWM, if the 65' no-touch area were introduced. The nature of the existing parcels and surrounding terrain is such that few, if any, of these homes could be brought in to conformance even after total destruction of the home.
- Less than 7% of the land area in the SMP jurisdiction is privately owned and undeveloped. Most of this remaining area is judged to be unsuitable for new development due to naturally occurring constraints such as steep or unstable slopes.
- Privately owned waterfront properties are almost fully armored and the majority of these bulkheads experience significant wave energy for several hours every day.
- Natural conditions are found primarily on unbuildable land.

CFTR: 08/02/10

This information will help the City evaluate whether the proposed regulations are necessary to satisfy the no net loss standard. The introduction of large no-touch buffers is a common strategy to protect areas where there is existing habitat and natural function from impacts due to new substantial developments. The attached memorandum demonstrates that the Burien Marine shoreline is already highly altered and that this approach will not serve the goal of achieving No Net Loss. On the flip side, the proposed buffers will create a burden on owners of existing waterfront homes, rendering a vast majority of them nonconforming. In light of the burden this type of regulation will create on shoreline homeowners, the City must reject the buffer approach included in the regulations.

Additionally, the attached memorandum demonstrates that the proposed vegetation conservation buffer and associated regulations are overly restrictive and will require individual property owners to shoulder the burden of the City's restoration goals. The attached memorandum shows that significant portions of the shoreline in the M1, M3 and M4 reaches are very highly modified and have no native vegetation at all. The land is dedicated to structures and other hardscape or else to landscaping. The draft regulations, for example the regulation requiring revegetation of 75% of the portion of a lot in the vegetation conservation buffer, would functionally preclude any broadly defined "alterations" on the site. In light of the existing conditions described in the attached memorandum, these overly restrictive measures do not ensure no net loss and will create a significant burden on homeowners. We encourage the City to adopt more reasonable regulations governing shoreline vegetation conservation, such as those proposed in the BMHA's redline.

Finally, it is worth noting that the information we are providing reinforces the idea discussed in the recent public forums of using Seahurst Park as the best opportunity to realize gains to shoreline ecology. The work that Burien is doing in Seahurst Park is an exemplary effort that should be applauded. Even with the work that has already been completed, all of the scientific panelists that attended the City's forum on June 14 agreed that there was more to be done and that Seahurst Park presents the best restoration opportunities and should be the focus of any restoration plan. Additionally, if the City wants to generate gains to shoreline ecology that offset potential future losses in other areas of the Burien shoreline, Seahurst Park presents the best city-wide opportunity to ensure no net loss of shoreline ecology throughout the city.

We hope that this information is helpful as you craft regulations designed to ensure "no net loss" of shoreline ecology. We would be happy to meet with members of council, staff or the Department of Ecology at any time to clarify what we have done and to share any of the data we have collected and synthesized.

Sincerely,

Michael D. Noakes

Michael D. Noakes
Burien Marine Homeowners Association

**Existing Conditions of Burien Marine Shoreline**
**Prepared on Behalf of the Burien Marine Homeowners Association**

## 1. Introduction and Methodology

This memorandum describes the existing conditions of the Burien Marine Shoreline. It synthesizes information gathered through field investigations and analysis of maps and aerial photographs.

Field investigations included walking the entire length of the shoreline multiple times observing and noting existing shoreline conditions. Measurements of the existing current setbacks from OWHM, in accordance with RCW 90.58.030 where feasible or using the existing bulkhead where necessary, were taken using a laser range finder.

In addition to our field notes and surveys, we recorded our field data through hundreds of photographs of shoreline properties. Finally our field investigation includes interviews with shoreline property owners many of whom have lived here for decades and have significant knowledge of the history of shoreline development.

This evaluation also relies on high quality aerial images such as those available in Google Earth. Figure 1.1, which shows four waterfront homes and two undeveloped upland parcels on a steep slope along 30th Ave SW, provides an example of the level of detail that is readily available.

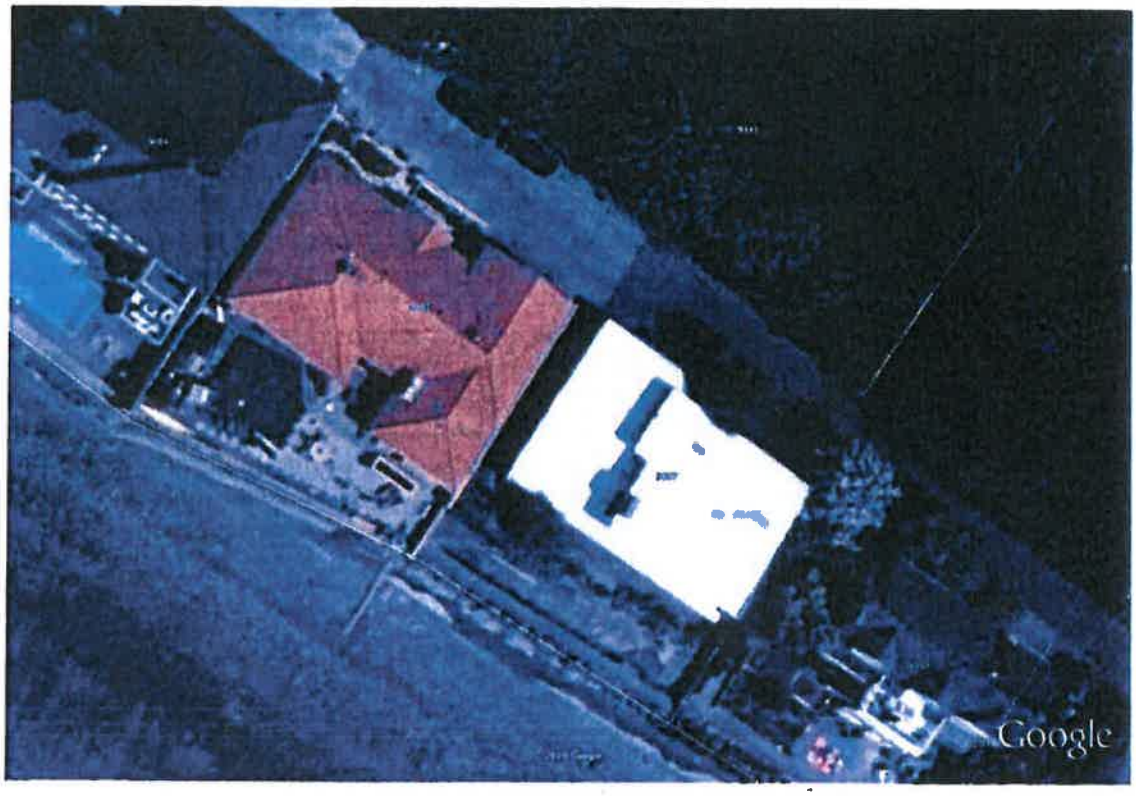



**Figure 1.1: An aerial image of 6 properties along 30th Ave SW**

Tools within Google Earth were used to map the boundaries of properties, homes, accessory structures, roads, lawns and ornamental shrubs, and regions of relatively natural tree growth and other vegetation. The physical surveys and extensive photographs were used to guide and validate this portion of the activity.

Computer programs were developed to evaluate and summarize the data that had been collected. Principal among these is a program that evaluates the regions that were mapped in Google Earth to estimate the area coverage along the shoreline. This program simulates the process of walking the line of OHWM one foot at a time. At each step a 200' sight line perpendicular to the shore is defined and the condition of the land is evaluated at every 1 foot step along this line. This process was repeated for the nearly 26,500 feet of the Burien Marine Shoreline to develop an estimate of the nature of the development for all 121 acres to a resolution of 1 square foot.

The condition of the land has been classified into three categories.

- Hardscape is impervious materials such as primary structures, accessory structures, patios, decks, roads and so on.
- Landscaping is lawns, hedges, flower beds, small to medium sized ornamental trees and shrubs, and so on.
- Natural conditions refer to clusters of natural growth trees, shrubs, and natural ground cover. There was no attempt to distinguish between native and non-native species.

King County Tax Assessor databases were accessed to determine the state of each tax parcel. This provided the ability to determine which parcels are privately owned, to determine when a number of small adjacent parcels have been collected by a single owner and are being treated as a single property, and most importantly to determine which parcels are judged to be unbuildable by the assessors office due to conditions including terrain, access, and slide history.

Properties are classified as waterfront or upland. Waterfront properties are those that include any land that reaches OHWM. In most cases these are properties with meaningful frontage on the shoreline but there are a few situations in which this is a narrow strip that is used to provide beach access to a home that it is substantially further back. Upland properties are those that do not have physical waterfront access. There are examples of both waterfront properties and upland properties that are partially within the SMP jurisdiction and partially beyond it.

## 2 Overall Characteristics and Observations

The City's Shoreline Inventory (the "Grette Inventory") and Draft SMP divide the Burien shoreline into four broad reaches: M1, M2, M3 and M4. During the field surveys it became apparent that the shoreline is more complex than the four large reaches suggest. For purposes of review and characterization, it is helpful to divide each reach into more discrete divisions or "segments" that are based on the terrain, conditions, and the patterns of development along the shoreline.

Table 2.1 summarizes this partitioning and the remainder of this section describes the distinct terrain in each segment and the resulting development patterns that were observed. The table indicates the length of each segment and its position along the shoreline relative to the boundary between North Burien and Seattle. All calculations are performed in feet; there may be small apparent discrepancies that result from rounding issues when converting these values to miles for display in this table.

| Reach | Segment | Length (ft) | Start Point (mi) | Length (mi) | Area (acres) |
|---|---|---|---|---|---|
| M1 | Seola/30th | 1769 | 0.00 | 0.34 | 8.12 |
| | Shoreywood Drive | 1806 | 0.34 | 0.34 | 8.29 |
| | Standring Lane | 2009 | 0.68 | 0.38 | 9.22 |
| M2 | Seahurst Park | 4368 | 1.06 | 0.83 | 20.06 |
| | 25th Ave | 1652 | 1.88 | 0.31 | 7.58 |
| M3 | 149/150/151st | 2371 | 2.20 | 0.45 | 10.89 |
| | Start of Blackwild Ave | 1654 | 2.65 | 0.31 | 7.59 |
| | Sunset Trail | 3815 | 2.96 | 0.72 | 17.52 |
| | Three Tree Point Lane | 836 | 3.68 | 0.16 | 3.84 |
| M4 | 174th | 1269 | 3.84 | 0.24 | 5.83 |
| | 172nd | 1858 | 4.08 | 0.35 | 8.53 |
| | Seahurst Blvd | 446 | 4.43 | 0.08 | 2.05 |
| | South Beach | 2564 | 4.52 | 0.49 | 11.77 |
| Total | | 26417 | 5.00 | 5.00 | 121.29 |

**Table 2.1 A summary of the 13 Reach Segments along the Marine Shoreline**

### 2.1 Reach M1

The M1 reach is divided into three segments described in further detail below.

#### Seola Lane and 30th Ave SW

This segment consists of 34 properties including waterfront properties along Seola Lane and 30th Ave and upland properties along Marine View Drive. Seola Lane and 30th Ave SW run roughly parallel to the shoreline and immediately behind the waterfront homes. Marine View Drive also runs roughly parallel to the shoreline but is further inland and on a bluff above 30th Ave.

Most of the developed properties are in a narrow strip of land along Seola Lane and 30th Ave SW between the OHWM and the toe of an increasingly steep bluff. A small number of upland homes sit at the top of this bluff along Marine View Drive with land that extends down the hill and into SMP jurisdiction along 30th Ave SW.

At the southwest end of this segment are two tract waterfront parcels that appear to be owned by a collective in the Shorewood neighborhood for their common interests. The grade of this land would impose a challenge to new development.

There are 6 privately owned parcels in this segment that have not been developed. All of these are on the steep slope upland of 30th Ave SW and appear to be unbuildable due to the terrain. The King County has assessed each of these parcels at between $1000 and $4500 which confirms this judgement.

The location of waterfront homes between the OWHM and upland bluff is a principal geographic feature in this segment that appears with some frequency throughout the Burien shoreline. Figure 2.1 is provided to help visualize an example of these features. This figure includes a depiction of the SMP jurisdiction in green and the proposed no-touch area in red.

**Figure 2.1: A portion of 30th Ave SW**

**Shorewood Drive**
This segment includes a stretch of Shorewood Drive that runs roughly parallel to the shoreline. The segment is dominated by a relatively steep hill that stretches from Shorewood Drive down to OHWM. At the north end of this segment the homes tend to be at the top of the bluff along Shorewood Drive. As one moves southwest along Shorewood the grade becomes less steep near OHWM and one begins to note homes within 50' of OWHM.

**Standring Lane**
This is a gated community of 24 homes along the waterfront on Standring Lane. Standring Lane is a private road. The land is relatively level at the north of this segment but a hill begins shortly thereafter upland of Standring Lane.

The single parcel that is upland of this stretch of Standring Lane is on a steep slope. The King County Tax Assessor reports the grade as close to 50% and has marked this property as unbuildable and assigned a tax value of less than $18,000.

This segment is 100% armored to protect the homes that tend to sit within 20 - 30' of the bulkhead. The water facing side of these bulkheads is beyond the current natural OHWM and they experience significant levels of wave energy for several hours at a time twice per day.

**2.2 Reach M2**
M2 has been divided in to two segments.

**Seahurst Park**
Over three quarters of a mile of beautiful public park that is being steadily restored.

**25th Ave**
A segment of 15 waterfront homes most of which are located at the top of an extremely steep bluff. The land along this steep slope is in natural condition. Eagle Landing Park is at the south end of this segment.

**2.3 Reach M3**
M3 is divided in to four segments

**149th/150th/151st**
This segment consists of 36 homes at the bottom of a steep hill. Most of the homes are between the base of the bluff and the OHWM with street access at the top of the bluff. Accordingly, several of these homes include private trams to provide access to the streets from the homes below.

**Start of Maplewild Ave SW**
A segment of 23 homes along the first 1/3 of a mile of Maplewild Ave SW. These parcels frequently stretch from the OHWM to Maplewild Ave SW. The terrain is generally quite steep and a good fraction of the homes sit at the top of the bluff rather than along the immediate waterfront. It is believed that the position of these homes is a consequence of the conditions of the terrain rather than owner preference. Waterfront homes become more prevalent towards the southwest end of this segment where the grade becomes less severe.

**Sunset Trail**
This is the longest developed segment defined in this memorandum. It includes 94 properties between Maplewild Avenue and the water. A small footpath, the Sunset Trail, runs parallel to Maplewild Ave and roughly bisects the length of this segment with homes on either side of the trail. The trail is relatively close to the water at the north end of the segment which has created relatively short parcels with homes constrained by the 20' setback line and the Sunset Trail. The terrain becomes steeper as one moves southward and the trail moves away from the water. At this point some homes are located along the trail at the top of a short bluff but a few homes have been constructed close to OHWM. As one continues along the trail the terrain becomes less severe and homes become more common adjacent to OHWM.

**Three Tree Point Lane**
The terrain becomes almost flat between the end of the Sunset Trail and the point at Three Tree Point. The 14 homes in this neighborhood tend to sit comparatively far back, the average setback is slightly over 65', and have fully landscaped backyards.

**2.4 Reach M4**
M4 is divided in to four segments.

**171st**
This segment contains 16 homes set between SW 171st St and the OHWM. These properties are fully developed with structures and fully altered landscaping.

**172nd**
This segment consists of a set of 51 parcels including a public street end. There are 41 homes located along the landward side of SW 172nd street. There is a steep hill immediately behind all of these homes. The waterward side of the street is fully hardscaped and this segment is almost completed armored.

**Seacoma Blvd**
This segment contains 12 private homes. Nine of these are located in a small development along Seacoma Blvd which is between SW 172nd St and OHWM. The remaining three homes are landward of SW 172nd St. These properties are generally short and narrow. This segment is fully armored and extensively hardscaped or landscaped.

**South Burien**
SW 172nd Ave moves sharply away from the water at the south end of the Seacoma Blvd segment due to a steep bluff. The parcels in the South Burien Segment are long and narrow and nearly all of them stretch from 172nd down to the water. Many of the homes are at the top of the bluff.

## 2.5 Development Metrics by Reach

Table 2.2 shows the number of properties within each Reach. Public or common land includes parks, street ends, and tract parcels that cannot be developed. The privately owned land is either waterfront, there is some frontage on Puget Sound, or upland. Private properties may be developed, exclusively with a Single Family Residence, or undeveloped. Review of the King County Tax Assessors database suggests that nearly every undeveloped parcel is judged to be unbuildable due to conditions such as steep slopes and frequent slides.

| | | M1 | M2 | M3 | M4 | Marine |
|---|---|---|---|---|---|---|
| Public/Common | | 2 | 3 | 4 | 2 | 10 |
| Waterfront | Developed | 66 | 12 | 112 | 101 | 291 |
| | Undeveloped | 1 | 2 | 8 | 2 | 14 |
| Upland | Developed | 17 | 0 | 44 | 14 | 75 |
| | Undeveloped | 9 | 0 | 0 | 2 | 11 |
| Total | | 95 | 17 | 168 | 121 | 401 |

**Table 2.2 The number of properties within each reach**

Table 2.3 shows the percentage of the linear length of the shoreline that is protected by shoreline armoring and the type of armoring in use.

| | M1 | M2 | M3 | M4 | Total |
|---|---|---|---|---|---|
| Rip Rap | 58% | 24% | 42% | 23% | 37% |
| Concrete | 35% | 0% | 35% | 68% | 35% |
| Wood | 1% | 2% | 12% | 3% | 5% |
| Total | 94% | 26% | 90% | 94% | 77% |

**Table 2.3 Level and Type of Armoring by Reach**

Table 2.4 summarizes the percentage of land area within 200' of OHWM in each overall condition by reach. As will become clearer in the next section, on private property the Natural condition is strongly correlated with the presence of steep slopes where development is precluded.

| | M1 | M2 | M3 | M4 | Total |
|---|---|---|---|---|---|
| Hardscape | 22% | 1% | 24% | 51% | 25% |
| Landscape | 24% | 0% | 30% | 37% | 24% |
| Natural | 54% | 99% | 46% | 12% | 51% |

**Table 2.4 Area Occupied by Land Coverage**

The nature of the terrain has a large impact on the location of the homes. Homes tend to be located relatively close to the water with a hill immediately upland, or else they are at the top of a bluff and are set back from the water. Table 2.5 indicates the number of waterfront homes that are located within 65' of OHWM. This is the depth of the no-touch area in the Burien SMP draft. If this regulation were adopted almost 75% of the waterfront homes would be lawfully non-conforming based solely on their proximity to OHWM. Furthermore the prevalence of steep slopes, as well as roads and foot trails, behind those homes means that few, if any, of the affected homes could be made conforming even if the home were completely destroyed.

| | M1 | M2 | M3 | M4 | Total |
|---|---|---|---|---|---|
| Home < 65' | 83% | 8% | 74% | 76% | 74% |

**Table 2.5 Percentage of homes that are within 65' by Reach**

## 2.6 Summary

As described above the Marine Shoreline is almost as fully developed as conditions have allowed with the obvious exception of Seahurst Park. The marine shoreline is dominated by the presence of steep slopes which have strongly shaped the patterns of development.

In some areas the slope remains steep all the way to the OHWM and the homes are found at the top of the bluff. The steep slope tends to preclude development and the land between the home and OHWM is in a relatively natural state.

More commonly the slope is set back sufficiently to allow homes to be placed at the bottom of the hill with the slope immediately behind. In some cases the land is so narrow that residents rely on steep stairs or private trams to reach their homes. Otherwise there may be room for a walking trail or a limited access roadway before the bluff is encountered. These conditions tend to push these homes close to the current 20' setback requirement. In this case the slope behind the home tends to be in relatively natural conditions.

The majority of privately owned undeveloped parcels are found on these slopes and the parcels are usually flagged as unbuildable in the King County Tax Assessors database. Almost all of the remaining parcels are heavily discounted due to slide histories. It is estimated that perhaps 10% to 20% of the privately owned undeveloped land is likely to be developed in a 20 year planning horizon.

## 3. Development Conditions along the Marine Shoreline

The discussion of the conditions of the shoreline in terms of Reaches and Segments with those reaches helps to enhance one's intuition about the nature of the Burien Marine Shoreline but it may lead to erroneous assumptions about the true prevalence about certain features.

This section will present a more quantified review of conditions using a uniform measure of distance in feet along the shoreline and to a depth of 200' from OHWM. Recall that this area has been mapped in Google Earth and the conditions have been sampled at a resolution of 1 sq. ft. Results are then presented in terms of length, areas, and relative percentages of these. This eliminates misunderstandings that may occur when parcels of significantly different sizes are being implicitly compared.

### 3.1 Public and Private Land

Figure 3.1 shows the percentage of land area within the SMP jurisdiction that is in public vs. private ownership. For privately owned land this chart indicates whether the land is on a developed parcel or an undeveloped parcel.

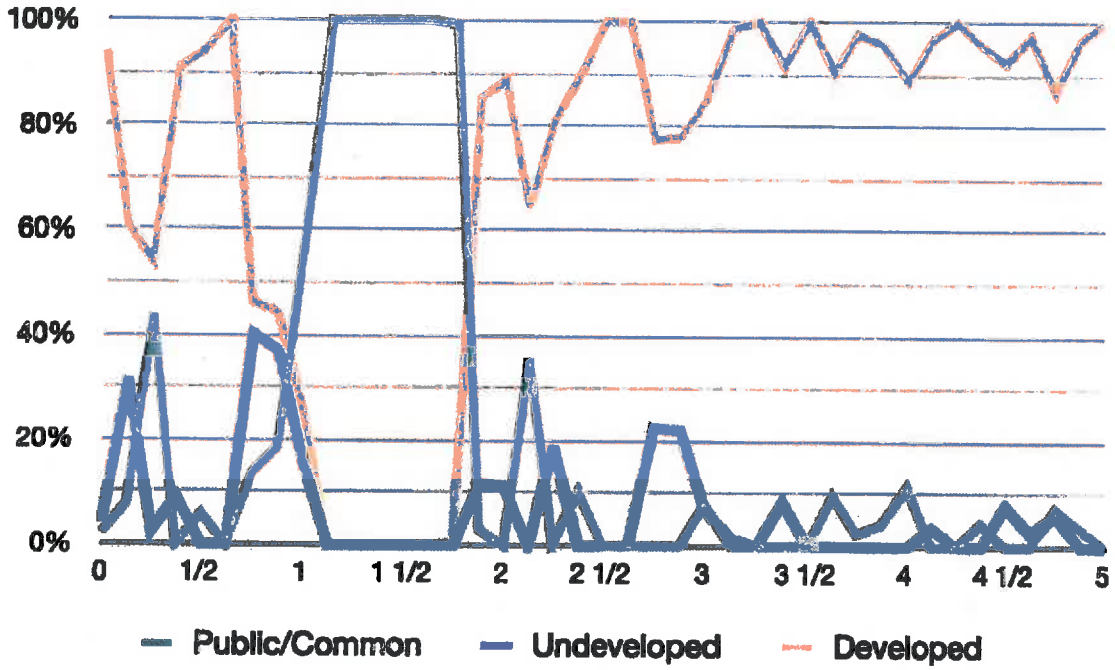



**Figure 3.1 Public/Common vs Private land along the Shoreline**

The x-axis represents distance, in miles, from the border between Seattle and Burien. The left end of the axis is Seattle and the right end is Normandy Park. The y-axis is the percentage of land area of each type as a fraction of the total area of the SMP jurisdiction. Seahurst Park begins at a little more than 1 mile from Seattle, and the remainder of the developed shoreline stretches from about 2.25 miles to Normandy Park.

The public/common land includes parks, street ends, and tract parcels. The first spike near Seattle is the two tract parcels at the southeast end of the Seola Lane / 30th Ave segment, the second major spike is Seahurst Park, the third spike is Eagle Landing Park, and the remaining spikes are street ends and minor tract parcels. Slightly over 20% of the total area is in the public trust. Almost all of this land is in a natural condition and it is unlikely that this land will become more fully developed in a minimum 20 year planning period. In fact this land provides the best opportunity for restoration activities.

Slightly less than 7% of the total SMP area is on properties that are privately owned but undeveloped. As has been discussed, the majority of this land is noted as unbuildable in the King County Tax Assessors database and much of the rest is heavily discounted due to access or slide history. For example the first two spikes near Seattle represent parcels on the steep slope behind 30th Ave SW and the third major spike around 3/4 of a mile from Seattle is a large unbuildable parcel behind Standring Lane. Queries of the tax database for each undeveloped property suggests that perhaps 1 or 2% of the total SMP area is both undeveloped and buildable. Nearly all of this land is in a natural condition.

### 3.2 Conditions on Privately Owned, Developed Property

Approximately 70% of the area is assigned to properties that have been developed exclusively with single family residences and their appurtenant structures; a priority use in the SMA. Figure 3.2 shows the patterns of use for the developed properties. A gap is shown for Seahurst Park.

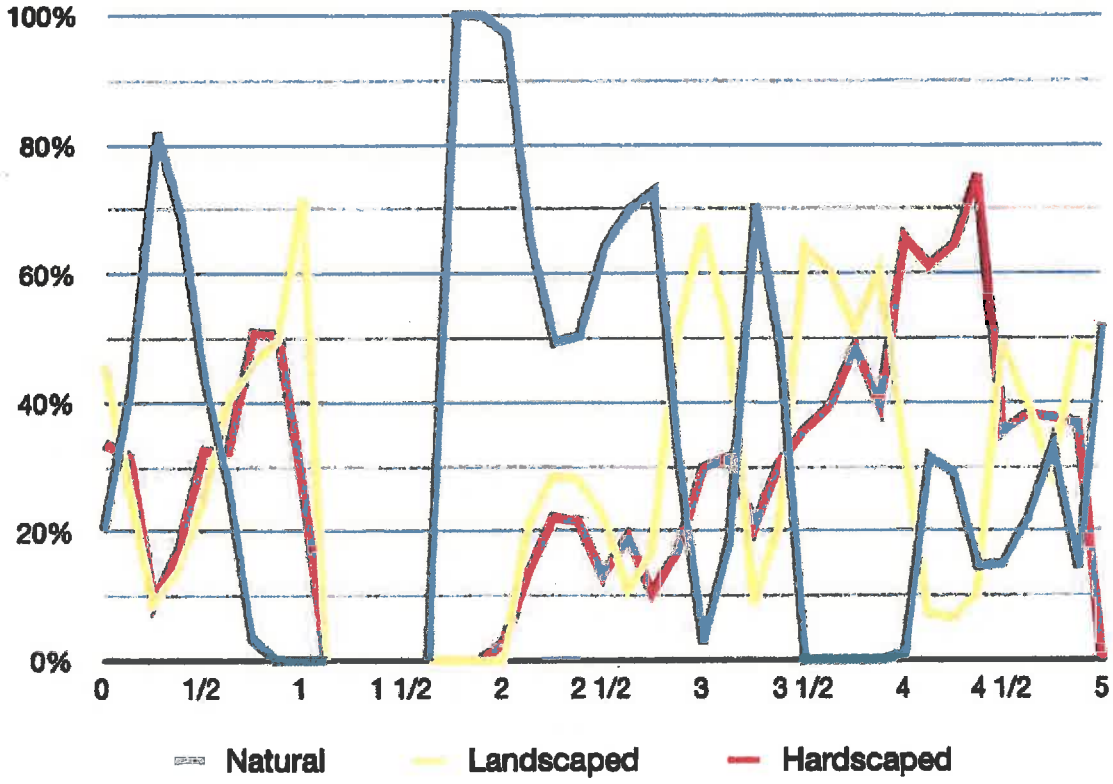



**Figure 3.2 Conditions on privately owned developed properties**

The total percentage of land coverage sums to 100% for most of this chart. The primary exception is the roughly 3/4 of a mile of Seahurst Park where there is no private property at all which is depicted as 0% for all coverage types.

For the Marine shoreline as a whole, the acreage of developed land within 200' of OHWM is approximately 1/3 natural, 1/3 landscaped, and 1/3 hardscaped. Although natural conditions exist on developed land throughout the shoreline it is particularly prevalent on steeper slopes.

The large spike of natural land in the first 1/4 mile corresponds to area in the vicinity of the tract parcels along 30th Ave SW. Most of the land in this area is in common ownership. The relatively small amount of privately owned land is located at the bottom of the steep bluff between Marine View Drive and 30 Ave SW which is then in a Natural state.

The second spike roughly 2 miles from Seattle corresponds to the steep slope to the southwest of Seahurst Park which is in a fully natural condition all the way to OWHM.

The remaining natural conditions are strongly correlated to bluffs along much of M3 and the south end of M4.

Figure 3.3 clarifies this point by focussing on the altered conditions within privately developed properties for the first 65' from OHWM. This is the area that is proposed as a no-touch area in the Burien draft SMP. Almost 85% of the private developed land within 65' of OHWM is already in an altered condition. There are significant sections of the shoreline where 100% of this area is altered. The first trough around 1/4 miles from Seattle is the steep slope along Shorewood Drive that has tended to force homes to the top of the bluff. The large trough at 1.5 miles is, of course, Seahurst Park which is publicly owned. The remaining peaks and troughs correspond almost perfectly to the position of the hill. The land is fully developed near OHWM when the slope allows and relatively natural when the home has been forced to the top of the bluff. This is the area that is currently proposed as a no-touch area in Burien draft SMP update.

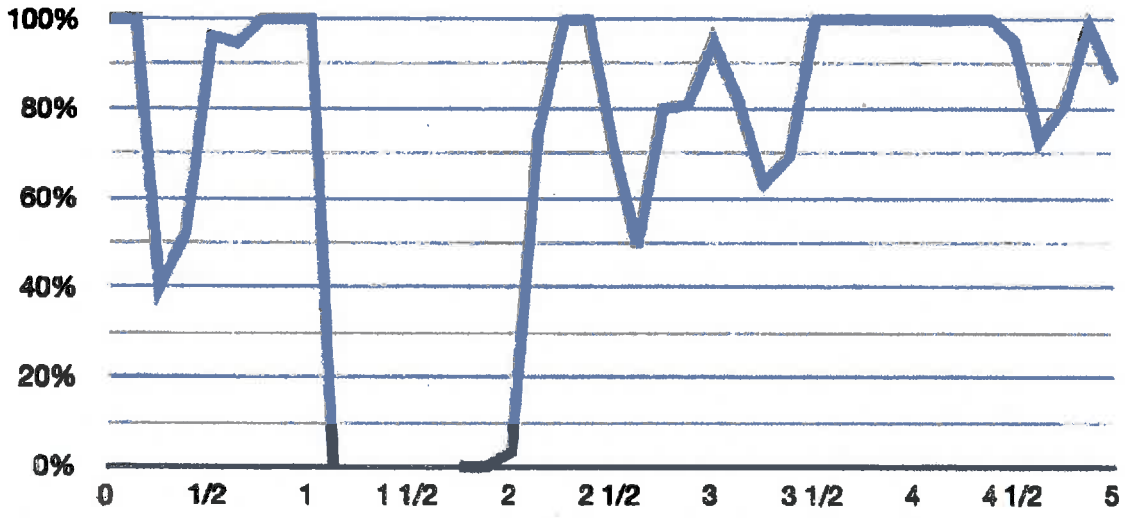



**Figure 3.3 Altered conditions within the first 65' from OHWM**

Figure 3.4 provides an indication of how altered the conditions are based on distance from OHWM. The red line (1%) indicates the distance where altered conditions are first encountered. The green line (100%) indicates the furthest point of altered land in SMP jurisdiction. Finally the yellow line (50%) indicates the distance travelled to cover half of the total altered land.

For much of the marine shoreline, altered conditions begin immediately at OWHM. Exceptions occur primarily where steep bluffs extend all the way to OHWM in which case the altered conditions are pushed up the bluff.

For much of the first 2.5 miles of shoreline, and ignoring Seahurst Park, the furthest point of altered land is around 100' to 125' from OHWM. The remaining distance is observed to be steep slopes that are in a largely natural condition.

One is more likely to find altered conditions within the full 200' as one continues south along the shore. The region near the tip of Three Tree Point, approximately 3.8 miles from Seattle, is highly altered for the entire 200' from OHWM. This is reflected in the figure with the 1% point at about 2', the 50% point at 100', and the far point at 200'.

The average distance to the start of the altered condition on privately owned land is 5', the average distance to the 50% level is approximately 75', and the 100% level averages approximately 145'. Note carefully that these averages disregard all public/ common land. This quantifies the intuition that the steep bluffs have tend to push the primary residence towards OHWM or else to the top of the bluff and outside of SMP jurisdiction. Outside M2, there is not an existing functioning riparian buffer for most of the shoreline. Defining a generic no-touch area of 65' will not change this and will not contribute to the No Net Loss standard in the SMP guidelines.

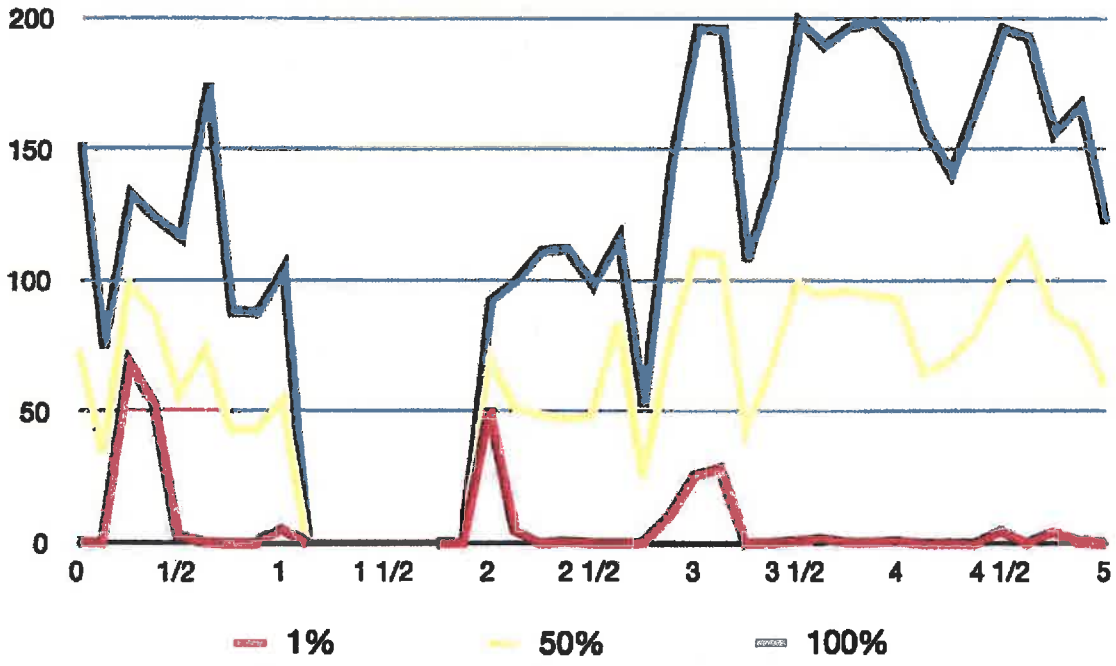



**Figure 3.4 Distance Ranges of Altered Condition on Private Property**

### 3.2 Shoreline Armoring

The plan has expressed a concern that new development near the shoreline will create a need for additional shoreline armoring. Figure 3.5 shows that the vast majority of the shoreline is almost completely armored; 95% or more by length. The significant exception is the 20% of the shoreline that includes Seahurst Park and the step bluffs immediately to the south.

The second dip depicted in the chart is in the Three Tree Point Lane segment of M3. As described in section 2.3, this is one of the few developed segments where the edge of the properties averages approximately 5' landward of the current OHWM. In sum, the buildable undeveloped lots that we are aware of are either at the top of a bluff or are already armored.

The majority of these bulkheads are now waterward of OHWM and the bulkheads are subject to significant wave energy, both natural and as a result of large container ships that travel to and from Tacoma, for several hours twice per day and protect homes that are commonly within 65' of the bulkhead.

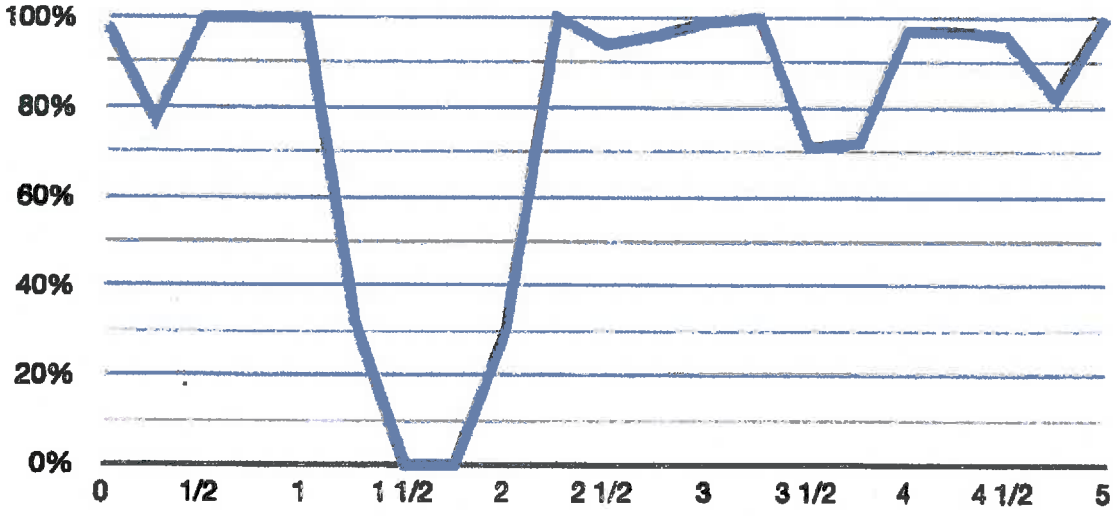



**Figure 3.5 Presence of armoring along the Shoreline (mi)**

### 3.5 Summary

This memorandum has demonstrated that the privately owned land within 200' of OHWM is highly developed.

Less than 7% of the total area is assigned to privately owned properties that are entirely undeveloped and most of this property is assessed by the King County Tax Assessors office as unbuildable. It is estimated that only 1% of 2% of the land is available for brand new development.

Slightly more than 20% of the total area is publicly owned and is not considered a candidate for new development in a 20 year planning period. Although this land is in a broadly natural condition this is the land where restoration efforts are most readily pursued.

A little over 70% of the total area is privately owned and contained by properties where a single family residence exists. Approximately 1/3 of this area is in a broadly natural condition and the remaining 2/3 is altered. Most of the homes are in generally good condition but there are a few homes that are candidates for significant reconstruction in the near term, and there is a reasonable expectation that others will require major rennovation in a 20 year planning period.

Development within the shoreline has been driven by terrain. There are steep bluffs along the majority of the shoreline. Homes are pushed close to OHWM wherever conditions allow but then return to the top of the bluffs where the hill is too close to the shore. The nature of the terrain and the desirability of living along OHWM means there is effectively no functioning riparian vegetation area adjacent to OHWM for the majority of M1, M3, and M4.

CEDAROCK CONSULTANTS, INC.

# MEMORANDUM

Date: June 4, 2010

From: Carl Hadley

Subject: **The Use of Science to Develop Marine Buffer Recommendations in Burien**

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This memorandum was prepared on behalf of the Burien Marine Homeowners Association (BMHA) in response to the Burien City Council's solicitation for science-based input on Burien's draft Shoreline Master Program ("draft SMP"). Specifically, this memorandum addresses the science used to develop marine shoreline buffer recommendations in Burien. First, the memorandum addresses the large volumes of reports and data that have been provided to the City Council, covering many aspects of buffers and buffer widths recommended to protect ecological functions. This science explores predominantly freshwater streams and rivers in forested, undeveloped environments such that it has limited applicability to Burien's urban developed marine shoreline. Second, this memorandum explores potential buffer benefit given existing developed conditions found along Burien's marine shoreline. As explained in further detail below, buffers have limited ability to protect or enhance shoreline ecology in developed urban environments, like that of Burien. Third, this memorandum explains the *"no net loss"* standard in the Shoreline Management Act ("SMA") and what it means in light of existing developed, urban conditions along the Burien shoreline.

**What science is Ecology and the City of Burien currently using to define marine shoreline buffer widths and is that science applicable to the Burien marine shoreline?**

Nearly all of the scientific literature and literature reviews referenced to support recommended marine buffers in the draft SMP address buffer functions and widths necessary to provide fully functioning natural pathways on freshwater streams in forested areas. Much of this literature investigates the results of tree harvesting in forests, or the effects of various agricultural practices. Notably, the studies evaluate functions provided by natural, forested conditions. Moreover, the literature discusses buffer function on habitat in freshwater streams, not marine (saltwater) shorelines. For example, all three references (May 2003, Knutson and Naef 1997, and FEMAT 1993) cited in the *Recommended Widths for Protected Areas and Buffers* chapter of the document *Protecting Nearshore Habitat and Functions in Puget Sound* discuss work done almost exclusively on streams and rivers in native forests.

These distinctions are important. The literature must be approached with caution when evaluating marine buffer functions and promulgating buffer recommendations. Some of the ecological functions provided by marine buffers are similar to those studied near streams, while other functions are irrelevant. For example, the 35-foot to 151-foot wide buffers

recommended to protect water temperature in streams won't have any influence on water temperature in Puget Sound due to the huge volume of water (relative to a stream), dominating influence of winds and currents, and miniscule potential shading ability compared to the overall surface area of Puget Sound.

By contrast to the natural forested environments that are the subject of the literature upon which the draft SMP relies, Burien's marine shoreline in the three reaches designated residential (M1, M3, and M4) has been altered significantly and is developed for urban residential use. Ninety-two percent of the water front lots on the reaches designated Urban Residential are already developed for single family use. Sixty-three percent of the 243 lots measured to date contain primary residences located within 50-feet of the ordinary high water mark. The full suite of buffer functions that support marine habitat adjacent to natural forests is reduced in areas of highly modified landscape. The presence of native vegetation in the buffer area is key to providing the functions described in references cited by Ecology and these references presume natural forested conditions. They do not consider urban constraints that prohibit or restrict a return to those natural conditions. Examples of these constraints include:

- Populated areas with large numbers of private properties along the shoreline;
- Existing buffer widths and conditions constrained by structure and infrastructure;
- Extensive existing bulkheads;
- Public safety (for example hazard trees or flooding);
- Engineered water quality protection rather than via buffer function.

While there is little available research with which to guide marine buffer recommendations in urban settings, we do not think this will be a particular issue for the City of Burien given existing conditions as discussed below.

**Do buffers work in developed areas?**

Buffers are typically designed to conserve existing or potential shoreline ecology and can be justified if there is reasonable confidence that the buffers will preserve natural functions. Functions of fully vegetated buffers can include pollutant removal, erosion control, large woody debris recruitment, water temperature moderation, wildlife habitat, bank protection, and nutrient input (among others). While these are all important factors in aquatic habitats within forested areas, the functions may not exist, or may be much less important in urban developed areas.

For example, one of the functions of shoreline ecology is woody debris recruitment. Woody debris is the accumulation of fallen trees and limbs that ultimately contribute to habitat quality. Buffer widths between 150-feet to 200-feet are typically required to provide 100 percent of the woody debris function observed in an intact native forest. However, there are few if any mature to old growth trees currently found along the marine shoreline in Burien and the potential of trees being allowed to grow for 100 to 300 years and then naturally fall is remote. Many if not most old and potentially unstable trees near existing homes and in parks and other

public places are legally removed as hazard trees. Only within non-developed areas, such as portions of Seahurst Park, is it likely that older trees will develop to maturity and be allowed to fall. Any significant trees that are located on private property near the shoreline can be protected using a significant tree ordinance. A buffer is not required to protect this function.

Similarly, as discussed above, buffers have little effect on water temperature in Puget Sound. Buffers also have little ability to preserve natural conditions that prevent erosion and protect bank stability where the banks are already stabilized with a dense mix of houses, landscaping, and hardscape, including significant bulkheads. With the exception of Seahurst Park, there are almost no trees hanging over the bulkheads that provide nutrients. Nor (with the exception of Seahurst Park) are there large patches of native vegetation suitable for use by wildlife habitat. Implementing buffer requirements under these situations would do little if anything to further reduce erosion, or protect nutrient inputs and wildlife habitat.

Vegetated buffers can separate pollution generating surfaces from Puget Sound and help remove pollutants via filtering and sediment deposition. However, the buffer must be vegetated, preferably with native shrubs and herbs. There is very little existing native vegetation on Burien's marine shoreline, thus requiring a buffer to conserve this function would have little effect. Rather than implementing buffers, water quality can better be protected by encouraging or requiring the use of native plants along the shoreline, prohibiting fertilizer and pesticide use, limiting other pollution generating activities such as painting and car washing, and collecting and treating road surface runoff before discharge to the Puget Sound.

**What is No Net Loss?**

The Shoreline Management Act requires regulations that ensure "no net loss" of ecological function. No net loss is not currently defined as part of the Shoreline Management Act. However, the term as used elsewhere (e.g. wetlands or recreational facilities) has been interpreted to mean that any adverse change to a condition found immediately prior to a proposed action, and caused by the action, will be balanced by an equivalent (or greater) gain somewhere else (i.e., loss balanced by gain).

Net loss is not compared to theoretical (perfect), or pre-development (undisturbed) conditions. This is one reason that science based on intact forests is not relevant along the Burien shoreline. Net loss is compared to existing conditions as found today. Along the marine shoreline in Burien, existing conditions include areas of dense development, extensive bulkheads, and very little native vegetation (Reaches M1, M3, and M4). Further development in these areas will have little adverse effect on existing ecological functions.

Because existing conditions are so important to the implementation of the Shoreline Management Act, the BMHA is currently working to further quantify existing conditions along the marine shoreline. Measurements of bulkhead coverage, building setbacks, and vegetative condition along the shoreline are currently being gathered and will be provided to the City and Ecology for use in developing reasonable and effective protection standards for the area.

We are recommending that the City of Burien define no net loss as follows: **No Net Loss** means that, following an action, shoreline ecological functions necessary to sustain shoreline natural resources are equivalent to ecological functions immediately prior to the action. "Net" change is based on inventory and analysis of existing conditions. When applied to shoreline habitat functions, the net result of any action should be no diminishment in shoreline ecological functions as they currently exist. No net loss does not compare to theoretical, perfect, or undisturbed conditions.

**Are there alternatives to buffers on individual properties to protect existing ecological functions?**

The Shoreline Management Act requires that local governments evaluate existing nearshore conditions and establish policies and regulations to ensure no net loss of those functions. The most realistic strategy for the Burien marine shoreline is to recognize and protect natural buffer features that have a direct functional role on water and habitat quality within the constraints of the urban environment.

As noted in the document *Protecting Nearshore Habitat and Functions in Puget Sound* (pg. III-37) buffers work best when applied to undeveloped or partially developed areas. Establishing buffers is less effective as the sole mechanism to protect the nearshore in more developed areas. This is primarily because buffers don't work well when they are established around existing residences. The structures immediately become non-conforming and a homeowner loses control of property which may have been utilized as yard or outdoor living space. Buffers in these settings often results in degraded vegetation, poor habitat quality, and potentially lower property values. While a buffer was theoretically applied, in effect there was no improvement in ecological function.

Instead, the City could achieve no net loss through regulations such as those proposed in the BMHA's redline. Additionally, the City of Burien could consider achieving ecological balance by improving habitat on a more regional, city-wide basis, rather than looking to balance ecological loss with gain on each individual property via implementation of large buffer requirements. Along the shoreline this could include further ecological enhancements to Seahurst Park and potential purchase and enhancement of undeveloped lots, perhaps using a mitigation banking plan. This approach is used elsewhere as an available alternative to on-site mitigation.

futurewise
Building communities
Protecting the land

# Recommendations on
# *Making Small Shoreline Buffers Work with Buffer Science*

**Working Draft - Nov. 2009**

## Introduction

In the course of reviewing Shoreline Master Programs (SMPs), Futurewise has seen several proposals for small buffers in areas of existing development. Some of these proposals seem to be based on the belief that, if a small buffer is established based on existing development patterns, unlimited continued development outside that small buffer will have no additional impacts to ecological functions, and thus no mitigation is necessary. This paper shows that there is no logical basis for such a strategy, and provides a recommended strategy for the acceptable use of small buffers in existing developed areas – especially cities - which we believe allows for reasonable development while also having a reasonable chance of protecting the existing shoreline functions as the Shoreline Management Act and the Shoreline Master Program Guidelines require.

## Purpose of Regulatory Buffers – Avoiding & Minimizing Impacts

The Shoreline Management Act (SMA) policy statement in RCW 90.58.020 lists the primary policy objective of the act: "This policy contemplates protecting against adverse effects to the public health, ***the land and its vegetation and wildlife, and the waters of the state and their aquatic life***, while protecting generally public rights of navigation and corollary rights incidental thereto." In addition, the SMA policy provides that "[p]ermitted uses in the shorelines of the state shall be designed and conducted in a manner to ***minimize***, insofar as practical, any resultant damage to the ecology and environment of the shoreline area and any interference with the public's use of the water."

To implement these policies to protect the ecology and to minimize damage, as well as other policies of the SMA, the SMP Guidelines require No-Net-Loss of Ecological Functions, stating specifically: "Local master programs shall include policies and regulations designed to achieve no net loss of those ecological functions."[1]

This is accomplished through Mitigation Sequencing,[2] whereby the first task of mitigation is avoidance of impacts, the second task is minimization of impacts, and the third is compensation for remaining impacts. Stated another way, allowing development to impact the shoreline is supposed to be the last option, not the first option. Impacts should only be allowed to the extent that it is not practical to avoid damage to the environment and the public's use of the water, and then the development should minimize and compensate for those impacts.

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[1] WAC 173-26-186(8)(b) under Governing Principles of the Guidelines relating to ecological functions; and implemented in WAC 173-26-201(2)(c) under Basic Concepts. Despite being called 'Guidelines,' the SMA, in RCW 90.58.080(1), requires that shoreline master programs shall be consistent with the SMP Guidelines.

[2] WAC 173-26-201(2)(c) under Basic Concepts and Protection of Ecological Functions; and implemented in WAC 173-26-201(2)(e) under Basic Concepts, Environmental Impact Mitigation.

One of the primary ways to accomplishing mitigation sequencing for shoreline waters (streams, lakes, wetlands, marine waters, etc.) and adjacent shorelands is to protect the functions and values provided by intact vegetation using a regulatory buffer or setback and vegetation retention area of a width supported by science. Such a buffer can provide many important functions and help protect the water quality and water resources.

An adequate regulatory buffer can serve three purposes:

(1) It helps accomplishes the first task of mitigation sequencing – avoidance. ***But this is only the case if the buffer is intact.***

(2) An intact buffer also minimizes the adverse impacts of development and redevelopment - such as water quality, glare, and noise impacts.

(3) For both degraded and intact areas, the buffer also identifies the area within which new development will cause impacts that need mitigation. Degraded buffers perform functions at a dampened level, depending on the amount of degradation. Even heavily degraded shorelines can perform functions at some level. This is specifically stated in the SMP Guidelines.[3] When development (including redevelopment, expansion, and more intensified uses) occurs within degraded buffer area, the impacts can be reduced and compensated for by enhancing the degraded functions.

If the regulatory buffer is not of adequate size to avoid and mitigate impacts, as is the case when using small buffers, new development outside the small buffer will still cause new impacts.

## Vegetative Buffer Areas Perform Many Functions

The peer-reviewed scientific evidence shows that intact buffers of a width based on science are needed to adequately mitigate the impacts of adjacent development on lakes, rivers, streams, marine waters, and wetlands.[4] The scientific studies document that (1) small buffers, even with intact vegetation, are incapable of fully mitigating development impacts; and (2) degraded buffers are unable to fully perform their buffering function. The science of intact buffer areas of adequate width shows that they perform many functions – some are provided below and grouped by similarity. Of particular importance is that even degraded conditions retain some functions, in spite of claims to the contrary.

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[3] WAC 173-26-201(2)(c) under Basic Concepts and Protection of Ecological Functions.

[4] Karen Cappiella and Tom Schueler, Crafting a Lake Protection Ordinance Urban Lake Management, Watershed Protection Techniques 3(4) p. 756 (2001) accessed on November 5, 2009 at: http://www.cwp.org/Resource_Library/Center_Docs/special/lakes/_ulm_lakeprotectionord.pdf; K. L. Knutson & V. L. Naef, ***Management Recommendations for Washington's Priority Habitats: Riparian*** p. XI, pp. 164 – 67 (Wash. Dept. Fish and Wildlife, Olympia WA: 1997) accessed on November 5, 2009 at: http://wdfw.wa.gov/hab/ripfinal.pdf; Sheldon, D., T. Hruby, P. Johnson, K. Harper, A. McMillan, T. Granger, S. Stanley, and E. Stockdale, ***Wetlands in Washington State - Volume 1: A Synthesis of the Science*** p. 5-55 (Washington State Department of Ecology Publication #05-06-006. Olympia, WA: March 2005) accessed on November 5, 2009 at: http://www.ecy.wa.gov/pubs/0506006.pdf; and EnviroVision, Herrera Environmental, and Aquatic Habitat Guidelines Working Group ***Protecting Nearshore Habitat and Functions in Puget Sound: An Interim Guide*** pp. II-38 to II-46 & pp. III-34 – III-42 (October 2007) accessed on November 5, 2009 at: http://wdfw.wa.gov/hab/nearshore_guidelines/.

**Water Quality and Infiltration**

- Inhibiting surface erosion from surface runoff and flood flows.
- Filtering sediment from surface runoff and flood flows.
- Removing and transforming nutrients and harmful substances from surface runoff and flood flows.
- Infiltrating and storing surface runoff and flood flows into groundwater for later release to water bodies.
- Removing and transforming nutrients and harmful substances from groundwater passing through root zones.

**Stabilization**

- Providing stabilization to streambanks and lake shores against erosive water forces through root mats and root-strength.
- Contributing in-water woody debris which reduces and slows erosive water forces against streambanks and lake shores through barriers and increased roughness.

**In-Water Habitat**

- Providing fish with over-water hanging cover from predators.
- Providing shade to help cool the water, especially for shallow margins.
- Contributing in-water woody debris needed for creation of fish habitat.
- Contributing in-water organic matter to support fish food species (insects and invertebrates), and other aquatic life.
- Screening or dampening noise, glare, and human activity from the water.

**Land Habitat**

- Providing refuge for fish from fast flood flows, as well as access to large quantities of food.
- Providing natural processes and food web functions to support wildlife.
- Providing wildlife habitat areas (for feeding, reproducing, resting, etc.) for riparian species, and for upland species that use riparian areas.
- Providing a wildlife migratory corridor along the water to other areas.
- Altering the microclimate near the water to be more suitable for aquatic and riparian species by sheltering from wind, holding humidity, etc.
- Screening or dampening noise, glare, and human activity.
- Providing separation from human activity for sensitive aquatic and upland wildlife species.

While full-sized, intact buffers perform almost the full level of the functions above, degraded buffers can perform low levels of functions, and additional development continues to impact these. It is not the case that degraded buffers have no functions, and thus no mitigation is needed for new development outside and arbitrary small buffer area.

## Small Degraded Buffers Cannot Protect Shoreline Functions

The currently available science shows that using the science-based buffer for avoidance and mitigation in mitigation sequencing has several logical outcomes that bear on the use of small buffers for existing development:

1. If the science-based buffers are intact, they can protect the resource from many impacts from nearby development.
2. If the buffers are not intact, they cannot protect the resource from adjacent development - even if it meets the buffer width - and there will be impacts.
3. If development takes place within the buffer area, there will be impacts.
4. In the case of existing development within the science-based buffer width, the vegetation is both degraded and there is not enough width. The presence of existing development does not mean that new development will not have impacts or even that existing development does not have ongoing impacts. Just as in #3 above, continued development in the normal science-based buffer area will increase the impacts. Simply making the buffer width number smaller to match the existing development does not change the presence of impacts.
5. Using small regulatory buffer widths to accommodate existing development establishes built-in impacts in the SMP review system.
6. Since the normal path of development in urban areas over time is expansion and intensification, there will be a continual increase in impacts and degradation across shoreline jurisdiction in these areas. This creates issues for both the Cumulative Impacts Analysis and the Restoration Plan.

This information shows that just because the science-based buffer area is degraded, it is not the case that unlimited additional development has no additional impacts as long as it meets a small regulatory buffer or setback.

This evidence also shows that small buffers cannot be applied to areas that may still have intact functions if those functions are to be protected from loss.

Some small buffer systems proposed in some SMPs seem to assume that the smaller degraded buffer works the same as an intact science-based buffer, i.e. adequately providing functions and buffering against impacts as long as development is outside the buffer line. But peer-reviewed scientific literature shows that a smaller degraded buffer is incapable of performing functions adequately and incapable of protecting the resource it is intended to protect.

## New Development and Existing Development Impact Shoreline Functions

Expansion of existing development, redevelopment, and new development on vacant land all adversely affect shoreline resources and functions. In fact, even existing development continues to cause impacts to ecological functions. As described above, this is the case even for development outside a small regulatory setback. Consider the following adverse impacts of development on the shoreline resources.

- New structures and impervious surfaces increase runoff volumes, remove vegetation, remove native soils that absorb water, and reduce the area available to infiltrate those volumes. Note that these impacts are partially mitigated through stormwater ordinances. However, stormwater regulations generally only address increased peak

runoff volumes, not the other impacts.[5] In addition, small developments are only required to comply with some of the storm water requirements reducing their ability to address these impacts.[6]

a. The increased runoff is focused into smaller receiving areas, thus increasing the erosive power of the surface runoff in those areas.
b. Where infiltration can still occur, the focused runoff drives infiltrated water to the groundwater table more rapidly with less opportunity for treatment.
c. Less vegetation area is available to filter sediment and nutrients from flood waters and the larger volumes of surface runoff passing over the site.
d. Less vegetation root structure is available to treat groundwater.
e. The trend of decreased infiltration in a drainage basin changes the hydrology of the basin by increasing winter flows and deceasing summer and fall flows adversely affecting water quality and aquatic habitats.

- Adding additions or new structures and impervious surfaces, and removing or simplifying vegetation (cutting trees, replacing shrubs with lawn, paving, etc.) also adversely affect habitat:
  a. Higher value habitat areas and migration pathways are eliminated or replaced with lower value areas, until the most simplified areas (open impervious surfaces) have only limited value for migration pathways and separation areas. More complex areas for nesting and refuge are most susceptible to loss.
  b. Substituting non-native species for native vegetation results in a loss of food sources for the entire food web. Many native insect species cannot effectively use non-native vegetation for food. The reductions in insect populations then affect the fish that feed on them.
  c. Natural processes and food web functions are reduced or eliminated with the progressive removal of complex vegetation elements.
  d. Species (large and small) capable of using degraded areas are greatly reduced with greater degradation.
  e. Microclimate is altered for species currently using site.
  f. Reduces the organic matter input to the water from drifting and blowing wind that supports the aquatic food web and life.
  g. Reduces the large woody debris input from trees and branches falling into the water that is needed to form and diversify fish and aquatic life habitat.

- In addition removing or simplifying the vegetation near water also:
  a. Reduces the root strength and root mats that provide bank stabilization.
  b. Increases sun exposure on shallow water areas and heats them.

- Residential uses have additional impacts, not directly related to construction, that increase with enlargement or expansion of the use. Aside from lighting, very little

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[5] Washington State Department of Ecology, ***Stormwater Management Manual for Western Washington Volume 1 – Minimum Technical Requirements*** pp. 1-20 – 1-26 (February 2005). Accessed on November 5, 2009 at: http://www.ecy.wa.gov/biblio/0510029.html

[6] *Id.* at 2-9.

can be done to mitigate these impacts – they are a function of the existence of the development. Non-residential uses can have impacts similar to residential uses that vary depending on the activities and the level of use.

a. Human presence and activity that impacts or drives off fish and wildlife. Bigger residences mean more people on the property, whether family members or guests.
b. Pets that prey on or drive off fish and wildlife. More family members increase the likelihood of having more pets.
c. Machinery and vehicular noise that impacts or drives off fish and wildlife. More people on the property increase the likelihood of having more machines and vehicles – including automobiles, watercraft, and mechanical toys.
d. Use of chemicals and fertilizers for house and yard. Larger structures and grounds increase the use of chemicals.
e. Use of night lighting that impacts or drives off fish and wildlife. Larger structures and grounds increase the use of night lighting.

- Existing uses can also have impacts that increase over time. While shoreline master programs do not apply to most existing uses, these impacts show that allowing an expanded, redeveloped, or new use that continues to rely on existing, degraded buffers or non-existent buffers will result in an increased loss of shoreline functions, contrary to the requirements of the SMA. Further, shoreline master programs do apply to ongoing activities that require five year permit renewals. The SMP should require measures to protect shoreline functions when those permits are renewed.
  a. Buffers degrade over time, so existing uses increase their pollution loads as the buffers degrade.
  b. Even if the pollution being discharged to the water body remains the same, the receiving waters can become more contaminated as pollutants build up in aquatic sediments and the water body year after year. Some pollutants are removed or transformed by flushing and biological processes, but others build up over time.

## Recommendations Using Small Buffers or Setbacks with Planting Alternatives

Based on the discussion above, regulatory systems that use small buffers alone are ineffective and fail to comply with the SMA. While a science-based regulatory buffer can provide a means of avoidance, and to a lesser degree minimization, small degraded regulatory buffers and setbacks do not, and result in a system with built-in adverse impacts to ecological functions.

Since a system that uses small buffers or setbacks alone cannot accomplish avoidance, or otherwise mitigate the impacts of a development, the only other acceptable strategy for their use if the built-in impacts are offset by built-in mitigation measures, including mitigation for habitat impacts. This is best accomplished by an improvement of the existing degraded buffer or habitat conditions. Even with this approach to using small buffers or setbacks, the SMP must also address the range of different shoreline conditions in a logical and systematic manner. Below is our recommended strategy for jurisdictions to use small buffers or setbacks for existing developed areas.

1. The shoreline area should be carefully mapped, and the existing level of development should be characterized. This should be part of the inventory and characterization regardless of the use of small buffers. When broad variations exist in setback and vegetation, the areas should be categorized based on the character so the protection measures can consider such variations.
2. Science-based regulatory buffer widths need to be adopted for intact or large setback areas. These areas need to be protected from further degradation.
3. Small regulatory buffers widths or setbacks with native vegetation planting (as described in item 4) can be used for areas of existing development, and should be based on the vegetation and setback categories identified during mapping. However, these areas need to be wide enough to function and function over time. For example, the narrowest high quality buffer than can filter nutrients is 13 feet; the minimal width for filtering pollutants is 33 to 52 feet.[7] And buffers degrade over time as they filter out nutrients and pollutant. Wider buffers are needed to protect other important shoreline functions.
4. Built-in mitigation requirements need to be included when an intact science-based buffer cannot be used to mitigate impacts of new development. This should include various <u>means of enhancing</u> the degraded shoreline areas where doing so is possible – such as planting native shoreline vegetation, removal or reduction of unnecessary shore armoring or other near-water structures, etc. Where native vegetation is planted it needs to include native groundcover, shrub, and tree planting; and needs to extend across the shoreline with allowances for water access.
5. Only very limited uses should be allowed in the setback and no uses can be allowed within the planted areas if they are to function. Encroachments into a buffer or setback vegetation should be limited to those that are water-dependent and water-related. Water-enjoyment and non-water-oriented uses and facilities can function without being in the buffer area.
6. Where native vegetation is not present in the buffer or setback, it must be planted and maintained. This must include native understory, shrub, and tree planting and extend across the shoreline with allowances to access the shoreline. At a minimum, this planted area needs to be large enough to maintain fully grown native trees.
7. Low impact development (LID) techniques should be required to minimize storm water runoff and help maintain a more natural hydrologic system. This is needed to help reduce the polluted storm water that would otherwise overwhelm the narrow planting strip.
8. Major redevelopments and changes in use, must established scientific based buffers, or at least wider buffers, to ensure no net loss of shoreline functions.
9. When permits for activities are renewed every five years, buffers or setbacks and vegetation plantings should be required.

While small buffers can be made acceptable for highly developed urban areas and rural areas, there needs to be policy support for not basing the buffer width on the available scientific information. Of course science-based buffers should be used for intact areas. Such

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[7] K. L. Knutson & V. L. Naef, Management Recommendations for Washington's Priority Habitats: Riparian p. XI, pp. 164 (Wash. Dept. Fish and Wildlife, Olympia WA: 1997).

justification can be provided in the jurisdiction's policy that supports the use of shoreline buffers. We recommend a policy similar to the following:

> ***BUFFER POLICY:*** While buffers widths based on science are necessary to protect ecological functions, using them is not possible in existing heavily developed areas, such as along some parts of [FILL IN THE BLANK]. In such areas, an alternative strategy is established using smaller buffers [or setbacks and native vegetation plantings] that are based on the existing development pattern, in combination with mitigation requirements for new development that provide enhancement of the smaller buffer and other degraded features to address impacts of the new development outside the small buffer areas.

# Appendix X

Under Washington State Shoreline Management Act Guidelines [WAC 173-26-186(8) & WAC 173-26-201(2)(c)] all new development, activities and uses must meet the standard of no net loss of ecological functions and shoreline processes, and to meet no net loss, mitigate any adverse impacts of new development.

The Burien Shoreline Master Program (SMP), Title 20, has been updated and reviewed by the Department of Ecology for consistency with Chapter 90.58 RCW and WAC 173-26 and defines the policies and regulations that must be observed for new development within Burien's Shorelines.

Development activities within Shoreline Jurisdiction that are subject to review under the Shoreline Master Program include, but are not limited to,

- Addition or removal of impervious surface (e.g. structures, pathways, and driveways).
- Addition or removal of native vegetation (BMC 20.30.040)
- Addition or restoration of partially functioning areas (BMC 20.40.101)
- Installation or alteration of Flood Hazard reduction structures (BMC 20.30.030)
- Installation or alteration of Shoreline Stabilization Structures (BMC 20.30.070)
- Installation or alteration of Docks, Piers, and Floats (BMC 20.30.075)

An important component of the provisions that achieve the no net loss standard is the definition of a Shoreline Buffer adjacent to Ordinary High Water Mark (OHWM) in which new development is subject to additional review. The dimensions of this buffer are tailored to the varied conditions that are observed along Burien's shoreline at the time of the update.

Developments with significant impacts within Burien's regulated Shoreline are likely to require the assistance of a qualified professional to demonstrate that a proposed development meets the requirements of the Burien Shoreline Master Program. Examples of projects that are more likely to require this level of support include the construction of a new primary residence on a property that is currently undeveloped and projects that require the installation of, or the expansion of, structures for flood hazard reduction or shoreline stabilization.

Developments with less significant impacts may be able to demonstrate that the no-net-loss provisions can be met by reference to a worksheet that is included in Section X.3 of this appendix. It is particularly appropriate for the remodeling, renovation, and reconstruction of an existing structure, for minor expansions of existing structures, and for the construction of minor appurtenances. Use of this worksheet provides predictability and is intended to reduce cost and complexity in satisfying the permitting process.

## X.1 Shoreline Buffers

The Burien SMP [BMC 20.30.050 and 20.30.055] defines a Shoreline Buffer adjacent to Ordinary High Water Mark (OHWM) in which new development is subject to enhanced review to assure no net loss. All development within this buffer must demonstrate that unavoidable adverse impacts are mitigated to achieve no-net loss.

Achieving no net loss can be done by avoiding an adverse impact, relocating the adverse impact to be outside the buffer, or by mitigating the impact. Demonstrating that the development will achieve the no net loss standard can be achieved by reference to an ecological impacts report developed by a qualified professional, or by reference to the worksheet in X.3. The Shoreline Administrator may define standards to guide the development of this report.

The Shoreline Buffer is further divided in to two zones, Zone 1 and Zone 2, with Zone 1 adjacent to OWHM and Zone 2 adjacent to the landward edge of Zone 1. The depth of these zones is based on existing patterns of development and hence varies along the Shoreline. The dimensions of the buffer for a given site can be determined by reference to BMC 20.30.050 and subsection X.?

### X.1.a Development Standards for Zone 1

It is intended that new development in Zone 1 will be primarily for the maintenance of existing structures, the restoration or remodeling of existing structures within the existing footprint, voluntary restoration activities, or required mitigation for adverse impacts in Zone 2.

The primary exception to this prohibition on adverse impacts is to develop an access path from Zone 2 to the line of OHWM. This access path should be the minimum size and design to serve this purpose and respect the safety of its intended users. Additional flexibility may be required to meet the needs of users with limited mobility.

### X.1.b Development Standards for Zone 2

It is intended that new development in Zone 2 will be primarily for the maintenance of existing structures, the restoration or remodeling of existing structures within the existing footprint, or for voluntary restoration activities. However new developments that result in adverse impacts, for example a modest expansion of an existing structure, may occur so long as these impacts are mitigated to achieve no net loss. It is likely that successful mitigation will be more easily achieved in Zone 1 but it is also possible to mitigate adverse impacts by improvements in Zone 2.

### X.1.c Additional considerations

BMC 20.30.030 (2.f) and BMC 20.30.070 (2.e) limit new shoreline development that require the need for shoreline stabilization and structural hazard reduction measures for the life of the development. This regulation must be considered if the development requires the installation of, or the expansion of, structures for flood hazard reduction or shoreline stabilization.

### X.2 Mitigation Sequencing

Consistent with WAC 173-26-201(2.e) it is necessary that, where required, mitigation measures shall be applied in the following sequence of steps listed in order of priority, with (A) of this subsection being top priority.

Avoiding the impact altogether by not taking a certain action or parts of an action;

Minimizing impacts by limiting the degree or magnitude of the action and its implementation by using appropriate technology or by taking affirmative steps to avoid or reduce impacts;

Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;

Reducing or eliminating the impact over time by preservation and maintenance operations;

Compensating for the impact by replacing, enhancing, or providing substitute resources or environments; and

Monitoring the impact and the compensation projects and taking appropriate corrective measures.

## X.3 Demonstrating successful mitigation of unavoidable adverse impacts

This section provides a work sheet that may be useful to demonstrate that typical developments associated with Single Family Residences will meet the no net loss standard without a professional impacts report.

This worksheet provides a model for evaluating the costs of certain adverse impacts and the benefits of certain improvements. The scope of adverse impacts that can be evaluated are limited to the creation or expansion of impervious surface and the removal of existing native vegetation. Improvements are the removal or reduction of impervious surface and the introduction or expansion of native vegetation. BMC 20.40.101 defines partially functioning areas as areas that provide one or more reduced ecological functions, and is neither native vegetation of impervious surface. Ecological functions may include sediment removal, erosion control, pollution removal, wildlife habitat, and infiltration. Partially functioning areas specifically include lawns, slat decks that allow infiltration, and non-native landscaped areas.

Measure of adverse impacts in Zone 2

1) Total square feet of new impervious surface _____ X 4 points = _____
2) Total square feet of cleared native vegetation _____ X 2 points = _____
3) Total cost (add 1 and 2) _____

Benefit of adding native vegetation in Zone 1

4) Total square feet of impervious surface eliminated _____ X 4 points = _____
5) Total square feet of partially functioning area improved _____ X 2 points = _____
6) Benefit of improvements in Zone 1 (add 4 and 5) _____

Benefit of improvements in Zone 2

7) Impervious surface to native vegetation (sq ft) _____ X 2 points = _____
8) Partially functioning area to native vegetation (sq ft) _____ X 1 points = _____
9) Impervious surface to partially functioning area (sq ft) _____ X 0.5 points = _____
10) Benefit of improvements in Zone 2 (add 7 – 9) _____

No Net Loss Indicator

11) Cost of adverse impacts (line 3) _____
12) Total benefit of improvements (add 6 and 10) _____

The project will meet the no net loss standard if line 11, the cost of adverse impacts, is less than or equal to line 12, the benefit of improvements.

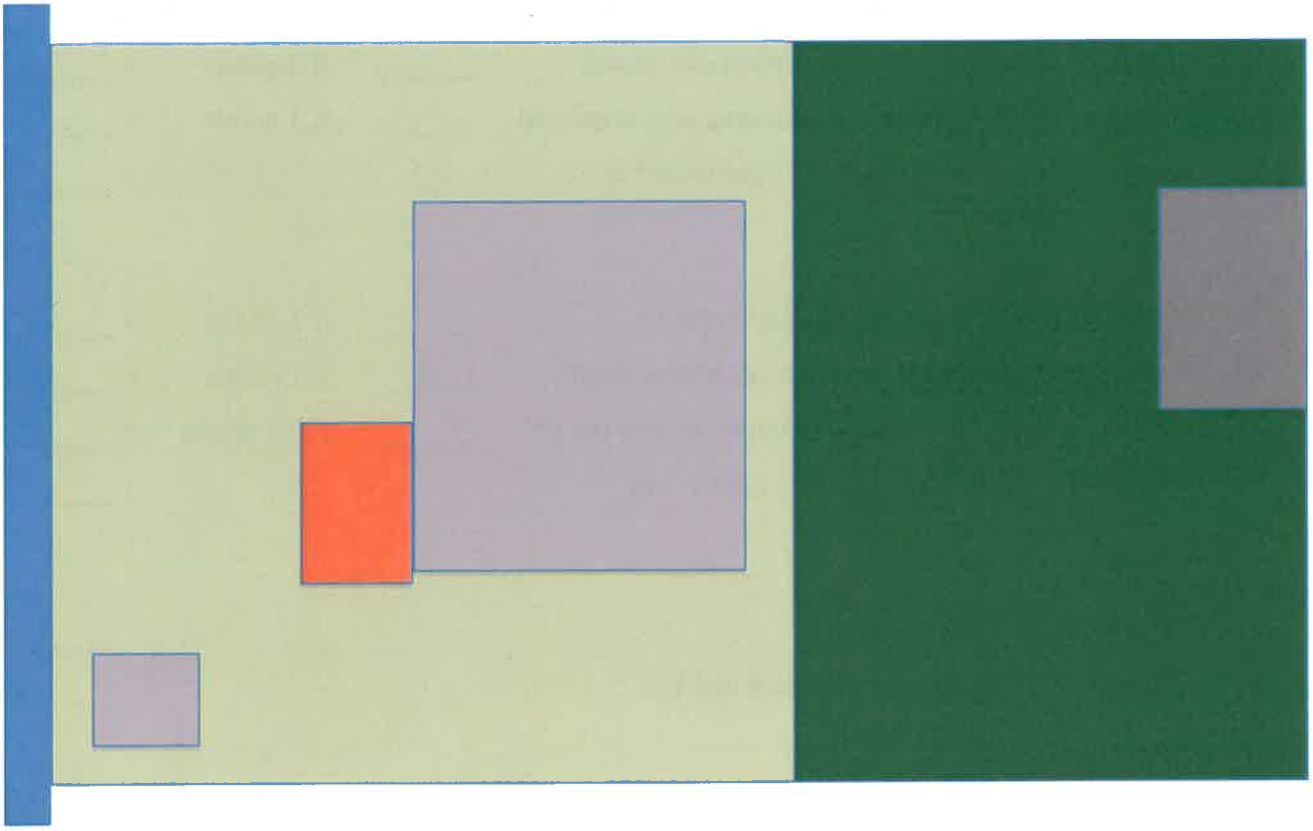
## X.4 A worked example

A family is considering a new development in Burien's Marine shoreline within the SR-AL designation. This property is approximately 170' deep and 100' wide and stretches from the road to OHWM. There is a moderate slope towards the landward end of the parcel which is primarily native vegetation. There is a one car garage adjacent to the road and a residence a short distance water ward of the toe of the slope. This one story home was constructed in the early 1950's and is approximately 50' wide and 40' deep and is set back approximately 50' from the OHWM. A concrete patio, 20' wide and 15' deep, is attached to the water ward side of the home; this patio intrudes 10' into Zone 2 of the Shoreline Buffer. The land between the home and the bulkhead has been extensively landscaped with lawn and flower beds. There is a small, 15' by 15', cabana towards the bulkhead.

This family intends to expand the garage and update the primary structure; they plan to add a second story to the home and expand the footprint. The addition of the second floor will not exceed the 35' height limit. The slope at the rear of the home suggests that they expand the home towards OHWM. They decide to expand the home 15' towards OHWM by eliminating the patio and a 30' x 15' section of lawn.

They propose to remove the cabana and replace it with native vegetation. They will also revegetate a 15' x 30' section of landscaping adjacent to the cabana.

Figure 1: A graphic that depicts existing development conditions (Needs polish).



The existing garage is well outside the Shoreline Buffer and the proposed expansion will not require the removal of any vegetation and hence can be approved.

Adding a second story to the home does not increase the impervious surface area and will not exceed the 35' height limit. The expanded footprint will consume the concrete patio and replace 300 sq feet of lawn with new impervious surface

| | | | | |
|---|---|---|---|---|
| Measure of adverse impacts in Zone 2 | | | | |
| 1) Total square feet of new impervious surface | 200 | X 4 points | = | 800 |
| 2) Total square feet of cleared native vegetation | _____ | X 2 points | = | _____ |
| 3) Total cost (add 1 and 2) | | | | 800 |
| Benefit of adding native vegetation in Zone 1 | | | | |
| 4) Total square feet of impervious surface replaced | 225 | X 4 points | = | 900 |
| 5) Total square feet of partially functioning area replaced | 450 | X 2 points | = | 900 |
| 6) Benefit of improvements in Zone 1 (add 4 and 5) | | | | 1800 |
| Benefit of improvements in Zone 2 | | | | |
| 7) Impervious surface to native vegetation (sq ft) | _____ | X 2 points | = | _____ |
| 8) Partially functioning area to native vegetation (sq ft) | _____ | X 1 points | = | _____ |
| 9) Impervious surface to partially functioning area (sq ft) | _____ | X 0.5 points | = | _____ |
| 10) Benefit of improvements in Zone 2 (add 7 – 9) | | | | _____ |
| No Net Loss Indicator | | | | |
| 11) Cost of adverse impacts (line 3) | | | | 800 |
| 12) Total benefit of improvements (add 6 and 10) | | | | 1800 |

The use of this work sheet demonstrates that the proposed improvements in Zone 1 are sufficient to mitigate for the adverse impacts in Zone 2.

## X.5 Shoreline Planning Areas

The Shoreline Inventory developed by Grette Associates partitioned the Burien Shoreline in to five (5) Inventory Reaches; four (4) along the Marine Shoreline and one (1) that encompasses the perimeter of Lake Burien. The Supplement to the Shoreline Inventory refined this coarse characterization in to nineteen (19) Shoreline Inventory Segments based on environment, existing development conditions, and well defined geographical markers. Finally the Supplement to the Shoreline Analysis and Characterization grouped the Inventory Segments in to four (4) Shoreline Planning Areas:

See BMC 20.30.050 Figure 6 for an image that indicates the location of these planning areas.

**UC-NA** The relatively natural conditions found in the Urban Conservancy designation
**SR-LB** Development around Lake Burien
**SR-AL** Altered portions of the Marine that generally include meaningful native vegetation
**SR-HA** Highly altered portions of the Marine with relatively little ecological function

See BMC 20.30.050 Figure 5 for the dimensions of Zone 1 and Zone 2 for the Shoreline Buffer in each Shoreline Planning Area.

See BMC 20.30.050 Figure 6 for an image that indicates the location of these planning areas.

The Urban Conservancy (UC-NA) planning area is bounded on the north by the northern end of Seahurst Park and on the south by the southern end of Eagle Landing Park.

The Shoreline Residential – Lake Burien (SR-LB) planning area encompasses all of Lake Burien

The Shoreline Residential – Altered (SR-AL) planning area groups 5 inventory segments along the Marine

1) A set of contiguous homes with addresses on SW Seola Lane at the northern border of Burien
2) A segment bounded on the north by the northern edge of the Shorewood Community Beach and at the south by the northern edge of those homes with addresses along Shorewood Lane SW
3) A substantial property at the mouth of Salmon Creek
4) An area bounded on the north by the southern end of Eagle Landing Park and at the south by the property at the tip of Three Tree Point
5) An area bounded on the north by the homes in the Seacoma Blvd development and the south by the City Limit with Normandy Park. The Seacoma Blvd development is a set of 9 waterfront homes in a small cul-de-sac off SW 172nd St at the point that this road begins to move away from Puget Sound.

The Shoreline Residential – Highly Alterned (SR-HA) planning area consists of the final 5 inventory segments

1) A set of contiguous homes with addresses on 30 Ave SW and bounded at the south by the Shorewood Community Beach
2) A set of contiguous homes with addresses on Standring Lane SW along that portion of the roadway that runs generally parallel to Puget Sound.
3) A set of contiguous homes along the South Beach edge of SW 171st St and SW 172nd St up to and including the 9 homes in the Seacoma Blvd cul-de-sac but not including the home at the tip of Three Tree Point.

**CITY OF BURIEN**
**AGENDA BILL**

| | | |
|---|---|---|
| **Agenda Subject:** Burien Dog Park Project - Staff Update | | **Meeting Date:** May 20, 2013 |
| **Department:** Parks, Recreation & Cultural Svcs.<br>**Contact:** Steve Roemer, Parks Development & Operations Manager<br>**Telephone:** (206) 248-5513 | **Attachments:**<br>1. Dog Park Presentation Material | **Fund Source:** N/A<br>**Activity Cost:** N/A<br>**Amount Budgeted:** N/A<br>**Unencumbered Budget Authority:** N/A |
| **Adopted Initiative:**<br>**Yes** **No X** | **Initiative Description:** Dog Park Feasibility | |

**PURPOSE/REQUIRED ACTION:**

The purpose of this Agenda Bill is for an update and discussion from staff regarding the potential development of an off-leash dog park to be located within a Burien city park or other available land.

**BACKGROUND (*Include prior Council action & discussion*):**

During the 2012 Parks PROS Plan update and continuing through the year, the concept of a dog park needed for Burien gained momentum after public surveys and Parks Board meeting discussions. Over the summer a local group of dog owners calling themselves the B-Town DOG, organized and spoke at both Parks Board and City Council meetings. They expressed the desire for a dog park in Burien and their willingness to support that effort through volunteering, fundraising and ongoing maintenance once the park was completed. PaRCS staff have been evaluating optional locations for a dog park with the assistance of the firm LA Studios LLC, who has been providing pro-bono feasibility and design services.

Public opportunites for input have included March 13, 2013 and May 8, 2013 public meetings, as well as a March 25, 2013 City Council Study Session presentation.

Staff had presented two park locations previously to City Council, including Hazel Valley and Salmon Creek Parks. In response to public and City Council feedback, staff has now included Lakeview Park as a third option for a potential dog park location.

**OPTIONS (*Including fiscal impacts*):**
N/A

**Administrative Recommendation:** Receive update.

**Committee Recommendation:** N/A

**Advisory Board Recommendation:** N/A

**Suggested Motion:** None required.

| | |
|---|---|
| Submitted by: Steve Roemer<br>**Administration** _____ | Mike Martin<br>**City Manager** _____ |
| **Today's Date:** May 20, 2013 | **File Code:** \\File01\records\CC\Agenda Bill 2013\052013pks-Dog park.doc |

# BURIEN DOG PARK

May 20, 2013

City Council Presentation

Steve Roemer, City of Burien

theLAStudioLLC

www.BurienParks.net

# BURIEN DOG PARK

## Background

- Early 2012 Parks Board identify dog parks as future agenda item
- Aug/Sept 2012 B-Town Dog (BTD) owners contact City and start to organize
- Sept. 12, 2012 BTD come to Parks Board requesting a dog park in Burien
- Oct. 1, 2012 BTD come to City Council with request
- Nov. 14, 2012 Park Board discussion item regarding next steps
- Dec.- Jan 2013 LAStudioLLC contacts staff offer pro-bono work and enter into a MOU
- Feb. 2013 Staff and consultant perform site visits and prepare preliminary site plans
- Mar. 13 2013 Parks Board hosts public meeting presenting two site and layout options for Hazel Valley and Salmon Creek Parks
- March 25, 2013 Presentation to City Council
- April 2013 Staff began discussions with HSD regarding a Lakeview Park site and preliminary plan developed by LAStudio LLC
- May 8, 2013 Public Meeting

# BURIEN DOG PARK

**Park Locations**

## Burien Off-Leash Dog Park

**Burien, Washington**

**May 8, 2013**

# BURIEN DOG PARK

**Salmon Creek Park - Conceptual Site Plan**

## Burien Off-Leash Dog Park

**Burien, Washington**

**May 8, 2013**

# BURIEN DOG PARK

**Neighbor Input: (5/8 meeting)**

- Concern of traffic impacts on 6th Ave SW (private) to NE
- Concern of traffic/parking on 118th when also have ball games on Highline campus to south (Salmon Creek School)
- Stop sign may be needed at intersection of SW 118th and 8th Ave SW
- How much of park is impacted and how much lawn is still available?
- Why change this nice neighborhood park?

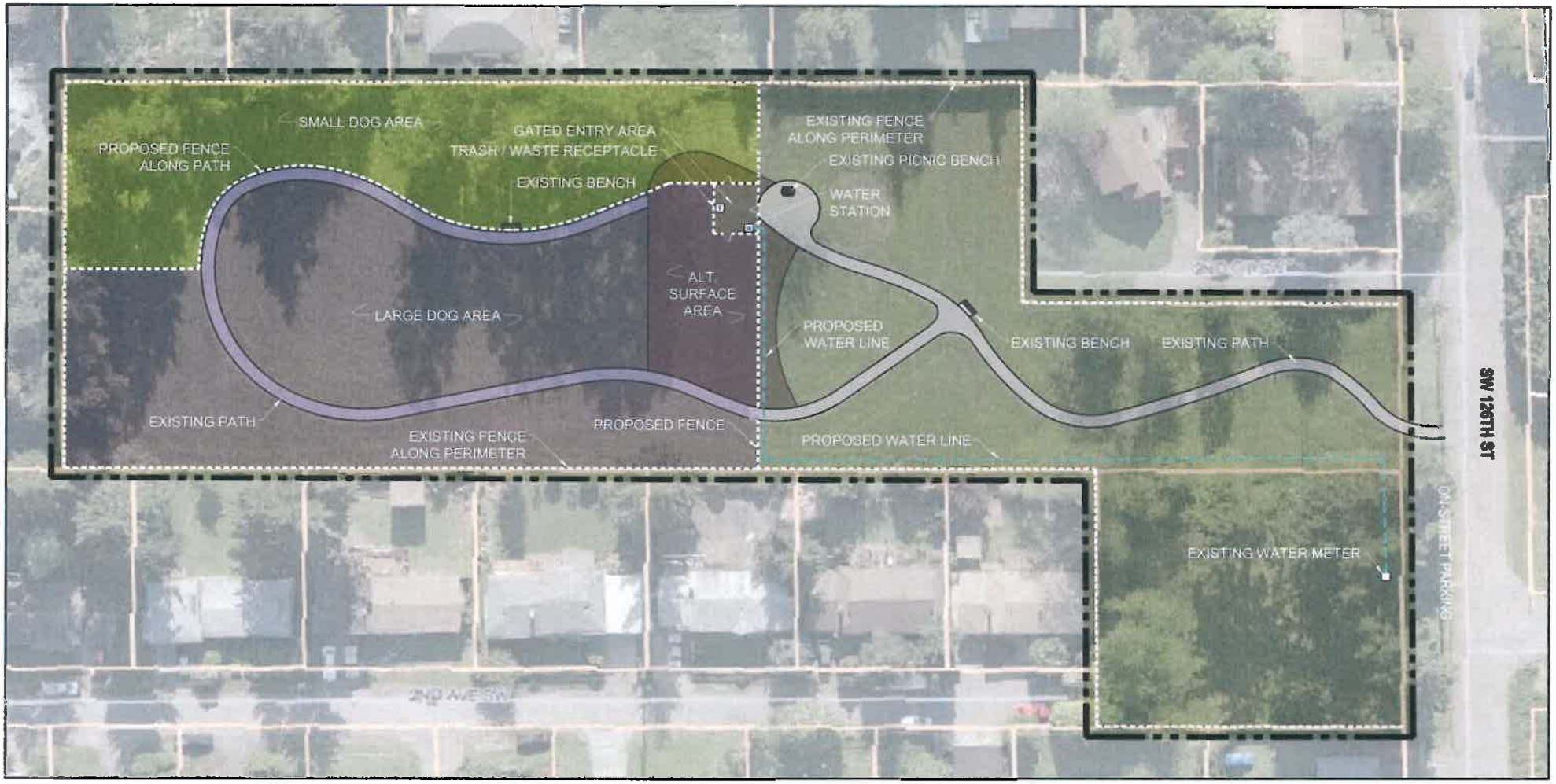
**Salmon Creek Park - Conceptual Site Plan**

Burien Off-Leash Dog Park

Burien, Washington

March 13, 2013

# BURIEN DOG PARK




**Hazel Valley Park - Conceptual Site Plan**

## Burien Off-Leash Dog Park

**Burien, Washington**

**May 8, 2013**

LAstudio LLC

# BURIEN DOG PARK

Neighbor Input: (5/8 meeting)

- Impacts of dogs adjacent to backyard fences and to their dogs
- Won't be able to use my gate from backyard into park
- I work night and sleep day, so concerned about noise
- Park trail used now by neighbors to walk
- King County removed the play structure and would rather see that replaced than add a dog park
- Placing a dog park so adjacent to residents is concerning and not usually done

**Hazel Valley Park - Conceptual Site Plan**
Burien Off-Leash Dog Park
Burien, Washington
March 13, 2013

# BURIEN DOG PARK

**SITE INFORMATION**

- 4.51 ACRES

**SITE OPPORTUNITIES**

- CENTRALLY LOCATED FOR BURIEN RESIDENTS AND CLOSE TO CITY CENTER.
- RE-PURPOSES ABANDONED SITE AND PROVIDES ADDITIONAL COMMUNITY AMENITY TO LAKEVIEW PARK.
- EXISTING PARKING ON NORTH & WEST SIDES.
- LIMITED IMPACT ON NEIGHBORING RESIDENTIAL PROPERTIES.
- VARIED SITE TOPOGRAPHY ADDS INTEREST TO USER EXPERIENCE.
- EXISTING FENCE RUNS CAN BE UTILIZED.
- EXISTING MATURE VEGETATION PROVIDES SHADE AND USER INTEREST.
- RE-USE EXISTING WALLS FOR SEATING.

**SITE CONSTRAINTS**

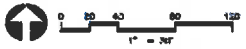
- A LEVEL 1 ENVIRONMENTAL ASSESSMENT SHOULD BE PERFORMED DUE TO PAST USE.
- GRAVEL & DEMOLITION DEBRIS WILL NEED TO BE REMOVED.
- SOIL IMPROVEMENT AND TURF RE-ESTABLISHMENT WILL BE NEEDED ON UPPER TERRACE.
- WILL REQUIRE STEPS FOR ACCESS FROM UPPER TERRACE TO LOWER TERRACE.
- SITE IS OWNED BY HIGHLINE SCHOOL DISTRICT AND WILL REQUIRE A USE AGREEMENT.

## Lakeview Park - Site Opportunities and Constraints Plan

# Burien Off-Leash Dog Park

Burien, Washington

May 8, 2013




the LAstudio LLC
land planning
landscape architecture
land entitlement

# BURIEN DOG PARK

**Lakeview Park - Conceptual Site Plan**

## Burien Off-Leash Dog Park

**Burien, Washington**

**May 8, 2013**

0 10 20 40 60

1" = 20'

LAstudio LLC
land planning
landscape architecture
land preservation

# BURIEN DOG PARK

## Public/neighbor Input May 8, 2013

- Site centrally located in Burien
- Accessible to citizens who live in apartment complexes near downtown
- Physical layout is best of three sites and doesn't impact neighbors
- Site already being used by neighbors with dogs
- Public feels that Lakeview is best site overall, of the three evaluated

**Lakeview Park - Conceptual Site Plan**

**Burien Off-Leash Dog Park**

Burien, Washington

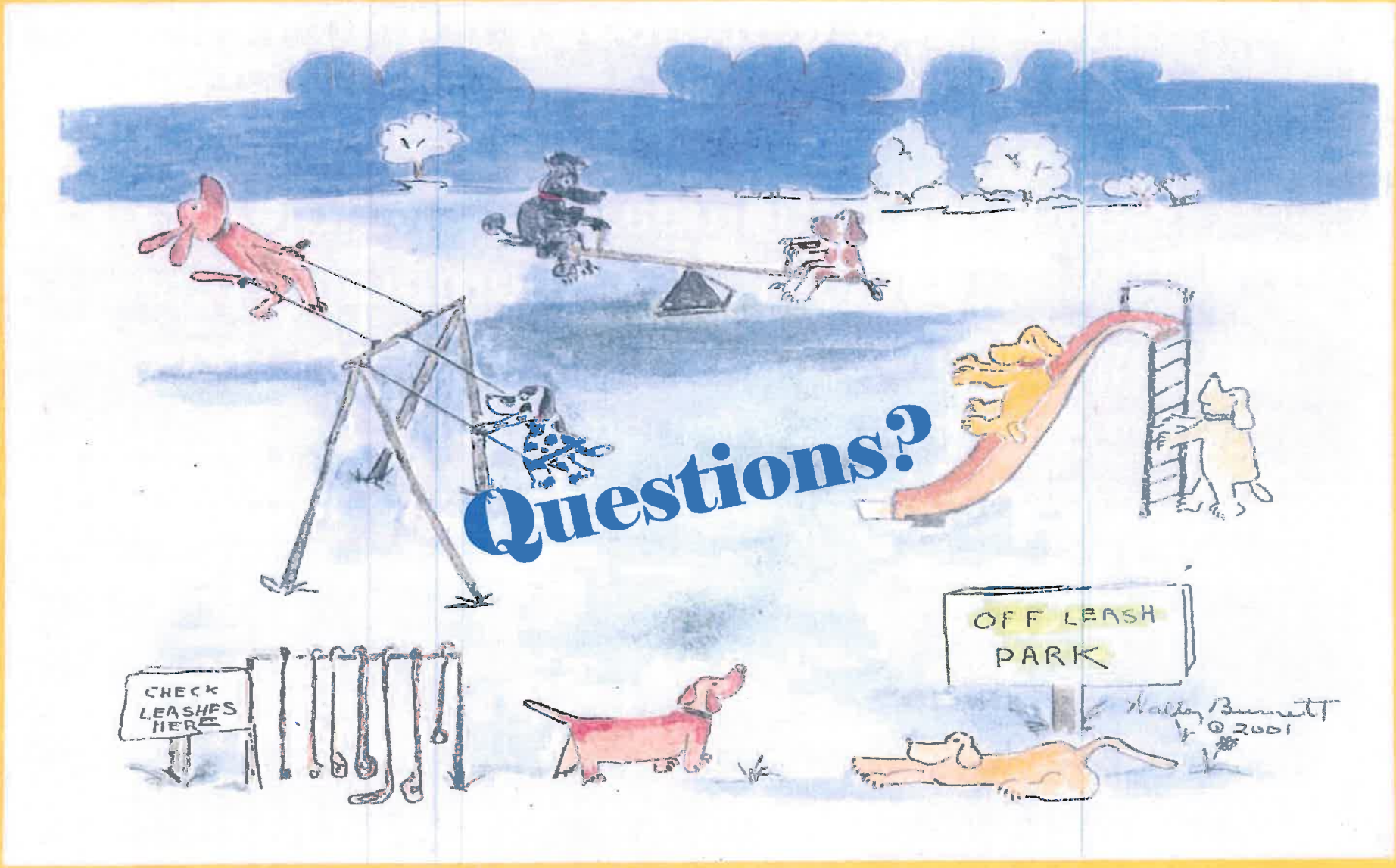
May 8, 2013

# BURIEN DOG PARK

## Next Steps

- Further evaluate Lakeview Park site
  ( Phase 1 Environmental Assessment)
- Start internal permitting/review with PW and Community Development
- Develop Use Agreement if Lakeview
- Develop Final Program Proposal
- City Council Recommendation June

# BURIEN DOG PARK



**CITY OF BURIEN**
**AGENDA BILL**

| | | |
|---|---|---|
| **Agenda Subject:** Discussion and Potential Adoption of Ordinance No. 582 Increasing the City's Surface Water Management Discount Rates and Amending Chapter 13.10 of the Burien Municipal Code | | **Meeting Date:** May 20 and June 3, 2013 |
| **Department:** Finance Department | **Attachments:** Ordinance No. 582 | **Fund Source:** Surface Water Management Fund |
| **Contact:** Kim Krause, Finance Director | | **Activity Cost:** N/A |
| **Telephone:** (206) 439-3150 | | **Amount Budgeted:** N/A |
| | | **Unencumbered Budget Authority:** N/A |

**PURPOSE/REQUIRED ACTION:**
The purpose of this agenda item is to discuss and potentially adopt Ordinance No. 582 increasing the surface water management service charge discount rates and amending Chapter 13.10 of the Burien Municipal Code.

**BACKGROUND (*Include prior Council action & discussion*):**
On November 5, 2012, Council approved Ordinance No. 574 increasing the surface water management service charges by 12% in 2013 to fund the requirements of the 2013 National Pollution Discharge Elimination System permit.

Ordinance No. 574 inadvertently omitted a commensurate increase in the service charge discount rates that are available to property owners in specified circumstances and City staff recommends adoption of Ordinance No. 582 in order to correct this inadvertent omission. King County administers the collection of the surface water management service charges for the City of Burien and they have been applying the 12% rate increase to the service charge discount rates since Ordinance No. 574 took effect on January 1, 2013.

**OPTIONS (*Including fiscal impacts*):**

- Approve Ordinance No. 582, increasing the surface water management service charge discount rates by twelve percent (12%) retroactive to January 1, 2013 and amending Chapter 13.10 of the Burien Municipal Code.
- Do not approve Ordinance No. 582, in which case the surface water management service charge discount rates will remain at a lower level. The City will notify King County to refund charges that were over-collected.

**Administrative Recommendation:** Discuss the ordinance on May 20th and consider placing on the June 3rd consent agenda for adoption.

**Suggested Motion for the June 3rd meeting:** Motion to approve the consent agenda will adopt Ordinance 582.

Submitted by: Kim Krause, Finance Director
**Administration** _____ **City Manager** _____

| | |
|---|---|
| **Today's Date:** May 10, 2013 | **File Code:** \\File01\records\CC\Agenda Bill 2013\052013ad-1 SWM Discount Rates Adoption.docx |

# CITY OF BURIEN, WASHINGTON

## ORDINANCE NO. 582

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**AN ORDINANCE OF THE CITY OF BURIEN, WASHINGTON, INCREASING SURFACE WATER MANAGEMENT SERVICE CHARGE DISCOUNT RATES AND AMENDING CHAPTER 13.10 OF THE BURIEN MUNICIPAL CODE**

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WHEREAS, effective January 1, 2013, the City Council approved Ordinance No. 574, amending Ch. 13.10 BMC by increasing surface water management service charges 12% in 2013 as necessary to fund the requirements of the City's 2013 National Pollution Discharge Elimination System (NPDES) permit; and

WHEREAS, the ordinance adopting the 12% service charge increase in 2013 inadvertently omitted a commensurate increase in the service charge discount rates that are available to property owners in specified circumstances, and City staff is recommending adoption of the code amendment set forth below in order to correct this inadvertent omission; and

WHEREAS, pursuant to an interlocal agreement, King County administers the collection of surface water management service charges for the City of Burien, and the County has been applying the 12% increase to the service charge discount rates since Ordinance No. 574 took effect on January 1, 2013;

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF BURIEN, WASHINGTON, DOES ORDAIN AS FOLLOWS:

Section 1. Chapter 13.10 of the Burien Municipal Code, Surface Water Management, is hereby amended by amending BMC 13.10.360 to read as follows:

**13.10.360 Rate adjustments and appeals.**

(1) Any person billed for service charges may file a request for rate adjustment with the department within three years of the date from which the bill was sent. However, filing of such a request does not extend the period for payment of the charge.

(2) Requests for rate adjustment may be granted or approved by the director only when one of the following conditions exists:

(a) The parcel is owned and is the personal residence of a person or persons determined by the county assessor as qualified for a low income senior citizen property tax exemption authorized under RCW 84.36.381. Parcels qualifying under this subsection (2)(a) shall be exempt from all charges imposed in this chapter;

(b) The acreage of the parcel charged is in error;

(c) The parcel is nonresidential and the actual impervious surface coverage of the parcel charged places it in a different rate category than the rate category assigned by the department;

(d) The parcel is nonresidential and the parcel meets the definition of open space in this chapter. Parcels qualifying under this subsection (2)(d) will be charged only for the area of impervious surface and at the rate which the parcel is classified under using the total parcel acreage;

(e) The parcel is served by one or more flow control or water quality treatment facilities required under this chapter, or can be demonstrated by the property owner to provide flow control or water quality treatment of surface and storm water to the standards in this chapter, and any such facility is maintained at the expense of the parcel owner to the standards required by the department. Nonresidential parcels except in the light category qualifying under this subsection shall be charged at the rate of one lower rate category than as classified by its percentage of impervious surface coverage. Nonresidential parcels in the light rate category qualifying under this subsection shall be charged at the rate of $~~102.00~~135.16 per parcel per year. Residential parcels and parcels in the very light category qualifying under this subsection shall be charged $~~51.00~~67.58 per parcel per year; or

(f) The service charge bill was otherwise not calculated in accordance with this chapter.

(3) The property owner shall have the burden of proving that the rate adjustment sought should be granted.

(4) At the director's discretion, before a rate adjustment will be granted, the property owner may be required to grant permission for city staff to inspect the property to determine if the applicable requirements in subsection (2) of this section have been met. If the property owner refuses to grant access for an inspection, the director may not grant the rate adjustment.

(5) Decisions on requests for rate adjustments shall be made by the director based on information submitted by the applicant and the results of the inspection, if applicable. The applicant shall be notified in writing of the director's decision. If an adjustment is granted which reduces the charge for the current year or two prior years, the applicant shall be refunded the amount overpaid in the current and two prior years.

(6) If the director finds that a service charge bill has been undercharged, then either an amended bill shall be issued which reflects the increase in the service charge or the undercharged amount will be added to the next year's bill. This amended bill shall be due and payable under this

chapter. The director may include in the bill the amount undercharged for two previous billing years in addition to the current bill.

(7) Decisions of the director on requests for rate adjustments shall be final unless, within 20 days of the date the decision was mailed, the applicant submits in writing to the director a notice of appeal setting forth a brief statement of the grounds for appeal and requesting a hearing before the hearing examiner. The examiner's decision shall be a final decision pursuant to Chapter 2.15 BMC. [Ord. 489 § 2, 2008]

Section 2. Severability. Should any section, paragraph, sentence, clause or phrase of this Ordinance, or its application to any person or circumstance, be declared unconstitutional or otherwise invalid for any reason, or should any portion of this Ordinance be pre-empted by state or federal law or regulation, such decision or pre-emption shall not affect the validity of the remaining portions of this Ordinance or its application to other persons or circumstances.

Section 3. Effective Date. This Ordinance shall take effect 5 days after publication and shall be applied retroactively to January 1, 2013.

ADOPTED BY THE CITY COUNCIL OF THE CITY OF BURIEN, WASHINGTON, AT A REGULAR MEETING THEREOF THIS ___ DAY OF _____, 2013, AND SIGNED IN AUTHENTICATION OF ITS PASSAGE THIS ___DAY OF _____, 2013.

CITY OF BURIEN
/s/ Brian Bennett, Mayor

ATTEST/AUTHENTICATED:
/s/ Monica Lusk, City Clerk
Approved as to form:
/s/ Craig D. Knutson, City Attorney

Filed with the City Clerk: _____, 2013
Passed by the City Council: _____, 2013
Ordinance No. 582
Date of Publication: _____, 2013

**CITY OF BURIEN**
**AGENDA BILL**

| | | |
|---|---|---|
| **Agenda Subject:** Review of Council Proposed Agenda Schedule | | **Meeting Date:** May 20, 2013 |
| **Department:** City Manager | **Attachments:** Proposed Meeting Schedule | **Fund Source:** N/A<br>**Activity Cost:** N/A<br>**Amount Budgeted:** N/A<br>**Unencumbered Budget Authority:** N/A |
| **Contact:** Monica Lusk, City Clerk | | |
| **Telephone:** (206) 439-5517 | | |
| **Adopted Initiative:** Yes No X | **Initiative Description:** N/A | |

**PURPOSE/REQUIRED ACTION:**

The purpose of this agenda item is for Council to review the proposed City Council meeting schedule. New items or items that have been rescheduled are in bold.

**BACKGROUND (*Include prior Council action & discussion*):**

According to City Council policies, the proposed meeting schedule is reviewed during the last meeting of each month.

**OPTIONS (*Including fiscal impacts*):**

1. Review the schedule, and add, delete, or move items.
2. Review the schedule and make no modifications.

**Administrative Recommendation:** Review the schedule and provide direction to staff.

**Suggested Motion:** None required.

| | |
|---|---|
| Submitted by: Monica Lusk<br>**Administration** | Mike Martin<br>**City Manager** |
| **Today's Date:** May 15, 2013 | **File Code:** \\File01\records\CC\Agenda Bill 2013\052013cm-2 Rev Agenda Schedule.doc |

# CITY OF BURIEN
# COUNCIL PROPOSED AGENDA SCHEDULE
# 2013

**May 27 (CANCELLED – Memorial Day Holiday)**

**June/July (Summer Schedule)**

1. 6 pm Parks & Recreation Board Interviews
2. **Motion to Adopt Ordinance No. 582, Increasing the City's Surface Water Management Discount Rates and Amending Chapter 13.10 of the Burien Municipal Code.**
   ***(Finance)***
3. Presentation of Annual Report by Discover Burien.
   *(City Manager)*
4. **Presentation of the 2012 Annual Police Report.**
   ***(Police)***
5. Motion to Approve Appointments to the Parks and Recreation Board.
   *(City Manager)*
6. Public Hearing and Discussion on Transportation Improvement Plan (TIP) Update.
   *(Public Works)*
7. Presentation and Discussion on Proposed Ordinance No. xxx, Amending BMC Title 15, Buildings and Construction.
   *(Community Development)*
8. Discussion on Proposal to Enhance School-Based Out-of-School Programs.
   *(Parks)*
9. Motion to Approve Resolution No. 343, Adopting the 2014 through 2019 Six-Year Transportation Improvement Program (TIP).
   *(Public Works)*
10. Motion to Adopt Proposed Ordinance No. xxx, Amending BMC Title 15, Buildings and Construction.
    *(Community Development)*
11. Recommendation on Potential Off-Leash Dog Area.
    *(Parks)*
12. Discussion on Ethics
    *(Legal - Council direction on 2/25)*
13. **6 pm Planning Commission Interviews**
14. **Motion to Approve Appointment to the Planning Commission.**
    ***(City Manager)***
15. Presentation by Seattle City Light.
    *(Finance)*
16. Review of Proposed Council Agenda Schedule.
    *(City Manager)*
17. City Manager's Report.
    *(City Manager)*

# Burien

*Washington, USA*

400 SW 152nd St., Suite 300, Burien, WA 98166
Phone: (206) 241-4647 • FAX (206) 248-5539
www.burienwa.gov


## MEMORANDUM

**TO:** Honorable Mayor and Members of the City Council
**FROM:** Mike Martin, City Manager
**DATE:** May 20, 2013
**SUBJECT:** City Manager's Report

## I. INTERNAL CITY INFORMATION

### A. Gym Jam Event at Hazel Valley Elementary School Attracts 140 Participants

The Burien Parks, Recreation & Cultural Services (PaRCS) Department's evening Gym Jam programs are held weekly at Hazel Valley, Hilltop, and Cedarhurst Elementary Schools to provide families the opportunity to participate in healthy, enriching activities for free in their own neighborhoods. On March 19, 140 children and parents attended Hazel Valley's evening program which featured a special movie night. Regular evening activities include basketball, volleyball, tag and capture the flag games, Zumba, break dancing, and arts and crafts. The Environmental Science Center also provides a participatory science component on-site during each of the program dates.

### B. Physical Activity Keeping Seniors Healthy

ShapeUP Fall Prevention Campaign – Burien PaRCS reports that the first fitness and dance classes of the year are getting off to a good start for those participating in the ShapeUP program. This program provides a $10 fee discount for participants aged 50 years or older if they register as a new participant or one who hasn't exercised in awhile. With generous sponsorship of King County Emergency Services, PaRCS hopes to exceed the goal of getting older adults active thereby decreasing the risk of physical falls, and the resulting physical, emotional, and financial hardships.
Wii Bowling – Burien PaRC's team of Wii Bowlers joined nine other cities to participate in the annual tournament held at the Tukwila Community Center on March 20. One of Burien's teams came in third in overall league standing. Burien team members practice at the Burien Community Center every Wednesday throughout the year.

**C. Distribution of New Recreation Guide Underway**
The Burien PaRCS Department has completed a full design "makeover" of its quarterly Recreation Guide; the new version has an improved layout and is more readable. The summer edition is being distributed to local elementary schools as a take-home publication for students and to all customers who have registered for a recreation class during the past two years. It is also available at the Community Center, the Library and other key public locations. A digital version of the Guide is online as well, at www.RecreationGuide.BurienParks.net

**D. City of Burien/King County Receive Grant for Stormwater Retrofit in the Miller-Walker Creek Basin**
On May 1 the Department of Ecology announced that a $235,000 grant has been awarded for planning and pre-design of up to five stormwater retrofit projects within the Miller-Walker Creek Basin to protect and restore its habitat. The King County Basin Steward will be administering the grant and drafting a scope to hire a consultant team. Work is expected to start in July.

## COUNCIL UPDATES/REPORTS

**A. Highline Medical Center Joins with Franciscan Health System (Page 589)**
Mayor Bennett received a letter dated April 11, 2013, from Joe Wilczek, Chief Executive Officer of Franciscan Health System, and Mark Benedum, Chief Executive Officer of Highline Medical Center, announcing the integration of the two organizations.

**B. Service Employees International Union (SEIU) Local 6 Hosts Meeting to Discuss Comprehensive Immigration Reform (CIR) (Page 591)**
SEIU Local 6 sent a letter of invitation to Mayor Bennett to participate in a meeting of community and elected leaders to discuss CIR. The meeting is Thursday, June 6, from 2-3:30pm at SEIU Local 6 offices.

**C. Tukwila Pantry Afternoon Tea and Spring Auction (Page 593)**
On Friday, June 7, an Afternoon Tea and Spring Auction will be held at the Tukwila Community Center for the benefit of the Tukwila Pantry. Councilmembers are invited to attend; the event is from 2:30-4:30pm.

**D. Councilmember Block to Attend Association of Washington Cities (AWC) Annual Conference**
Councilmember Block will attend the AWC Annual Conference June 25-28 at the Three Rivers Convention Center in Kennewick, Washington.

**E. 2013 Legislative Special Session (Page 595)**
Attached is an update from Mike Doubleday, Government Relations Specialist, summarizing the issues and priorities to be considered at the legislative special session set to begin May 13. The session could last up to 30 days.

**F. April Building Permit Reports (Page 601)**
Attached are the monthly reports for Building Permits issued and Building Permits received during the month of April. The number of Building Permits received increased in April, but the valuation of building permits received was slightly lower than in March. The number of building permits issued in April remained steady and value of Building Permits issued increased slightly over March's results.

**G. Construction Permits Issued**
The following significant construction and/or demolition permits were issued in the month of April:

- Vietnamese Christian Fellowship - Construction permits were issued to build a new 24,000 square foot assembly hall for the Vietnamese Christian Fellowship located at 157 SW 166th Street. The project has a construction valuation of $2,760,826.
- Staples - The demolition permit was issued to tear down the building formerly known as The Keg restaurant next to the former Fashion Bug. A new addition will be constructed that will be the future site of the new Staples store to be located at 158 SW 148th Street. Project construction valuation is $701,383.
- Tesoro USA - Construction permits were issued for fuel tank replacement, fuel pump upgrades to include diesel fuel, and canopy lighting upgrades at the Tesoro USA gas station located at 303 SW 148th Street. The station will be closed while this work is performed.

**H. Citizen Action Report (CAR) (Page 603)**
Staff has provided Council with the attached April Citizen Action Report.

**I. Notices: (Page 611)**
The following (attached) Notices were published:

- Notice of Decision: File Number PLA 13-0487; Approval of Type 1 Land Use Review, subject to conditions. The deadline for filing a written Note of Appeal with the City Clerk is prior to 5:00 pm on May 23, 2013.
- Notice of Decision: File Number PLA 13-0485; Approval of Type 1 Land Use Review, subject to conditions. The deadline for filing a written Notice of Appeal with the City Clerk is prior to 5:00pm on May 23, 2013..
- Notice of Application: File Number PLA 13-0745; Short Plat One Residential Lot Into Two Residential Lots. Written comments must be received prior to 5:00pm on June 13, 2013.
- Notice of Application: File Number PLA 13-0733; Type 2 Land Use Review, SEPA Review, Shoreline Substantial Development and Critical Area Review of a Master Plan for redevelopment of the Ruth Dykeman Campus.

Franciscan Health System

Better Together

HIGHLINE MEDICAL CENTER

April 11, 2013

Dear Mr. Bennett:

We are proud to announce that it is official! Highline Medical Center is now part of the Franciscan Health System. Our affiliation has been approved by state and federal regulators and the Highline Board of Trustees has endorsed a strategic plan to guide our work to move both organizations forward.

Over the years, both Highline Medical Center and Franciscan Health System have established high standards of performance and quality care in the communities we serve. Now, by combining resources, technologies and staffing, we can be *better together*—and better serve our communities through:

- **Enhanced Quality of Care**
  Through affiliation, Franciscan and Highline can increase quality of care for patients in the communities we serve by sharing resources, best practices and expertise.
- **Enhanced Access to Care**
  By working together, Highline and Franciscan will make it easier to access health care across a broad array of services – from primary care, specialized care, research, hospice and long-term care – on a scale that neither organization can achieve on its own.
- **Reduced Cost of Care**
  Franciscan and Highline will collaborate to reduce costs by better organizing how care is delivered. For example, both organizations will work to create improved models for delivering care and for managing patients with chronic diseases of patients. This will help make health care more affordable for government payers, commercial insurers, employers and patients.

We sincerely believe that through this affiliation, Highline will be able to provide enhanced services and facilities for generations to come. If you have any questions or concerns about the Highline/Franciscan integration, please do not hesitate to contact Mark Benedum, Highline Chief Executive Officer at (206) 431-5237.

Sincerely,

Joe Wilczek
Chief Executive Officer
Franciscan Health System

Mark Benedum
Chief Executive Officer
Highline Medical Center

RECEIVED
MAY 02 2013
City of Burien

LOCAL 6
SEIU
Stronger Together

May 8, 2013

RECEIVED
MAY 10 2013
City of Burien

Mayor Brian Bennett
400 SW 152nd St, Suite 300
Burien, WA 98166

Dear Mayor Bennett:

SEIU Local 6 is gathering a group of community and elected leaders in the Seattle area to meet with our members to discuss Comprehensive Immigration Reform (CIR). Our goal is to share stories of immigrants, discuss the positive effects CIR will have on our communities, and explore any concerns.

Please join us:

| | |
|---|---|
| Date: | Thursday, June 6th |
| Time: | 2pm-3:30pm |
| Where: | SEIU Local 6<br>3720 Airport Way South<br>Seattle, WA 98134 |

Please RSVP to Matt Haney via email at mhaney@seiu6.org or by phone at (206) 448-7348, ext. 307.

Thank you for your continued support and dedication to all our communities.

Sincerely,

Sergio Salinas
President, SEIU Local 6

SS:yjk

SERGIO SALINAS
President

YASMIN ADEN
Secretary-Treasurer

CHARLES PANNELL
Vice President

YESHIMEBET ABERA
Vice President

SERVICE EMPLOYEES
INTERNATIONAL UNION

206/448-7348
800/238-7348

Seattle Office
3720 Airport Way South
Seattle, WA 98134-2217
Fax 206/441-5120

## Carol Allread

**From:** info@tukwilapantry.org
**Sent:** Friday, May 03, 2013 2:05 PM
**To:** Brooke Alford; Jeri Anderson; Kyle Anderson - Anderson Food Resource; Richard Artura; Kelly Bachenberg; Yvonne Bigham; Rick Boman - Red Dot; Judith Borek; Evie Boykan -City of Tukwila; Colleen Brandt-Schluter - City of SeaTac; Stephanie Brown; Public Council Inbox; Pam Carter; Eric Cheung; Perry Chinn - Interurban Chiropractic; Patty Cokus; Adriana Cribb; Joyce Dixon; Erin Downey - Whole Foods; Jodi Drozd; Norm Drysdale - McKay Wealth Mgmt.; Joe Duffie; Sophiap Eng; Debbie Fattore; Mary Fisher - Integra Telecom; Lori Fleming; Erik Flynn; Mary Flynn; Megan Flynn-Raab; David Fretz - Casinos; Lloyd & Cheryl Gaddis; Tracy Gallaway - City of Tukwila; Stephanie Gardner - Parks and Rec; Ellen Gengler; Dawn Gonser - SeaTac Super 8; Don Gregory; Stacy Hansen - City of Tukwila; Leona Henderson; Claudette Henderson - DoubleTree; Laurence & Diana Hopper; Kathy Hougardy; Shawn Hunstock; Shawn Hunstock; Michelle Ichiyama - Integra Telecom; Amy Johnson; Denise Johnson - SeaTac Super 8; Gina Kallman; Sue Kato; Laura Kirkland; Carol Kolson; Lauren Kominkiewicz; Mary Koontz - Tukwila Pet Hosp; Ron & Nancy Lamb; Tim Large; Michele Larson; Emily LeFebvre; Sharon Mann; Suzan Martin; Celes Martinez; Kimberly Matej; Jenny McCoy; Ron Meyers - SAVVIS; James Millikan; Albert & Mary Miotke; Wendy Morgan; Pastor Kent Murahashi - Grace Point Comm. Church; Georgina Nelson Thomas; Kim Nicholas - Cedar River Animal Hospital; Gloria Pampu; Charles & Marie Parrish; Chris Partman; Nathan Phillips; Valarie Pickens; Margarita Prentice; De'Sean Quinn; Carrie Rasmussen - McKay Wealth Mgmt.; Kristie Richardson - Embassy Suites; Jay & Rachell Sardeson; City of SeaTac - City Council; Taimi Sepulveda; Billy Shott; Zev & Robin Siegl; Theresa Sigler; Tricia Singer - BECU; W.G. Sroufe; Linda Stanley; Louise Strander; Jean Sullivan; Paul Szewczyk; John Takami; Gayle Terry; Dia Thibadeau; Carrie & Chris Thompson; Hugh Tobin; Don Tomaso; City of Tukwila - City Council; Foster Tukwila Presbyterian Church; Paulette Vodder; Laura Washington - Enterprise Rental; Toni Watson
**Subject:** Tukwila Pantry - Afternoon Tea Fund Raiser

Tukwila Pantry

*An Emergency Food Bank*
*"Lend A Hand Feed A Neighbor"*

The Tukwila Pantry Board, Staff and Volunteers are planning an Afternoon Tea and silent auction on Friday, June 7th. The details are below. We are hoping to see all of our friends at this special event.

Please feel free to contact us if you need further information.

Tickets can be purchased on line by going to our website at TukwilaPantry.org.

If you are unable to attend the event and would like to make a donation, there is an option for donations as well. Remember all funds raised during the months of April and May will be enhanced through the **Feinstein Challenge**. So each donation dollar will be stretched farther during this period.

Thank you and look forward to seeing you at the Tea!

Tukwila Pantry
3118 S. 140th Street
Tukwila, WA 98168
206-431-8293
www.tukwilapantry.org

May 13, 2013

**To: Mike Martin, Burien City Manager**
**City Councilmembers**

**From: Mike Doubleday**

**Re: 2013 Legislative Session, May 13 Update**

The first special session called by the Governor begins today, Monday, May 13. This session can last up to 30 days, making June 11 the final day.

There only "must do" issue on the agenda is passage of a 2013-15 operating budget. Once that is resolved, a transportation revenue package may be considered. Other issues that may come up are:

- A bill to strengthen DUI statutes
- The reproductive parity bill
- The WA "Dream" Act,
- Education reform bills
- Transportation reform bills (alongside a possible transportation revenue package).
- **HB 1840**, expanding the definition of unlawful possession of a firearm

The 2013-15 operating budget will be slow to finalize as the differences are philosophical. I expect the session to stretch beyond Memorial Day and perhaps all the way to June 11. A second special session is a possibility.

I'll be in Olympia on an "as needed" basis. I am working the transportation revenue package hard.

## 1. Operating Budget

In a brief summary, the House operating budget raises about $1.1B per biennium through the extension of the existing state B&O rate on service

industries, plus the closing of nine (9) tax preferences and places the money in the newly-created Education Trust Account. The Senate transfers various existing revenues (e.g. The Public Works Trust Fund, other capital budget dollars) and cuts state government to raise about the same amount of revenue for education funding.

As I've mentioned in recent weeklies, the major issues for Burien in the operating budgets are as follows: **Liquor taxes:**

- Senate budget reduces liquor taxes to cities by half for 2014/15 fiscal year: Burien's would be reduced by $218,000
- House budget does not divert liquor taxes from cities

No other states-shared revenues are diverted in either budget.

**Public Works Trust Fund loan list:**

- Senate budget permanently redirects all but 2% of the state REET into the General Fund and sweeps $15M in cash from the account for 2014; the 2014 loan list is $268M
- House sweeps $100M in *cash* from the account to the state GF for 2014; loan list is $350M for 2014, no permanent sweep of the accounts revenue sources.

**Stormwater Grants:**

- Senate budget provides $75M in stormwater grants, $46M of which will be competitive.
- House budget provides $100M in stormwater grants, $96M of which will be competitive.

## 2. Transportation

The Governor is becoming more engaged, holding a stakeholder rally in Olympia today (May 13) and pushing the passage of the revenue package much harder. There have been numerous meetings over the two-week break, with specific legislators targeted for follow-up work. The general consensus among the lobby group is that a package will end up on the

ballot eventually, but the business community is only interested in funding *opposition* to an Eyman initiative to repeal a package passed in Olympia (so a NO vote to repeal on the ballot). They are not interested in funding a referendum campaign that would seek to pass a package on the ballot, or affirm a package passed in Olympia (so a YES vote on the ballot). I believe there is precedent for this as the 9 ½ cent 2005 package was the subject of an Eyman initiative that did not pass. I'm very engaged in this package and will keep you up to date.

### 3. Local B&O Tax (SB5688, SB 5656)

Both bills died in the House, but I expect each to be requested by the Senate in operating budget negotiations with the House. The Senate operating budget references both bills and provides about $2M for implementation.

The version of **5656** referenced mandates that B&O cities choose between the state BLS and the city business and license portal for their business license processing by 2016 and non-B&O cities must make the same choice by 2019. The version of **5688** referenced is a DOR-led study to review the state and local B&O tax structures and how they can be aligned.

### 4. Seahurst Park Renovation Funding

The Seahurst Park renovation is funded in both capital budgets:

- House: $4.42M in the Puget Sound Acquisition and Restoration Fund (of $70M for PSAR), $1.28M in the Estuary and Salmon Restoration Program (of $10M for ESRP);
- Senate: same amounts for Seahurst in both funds, only difference is PSAR is funded at $60M.

Per the rankings for each program, we need $40M in PSAR, and about $9.5M in ESRP to keep funding for Seahurst, so we are right on the line in the ESRP.

We still have no word about federal Army Corps of Engineer funding for this project. The Corps' funding priorities for this year were sent to the

Congressional committee last week, but we hear from the Seattle Corps office that the information is confidential. I'm asking Murray's office for help, and I'll contact Congressman McDermott's office this week as well.

**5. Deferral of Impact Fee Payments (HB 1652)**

This bill has been sent to the Governor for signature, but he has yet to act. AWC requested a veto of this bill, and the homebuilders are working hard to get the bill signed. The Governor has until May 21 to act on bills.

The bill requires cities to adopt one of the following options:

- An applicant must record a covenant against title to the development subject to the impact fee obligation. The covenant is a lien against the lot or unit at the rates in effect at the time the building permit is issued and is binding upon successors. The impact fee must be paid at the time of closing or 18 or more months after the issuance of the building permit, whichever is earlier.
- A process whereby an applicant may apply for a deferral of the impact fee payment until final inspection or certificate of occupancy.
- An alternative method adopted by the city that is consistent with a deferral program.

**6. Local Government Purchasing (SB 5110)**

**5110** has been signed by the Governor. It's a City of Kirkland bill that authorizes local governments to award contracts to the lowest bidder before taxes are applied provided it gives notice of its intent to do so prior to the submission of bids. This practice is permitted only for sales tax and B&O taxes imposed on suppliers.

**7. Fire Hydrant Bill (HB 1512)**

**1512** has been signed by the Governor. The bill addresses state Supreme Court cases that held that cities could not pay for fire hydrants through the utility bill, but rather such charges were a general government

responsibility. Cities may contract with water purveyors for the provision of fire suppression water facilities, services, or both.

### 8. City Vehicles Alternative Fuel Usage (SB 5099)

This bill exempts some city emergency vehicles from the current law requirement that cities and counties must satisfy 100 percent of their fuel needs for all vessels, vehicles, and construction equipment from electricity or biofuels by 2018. The bill also requires the state Department of Commerce to convene an advisory committee of representatives of local governments to work with the Department to develop rules relating to the fuel usage requirements. The Governor has until May 21 to act on this bill.

### 9. Alternative Public Works Contracting Reauthorization/Job Order Contracting (HB 1466)

The Governor has scheduled action on May 14 for **HB 1466**. The bill extends job order contracting, design-build and GCCM through 2020. The job order contracting amount is increased from $4 million to $6 million in King County.

### 10. Telecommunications Parity Act (HB 1971)

**HB 1971** is part of the operating budget negotiations. The House assumes $110M from enactment of this bill. The bill removes the sales tax exemption for all residential phone lines, requires retailers to collect E-911 taxes on prepaid wireless phones, and makes a number of other changes related to telecommunications. The bill addresses the issues raised in the 2011 *Sprint Spectrum v. Washington State Department of Revenue* case.

Burien
Washington, USA

## Summary of Permits Issued – APRIL 2013

| Type Permit | Count | Valuation |
|---|---|---|
| Building | 29 | $ 2,372,167 |
| Damage | 0 | |
| Demolition | 4 | $ 20,000 |
| Electrical | 75 | $ 130,850 |
| Fire Protection | 4 | $ 104,700 |
| Mechanical | 21 | $ 112,300 |
| Plumbing | 10 | $ 35,670 |
| Right of Way | 34 | |
| Sign | 11 | $ 35,950 |
| Totals : | 188 | $ 2,811,637 |

Burien
Washington, USA

## Summary of Permits Applications Received – APRIL 2013

| Type Permit | Count | Valuation |
|---|---|---|
| Building | 33 | $ 2,953,265 |
| Damage | 4 | |
| Demolition | 5 | $ 21,000 |
| Electrical | 80 | $ 117,193 |
| Fire Protection | 8 | $ 13,900 |
| Mechanical | 20 | $ 23,300 |
| Plumbing | 8 | $ 7,170 |
| Right of Way | 41 | |
| Sign | 7 | $ 10,350 |
| Totals : | 206 | $ 3,175,278 |

# CITY OF BURIEN MEMORANDUM

**DATE:** May 2, 2013

**TO:** Mike Martin, City Manager

**FROM:** Cynthia Schaff, Paralegal

**RE:** 2013 Citizen Action Report

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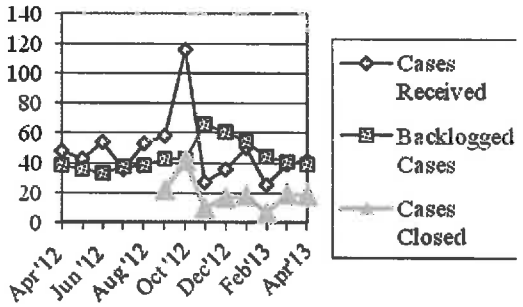
This report reflects the caseload for April and includes all backlog cases open as of April 30, 2013. As of that date, there were 61 open cases. 39 of the open cases are more than five weeks old and are considered backlog. There were 42 cases opened during the month of April, 16 cases initiated by staff/police/fire, and 26 cases initiated by residents. 18 of the cases opened during the month of April were closed within the month.

**Citizen Action Case Status**




| | Apr '12 | May '12 | Jun '12 | Jul '12 | Aug '12 | Sep '12 | Oct '12 | Nov '12 | Dec '12 | Jan '13 | Feb '13 | Mar '13 | Apr '13 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Cases Closed** | | | | | | 22 | 42 | 10 | 17 | 18 | 6 | 19 | 18 |
| **Cases Received** | 48 | 43 | 54 | 36 | 53 | 58 | 116 | 27 | 36 | 50 | 25 | 39 | 42 |
| **% Cases Closed/Received** | | | | | | 38% | 36% | 37% | 47% | 36% | 24% | 49% | 43% |
| **Backlogged Cases** | 38 | 36 | 33 | 37 | 38 | 43 | 43 | 66 | 61 | 55 | 44 | 41 | 38 |
| **Total Open Cases** | 63 | 59 | 69 | 60 | 62 | 72 | 125 | 88 | 84 | 84 | 77 | 63 | 60 |
| **% of Backlog** | 60% | 61% | 48 % | 62 % | 61% | 60% | 34% | 75% | 73% | 65% | 57% | 65% | 64% |

As usual, please let me know if you have any questions or suggestions for additional improvements to this report.

Cc: Chip Davis, Interim Community Development Director
Jim Bibby, Code Compliance Officer
Maiya Andrews, Public Works Director
Michael Lafreniere, Parks Director
Jan Vogee, Building Official
Craig Knutson, City Attorney

Burien
Washington, USA

# Monthly Report to the City Manager
## Citizen Action Request Case Status

Report Date: 05/02/2013

| Days Old | Department | CAR # | Date Received | Nature of Request | Complaint Information | Last Action | Date | Status |
|---|---|---|---|---|---|---|---|---|
| 1108 | Public Works | CAR-10-0208 | 04/20/2010 | ROW Issue | 804 SW 122ND ST<br>Zoning-Puloka-Zone 1 | NOV Issued | 04/04/2013 | Open |
| 539 | Code Enforcement | CAR-11-0486 | 11/10/2011 | Nuisance | 16331 MAPLEWILD AV SW<br>Nuisance-Golka-Zone 3 | NOV Issued | 02/26/2013 | Open |
| 470 | Fire Department | CAR-12-0024 | 01/18/2012 | Fire Department Issue | 15733 AMBAUM BL SW<br>Fire Dept issue-Highline Lanes-Zone 3 | Other - See Notes | 04/12/2012 | Open |
| 407 | Fire Department | CAR-12-0110 | 03/21/2012 | Fire Department Issue | 420 SW 154TH ST<br>Fire Issue-Laru Apts-Zone 3 | Case Received | 03/21/2012 | Open |
| 407 | Fire Department | CAR-12-0111 | 03/21/2012 | Fire Department Issue | 615 AMBAUM BL SW<br>Fire Issue-Condos-Zone 3 | Case Received | 03/21/2012 | Open |
| 407 | Fire Department | CAR-12-0112 | 03/21/2012 | Fire Department Issue | 15800 4TH AV S<br>Fire Issue-Woodcrest Apt-Zone 4 | NOV Issued | 04/16/2013 | Open |
| 407 | Fire Department | CAR-12-0114 | 03/21/2012 | Fire Department Issue | 15621 4TH AV S<br>Fire Issue-Cedar Court Apts-Zone 4 | NOV Issued | 04/16/2013 | Open |
| 343 | Code Enforcement | CAR-12-0203 | 05/24/2012 | Nuisance | 12657 12TH AV S<br>Nuisance, Vehicles, House-Towle-Zone 2 | NOV Issued | 01/23/2013 | Open |
| 304 | Code Enforcement | CAR-12-0284 | 07/02/2012 | Fire Department Issue | 12448 AMBAUM BL SW<br>Fire Issue-Clifton Apts-Zone 1 | NOV Issued | 04/16/2013 | Open |
| 280 | Fire Department | | | | 12400 28TH AV S | | | |

| Days Old | Department | CAR # | Date Received | Nature of Request | Complaint Information | Last Action | Date | Status |
|---|---|---|---|---|---|---|---|---|
| | | CAR-12-0311 | 07/26/2012 | Fire Department Issue | Fire Alarm-Woodbridge Apts.-Zone 2 | Phone Call | 07/30/2012 | Open |
| 261 | Code Enforcement | CAR-12-0338 | 08/14/2012 | Business License | 502 SW 138TH ST<br>Business License/Home Occ.-Parkers Moving-Zone 1 | Other Letter | 02/28/2013 | Open |
| 253 | Code Enforcement | CAR-12-0353 | 08/22/2012 | Nuisance | 12723 SHOREWOOD PL SW<br>Nuisance, Attractive,Swim Pool-Mielke-Zone 1 | Enforcement Letter 2 | 05/01/2013 | Open |
| 252 | Code Enforcement | CAR-12-0355 | 08/23/2012 | Nuisance | Vegetation-Miller-Zone 1 | NOV Issued | 02/15/2013 | Open |
| 213 | Code Enforcement | CAR-12-0431 | 10/01/2012 | Fire Department Issue | 18050 DES MOINES MEMORIAL DR S<br>Fire/Building-New Owner-Zone 4 | Enforcement Letter 1 | 11/21/2012 | Open |
| 203 | Code Enforcement | CAR-12-0439 | 10/11/2012 | Building | 14448 8TH AV S<br>Building Permit-Hoang-Zone 4 | NOV Issued | 01/17/2013 | Open |
| 150 | Code Enforcement | CAR-12-0591 | 12/03/2012 | Nuisance | 13811 DES MOINES MEMORIAL DR S<br>Fence -Haberzettl-Zone 2 | Enforcement Letter 1 | 02/01/2013 | Open |
| 143 | Code Enforcement | CAR-12-0606 | 12/10/2012 | Sign Violation | 13809 1ST AV S<br>ABS Pole Violation-Classy Motors-Zone 1 | NOV Issued | 03/29/2013 | Open |
| 134 | Code Enforcement | CAR-12-0626 | 12/19/2012 | Nuisance | 12242 23RD AV S<br>Nuisance, Vehicles, Trash, RV Living-King-Zone 2 | NOV Issued | 03/29/2013 | Open |
| 113 | Code Enforcement | CAR-13-0010 | 01/09/2013 | Sign Violation | 16033 1ST AV S<br>ABS,Salvation Army-Zone 3 | Enforcement Letter 1 | 01/11/2013 | Open |
| 112 | Code Enforcement | CAR-13-0016 | 01/10/2013 | Nuisance | 13417 4TH AV S<br>Nuisance, Trash-Alcantar-zone 2 | NOV Issued | 03/29/2013 | Open |
| 112 | Building | CAR-13-0018 | 01/10/2013 | Building | 14901 28TH AV SW<br>Building/ROW Issue-Winston-Zone 3 | Case Received | 01/10/2013 | Open |
| 99 | Code Enforcement | CAR-13-0030 | 01/23/2013 | Nuisance | 856 SW 125TH ST<br>Vacant House-Dang-Zone 1 | Other - See Notes | 04/17/2013 | Open |

| Days Old | Department | CAR # | Date Received | Nature of Request | Complaint Information | Last Action | Date | Status |
|---|---|---|---|---|---|---|---|---|
| 93 | Code Enforcement | CAR-13-0036 | 01/29/2013 | Nuisance | 13825 DES MOINES MEMORIAL DR S<br>Vehicles/Trash-Haberzetti -Zone 4 | NOV Issued | 03/29/2013 | Open |
| 93 | Code Enforcement | CAR-13-0051 | 01/29/2013 | Housing Concerns | 12456 ROSEBERG AV S<br>Housing, No Water-Prasad, Rental-Zone 2A | Case Received | 01/29/2013 | Open |
| 92 | Code Enforcement | CAR-13-0037 | 01/30/2013 | Nuisance | 12054 3RD AV S<br>Vehicles-Meth-Zone 2 | Enforcement Letter 2 | 04/19/2013 | Open |
| 91 | Code Enforcement | CAR-13-0049 | 01/31/2013 | Housing Concerns | 821 SW 154TH ST<br>Housing-Nguyen-Zone 3 | Enforcement Letter 1 | 02/28/2013 | Open |
| 83 | Code Enforcement | CAR-13-0057 | 02/08/2013 | Nuisance | Nuisance, Trailer Storage-Used Tires-Zone1 | NOV Issued | 03/29/2013 | Open |
| 64 | Code Enforcement | CAR-13-0075 | 02/27/2013 | Animals | 16545 DES MOINES MEMORIAL DR S<br>Animals, Set Back-Nguyen-Zone 4 | Enforcement Letter 1 | 03/06/2013 | Open |
| 59 | Code Enforcement | CAR-13-0086 | 03/04/2013 | Nuisance | 1040 S 136TH ST<br>Nuisance-Trash-Rattu | Enforcement Letter 1 | 04/24/2013 | Open |
| 56 | Code Enforcement | CAR-13-0087 | 03/07/2013 | Nuisance | 810 SW 117TH ST<br>Nuisance, Garbage-Khampuvong-Zone 1 | Enforcement Letter 1 | 03/15/2013 | Open |
| 51 | Code Enforcement | CAR-13-0114 | 03/12/2013 | Graffiti | 11603 10TH AV S<br>Graffiti, Bldg Permit-Tran-Zone 2 | Phone Call | 04/22/2013 | Open |
| 48 | Code Enforcement | CAR-13-0117 | 03/15/2013 | Planning / Zoning | 12462 ROSEBERG AV S<br>Zoning, Trailer Living-Draper-Zone 2 | Case Received | 03/29/2013 | Open |
| 45 | Code Enforcement | CAR-13-0099 | 03/18/2013 | Planning / Zoning | 14611 AMBAUM BL SW<br>Zoning-Vehicles-B/L-Robbins-Zone 3 | Case Received | 03/19/2013 | Open |
| 44 | Code Enforcement | CAR-13-0100 | 03/19/2013 | Building | 636 S 150TH ST<br>Building Permit-Pham-Zone 4 | Phone Call | 03/28/2013 | Open |
| 44 | Building | CAR-13-0101 | 03/19/2013 | Building | 610 S 150TH ST<br>Building Permit-Johnson-Zone 4 | Enforcement Letter 1 | 03/20/2013 | Open |

| Days Old | Department | CAR # | Date Received | Nature of Request | Complaint Information | Last Action | Date | Status |
|---|---|---|---|---|---|---|---|---|
| 41 | Code Enforcement | CAR-13-0108 | 03/22/2013 | Graffiti | 12230 AMBAUM BL SW<br>Graffiti-Nickels-Zone 1 | Meeting | 03/27/2013 | Open |
| 38 | Code Enforcement | CAR-13-0109 | 03/25/2013 | Nuisance | 16028 11TH AV SW<br>RV Living-Andersen-Zone 3 | Enforcement Letter 1 | 04/19/2013 | Open |
| 38 | Code Enforcement | CAR-13-0120 | 03/25/2013 | Nuisance | 949 SW 130TH ST<br>Nuisance, Trash debris-Taylor-Zone 1 | Enforcement Letter 1 | 04/08/2013 | Open |
| 30 | Code Enforcement | CAR-13-0121 | 04/02/2013 | Nuisance | Nuisance, Vehicles-Johnson, Vacant-Zone 2 | Case Received | 04/02/2013 | Open |
| 23 | Code Enforcement | CAR-13-0129 | 04/09/2013 | Nuisance | 2621 S 125TH ST<br>Junk Vehicles-James-Zone 2 | Enforcement Letter 1 | 04/11/2013 | Open |
| 23 | Code Enforcement | CAR-13-0131 | 04/09/2013 | Nuisance | 2615 S 125TH ST<br>Junk vehicle-Do-Zone 2 | Other - See Notes | 04/16/2013 | Open |
| 23 | Code Enforcement | CAR-13-0133 | 04/09/2013 | Nuisance | 2607 S 125TH ST<br>Vehicle-Barter-Zone 2 | Case Received | 04/09/2013 | Open |
| 23 | Code Enforcement | CAR-13-0136 | 04/09/2013 | Business License | 2305 SW 114TH ST<br>Business License-Alki Sewer-Zone 1 | Enforcement Letter 2 | 04/23/2013 | Open |
| 22 | Code Enforcement | CAR-13-0137 | 04/10/2013 | Building | 12038 1ST AV S<br>Building Permit-Foster-Zone 2 | Case Received | 04/11/2013 | Open |
| 17 | Code Enforcement | CAR-13-0150 | 04/15/2013 | Accessory Dwelling Unit | 815 S 136TH ST<br>Illegal ADU, Vehicles-Li-Zone 2 | Enforcement Letter 1 | 04/23/2013 | Open |
| 16 | Code Enforcement | CAR-13-0140 | 04/16/2013 | Nuisance | 1046 S 115TH ST<br>Van living - Sweet - Zone 2 | Case Received | 04/16/2013 | Open |
| 15 | Code Enforcement | CAR-13-0141 | 04/17/2013 | Nuisance | 216 S 124TH ST<br>Vacant/Unsecured-Fannie Mae - Zone 2 | Case Received | 04/17/2013 | Open |
| 15 | Code Enforcement | | | | 14642 21ST AV SW | | | |

| Days Old | Department | CAR # | Date Received | Nature of Request | Complaint Information | Last Action | Date | Status |
|---|---|---|---|---|---|---|---|---|
| | | CAR-13-0143 | 04/17/2013 | Accessory Dwelling Unit | ADU - Street - Zone 3 | Enforcement Letter 1 | 04/22/2013 | Open |
| 14 | Code Enforcement | CAR-13-0145 | 04/18/2013 | Sign Violation | 14900 AMBAUM BL SW<br>Sign Violation Permit-Coffey-Zone 3 | Case Received | 04/18/2013 | Open |
| 14 | Code Enforcement | CAR-13-0147 | 04/18/2013 | Rental Housing License | Rental Housing License-Eastview Lanal Apts-Zone 2 | Case Received | 04/18/2013 | Open |
| 14 | Code Enforcement | CAR-13-0148 | 04/18/2013 | Business License | 11229 16TH AV SW<br>Business License-Novito Constr.-Zone 1 | Case Received | 04/18/2013 | Open |
| 14 | Code Enforcement | CAR-13-0151 | 04/18/2013 | Business License | 229 S 173RD PL<br>Business License-Westlake Concrete Construction-Zone 4 | Case Received | 04/18/2013 | Open |
| 13 | Code Enforcement | CAR-13-0154 | 04/19/2013 | Sign Violation | 220 SW 152ND ST<br>Sign Permit-Maria Bonita-Zone 3 | Case Received | 04/19/2013 | Open |
| 13 | Code Enforcement | CAR-13-0156 | 04/19/2013 | Critical Area Concerns | 15845 4TH AV SW<br>Vagrant Living-Green Stone Properties-Zone 3 | Case Received | 04/19/2013 | Open |
| 8 | Code Enforcement | CAR-13-0157 | 04/24/2013 | Sign Violation | 12272 1ST AV S<br>Sign Violation-Kim's-Zone 2 | Enforcement Letter 1 | 04/25/2013 | Open |
| 8 | Code Enforcement | CAR-13-0158 | 04/24/2013 | Critical Area Concerns | 2933 SW 164TH PL<br>Critical Area Tree Removal-Poehlman-Zone 3 | Enforcement Letter 1 | 04/26/2013 | Open |
| 7 | Public Works | CAR-13-0159 | 04/25/2013 | ROW Issue | 3502 SW 172ND ST<br>ROW Issue, Fence-Saxwold-Zone 3 | Phone Call | 04/26/2013 | Open |
| 3 | Code Enforcement | CAR-13-0160 | 04/28/2013 | Animals | 2811 SW 169TH ST<br>Animals, Bee keeping-Stoyandov-Zone 3 | Enforcement Letter 1 | 04/30/2013 | Open |

| Days Old | Department | CAR # | Date Received | Nature of Request | Complaint Information | Last Action | Date | Status |
|---|---|---|---|---|---|---|---|---|
| 2 | Code Enforcement | CAR-13-0161 | 04/30/2013 | Nuisance | 648 S 159TH ST<br>Junk Vehicles/Vacant-Murray-Zone 4 | Other - See Notes | 04/30/2013 | Open |
| 2 | Code Enforcement | CAR-13-0162 | 04/30/2013 | Nuisance | 14861 8TH AV S<br>Vacant/Unsecured-Traub-Zone 4 | Case Received | 04/30/2013 | Open |

Cm

# Notice of Decision

City of Burien 400 SW 152nd Street (Suite 300) Burien, Washington 98166-3066

| | |
|---|---|
| Date | May 9, 2013 |
| Applicant | Aileen Zavales of Lynx Consulting, representing T-Mobile West, LLC |
| Proposal | Replacement of six existing panel antennas and addition of three remote radio heads, hybrid coaxial cable and associated equipment to an existing personal wireless service facility located in a residential zone. |
| File No. | PLA 13-0487 |
| Location | 12637 8th Avenue South, Burien, WA |
| Tax Parcel No. | 144720-0065 |
| Decision | Approval of Type 1 Land Use Review, subject to conditions |
| SEPA Determination | Determination of Nonsignificance |
| Appeals | The City of Burien has issued the decision described above. Parties of record may appeal this decision to the Hearing Examiner pursuant to Burien Municipal Code Section 19.65.065.5. The deadline for filing a written Notice of Appeal with the City Clerk is prior to 5:00 p.m. on **May 23, 2013**. Copies of the "Notice of Appeal" document may be obtained at the Department of Community Development. There is a non-refundable filing fee of $300 for the submittal of an appeal. For more information please contact the project planner (see below). |
| Property Tax Revaluation | Affected property owners may request a change in valuation for property tax purposes notwithstanding any program of revaluation. For more information, please contact the King County Assessor's Office at (206) 296-7300. |
| Project Planner | Charles W. "Chip" Davis, AICP<br>Department of Community Development<br>City of Burien<br>400 SW 152nd Street (Suite 300)<br>Burien, WA 98166<br>Phone: (206) 439-3152 E-Mail: chipd@burienwa.gov |
| Attachments | Conditions of Approval |

## TYPE 1 LAND USE REVIEW CONDITIONS OF APPROVAL

T-Mobile Wireless Atonement Lutheran Church PWSF, PLA 13-0487

1. This application is subject to the applicable requirements contained in the Burien Municipal Code (including but not limited to the Zoning Code, Building Code and Fire Code), the 2009 King County Surface Water Design Manual, as amended, the 2009 Stormwater Pollution Prevention Manual, as adopted, Burien Municipal Code, Chapter 13.10 and the 2008 Burien Road Standards. It is the responsibility of the applicant to ensure compliance with the various provisions contained in these documents.

2. Prior to issuance of the construction permit, the property owner shall submit a completed, signed and notarized affidavit agreeing to remove the PWSF at his or her expense, if the facility is abandoned (see Attachment 7 and Conclusion II.E.4).

# Notice of Decision

City of Burien 400 SW 152nd Street (Suite 300) Burien, Washington 98166-3066

| | |
|---|---|
| Date | May 9, 2013 |
| Applicant | Aileen Zavales of Lynx Consulting, representing T-Mobile West, LLC |
| Proposal | Replacement of six existing panel antennas and addition of three remote radio heads, hybrid coaxial cable and associated equipment to an existing personal wireless service facility located in a residential zone. |
| File No. | PLA 13-0485 |
| Location | 19010 1st Avenue South, Burien, WA |
| Tax Parcel No. | 322304-9017 |
| Decision | Approval of Type 1 Land Use Review, subject to conditions |
| SEPA Determination | Determination of Nonsignificance |
| Appeals | The City of Burien has issued the decision described above. Parties of record may appeal this decision to the Hearing Examiner pursuant to Burien Municipal Code Section 19.65.065.5. The deadline for filing a written Notice of Appeal with the City Clerk is prior to 5:00 p.m. on **May 23, 2013**. Copies of the "Notice of Appeal" document may be obtained at the Department of Community Development. There is a non-refundable filing fee of $300 for the submittal of an appeal. For more information please contact the project planner (see below). |
| Property Tax Revaluation | Affected property owners may request a change in valuation for property tax purposes notwithstanding any program of revaluation. For more information, please contact the King County Assessor's Office at (206) 296-7300. |
| Project Planner | Charles W. "Chip" Davis, AICP<br>Department of Community Development<br>City of Burien<br>400 SW 152nd Street (Suite 300)<br>Burien, WA 98166<br>Phone: (206) 439-3152 E-Mail: chipd@burienwa.gov |
| Attachments | Conditions of Approval |

## TYPE 1 LAND USE REVIEW CONDITIONS OF APPROVAL

T-Mobile Wireless Criminal Justice Training Center PWSF, PLA 13-0485

1. This application is subject to the applicable requirements contained in the Burien Municipal Code (including but not limited to the Zoning Code, Building Code and Fire Code), the 2009 King County Surface Water Design Manual, as amended, the 2009 Stormwater Pollution Prevention Manual, as adopted, Burien Municipal Code, Chapter 13.10 and the 2008 Burien Road Standards. It is the responsibility of the applicant to ensure compliance with the various provisions contained in these documents.

# Notice of Application

City of Burien 400 SW 152nd Street Suite 300 Burien, Washington 98166-3066

| | |
|---|---|
| Date | May 13, 2013 |
| Applicant | Navos |
| Proposal | Type 2 Land Use Review, SEPA Review, Shoreline Substantial Development and Critical Area Review of a Master Plan for redevelopment of the Ruth Dykeman Campus |
| File No. | PLA 13-0733<br>File is available for viewing at Burien City Hall during regular business hours. |
| Location | 1033 SW 152nd Street, Burien, Washington |
| Tax Parcel No. | 1923049054 |
| Current Zoning | SPA-2 (Special Planning Area 2) and RS 7,200 (Residential Single-family) |
| Application Submitted/Complete | Submitted: April 15, 2013<br>Complete: April 29, 2013 |
| Other Permits Needed | Building Permits and Right-of-Way Use Permit |
| Existing Environmental Info. | SEPA Environmental Checklist, Tree Inventory Report, Traffic Analysis and Parking Demand Letter, Stormwater Technical Information Report, Wetland Stream Delineation Report |
| Environmental Review | For this proposal, the City of Burien is using the "optional Determination of Non Significance (DNS) process" under the State Environmental Policy Act (WAC 197-11-355). The City expects to issue a DNS for the proposal. Individuals who submit timely written comments to the City (as indicated below) will become parties of record and will be notified of any decision and environmental determination made on this project. A copy of any decision and environmental determination made on this project may also be obtained upon request. The decision on the proposal and environmental determination, once made, may be appealed. All documents submitted or requested as part of this application are available for review at City Hall during regular business hours. |
| Review Process and Public Comment | The decision on this application will be made by the Hearing Examiner following a public hearing. Prior to preparation of the Dept. of Community Development staff recommendation to the Hearing Examiner, there is an opportunity for the public to submit written comments. **To be considered as part of the staff report, written comments must be received prior to 5:00 p.m. on June 3, 2013.** Send written comments to the project planner (see below). Please indicate your name and address and refer to the file indicated above. In addition, anyone may submit written or oral comments to the Hearing Examiner at the public hearing. Only people who submitted comments as indicated above may appeal the decision on this application. |
| Project Planner (for written comments and more information) | Stephanie Jewett, AICP<br>Department of Community Development<br>City of Burien<br>400 SW 152nd Street Suite 300<br>Burien, WA 98166<br>Phone: (206) 439-3152 E-Mail: StephanieJ@burienwa.gov |

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# Notice of Application

City of Burien 400 SW 152nd Street (Suite 300) Burien, Washington 98166

| | |
|---|---|
| Date | May 14, 2013 |
| Applicant | Brad Gehring with G-9 Investments, LLC |
| Proposal | Short Plat One Residential Lot Into Two Residential Lots. |
| File No. | PLA 13-0745<br>File is available for viewing at Burien City Hall during regular business hours. |
| Location | 215 SW 144th Street, Burien, Washington |
| Tax Parcel No. | 192304-9292 |
| Current Zoning | RS-7,200 Single-Family Residential Zone |
| Application Submitted/Complete | Submitted: April 17, 2013<br>Complete: May 2, 2013 |
| Other Permits Needed | Building Permit and Right-of-Way Permit |
| Other Studies Needed | None |
| Existing Environmental Info. | None |
| Review Process and Public Comment | The decision on this application will be made by the Community Development Director. Prior to the decision, there is an opportunity for the public to submit written comments. **Written comments must be received prior to 5:00 p.m. on June 13, 2013.** Send written comments to the project planner (see below). Please indicate your name and address and refer to the file indicated above. Only people who submitted comments as indicated above may appeal the decision on this application. |
| Project Planner (for written comments and more information) | Charles W. "Chip" Davis, AICP<br>Department of Community Development<br>City of Burien<br>400 SW 152nd Street (Suite 300)<br>Burien, WA 98166<br>Phone: (206) 248-5501 E-Mail: chipd@burienwa.gov |
| Published in the Seattle Times | Date of Notice: May 14, 2013 |

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