



**PLANNING COMMISSION AGENDA**  
October 26, 2010, 7:00 p.m.  
Multipurpose Room/Council Chamber  
Burien City Hall, 400 SW 152<sup>nd</sup> Street  
Burien, Washington 98166

**This meeting can be watched live on Burien Cable Channel 21 or  
streaming live and archived video on [www.burienmedia.org](http://www.burienmedia.org)**

**I. ROLL CALL**

**II. AGENDA CONFIRMATION**

**III. PUBLIC COMMENT** Public comment will be accepted on topics not scheduled for a public hearing.

**IV. APPROVAL OF MINUTES** a. September 28, 2010

**V. PUBLIC HEARING**

**VI. OLD BUSINESS** a. 2010 Proposed Comprehensive Plan Amendments, Discussion and Recommendation to City Council

**VII. NEW BUSINESS** a. El Dorado West Retirement Community Rezone Request, Introduction and Discussion

**VIII. PLANNING COMMISSION  
COMMUNICATIONS**

**IX. DIRECTOR'S REPORT**

**X. ADJOURNMENT**

**Future Agendas (Tentative)** November 9:  
- El Dorado West Retirement Community Rezone Request, Public Hearing, Discussion and possible Recommendation

**Planning Commissioners**

**Jim Clingan (Chair)**

**Greg Duff**

**Rachel Pizarro**

**Nancy Tosta (Vice Chair)**

**Ray Helms**

**Joe Fitzgibbon**

**John Upthegrove**

**CITY OF BURIEN, WASHINGTON  
MEMORANDUM**

**DATE:** October 26, 2010  
**TO:** Planning Commission  
**FROM:** Charles W. “Chip” Davis, AICP, Planner  
**SUBJECT:** Discussion and Recommendation on 2010 Comprehensive Plan Amendments.

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**PURPOSE/REQUIRED ACTION:**

The purpose of this agenda item is for the Planning Commission to discuss and make a final recommendation to the City Council regarding the proposed 2010 Comprehensive Plan map and text amendments.

**BACKGROUND:**

The Planning Commission recommended the 2010 docket to the City Council on June 8, 2010. The City Council adopted the 2010 Comprehensive Plan Docket on July 19, 2010.

On September 28<sup>th</sup> the Planning Commission received a presentation from staff which included a brief summary of each item accompanied by recommendations for each of the Comprehensive Plan amendments. The commission also received information for Amendment 2010-2 (Lake Burien Neighborhood) from the applicant and public comments regarding the proposed Comprehensive Plan Map amendment and rezone request.

A Public Hearing was conducted on the proposed 2010 Comprehensive Plan amendments at the October 12<sup>th</sup> Meeting and the Commission received public comments regarding both proposed amendments. A copy of all written comments received has been attached for your review (Attachment E). Following the hearing, the Commission requested clarification for a map included in the staff presentation, which has also been attached for your review (Attachment D).

**COMPREHENSIVE PLAN AMENDMENTS:**

Attached you will find a staff recommendation for each of the proposed Comprehensive Plan amendments that was originally provided in your September 28, 2010 meeting packet. The recommendation reports include a brief description of the amendments and an analysis of the applicable review criteria. Attached to this memo is a copy of the decision criteria (Attachment C) which must be addressed as the Commission makes a recommendation to the City Council. The staff report and the applicant’s application both contain information to address these criteria.

**NEXT STEPS**

When the Planning Commission takes action on the 2010 Comprehensive Plan amendments, staff recommends the Planning Commission make separate motion to recommend to the City Council approval or denial of each item. Following your discussion the Commission may:

- a. Move to adopt the staff recommendation as presented; or
- b. Make modifications to the recommendation and outline the findings and conclusions in support of the modifications; or
- c. Move to deny the proposed amendments.

Staff recommends the Planning Commission make a motion for each of the proposed amendment recommendation then discuss and make a recommendation to the City Council.

**Suggested Motion:** *I move that the Planning Commission recommend to the Burien City Council approval of Comprehensive Plan Reference number \_\_\_\_\_ as set forth in attachment \_\_\_\_\_ of the staff recommendation report.*

If you have any questions before the meeting, please contact me at (206) 248-5501 or by e-mail at [chipd@ci.burien.wa.us](mailto:chipd@ci.burien.wa.us).

**Attachments:**

- A. Staff Recommendation 2010-1, Property Acquisition Areas Goal and Policy Text Amendment**
- B. Staff Recommendation 2010-2, Lake Burien Neighborhood Plan Map Amendment and Rezone Request**
- C. Comprehensive Plan Amendment and Rezone Decision Criteria**
- D. Amended Staff PowerPoint Presentations from October 12<sup>th</sup> Meeting**
- E. Written Comments Received at October 12<sup>th</sup> Public Hearing**

CITY OF BURIEN  
Dept. of Community Development  
400 SW 152<sup>nd</sup> Street, Suite 300  
Burien, WA 98166  
(206) 248-5510

2010 Comprehensive Plan Text Amendment

**AMENDMENT REFERENCE NUMBER:** 2010-1

**APPLICANT(S):** City of Burien

**LOCATION:** Comprehensive Plan Text Amendment

**REQUEST:**

Repeal all or part of "Property Acquisition Areas" (Goal PA-1 and Policies PA 1.1 – PA 1.9 on pages 2-36 and 2-37 of the Burien Comprehensive Plan.

**TAX PARCEL NUMBER(S):** Not applicable

**STAFF RECOMMENDATION:**

Repeal all of Goal PA-1 Property Acquisition Areas and Policies PA 1.1 – PA 1.9 as set forth in Attachment 1.

**FINDINGS**

**HISTORY:**

In 1995, the Burien City Council adopted Ordinance No. 133 which established Chapter 18.130 of the interim zoning code to regulate property acquisition by public entities. The newly established chapter was directed primarily at airport affected properties in the northeast portion of Burien which were being acquired by the Port of Seattle.

In 1997, the City's initial Comprehensive Plan recognized the impact of airport operations on the northeast portion of Burien. The Plan created the "Northeast Special Planning Area" to provide policy guidance for future redevelopment to airport-compatible uses.

In 2001-2003, the City created a "Joint Advisory Committee" of interested area residents, property owners, Port of Seattle and business interests to create a more specific plan for facilitating such redevelopment in the newly named "Northeast Redevelopment Area" (NERA). Following preparation of a Supplemental Environmental Impact Statement (SEIS), the City Council adopted new Comprehensive Plan policies and zoning regulations for "Special Planning Area 4" (SPA-4). The new SPA-4 was designed to encourage redevelopment of the entire NERA with business park uses. The Council established a 2 acre minimum parcel size for redevelopment and prohibited new residential uses.

Since 2003, SeaTac Airport's third runway opened, and the economy entered a recession and with little redevelopment over the intervening years, the City Council authorized a new effort to redefine the NERA which culminated in 2009 with the adoption of Ordinance No. 529. The adopted amendments encourages creation of an airport-compatible business park in a new "Airport Industrial" (AI) zoning designation, with new residential uses and small businesses allowed in a new "Professional-Residential" (PR) zoning designation in the northwest part of the area along 8<sup>th</sup> Avenue South. The amendment also eliminated the 2 acre minimum required for redevelopment and allows auto sales and retail uses in the southern portion of the AI zoned area.

Ordinance No. 529 also repealed BMC 18.130 providing planning and zoning guidance for property acquisition by public entities. The language in Comprehensive Plan Goal PA.1 mirrors that language which was eliminated from the Burien Zoning Ordinance by Ordinance No. 529 and adoption of the proposed Comprehensive Plan amendment would ensure the two documents are consistent.

## **REVIEW OF CRITERIA FOR COMPREHENSIVE PLAN AMENDMENT**

Zoning Code section 19.65.095.4 contains the criteria for review of a proposed Comprehensive Plan amendment. To be approved, the proposed amendment must meet all of the following criteria:

### ***A. The request has been filed in a timely manner.***

The request to amend the Comprehensive Plan for elimination of Comprehensive Plan Goal PA.1 and Plan Policies PA 1.1 – PA 1.9 was made prior to June 1, 2010, as required in BMC 19.65.095.

### ***B. There is a public need for the proposed amendment.***

The public need for the amendment is to complete land use actions which were initiated by Ordinance No. 529 to provide for the orderly transition of land uses in the Northeast Redevelopment Area (NERA) and ensure the Comprehensive Plan and Zoning Ordinance are consistent with one another.

### ***C. The proposed amendment is the best means for meeting the identified public need.***

The proposed amendment will eliminate language in the Comprehensive Plan which has been removed from the Zoning Ordinance by the Burien City Council and will ensure consistency between the two documents.

### ***D. The proposed amendment is consistent with the overall intent of the goals and policies of the Burien Comprehensive Plan, Growth Management Act and Countywide Planning Policies; and***

Approval of the proposed amendment will ensure consistency between the goals and policies of the Burien Comprehensive Plan and Zoning Ordinance in conformance with the stated intent of the Growth Management Act requiring consistency.

There are no applicable policies in the King County Countywide Planning Policies relating to the proposed amendment.

### ***E. The proposed amendment will result in a net benefit to the community.***

The proposed amendments will facilitate redevelopment of land impacted by airport operations, providing additional revenues to the community and more flexibility for property owners in the area.

### ***F. The revised Comprehensive Plan will be internally consistent.***

The proposed amendments will be consistent with the remaining portions of the Comprehensive Plan.

### ***G. The capability of the land can support the projected land use.***

Approval of the proposed amendment will not impact the ability of the land to support projected land use.

### ***H. Adequate public facility capacity to support the projected land use exists or can be provided by the property owner(s) requesting the amendment, or can be cost-effectively provided by the City or other public agency.***

Approval of the proposed amendment will not impact public facility capacities.

**I. The proposed amendment will be compatible with nearby uses.**

NERA development standards are already in place as a result of Ordinance No. 529, and will result in adequate protections for publically acquired properties.

**J. The proposed amendment would not result in the loss of capacity to meet other needed land uses, such as housing.**

Approval of the proposed amendment will not impact the capacity to meet other needed land uses, such as housing.

**K. For a Comprehensive Plan map change, the applicable designation criteria are met and either of the following is met:**

*i. Conditions have so markedly changed since the property was given its present Comprehensive Plan designation that the current designation is no longer appropriate;*

*ii. The map change will correct a Comprehensive Plan designation that was inappropriate when established.*

Not Applicable. No change is proposed for the Comprehensive Plan map.

**ATTACHMENTS**

1—Proposed Comprehensive Plan Text Amendments

2—Eliminated Chapter 18.130 Property Acquisition by Public Entities

City of Burien  
Comprehensive Plan Text Amendment

**Property Acquisition Areas**

**Goal PA.1**

*~~Continue to maintain control over land use within the City in order to prevent degradation of economic vitality, property values, essential infrastructure and the natural environment.~~*

~~Pol. PA 1.1 — All land acquired within the City for public purposes by public entities is subject to the City's zoning and planning jurisdiction and shall be developed in a manner consistent with City regulations (planning, zoning, development standards, health, and safety requirements) to the extent allowed by law.~~

~~Pol. PA 1.2 — Except as provided by state law, including RCW 36.70A.200, all land acquired within the City for public purposes by public entities shall be designated for use as open space land or for public facilities designed to benefit the City and its residents (e.g. fire station, school building) and shall be subject to the zoning requirements applicable to open space and or public facilities. The open space land use and open space zoning designation shall allow only parks, recreational, and open space areas, or other public land uses.~~

~~Pol. PA 1.3 — Except to the extent otherwise provided in state law, property within the City acquired for public purposes by public entities may not be used for new commercial activities, unless the City makes a finding that such land uses are of value to the City and should be permitted. All commercial land uses of property shall be subject to City land use regulations and shall be restricted in accordance with the City's land use plans, zoning ordinances and development regulations to the extent allowed by law.~~

~~Pol. PA 1.4 — Modification, demolition, and relocation of buildings and structures on land acquired within the City for public purposes by public entities shall require City approval and permits to the extent allowed by law.~~

~~Pol. PA 1.5 — The City Department of Community Development shall adopt and implement permitting procedures for building, health, and safety regulations to be administered by the City.~~

~~Pol. PA 1.6 — Public entities acquiring areas within the City for public purposes shall perform a SEPA environmental checklist and an environmental survey to investigate soil and site contamination before the City will allow site preparation, construction or demolition activities. All identified soil and site contamination shall be remediated as a condition of site modification.~~

~~Pol. PA 1.7 — Any site development activity on land acquired within the City for public purposes by public entities shall meet City zoning regulations.~~

~~Pol. PA 1.8 — To the extent allowed by law, the City shall retain full authority over the management, operation, and maintenance of streets and street right of ways in land acquired within the City for public purposes by public entities.~~

~~Pol. PA 1.9 — The City shall develop a permit process whereby public streets may be vacated.~~

City of Burien  
Zoning Ordinance Text Removed by Ordinance No. 529

Chapter 18.130

PROPERTY ACQUISITION BY PUBLIC ENTITIES

Sections:

- 18.130.010 Planning and zoning jurisdiction on lands acquired by public entities.  
18.130.020 Limits on use of land acquired by public entities.  
18.130.030 Requirements for development on lands acquired by public entities.  
18.130.040 Management of streets and street rights-of-way within and adjacent to land acquired by public entities.

18.130.010 Planning and zoning jurisdiction on lands acquired by public entities.

(1) All land acquired within the city of Burien for public purposes by public entities is subject to the city's zoning and planning jurisdiction.

(2) All land acquired within the city of Burien for public purposes by public entities shall be developed in a manner consistent with city planning, zoning, development, health, and safety requirements. [Ord. 133 § 1, 1995]

18.130.020 Limits on use of land acquired by public entities.

(1) Except to the extent otherwise provided in state law, all land acquired within the city of Burien for public purposes by public entities shall be designated for use as parks and recreation land or for community facilities designed to benefit the city and its residents (e.g. fire station, school building) and shall be subject to the zoning requirements applicable to parks and recreation and/or public facilities. The open space land use and open space zoning designation shall allow only parks, recreational areas, or other public land uses.

(2) Except to the extent otherwise provided in state law, property within the city of Burien acquired for public purposes by public entities may not be used for new commercial activities, unless the city makes a finding that such land uses are of value to the city and should be permitted. All commercial land uses of property shall be subject to city land use regulations and shall be restricted in accordance with the city's land use plans, zoning ordinances and development regulations.

(3) Modification, demolition, and relocation of buildings and structures on land acquired within the city of Burien for public purposes by public entities shall require city approval and permits.

(4) The city of Burien shall adopt and implement permitting procedures for building, health, and safety regulations. [Ord. 133 § 1, 1995]

18.130.030 Requirements for development on lands acquired by public entities.

(1) Public entities acquiring areas within the city of Burien for public purposes shall perform a SEPA environmental checklist and an environmental survey to investigate soil and site contamination before the city of Burien will allow site preparation, construction or demolition activities. All identified soil and site contamination shall be remediated as a condition of site modification.

(2) Any site development activity on land acquired within the city of Burien for public purposes by public entities shall meet city of Burien zoning regulations. [Ord. 133 § 1, 1995]

18.130.040 Management of streets and street rights-of-way within and adjacent to land acquired by public entities.

The city shall retain full authority over the management, operation, and maintenance of streets and street rights-of-way in land acquired within the city of Burien for public purposes by public entities. [Ord. 133 § 1, 1995]

**CITY OF BURIEN**  
**Department of Community Development**  
**400 SW 152nd Street, Suite 300**  
**Burien, WA 98166**  
**(206) 248-5510**

**2010 Comprehensive Plan Amendment and Rezone Request**

**AMENDMENT REFERENCE NUMBER**

2010-2

**APPLICANT**

Chestine and Robert Edgar for Lake Burien Neighborhood

**TAX PARCEL NUMBER**

Various (See Vicinity Map)

**REQUESTS**

1. Change Comprehensive Plan designation of Lake Burien Neighborhood, as defined by applicant, from Moderate Density Single-Family Residential to Low Density Single-Family Residential.
2. Rezone Lake Burien Neighborhood, as defined by applicant, from RS-7,200 (Residential Single-Family) to RS-12,000 (Residential Single-Family).

**STAFF RECOMMENDATIONS**

1. Deny Comprehensive Plan designation change of Lake Burien Neighborhood, as defined by applicant, from Moderate Density Single-Family Residential to Low Density Single-Family Residential.
2. Deny rezone of Lake Burien Neighborhood, as defined by applicant, from RS-7,200 (Residential Single-Family) to RS-12,000 (Residential Single-Family).

**FINDINGS**

**HISTORY**

**Comprehensive Plan Land Use Designations:**

1993: The City of Burien Interim Land Use Plan and Map (Ordinance 27) designated the subject properties as Single Family (RS-7,200).

1997: The City of Burien Comprehensive Plan Map designated the subject properties as Single-Family (3 units per acre).

1999: The Burien Comprehensive Plan map designated the subject properties as Moderate Density Single-Family (5 – 6 units per acre).

**Zoning Designations:**

1981: The King County Zoning Map designated the subject parcels RS-7,200 Single-Family Residential.

1994 - Ordinance 87 map attachment shows the subject parcels zoned R-6 Single-Family Residential (Six units per acre).

1997 - Ordinance 252 map attachment shows the subject parcels zoned RS-7,200 Single-Family Residential.

1999 - Ordinance 264 map attachment shows the subject parcels zoned RS-7,200 Residential Single-Family.

**CURRENT LAND USE:** Single-family residences are the predominant land use.

**ADJACENT COMPREHENSIVE PLAN/ZONING DESIGNATIONS**

<b>Direction</b>	<b>Comp. Plan Designation</b>	<b>Zone</b>	<b>Current Uses</b>
North	Moderate Density Residential Neighborhood	RS-7,200 (Single-Family Residential)	Single-Family Residences
Northwest	Neighborhood Commercial and Low Density Multi-Family Residential Neighborhood	CN (Neighborhood Center) and RM-12 (Multi-Family Residential)	Neighborhood Commercial and Multi-Family Residences
South	Moderate Density Residential Neighborhood	RS-7,200 (Single-Family Residential)	Single-Family Residences
West	Low Density Residential Neighborhood	RS-12,000 (Single-Family Residential)	Single-Family Residences and Private Elementary School
East	Special Planning Area 2 (Ruth Dykeman Children's Center) and High Density Multi-Family Neighborhood	Special Planning Area 2 (Ruth Dykeman Children's Center) and RM-18 Residential Multi-Family	Juvenile Treatment Facility and Multi-Family Residences

**DISCUSSION**

The current Comprehensive Plan and Zoning designations for the Lake Burien Neighborhood, as defined by the applicant (see Attachment 3), allow for single-family uses with minimum lot sizes of

7,200 square feet. Of the approximately 135 lots, the majority of the lots are developed with single-family residences (see Attachments 1 and 2). The applicant indicates that Lake Burien is a critical area and warrants extra protection a more environmentally compatible comprehensive plan map designation. The applicant also contends that there is a conflict between the comprehensive plan text and map for the area surrounding Lake Burien. The requested Comprehensive Plan amendment and rezone request from Moderate Density Residential to Low Density Residential and from RS-7,200 Single-Family Residential to RS-12,000 Single-Family Residential is proposed to address both of these concerns.

The area surrounding Lake Burien has been delineated as a moderate density residential area since the incorporation of the City of Burien. With the exception of a brief period in 1997, the zoning designation for the area has been 6-units per acre since 1981 when King County controlled the zoning. The overall density of development in the area is more reflective of the Moderate Density Residential Neighborhood platted lot pattern of five to six units per acre and exceeds the Low Density Residential Neighborhood pattern of four units per acre or less. There is no apparent conflict between the text and the plan map in this regard.

In regard to the protection of critical areas, the requested change would have far less effect on generation of surface water runoff and other aspects for protection of water quality. Regulations are already in place, as part of the Critical Areas portion of the zoning code or targeted low impact development measures could be pursued through the permitting process to better achieve environmental protection. The requested change would impact only the relatively small number of lots that could be developed in the future and the difference in maximum impervious surface coverage and other development standards in the RS-7,200 and RS-12,000 could create non-conforming properties with regard to impervious surface coverage. There are provisions in the zoning code to address lots which exceed this development standard.

#### **REVIEW OF CRITERIA FOR COMPREHENSIVE PLAN AMENDMENT**

Zoning Code section 19.65.095.4 contains the criteria for review of a proposed Comprehensive Plan amendment. To be approved, the proposed amendment **must meet all of the following criteria** (shown in bold italics, followed by staff response):

***A. The request has been filed in a timely manner.***

The request was made by a resident of the area under consideration. The request was received by the City of Burien on June 1, 2010 consistent with the June 1, 2010 deadline date, as required in BMC 19.65.095.

***B. There is a public need for the proposed amendment.***

It has not been adequately demonstrated that the current map designation of the area for Moderate Density Residential Development is in conflict with the Comprehensive Plan text. Additionally, it has not been demonstrated that the requested change would more effectively address the public need than could be addressed using existing Critical Area protective regulations based on existing policies in the Comprehensive Plan which are related to environmental protection.

***C. The proposed amendment is the best means for meeting the identified public need.***

The proposed amendment is not the best means for addressing the environmental issues for the subject area properties surrounding Lake Burien. There are better means such as Critical Area regulations, storm water regulations and targeted low impact development measures implemented during the permitting process would be more effective.

***D. The proposed amendment is consistent with the overall intent of the goals and policies of the Burien Comprehensive Plan, Growth Management Act and Countywide Planning Policies.***

As stated in the Burien Comprehensive Plan (Policy RE 1.5), the intent of the Low Density Residential Neighborhood Designation is to provide for low density residential development. Development in this designation includes existing neighborhoods that are zoned for four units per acre or less.

Properties designated Low Density Residential neighborhood should reflect the following criteria (shown in italics, followed by staff response):

*1. The area is already generally characterized by single family residential development at four units per acre or less; and*

The neighborhood is generally characterized by residential development of greater than four units per acre.

*2. Relative to other residential areas within the City, the area is characterized by lower intensity development as shown on Map LU-2 (page 2-3).*

The neighborhood is designated for suburban 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 Area Map,*

A portion of the neighborhood immediately adjacent to the lake is designated wetland on the Critical Areas Map.

*4. The existing and planned public facilities for the area cannot adequately support a higher density.*

There are sufficient existing and planned public facilities to support the current density.

*5. The area is subject to existing impacts from high levels of airport-related noise.*

The area is subject to airport-related noise but is not subject to high levels of airport-related noise.

The area subject to the requested amendment is more reflective of its current designation when one reviews the criteria in Policy RE 1.6, Moderate Density Residential Neighborhood. This designation is characterized by single family residential uses at greater than four units per acre,

existing public facilities adequate to support residential development at current density, does not have significant amounts of critical areas and if located outside the area designated as Urban, is limited to five units per acre.

***E. The proposed amendment will result in a net benefit to the community.***

The applicant has not demonstrated that the proposed amendment will result in a net benefit to the community from increased protection of water quality and critical areas as more targeted and efficient measures are already in place as a result of other Comprehensive Plan policies, Critical Area and storm water regulations.

***F. The revised Comprehensive Plan will be internally consistent.***

The applicant has not demonstrated any existing inconsistency in the Comprehensive plan that would warrant the proposed amendment and approval of the proposed amendment would be inconsistent with existing policies.

***G. The capability of the land can support the projected land use.***

The proposed amendment, contrary to the applicant's claim, will not have an impact on existing density and since the benefits of changing the designation from moderate to low density will be minimal the capability of the land to support the projected land use classification will not be appreciably affected.

***H. Adequate public facility capacity to support the projected land use exists, or, can be provided by the property owner(s) requesting the amendment, or, can be cost-effectively provided by the City or other public agency.***

Adequate public facility capacity exists to support the requested amendment.

***I. The proposed amendment will be compatible with nearby uses.***

The proposed amendment will be compatible with the properties located on a small portion of the north boundary and a small portion of the west boundary of the subject area. The proposed amendment will not necessarily be compatible with properties located on a portion of the west boundary that are designated Multi-Family and Neighborhood Commercial and on a portion on the east boundary that are designated Special Planning Area 2 and Multi-Family.

***J. The proposed amendment would not result in the loss of capacity to meet other needed land uses, such as housing.***

The proposed amendment would result in the loss of capacity to meet other needed land uses such as housing, as the applicant acknowledges in the application. Measures cited by the applicant, such as transfer of development rights, are not currently included in the Comprehensive Plan and could not be used to mitigate this impact. The shifting of responsibility for meeting housing capacity requirements cannot be accomplished through the proposed amendment.

***K. For a Comprehensive Plan map change, the applicable designation criteria are met and either of the following is met:***

- i. Conditions have so markedly changed since the property was given its present Comprehensive Plan designation that the current designation is no longer appropriate; or,***
- ii. The map change will correct a Comprehensive Plan designation that was inappropriate when established.***

The applicant has not demonstrated that conditions have so markedly changed since the previous designation that the current designation is no longer appropriate or that the map change is required to correct a designation that was inappropriate when established. The existing designation as Moderate Density Residential Neighborhood was established as a result of a public planning process and has been in place since Burien's incorporation in 1993.

#### **REVIEW OF CRITERIA FOR REZONE**

Zoning Code section 19.65.090.3 contains the criteria for review of a proposed rezone. To be approved, the proposed amendment **must meet all of the following criteria** (shown in bold italics, followed by staff response):

***A. The rezone is consistent with the Comprehensive Plan.***

The proposed rezone to RS-12,000 Single-Family Residential would be consistent with the proposed Comprehensive Plan if the Comprehensive Plan designation is changed. Staff is recommending that the Comprehensive Plan change be denied (see discussion above).

***B. The rezone bears a substantial relation to the public health, safety or welfare.***

The rezone would not provide significant protection for critical areas in regard to water quality, given the relatively minor difference in impervious surface coverage requirements as a result of the requested rezone. More effective avenues already exist for addressing critical area protection and surface water impacts on Lake Burien (see discussion above). Consequently, the rezone will not significantly contribute to the public's health, safety and welfare.

***C. The rezone will not be materially detrimental to uses or property in the immediate vicinity of the property.***

There is no evidence to support that a rezone would be materially detrimental to uses in the immediate vicinity of the subject area.

***D. The rezone has merit and value for the community as a whole.***

The rezone does not have merit and value for the community as a whole (see discussion above).

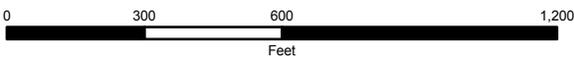
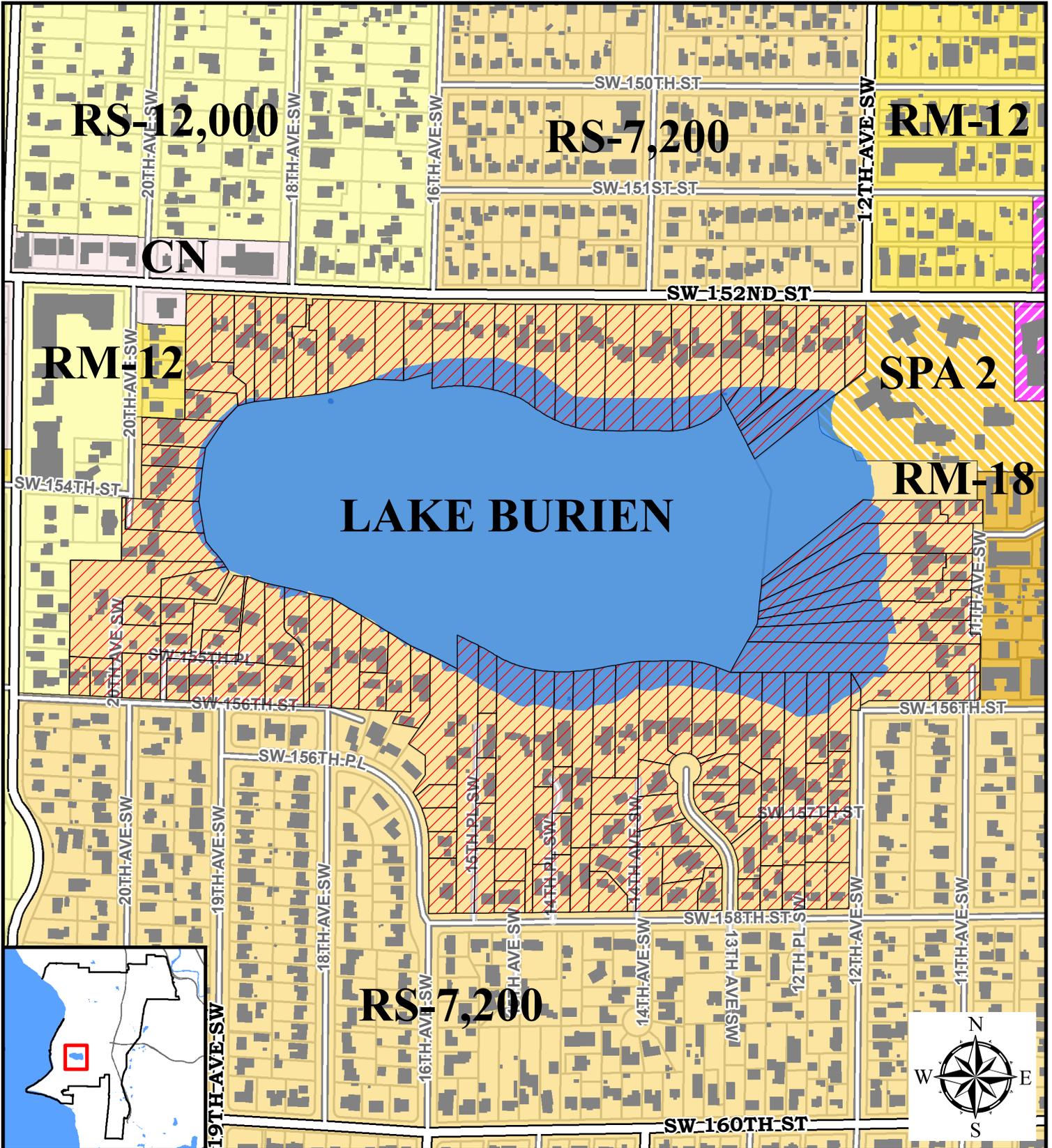
**ATTACHMENTS**

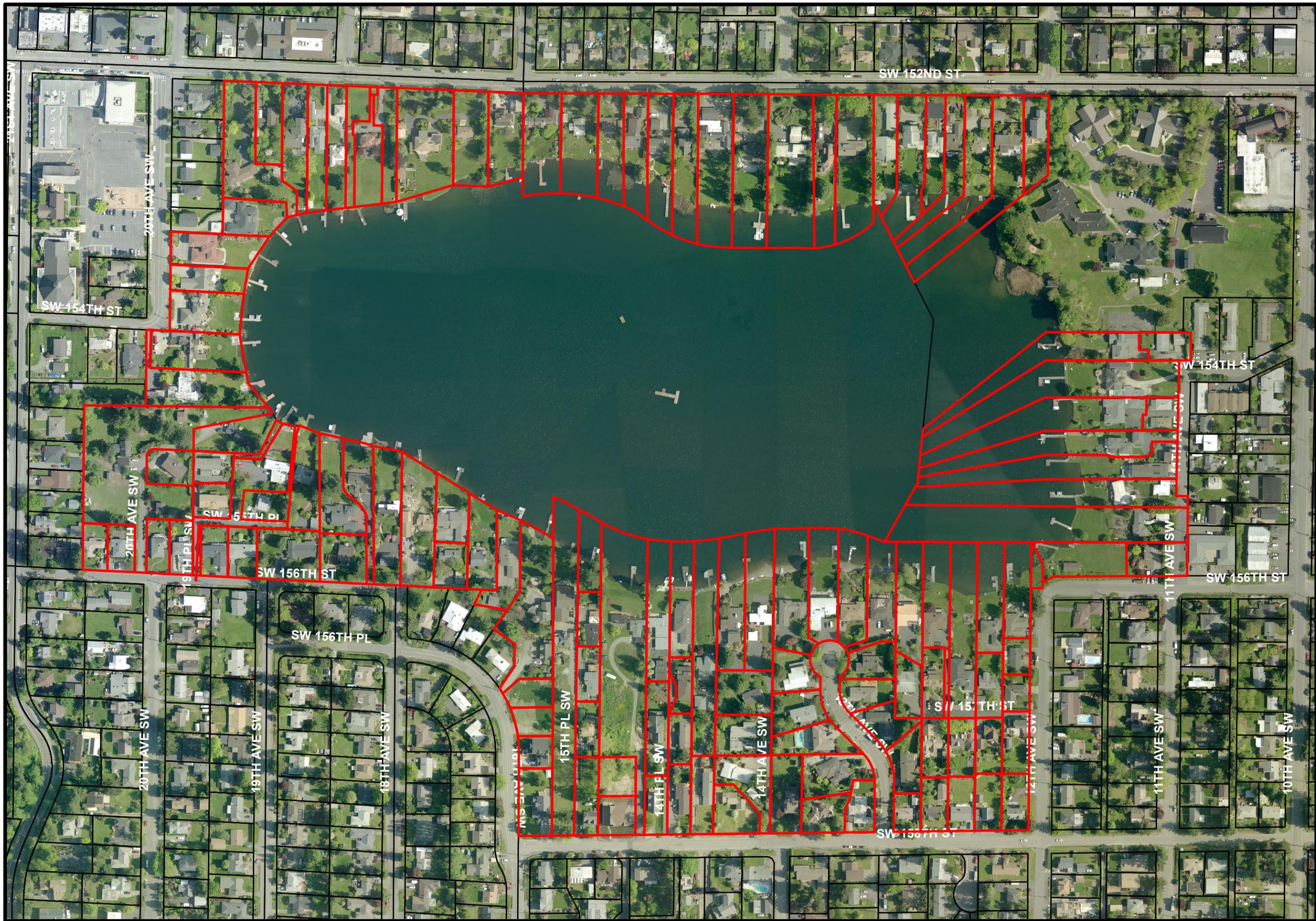
- 1- Vicinity Zoning and Land Use Map
- 2- Aerial Photo, dated 2009
- 3- Comprehensive Plan Amendment Request, June 1, 2010

Reference No. 2010-2

# Comprehensive Plan Map Amendment and Rezone

## Edgar/Lake Burien Neighborhood - Zoning/Land Use





SW 152ND ST

SW 154TH ST

20TH AVE SW

SW 154TH ST

20TH AVE SW

19TH PL SW

SW 155TH PL

15TH AVE SW

SW 156TH ST

SW 156TH ST

SW 156TH PL

15TH PL SW

14TH PL SW

14TH AVE SW

SW 15TH ST

20TH AVE SW

19TH AVE SW

18TH AVE SW

17TH AVE SW

12TH AVE SW

11TH AVE SW

10TH AVE SW

SW 156TH ST



# Burien

Washington, USA

## Comprehensive Plan Amendment Request (Includes rezones)

400 SW 152<sup>nd</sup> Street, Suite 300 Burien, WA 98166  
Phone: (206) 241-4647 • FAX: (206) 248-5539  
www.burienwa.gov

Amendment Type	Reference Number (staff will assign)
<input checked="" type="checkbox"/> Map amendment	_____
<input type="checkbox"/> Text amendment	_____
<input type="checkbox"/> Quasi-Judicial Rezone	_____

PLA 10-0770

APPLICANT INFORMATION	
Name: <u>Chestine+Robert Edgar</u> Company: _____	Daytime Phone: <u>(425) 971-4786</u>
Mailing Address: <u>1811 SW 152nd St. Burien 98166</u>	Fax Number: _____
Contact person (if different): <u>Same</u>	Daytime Phone: _____
Property owner (if different): _____	Daytime Phone: _____
Mailing Address: _____	Fax Number: _____

e-mail c-edgar2@yahoo.com

SITE INFORMATION (if applicable)	
Site Address: <u>Lake Burien Neighborhood</u> Attachment H Map	Parcel Number: _____
Existing Zoning District: <u>RS-7200/moderate density</u>	Existing Comprehensive Plan designation: <u>Moderate Density Residential</u>
Requested Zoning: <u>RS-12000/low density</u>	Requested Plan designation: <u>Low Density Residential</u>
Number of Acres: <u>33.6</u>	Current Land Use: <u>single family Residential</u>
Critical areas present: <input checked="" type="checkbox"/> Wetlands <input checked="" type="checkbox"/> Streams <input checked="" type="checkbox"/> Critical Aquifer <input type="checkbox"/> Landslide Hazard Area <input checked="" type="checkbox"/> Fish & Wildlife	

Brief description of proposal (attach additional sheets if necessary):

Change the land use designation on the Burien Comprehensive Land Use Map from "Moderate Density Residential Neighborhood" to "Low Density Residential Neighborhood" for the Lake Burien Neighborhood.

Change or amendment any City of Burien regulations, policy, maps, etc. so that they are coordinated, clear, consistent and in agreement with the Burien Comprehensive Plan Land Use designation of "Low Density Residential Neighborhood" for the Lake Burien Neighborhood.

The Phasing of Uses and Densities, Goal PH.1, Pol. PH.1.1 (page 2-25) to be implemented, from current use and density to the new use and density generated, as a result of this amendment change.

See attachments.

### SIGNATURE

I, Chestine Edgar, declare that I am a citizen of the Lake Burien Neighborhood the owner of the property involved in this application, and that the foregoing statements and answers herein contained and the information herewith submitted are in all respects true and correct to the best of my knowledge and belief. I designate Chestine Edgar to act as my agent with respect to this application. I agree to reimburse the City of Burien for the costs of professional engineers and other consultants hired by the City to review and inspect this proposal when the City is unable to do so with existing in house staff.

Dated: 6/1/10

Signature: Chestine Edgar

RECEIVED

JUN 01 2010

CITY OF BURIEN

To: The City of Burien  
From: Chestine Edgar-petitioner for change to 2009 Burien Comprehensive Plan Land Use Map  
Robert Edgar-petitioner for change to 2009 Burien Comprehensive Plan Land Use Map  
Date: May 28, 2010

Subject: 2010 Burien Comprehensive Plan Amendment Request-Change to Land Use Map

This amendment request is to resolve the inconsistencies in the 2009 Burien Comprehensive Plan between the plan text policies and the land use map for the Lake Burien Neighborhood.

### **Summary of Changes Sought by the Petitioners**

Change the land use designation on the Burien Comprehensive Land Use Map from "*Moderate Density Residential Neighborhood*" to "*Low Density Residential Neighborhood*" for the Lake Burien Neighborhood.

Change or amendment any City of Burien regulations, policy, maps, etc. so that they are coordinated, clear, consistent and in agreement with the Burien Comprehensive Plan Land Use designation of "*Low Density Residential Neighborhood*" for the Lake Burien Neighborhood.

The **Phasing of Uses and Densities, Goal PH.1, Pol. PH 1.1** (page 2-25) to be implemented, from current use and density to the new use and density generated, as a result of this amendment change.

### **Short and Plain Statement of the Grounds for the Burien Comprehensive Plan Map Amendment**

- I. Lake Burien is a critical area (wetland, aquifer recharge area) by state, county and city designation and as such warrants extra protection in land use map designation.
- II. The Lake Burien Neighborhood is defined as a Low Density Residential Neighborhood by the Land Use Element policy text in the 2009 Burien Comprehensive Plan.
- III. The Lake Burien Neighborhood is shown as a Moderate Density Residential Neighborhood on the 2009 Burien Comprehensive Plan Land Use Map.
- IV. Therefore, there appears to be an inconsistency between the 2009 Burien Comprehensive Plan policy text and the 2009 Burien Comprehensive Plan Land Use Map.
- V. Whenever there is an inconsistency between Comprehensive Plan policy text and maps, the policy text is the controlling factor. The Burien Comprehensive Plan Land Use Map needs be corrected for the Lake Burien Neighborhood.
- VI. Therefore, other related city maps and regulations need to be consistent with the corrected 2009 Burien Comprehensive Plan Land Use Map.

**Statement to Sustain the Amendment to the Burien  
Comprehensive Plan Map**

**I**

**LAKE BURIEN IS A CRITICAL AREA (WETLAND, AQUIFER RECHARGE AREA) BY STATE,  
COUNTY AND CITY DESIGNATION AND AS SUCH WARRANTS EXTRA PROTECTION IN  
LAND USE MAP DESIGNATION**

Lake Burien is designated as a Critical Area for the following reasons; it is an aquatic resource, a wetland, an aquifer recharge area, and an area of importance for wildlife (Grette Associates 2008) (Attachment A-King County Map, Attachment B-Herrera 2010, Attachment C-Cooke 2010). Lake Burien is also considered a shoreline of the state. The City of Burien's 2009 Critical Areas Map (Attachment D-Critical Area Map) shows that a significant portion of the properties that are immediately adjacent to Lake Burien are categorized as Critical Areas.

As a result of the inconsistency between the Comprehensive Plan policy text and the Land Use Map, there appears to be a disregard for the protections of Critical Areas as required by RCW 36.70A (The Growth Management Act). The protection of critical areas and the need for lower density land use is recognized in sections **RCW 36.70A.020, 36.70A.060, 36.70A.170, 36.70A.172, 36.70A.175 and 36.70A.480**. The **King County Comprehensive Plan**, which serves to guide **Countywide Planning Policies**, recognizes the importance of Critical Areas in **Chapter 1-Regional Planning and Chapter 4-Environment**. In the **2009 Burien Comprehensive Plan**, the need to protect Critical Areas is recognized in **Chapter 2-Plan Policies**.

In all of the previously mentioned documents, the requirement of Best Available Science (BAS) is required when dealing with Critical Areas. The **2009 Burien Comprehensive Plan, 2.2 LAND USE ELEMENT, Natural Environment, Goal EV.1, Pol. EV 1.8** (page 2-27), states: "*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)].*" **RCW 36.70A.172 Critical Areas – Designation and Protection – Best available science to be used**, states: "*(1) In designing and protecting critical areas under this chapter, counties and cities shall include the best available science in developing policies and development regulations to protect the functions and values of critical areas.*"

In a review of the Best Available Science for protecting and saving wetlands and other critical areas, the following strategies were cited:

1. limiting uses,
2. avoiding development in some areas,
3. transferring development density to another site, and
4. public protection of the critical area as a valuable site (MRSC-Best Available Science-Critical Areas, 4/10).

While buffers and mitigation have been strategies used to protect wetlands and critical areas, they have been proven not adequate to prevent "no net loss" to these critical areas (King County website, PSWSMRP, "Wetlands and Urbanization", Azous and Horner, 1997). Pollutants reach wetlands mainly through runoff (PSWQA 1986; Stockdale 1991). Urbanization of wetlands and the watersheds that feed wetlands generate large amount of pollutants such as eroded soils from construction sites, toxic metals and petroleum wastes from roadways and nutrients and bacteria

from residential areas. *“At the same time that urbanization produces larger quantities of pollutants, it reduces water infiltration capacity, yielding more surface runoff.”* (Loucks 1989; Canning 1988). The addition of 66% more residences to any a critical area wetland will result in a significant impact to the area and cause net loss to the area (Attachment E-Map showing lot impacts). Residential uses that impact wetlands include: *“a. Human presence and activity that impacts or drives off fish and wildlife. Bigger residences usually 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, yard machinery, and recreational vehicles. d. Use of chemicals and fertilizers for house and yard. Larger structures and grounds increase the use of chemicals. e. Uses of night lighting that impacts or drives off fish and wildlife. Larger structures and grounds typically increase the use of night lighting.”* (Making Small Shoreline Buffers Work with Buffer Science, March 2010). The **2009 Burien Comprehensive Plan, 2.2 LAND USE ELEMENT, Natural Environment, Wetlands, Goal EV.6, Pol. EV 6.1**, (page 2-33), states: *“The City shall protect its wetlands with an objective of no overall net loss of functions and values.”*

New construction and added impervious surface area can significantly impact Aquifer Recharge Areas. *“Lake Burien is mapped as an Aquifer Recharge Area, a 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 entire aquifer”* (Grette, 2008). The **2009 Burien Comprehensive Plan, 2.8 STORM WATER ELEMENT, Goal ST.1, Protecting Water Quality, Pol. ST 1.10**, (page 2-111), states: *“In the interest of the residents of Burien, the Puget Sound area and adjoining communities, the City will protect the quality of surface water bodies that are located within the drainage basins of the City.”*

Therefore, another critical strategy that should be employed in the protection of urbanized critical areas and wetlands is to keep the land use of these areas at low density usage. This concept of low density usage is supported by the **2009 Burien Comprehensive Plan, 2.2 LAND USE ELEMENT, Residential Neighborhoods, Goal RE.1, Pol. RE 1.5, Low Density Neighborhood** (page 2-8) and should be reflected by land use designations at *“4 units per acre or less, due to the constraints posed by critical areas.”*

Additionally, under the Public Trust Doctrine (Attachment F-Public Trust Doctrine), the water quality and the environmental preservation are considered as valid public trust issues. This is a simple but powerful legal concept that obliges all levels of government to manage natural resources in the best interest of their citizens, without sacrificing the needs of future generations (Science Daily, April 13, 2009). As a legal concept, it is well established in the United States at the state level and in federal agencies. Lake Burien is a critical area that falls under the domain of the Public Trust Doctrine. The Lake Burien neighborhood contains significant amounts of critical area and as such should be designated as *“Low Density Residential Neighborhood”* by both the Comprehensive Plan policy text Goal RE.1, Pol. RE 1.5 and the Comprehensive Plan Land Use Map.

**II**  
**THE LAKE BURIEN NEIGHBORHOOD IS DEFINED AS A LOW DENSITY RESIDENTIAL NEIGHBORHOOD BY THE LAND USE ELEMENT POLICY TEXT IN THE 2009 BURIEN COMPREHENSIVE PLAN**

According to the **2009 Burien Comprehensive Plan, 2.2 LAND USE ELEMENT, Residential Neighborhoods, Goal RE.1, Pol. RE 1.5** (page 2-8), a Low Density Residential Neighborhood is described as being “zoned for 4 units per acre or less, due to the constraints posed by critical areas.” The **Designation Criteria in Goal RE.1, Pol. RE 1.5** (page 2-9) contains two criteria that are relevant to this discussion: “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*
3. *The land is designated as potential landslide hazard area, steep slope area, or wetland on the City of Burien’s Critical Areas Map.*”

Lake Burien appears as a critical area on the City of Burien’s Critical Areas Map. The justification for the Critical Area classification is previously addressed Section I. The **2009 Burien Comprehensive Plan, 2.2 LAND USE ELEMENT, Natural Environment, Goal EV.1, Pol. EV 1.2** (page 2-26), states: “Development should be directed toward areas where their adverse impacts on critical areas can be minimized.”

In spite of the lot size designation of 7200 sq ft, the land around Lake Burien has always (approximately 100 years) been characterized by single family residential development at four units per acre or less. This development pattern was a result of the fact that King County originally determined that Lake Burien properties had 100’ setback requirements from the lake edge. The historical nature of the lake is documented in the attached letter from Joe Wozniack (Attachment G). For this reason, the Lake Burien neighborhood had been identified in Burien’s 1997 Comprehensive Plan with an R-3 land use designation.

While in the 1999 amendment to the Burien Comprehensive Plan, the Lake Burien neighborhood was changed from R-3 to R-6, the change appears to have been made on historical paper lot size from King County. In an extensive review of the Burien City files including meeting minutes, draft maps, citizen comments and King County records, there is no evidence of discussions about Best Available Science for this critical area being used in the final decision of how Lake Burien would be change from R-3 to R-6 designation on the Comprehensive Plan Land Use Map. Also, there is no evidence of discussions by the Planning Commission, City Council or City staff about what was the actual and physical land use around Lake Burien or what Best Available Science relating to critical areas was used in the decision making process.

The residential properties surrounding Lake Burien are already physically characterized by single family residential development at four units pre acre or less and meet the definition of a “*Low Density Residential Neighborhood*” as defined in **2009 Burien Comprehensive Plan, 2.2 LAND USE ELEMENT, Residential Neighborhoods, Goal RE.1, Pol. RE 1.5**. (pages 2-8 & 2-9). Additionally, significant portions of properties immediately adjacent to Lake Burien are categorized by the City of Burien as Critical Areas. Therefore by the Comprehensive Plan policy text definition, the Lake Burien neighborhood is designated as “*Low Density Residential Neighborhood*”.

**III**  
**THE LAKE BURIEN NEIGHBORHOOD IS SHOWN AS A MODERATE DENSITY  
RESIDENTIAL NEIGHBORHOOD ON THE 2009 BURIEN COMPREHENSIVE PLAN LAND  
USE MAP**

The **2009 Burien Comprehensive Plan, 2.2 LAND USE ELEMENT, Residential Neighborhoods, Goal RE.1, Pol. RE 1.6, Designation Criteria** (page 2-10) defines a “*Moderate Density Residential Neighborhood*” and contains one criteria that is relevant to this discussion:  
“3. *The area does not have significant amounts of critical areas.*”

Since the Lake Burien neighborhood has significant amounts of critical areas, it does not match the Comprehensive Plan policy text definition of “*Moderate Density Residential Neighborhood.*”

**IV**  
**THEREFORE, THERE APPEARS TO BE AN INCONSISTENCY BETWEEN THE 2009 BURIEN  
COMPREHENSIVE PLAN POLICY TEXT AND THE 2009 BURIEN COMPREHENSIVE  
PLAN LAND USE MAP**

The first paragraph of the Washington State Growth Management Act (GMA) section **RCW 36.70A.070 Comprehensive plans – Mandatory elements**, states:

“*The comprehensive plan of a county or city that is required or chooses to plan under RCW 36.70A.040 shall consist of a map or maps, and descriptive text covering objectives, principles, and standards used to develop the comprehensive plan. The plan shall be an internally consistent document and all elements shall be consistent with the future land use map.*”

According to the **2009 Burien Comprehensive Plan, Land Use Plan Implementation, Goal PI.1**, there is a requirement to “*Implement the goals and policies of the land use plan through a variety of means and mechanisms which are coordinated and consistent.*”

Since the 2009 Comprehensive Plan policy text and Comprehensive Plan Land Use Map are not in agreement about the neighborhood density for Lake Burien, there is a lack of coordination and consistency.

**V**  
**WHENEVER THERE IS AN INCONSISTENCY BETWEEN COMPREHENSIVE PLAN POLICY  
TEXT AND MAPS, THE POLICY TEXT IS THE CONTROLLING FACTOR. THE BURIEN  
COMPREHENSIVE PLAN LAND USE MAP NEEDS BE CORRECTED.**

The **2009 Burien Comprehensive Plan, 2.2 LAND USE ELEMENT, Land Use Conflicts, Pol. PI 1.6** (page 2-39) states: “*If there is a conflict between the comprehensive plan land use map and the land use designation policies, the land use designation policies control.*”

There is an inconsistency between the 2009 Comprehensive Plan text policies and the Land Use Map. Therefore the Comprehensive Plan policy text controls Comprehensive Plan Land Use Map. The Lake Burien neighborhood needs to be designated a “*Low Density Residential Neighborhood*” on the Comprehensive Plan Land Use Map.

**VI**  
**THEREFORE, OTHER RELATED CITY MAPS AND REGULATIONS NEED TO BE**  
**CONSISTENT WITH THE CORRECTED 2009 BURIEN COMPREHENSIVE PLAN LAND USE**  
**MAP.**

The **2009 Burien Comprehensive Plan, 2.2 LAND USE ELEMENT, Land Use Plan Implementation, Goal PI.1, Pol. PI 1.2** (page 2-38) states: *“The City’s development regulations should be consistent with other City plans and activities, including other development requirements. Development regulations shall be clearly written and absent of duplicative, uncoordinated or unclear requirements.”*

This amendment request is for the lots immediately adjoining Lake Burien to have a land use map density designation of *“Low Density Residential Neighborhood”* as supported by the 2009 Comprehensive Plan text policies, and that other City of Burien regulations, policy, maps, etc. regarding land use are coordinated, clear, consistent and in agreement with the 2009 Burien Comprehensive Plan Land Use designation of *“Low Density Residential Neighborhood”*. See the attached map for the requested map change (Attachment H).

**Summary of Changes**

Change the land use designation on the Burien Comprehensive Land Use Map from *“Moderate Density Residential Neighborhood”* to *“Low Density Residential Neighborhood”* for the Lake Burien Neighborhood.

Change or amendment any City of Burien regulations, policy, maps, etc. so that they are coordinated, clear, consistent and in agreement with the Burien Comprehensive Plan Land Use designation of *“Low Density Residential Neighborhood”* for the Lake Burien Neighborhood.

The **Phasing of Uses and Densities, Goal PH.1, Pol. PH 1.1** (page 2-25) to be implemented, from current use and density to the new use and density generated, as a result of this amendment change.

**Comprehensive Plan Amendment Criteria**

This next series of responses will follow the list of items requested by the city under the topic of *“Comprehensive Plan Amendment Criteria”* shown on page 2 of the *“Burien Comprehensive Plan Amendment Request”* application form.

**A. The request has been filed in a timely manner.**

The *“Burien Comprehensive Plan Amendment Request”* application form requesting a *“Map Amendment”* to the 2010 Burien Comprehensive Plan was submitted to the City of Burien on: **June 1, 2010** with a City of Burien **mandated** fee of: \$1,723.63

B. There is a public need for the proposed amendment.

Under RCW 36.70A, there is a requirement for consistency throughout the comprehensive plan text and maps as well as protections for Critical Areas. There is a public need for this proposed amendment because the policies stated in the **2009 Burien Comprehensive Plan, 2.2 LAND USE ELEMENT, Residential Neighborhoods, Goal RE.1, Pol. RE 1.5** (page 2-8) do not appear to be consistent with the Comprehensive Plan Land Use Map for the Lake Burien neighborhood. As a result of these inconsistencies, there appears to be a disregard for the protections of Critical Areas as required by RCW 36.70A (The Growth Management Act). The protection of critical areas and the need for lower density land use is recognized in sections **RCW 36.70A.020, 36.70A.060, 36.70A.170, 36.70A.172, 36.70A.175 and 36.70A.480**. The **King County Comprehensive Plan**, which serves to guide County-wide Planning Policies, recognizes the importance of Critical Areas in **Chapter1-Regional Planning and Chapter4-Environment**. The **2009 Burien Comprehensive Plan, 2.2 LAND USE ELEMENT, Natural Environment, Wetlands, Goal EV.6, Pol. EV 6.1** (page 2-33) states: *“The City shall protect its wetlands with an objective of no overall net-loss of functions and values.”*

Also, the **2009 Burien Comprehensive Plan, 2.2 LAND USE ELEMENT, Land Use Conflicts, Pol. PI 1.6** (page 2-39) states: *“If there is a conflict between the comprehensive plan land use map and the land use designation policies, the land use designation policies control.”*

In all of the previously mentioned documents, the requirement of Best Available Science (as previously addressed in Section I) is required when dealing with Critical Areas. In a review of the Best Available Science for protecting, saving wetlands and other critical areas, the following strategies were cited:

1. limiting uses,
2. avoiding development in some areas,
3. transferring development density to another site, and
4. public protection of the critical area as a valuable site  
(MRSC-Best Available Science-Critical Areas, 4/10).

While buffers and mitigation have been strategies used to protect wetlands and critical areas, they have been proven not adequate to prevent “no net loss” to these critical areas (King County website, PSWSMRP, “Wetlands and Urbanization”, Azous and Horner, 1997). Pollutants reach wetlands mainly through runoff (PSWQA 1986; Stockdale 1991). Urbanization of wetlands and the watersheds that feed wetlands generate large amount of pollutants such as eroded soils from construction sites, toxic metals and petroleum wastes from roadways and nutrients and bacteria from residential areas. *“At the same time that urbanization produces larger quantities of pollutants, it reduces water infiltration capacity, yielding more surface runoff.”*(Loucks 1989; Canning 1988). Additionally, residential development and the increased human usage of the land results in a significant impact to a critical area wetland and causes net loss. Increased amounts of impervious surface in residential areas on or adjacent to critical areas causes damage to wetlands, aquifer recharge areas and water quality. Therefore, another critical strategy that should be employed in the protection of urbanized critical areas and wetlands is to keep the land use of these areas at low density usage. This concept of low density usage is supported by the **2009 Burien Comprehensive Plan, 2.2 LAND USE ELEMENT, Residential Neighborhoods, Goal RE.1, Pol. RE 1.5, Low Density Neighborhood** (page 2-8) and should be reflected by land use designations at *“4 units per acre or less, due to the constraints posed by critical areas.”*

Additionally, under the Public Trust Doctrine, the water quality and the environmental preservation are considered as valid public trust issue. This is a simple but powerful legal concept that obliges all levels of government to manage natural resources in the best interest of their citizens, without sacrificing the needs of future generations (Science Daily, April 13, 2009). As a legal concept, it is well established in the United States at the state level and in federal agencies. Lake Burien is a critical area that falls under the domain of the Public Trust Doctrine.

The protection of the natural environment, water quality, critical areas and consistency in the comprehensive plan are well documented public needs.

C. The proposed amendment is the best means for meeting the identified public need.

The proposed amendment is the best means for meeting this identified public need of creating consistency throughout the comprehensive plan and maps and for protection of critical areas because land use is controlled by policy and map designation in the Comprehensive Plan. This is the only legal mechanism for creating plan consistency and for maintaining a low density residential development in a critical area such as Lake Burien.

D. The proposed amendment is consistent with the overall intent of the goals and policies of the Burien Comprehensive Plan, Growth Management Act and Countrywide Planning Policies.

The proposed amendment is in agreement with the Burien Comprehensive Plan, Chapter 2:

A) 2.2 LAND USE ELEMENT:

- 1) Residential Neighborhoods, Goal RE.1, Pol. RE 1.5, Pol. RE 1.6
- 2) Natural Environment, Goal EV.1, Pol. EV 1.2, EV 1.8, Goal EV. 2, Goal EV.4, Goal EV.5, Goal EV.6, Pol. EV 6.1
- 3) Land Use Plan Implementation, Goal PI.1, Pol. PI 1.1, Pol. PI 1.2, Pol 1.5
- 4) Land Use Conflicts, Pol. PI 1.6
- 5) Phasing Uses and Densities, Goal PH.1, Pol. PH 1.1

B) 2.8 STORM WATER ELEMENT:

- 1) Protecting Water Quality, Goal ST.1, Pol. ST 1.10

The proposed amendment is in agreement with the Growth Management Act/RCW 36.70A:

- 1) Planning goals, 36.70A.020
- 2) Definitions, 36.70A.030
- 2) Natural resources and critical areas, 36.70A.060
- 3) Comprehensive plans-Mandatory elements, 36.70A.070
- 4) Natural resource lands and critical areas, 36.70A.170
- 5) Critical areas-Designation and protection-Best available science to be used, 36.70A.172
- 6) Wetlands to be delineated in accordance with manual, 36.70A.175
- 7) Shorelines of the state, 36.70A.480

The proposed amendment is in agreement with King County Countywide Planning Policies:

- 1) Chapter 1-Regional Planning
- 2) Chapter 4-Environment

E. The proposed amendment will result in a net benefit to the community.

The proposed amendment will result in a net benefit to the community by having a Comprehensive Plan that is internally consistent in both text and maps. The **2009 Burien Comprehensive Plan, 2.2 LAND USE ELEMENT, Land Use Plan Implementation, Goal PI.1, Pol. PI 1.1** (page 2-37) states: *“The Comprehensive Plan, development regulations, function plans and budgets should be mutually consistent and reinforce each other.”*

**Goal PI.1, Pol. PI 1.2** (page 2-37) states: *“The City’s development regulations should be consistent with other City plans and activities, including other development requirements. Development regulations shall be clearly written and absent of duplicative, uncoordinated or unclear requirements.”*

Burien citizens and City staff who use the Burien Comprehensive Plan will not be confused by internal inconsistencies. Other city plans, development regulations, functional plans and budgets will also be consistent. In addition, the protection of the water quality, natural environment and critical areas in this part of the city will benefit the whole community.

F. The revised Comprehensive Plan will be internally consistent.

The revised Comprehensive Plan will be internally consistent because it appears to be inconsistent without this change. It will also be in compliance with the Washington State Growth Management Act (**RCW 36.70A.070 Comprehensive plans – Mandatory elements**) which mandates that a Comprehensive Plan *“...shall be an internally consistent document and all elements shall be consistent with the future land use map.”*

G. The capability of the land can support the projected land use.

Best Available Science suggests that the carrying capacity of the properties around Lake Burien would not be negatively impacted if the properties are designated as *“Low Density Residential Neighborhood”*. This amendment reduces the current proposed density and land use designation demands on a critical area – Lake Burien.

H. Adequate public facility capacity to support the projected land use exists.

**RCW 36.70A.030 Definitions (12)** states: *“‘Public facilities’ include streets, roads, highways, sidewalks, street and road lighting systems, traffic signals, domestic water systems, storm and sanitary sewer systems, parks and recreational facilities, and schools.”* This public facility capacity and infrastructure already exist to support the projected land use of *“Low Density Residential Neighborhood”*. The city has the resources to make the required change to the maps, mailings to impacted residents and staff time involved in the cost of implementing this amendment. The city also has mechanisms in place to do these clerical items in a cost effective manner.

I. The proposed amendment will be compatible with nearby uses.

The proposed amendment will be compatible with nearby uses which are mainly residential. The amendment will simply reduce density in an already residential neighborhood. The area to be changed on the map is currently adjacent to properties already classified as a *“Low Density*

*Residential Neighborhood*". The amendment will simply resolve an internal inconsistency on a map for a residential neighborhood that is currently classifiable as a "Low Density Residential Neighborhood" by 2009 Comprehensive Plan policy text.

J. The proposed amendment would not result in the loss of capacity to meet other needed land uses such as housing.

**The 2009 Burien Comprehensive Plan, 2.2 LAND USE ELEMENT, Phasing of Uses and Densities, Goal PH.1, Pol. PH 1.1,** (page 2-25) states: "*Where appropriate, the City will encourage and support the use by individual property owners of alternatives to development. Such alternatives may include transfer of development rights ("TDR") to the downtown and other appropriate areas, conservation easements, open space tracts, and other mechanisms designed to permanently eliminate development.*"

The proposed amendment has the potential for no net loss of housing capacity by employing the transfer of development rights and promoting density in the downtown core which is in accordance with Burien's vision or by using the TDR to an already, high density area of the newly annexed area of Burien. If no alternatives were available such as the TDR, then this amendment change would generate a 2% loss in residential lots according to the King County Comprehensive Plan 2020 goal. The projection map (Attachment E) was prepared by the city in 1999 prior to the Land Use Map Designation change for Lake Burien Neighborhood. At that point in time, it was projected that the Lake Burien area could increase by 53 new lots (66%). Since that time, there have been a few subdivisions of property and some short plats created. So, the current number of new lots that could be put on the lake is 40+. However since that document was prepared, the city has expanded the possible new housing units in the city by creating the downtown core area. In the downtown core, buildings can be up to seven stories in height. The zoning that resulted from the creation of the Town Square Complex and similar future projects in that area could replace the target number lost around the lake. Simply stated, between the downtown area and the newly annexed, high density use areas, it will be fairly simple to accommodate 40+ housing units by 2020.

Additionally, as suggested in the Comprehensive Plan of 1997, there should be a phase-in period for any owners around Lake Burien who might claim economic loss as a result of being density land use change. The 1997 Comprehensive Plan allowed a one and a half year period before the total plan was put in place. This is allowed by the **2009 Burien Comprehensive Plan, 2.2 LAND USE ELEMENT, Phasing of Use and Densities, Goal PH.1** (page 2-25) which can be used "*To allow for the orderly phasing of current uses and densities to desired future uses and densities.*" A similar phasing period for this amendment change to the 2009 Comprehensive Plan Land Use would help any Lake Burien property owner, who might claim significant economic hardship or loss resulting from the Land Use Map change.

K. For a Comprehensive Plan Map change, either of the two following are met:

i. Conditions have so markedly changed....

This criteria is not applicable.

ii. The map change will correct a Comprehensive Plan designation that was inappropriate when established.

Since this is a 2009 Comprehensive Plan map change, the applicable designation criteria are met because a map change will correct an inconsistency between the 2009 Comprehensive Plan policy text and 2009 Comprehensive Plan maps. The 2010 Burien Comprehensive Plan will also be in compliance with the Washington State Growth Management Act (**RCW 36.70A.070 Comprehensive plans – Mandatory elements**) which mandates that a Comprehensive Plan “...shall be an internally consistent document and all elements shall be consistent with the future land use map.”

## Rezone Criteria

This next series of responses will follow the list of items requested by the city under the topic of “Rezone Criteria” shown on page 2 of the “Burien Comprehensive Plan Amendment Request” application form.

### A. The amendment is consistent with the Comprehensive Plan.

The amendment that is being proposed will make the 2010 Burien Comprehensive Plan Land Use Map consistent with the text of its policies.

### B. The amendment bears a substantial relation to the public health, safety, or welfare.

This amendment seeks to protect critical areas that involve water quality. The protection of water quality is of the utmost importance to public health and safety and is required by RCW 36.70A.

### C. The amendment is in the best interest of the community as a whole.

The protection of water quality is of value to the current community and future generations. Lake Burien is a critical area that justifies protection under the Public Trust Doctrine. Its importance as a critical area warrants a zoning map change and other related documents change to be consistent with the Burien Comprehensive Plan Land Use designation of “*Low Density Residential Neighborhood*”.

**The 2009 Burien Comprehensive Plan, 2.2 LAND USE ELEMENT, Land Use Implementation, Goal PI.1,** (page 2-37), states: “*Implement the goals and policies of the land use plan through a variety of means and mechanisms which are coordinated and consistent.*”

**The 2009 Burien Comprehensive Plan, 2.2 LAND USE ELEMENT, Land Use Implementation, Goal PI.1, Pol. PI 1.1.,** (page 2-37), states: “*The Comprehensive Plan, development regulations, functional plans and budgets should be mutually consistent and reinforce each other.*”

Therefore, if the Comprehensive Plan Land Use Map is amended; then the other city documents such as the Zoning Map and supporting text requirements and regulations regarding land use development, redevelopment and zoning will also need to be amended to be consistent with the 2010 Comprehensive Plan for the area of Lake Burien.

**Sources/References used in the preparation of the 2010 Burien Comprehensive Plan amendment request**

Burien Municipal Code 18.60.020, 18.60.310

Burien Comprehensive Plan, (2009)

City of Burien Map Collections

City of Burien records on Comprehensive Plan, (1996 – 1999)

Cooke, Sarah Spear, “*Review for the City of Burien’s Draft SMP.....*”, (March 23, 2010)

Grette Associates, Shoreline Analysis and Characterizations, (June 12, 2006, revised October 23, 2008)

Grette Associates, Shoreline Inventory, (March 27, 2008, revised October 23, 2008)

Herrera Environmental Consultants, “*Data Analysis Report: Lake Burien, Washington*”, (March 16, 2010) Zisset, Rob

King County Comprehensive Plan, (2008)

King County Land records, maps.

Letter to City of Burien Council members, John Wozniak, President, Lake Burien Shore Club, (October 30, 1997)

MRSC - Best Available Science - Critical Areas, online, (April 2010)

PSWSMRO, “Wetlands and Urbanization”, (Azous and Horner, 1997)

Revised Code of Washington (RCW), RCW 36.70A

Recommendations on Making Small Shoreline Buffers Work with Buffer Science, (March 2010)

“Science daily”, (April 13, 2009)

“The Public Trust Doctrine and Coastal Zone Management in Washington State”, Washington state Department of Ecology, (October 1991)

Whidbey Environmental Action Network v. Island County, (June 4, 2004)

# ATTACHMENT A

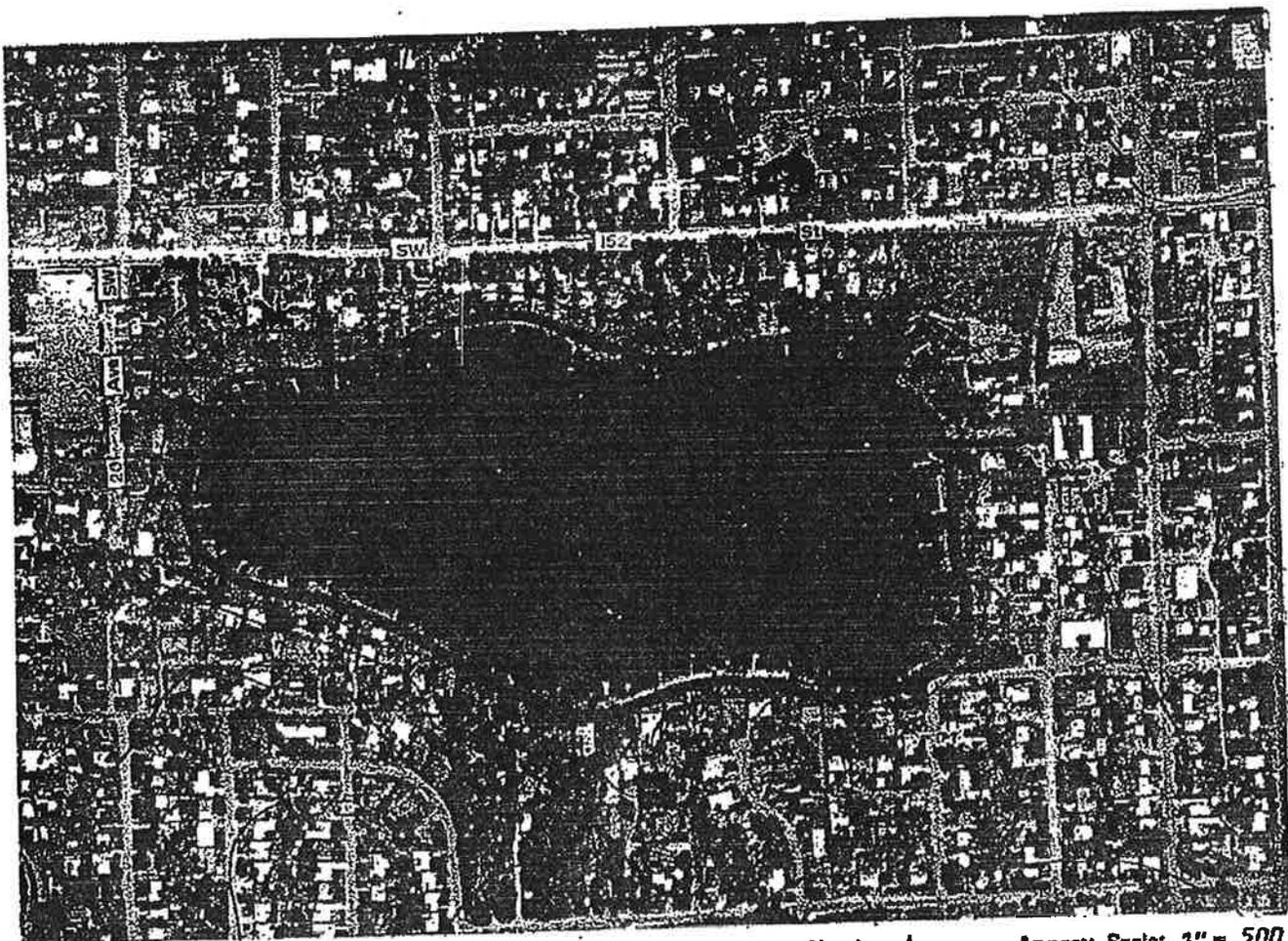


Photo Date: 5-80

North ▲

Approx. Scale: 1" = 500'

**WETLAND:** *Miller Creek 5*

**COMMUNITY PLAN AREA:** *Highline*

**LOCATION:** *NW SW 19-23-4*

*NE SE 24-23-3*

**BASIN OR DRAINAGE:** *Puget Sound*

**INVENTORY DATE:** *8-18-81*

**ACREAGE:** *42*

**CLASSIFICATION:**

**Fish and Wildlife Service**

**Common Name**

*L1UB3*

*Lacustrine, Limnetic, Unconsolidated Bottom, Mud*

*Open Water*

*L2UB2*

*Lacustrine, Littoral, Unconsolidated Bottom, Sand*

*Open Water*

**NOTE:**

The wetland edge shown above is approximate. In marshes, ponds or lakes, the transition from standing water to uplands is usually clear. However, the edges of forested or scrub/shrub wetlands are less distinct. There, the change from wetland to upland is less distinct. For a discussion, see Wetland Plants of King County and the Puget

**OBSERVED SPECIES: (refer to list in Appendix 1)**

Trees: AR, PT  
 Herbs: IP, NP, NO, PP, TL  
 Shrubs: CS, SX, SD  
 Sedges/Rushes/Grass/Fern: EX, SV  
 Birds: KF, GB, GH, CG, MA, VS, TS, BS, RB, AR, ST, SS  
 Mammals:  
 Fish:  
 Other:

**RARE/ENDANGERED/THREATENED SPECIES: (refer to list in Appendix 2)**

Recorded/Observed:  
 Potential:

**SIGNIFICANT HABITAT FEATURES:**

OUTLET: Type: Channel, Control Weir  
 Condition: Open  
 Outflow enters: Stream

POTENTIAL STORAGE: Existing Active: 21 ac. ft.  
 Potential Active: 21 ac. ft.

**GENERAL OBSERVATIONS:**

**WETLAND EVALUATION SUMMARY:**

Data was collected in the five categories shown below. Within each category the data was evaluated to produce numerical values. Composite values for each category were produced in order to compare each wetland to other wetlands in its sub-basin and in King County. The result of that comparison was a percentile rank. The percentile is expressed on a scale of one hundred and indicates the percent of wetlands that scored equal to or below that particular site. For example, a percentile rank of 80 under sub-basin means that the wetland scored equal to or better than 80 percent of all sites within the sub-basin for that evaluation category. NOTE: The percentile ranks are valid only within the individual evaluation category and are intended solely for reference and comparison.

Evaluation Category	Rank (by percentile)	
	Sub-basin	County-wide
<b>Hydrology:</b> runoff storage potential, water quality, potential for minimizing damage in downstream areas	85	80
<b>Biology:</b> quality of habitat, abundance and diversity of plant and animal species	85	76
<b>Visual:</b> diversity and contrast of wetland and surrounding vegetation, surrounding landforms	42	24
<b>Cultural:</b> types of access, proximity to schools/institutions, overall environmental quality	100	99
<b>Economic:</b> presence of agriculture/peat extraction, anadromous or game fish, game birds or mammals of commercial value	100	69

**WETLAND RATING:**

Each wetland was assigned one of three possible wetland ratings. The wetland ratings were determined by examining the scores of selected inventory tasks, specific data or percentile ranks for individual evaluation categories. The criteria used to assign the wetland ratings are described in the Introduction. For each rating a number of specific guidelines for new development in or adjacent to wetlands were prepared. The guidelines are intended to assist in carrying out King County's Sensitive Areas Ordinance and other wetland policies. They are included in a separate report titled "Guidelines for King County Wetlands".

Wetland Rating: 2

# ATTACHMENT B

## DATA ANALYSIS REPORT

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### Lake Burien, Washington

Prepared for

Lake Burien Shore Club  
15702 13th Avenue SW  
Burien, Washington 98166

Prepared by

Herrera Environmental Consultants  
2200 Sixth Avenue, Suite 1100  
Seattle, Washington 98121  
Telephone: 206.441.9080

March 16, 2010

.....

**Note:**

Some pages in this document have been purposefully skipped or blank pages inserted so that this document will copy correctly when duplexed.

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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.

### ***Chlorophyll 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: *Peridinium*, *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

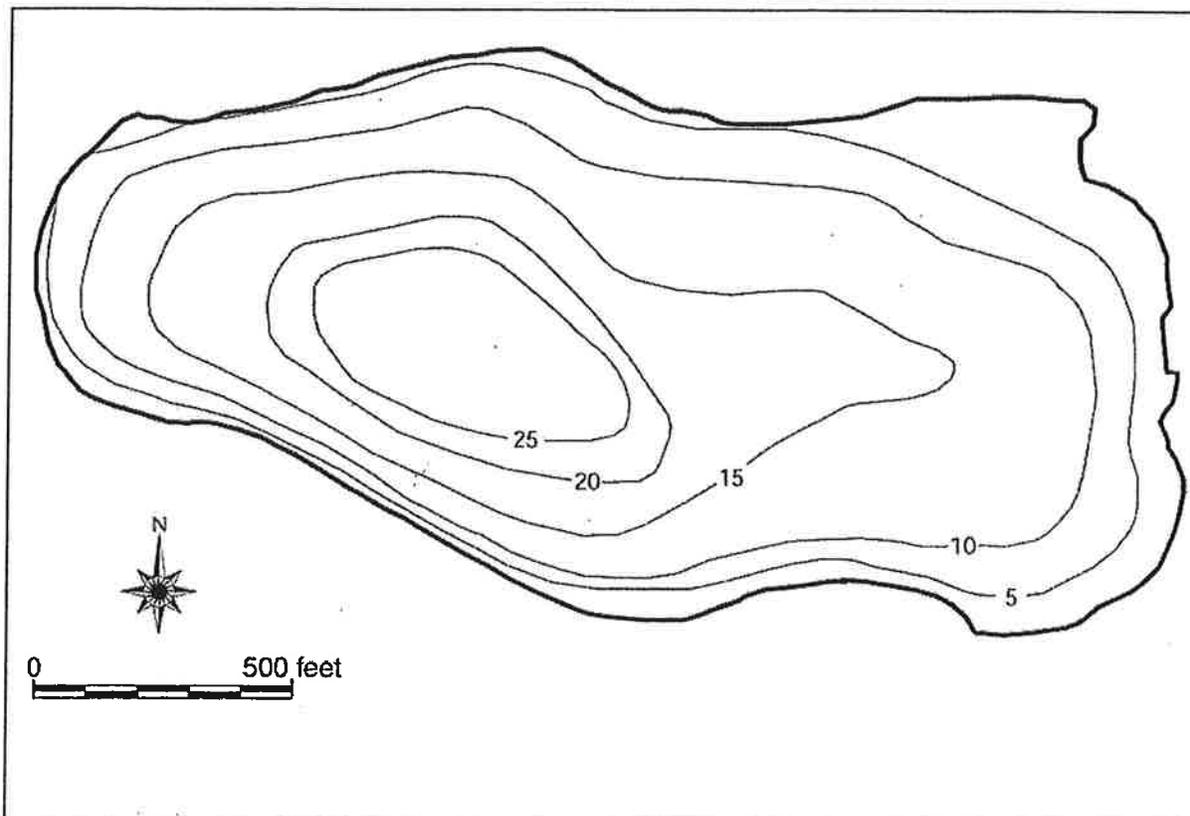


Figure 1. Lake Burien bathymetry showing depth contours in feet (source: Messick 2010).



Figure 2. Lake Burien watershed (source: Messick 2010).

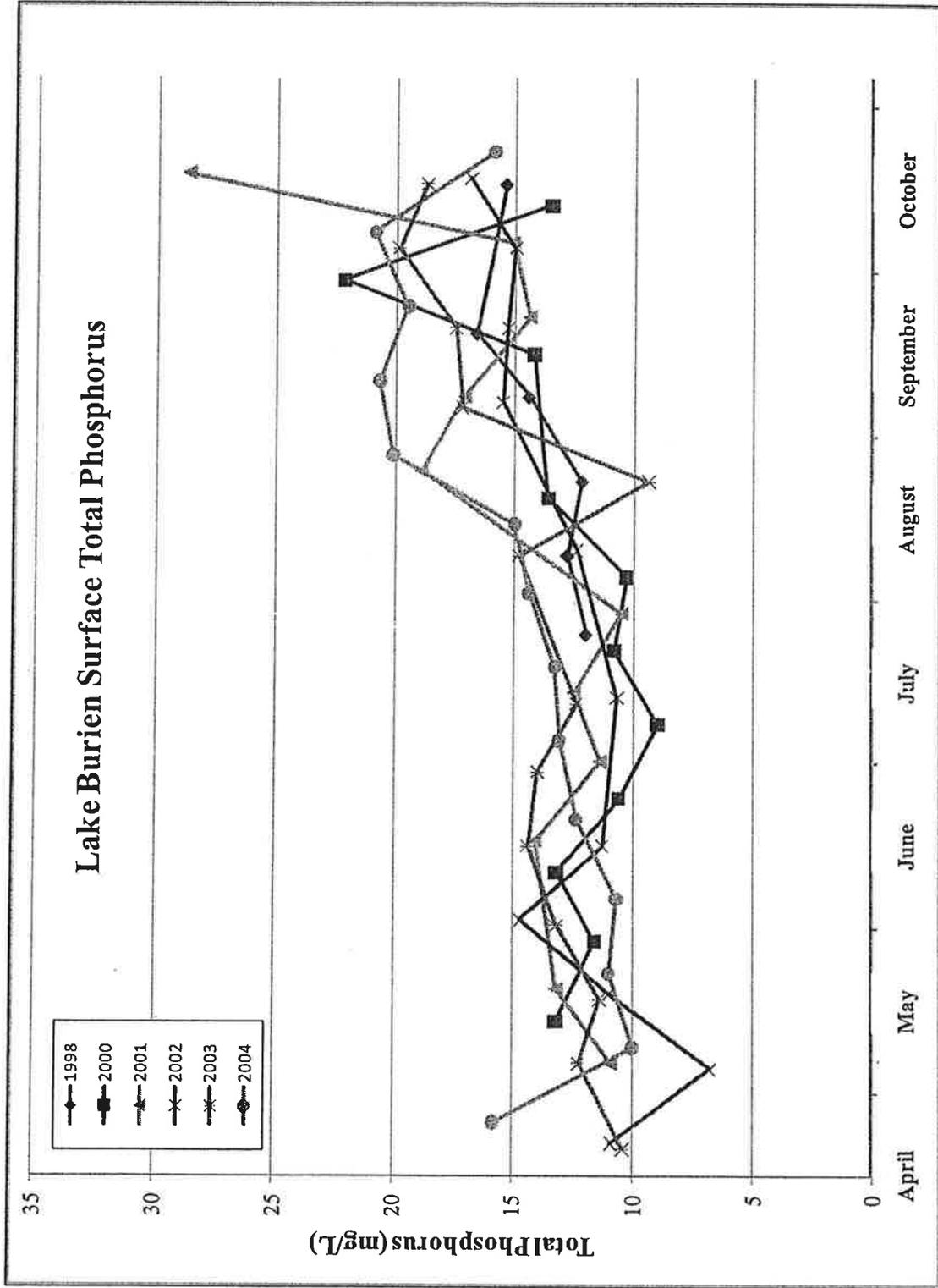


Figure 3. Lake Burien total phosphorus concentrations at 1 meter depth (source: King County 2010).

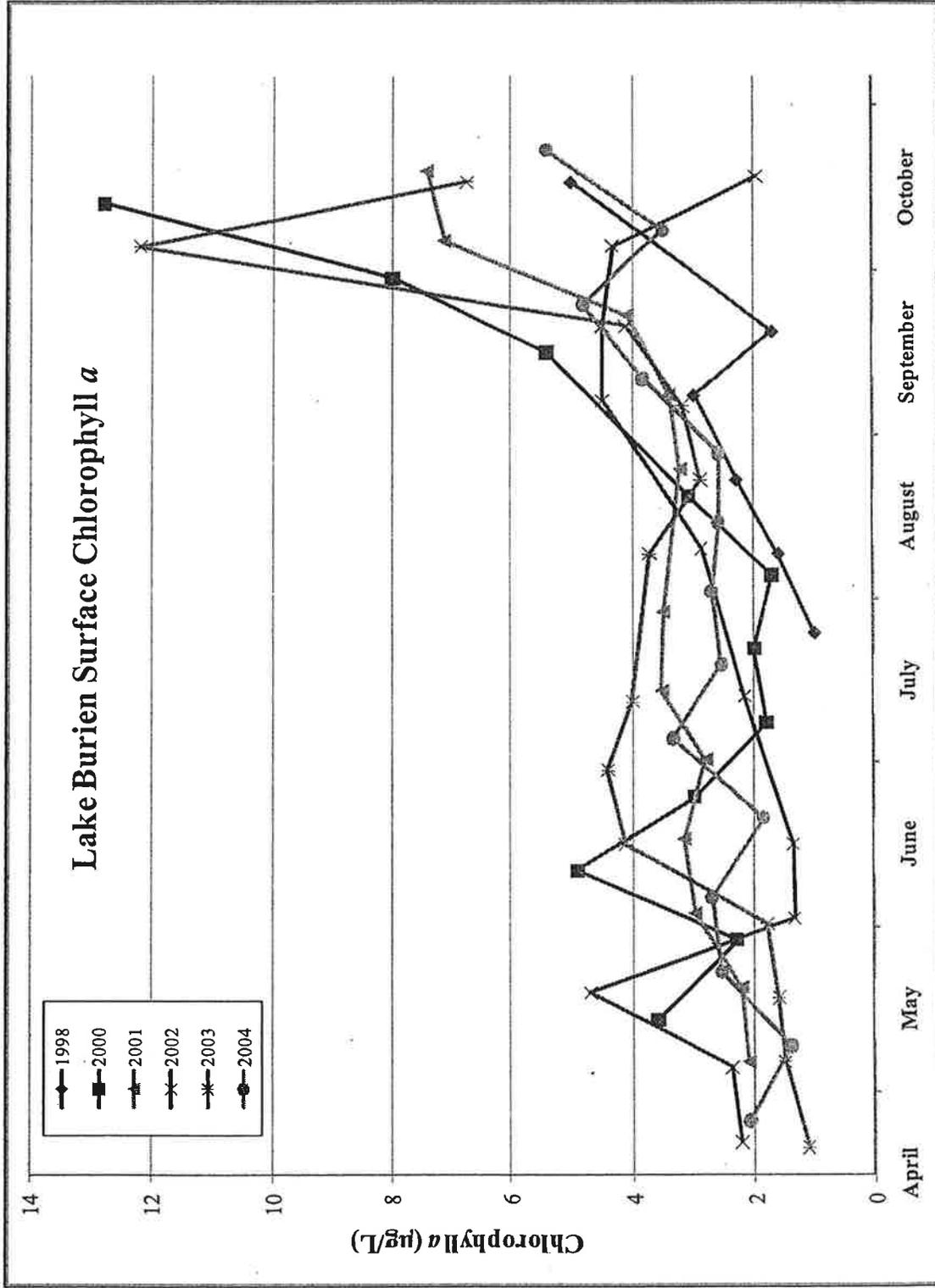


Figure 4. Lake Burien chlorophyll a concentrations at 1 meter depth (source: King County 2010).

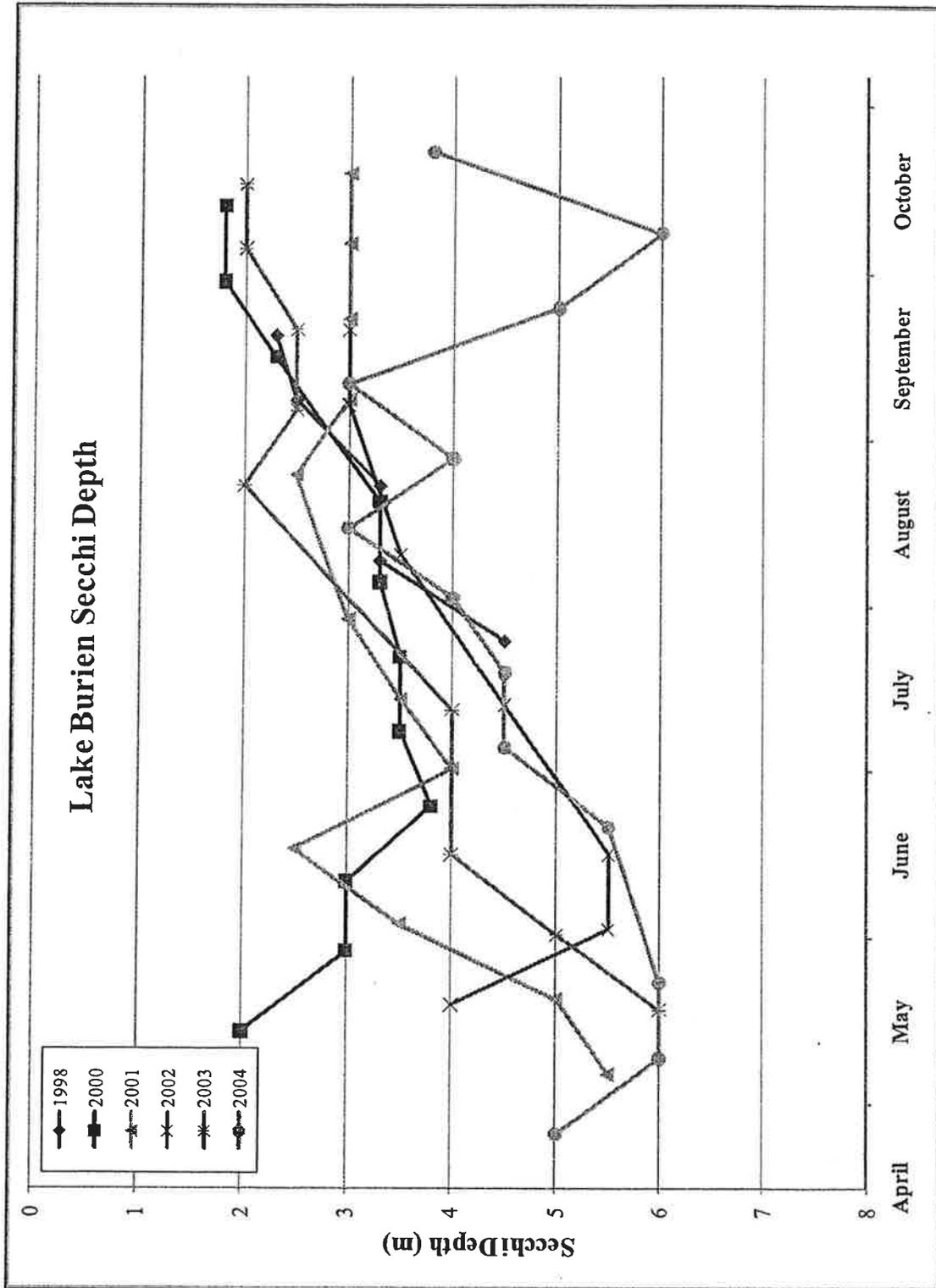


Figure 5. Lake Burien Secchi depths (source: King County 2010).

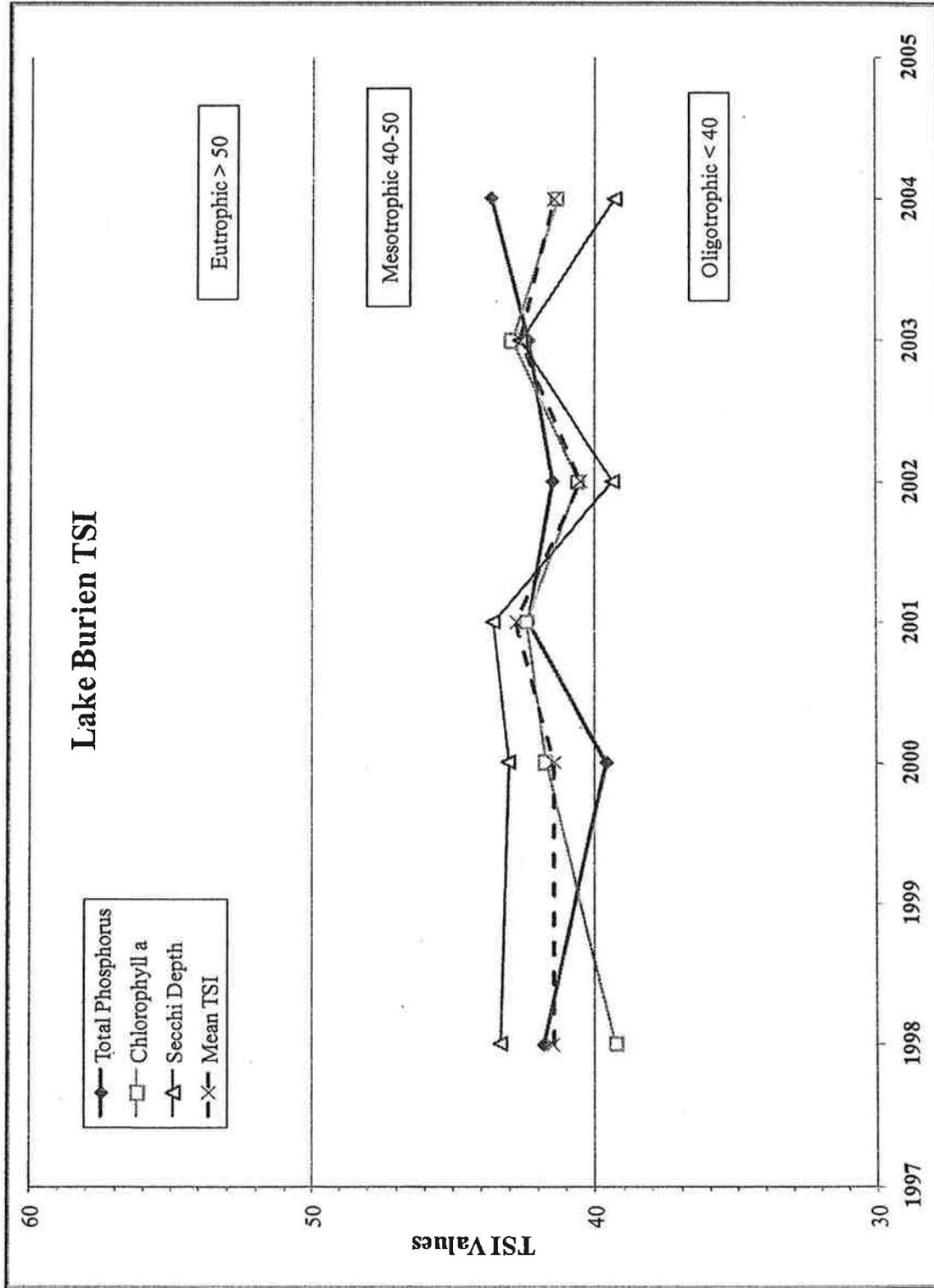
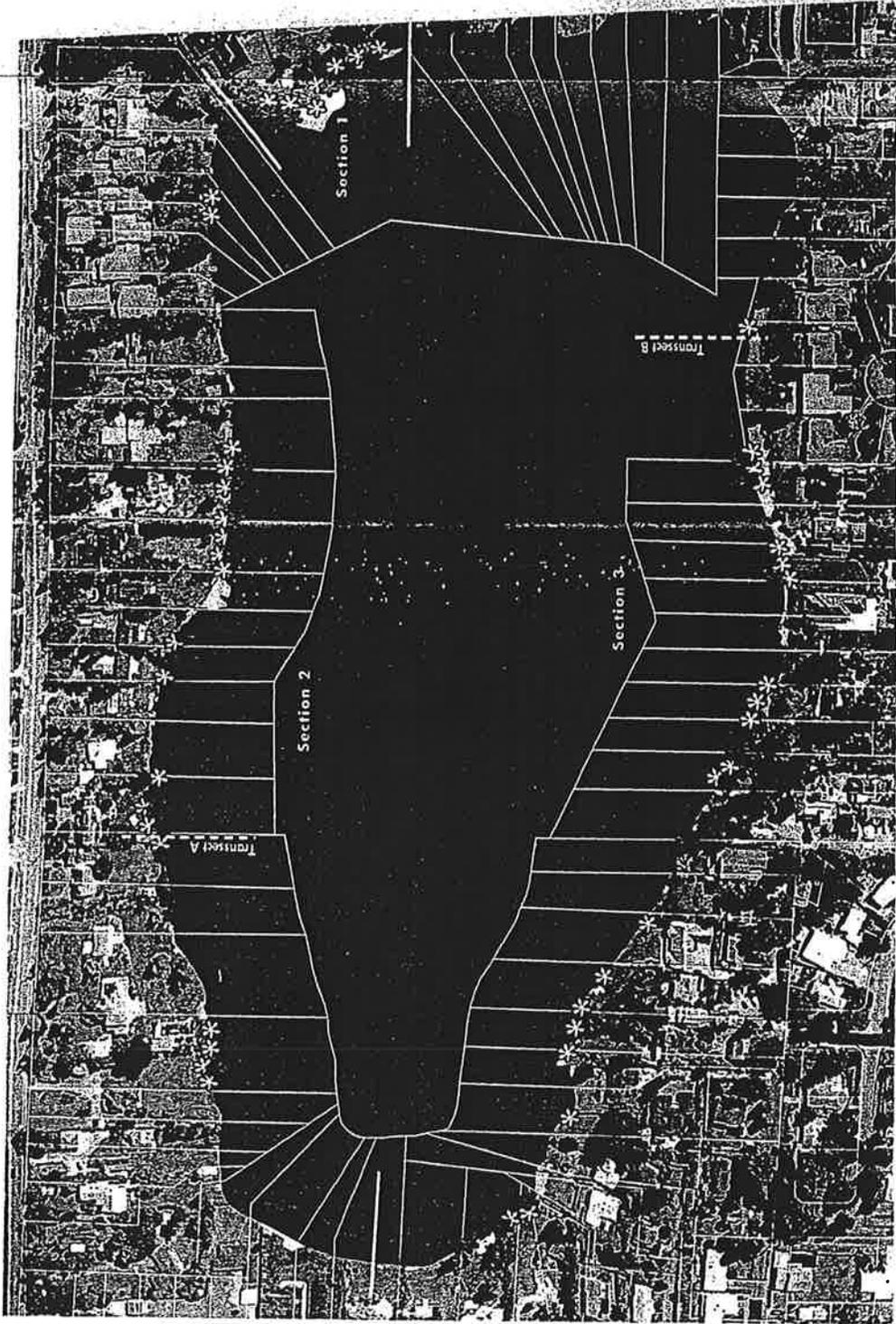


Figure 6. Lake Burien trophic state indices.

Figure 7X  
**Lake Burien**  
 Weed Location Map



- LEGEND**
- Lythrum salicaria*  
(Purple Loosestrife)
  - Lysimachia vulgaris*  
(Garden Loosestrife)
  - Phalaris arundinacea*  
(Reed Canary Grass)

- Stream
- Section boundary
- Transect line
- Flooding
- Emergent
- Submergent
- No plants or sparse
- No plants—deep
- Parcel boundary



0 100 200 300 Feet  
 October 1999

Produced by:  
 GIS/Visual Communications Unit, WLR  
 King County Department of Natural Resources  
 File Name: 9910 Burien AquaticMap.apr

Figure 7. Lake Burien 1999 aquatic plant map (source: King County 1999).



## Purple Loosestrife and Garden Loosestrife on Lake Burien

Surveyed July and September 2009

- Legend**
- garden loosestrife
  - purple loosestrife
  - ▬ parcel boundaries



March 09, 2010

Figure 8. Lake Burien 2009 purple loosestrife and garden loosestrife locations (source: Messick 2010).



Years with HEC: 20

### Credentials

M.S. in Water Resource Management, University of Washington, 1980

B.S. in Environmental Biology, University of Calgary, 1978

WSDOT Construction Site Erosion and Spill Control Certification Course, 2001

OSHA 40-Hour Health and Safety Training for Hazardous Waste Sites, since 1988

Scuba Diving Certification, 1979

### Specialties

Lake management

Water quality

Stormwater management plans

Marine and freshwater sediment

Monitoring and quality assurance plans

## Rob Zisette

### Aquatic Science Principal

Rob Zisette, an aquatic science principal, has 28 years of professional experience specializing in surface water management, including lake restoration projects, aquatic plant management studies, stormwater management plans, and environmental impact statements. He has developed and implemented monitoring and quality assurance project plans for various freshwater and marine and water and sediment quality investigations. Mr. Zisette has mapped aquatic plants, evaluated aquatic plant management techniques, developed aquatic nuisance prevention plans, assessed plankton communities, identified nutrient sources, and evaluated lake restoration techniques in lakes and reservoirs. He has assessed benthic invertebrate populations, fish habitat, and riparian conditions in lakes and streams. He has evaluated nonpoint source pollution and the effects of best management practices (BMPs) in urban drainage basins. Additional experience includes water quality impact analysis for solid and hazardous waste management projects, sediment quality characterization and dredge disposal analysis for marine sediment management projects, laboratory analysis of water samples for various chemical and biological parameters, and quality assurance review of field and laboratory data.

### Example Lake Projects:

#### Vancouver Lake Research Plan and Management Alternatives

Vancouver Lake Watershed Partnership, Vancouver, WA

Mr. Zisette provided technical input to the development of a 5-year research plan for Vancouver Lake that included research on water dynamics, nutrients, sediment, food web interactions, toxic contaminants, and fish and wildlife habitat. He also provided technical review of a summary of management action alternatives for the control of cyanobacteria in Vancouver lake.

#### Lake Steilacoom Calcium Oxide Treatment Study

City of Lakewood, WA

Mr. Zisette developed a quality assurance project plan to monitor a series of calcium oxide treatments in Lake Steilacoom for the City of Lakewood. Mr. Zisette coordinated water quality monitoring conducted twice a month at seven lake stations, and provided technical review of a report that evaluated treatment impacts and effectiveness. He is currently conducting a feasibility study of treating the lake with aluminum sulfate.

#### Lake Youngs Reservoir Limnological Studies

City of Seattle, WA

Mr. Zisette evaluated the feasibility of techniques for controlling off-flavors produced by periphytic blue-green algae (cyanobacteria) in Lake Youngs Reservoir for Seattle Public Utilities. He presented feasibility findings and a study approach to a workshop comprised of limnologists and stakeholders for the selection of preferred alternatives. Mr. Zisette designed in-reservoir tests and prepared a monitoring and quality assurance project plan for evaluating the effectiveness of four preferred alternatives: chlorine tabs, granulated copper algicide, aluminum sulfate, and sediment capping. He used scuba diving to treat two sets of test plots (shallow and deep) and collect periphyton, water, and sediment samples. He designed a long-term periphyton monitoring program, and conducted 18 periphyton surveys that included underwater videotaping and the collection of replicate periphyton samples along survey transects. Mr. Zisette coordinated the testing of geosmin and MIB production by odor-producing algae cultures, and he prepared a

taste and odor management plan based on results of the study. He also designed a comprehensive, long-term monitoring program for tracking changes in water quality and enhancing current knowledge of ecological relationships in the reservoir. Mr. Zisette assisted with the development of a water and phosphorus budget for this drinking water reservoir to quantify effects of drawdown from changes in ground water inflow and internal phosphorus cycling. He prepared a monitoring plan for evaluating effects of an air diffusion mixing system that was designed to reduce the short-circuiting of inflow through Lake Youngs. He designed and implemented special studies for evaluating the cycling of phosphorus, organic carbon, and copper between sediments and waters in shallow regions of the reservoir. Mr. Zisette prepared an aquatic plant management plan, installed bottom barriers, and successfully employed a hand-pulling technique to eradicate an early infestation of Eurasian watermilfoil. He conducted three aquatic plant surveys using sonar, visual, and sampling techniques for mapping the distribution, density, and biomass of aquatic plant species. Mr. Zisette co-authored an exotic aquatic species prevention program that included fact sheets and equipment decontamination procedures for the control of zebra mussels and invasive plants.

**Lake Youngs Limnology Expert Panel Workshop**  
City of Seattle, WA

Mr. Zisette participated in a workshop with other limnology experts to evaluate observed trends in drinking water quality primarily associated with algae growth in Lake Youngs for Seattle Public Utilities. Mr. Zisette evaluated spatial and temporal trends in key hydrologic and water quality parameters using graphical and statistical analysis of a comprehensive set of limnological data collected over a 15-year period at eight monitoring sites located in Lake Youngs and the Cedar River Watershed. He prepared a report that summarized the observed trends, presented the data analysis findings to the expert panel, participated in discussions among experts at a workshop, and provided recommendations for future data collection and analysis to address water quality concerns.

**Union River Reservoir Monitoring and Operation Evaluation**  
City of Bremerton, WA

Mr. Zisette developed a comprehensive monitoring program for the Union River Reservoir, which is impounded by Casad Dam and is the primary source of the unfiltered, 8-mgd drinking water system operated by the City of Bremerton. Existing monitoring procedures and historical data were reviewed to provide recommendations for changes in sampling station locations/depths, sampling frequency, and sample analysis parameters and methods. Mr. Zisette assisted the City with monitoring levels of cyanobacteria (blue-green algae) and microcystin for comparison to human toxicity criteria established by the World Health Organization. Mr. Zisette investigated the cause of excessive periphyton (attached filamentous algae) growth in the reservoir outlet (Union River) that resulted in filter clogging complaints from customers during the summer of 2002. He established appropriate monitoring procedures for tracking periphyton growth and developed reservoir operating guidelines to prevent nuisance levels of periphyton growth in the future. Mr. Zisette provided action levels for various monitoring parameters, develop outlet gate selection criteria to optimize water quality for various reservoir surface elevations, and provided training of City staff on limnological principles and methods for collecting periphyton samples.

**Green Lake Alum Treatment and Integrated Phosphorus Management Plan**  
Seattle Parks and Recreation, WA

Mr. Zisette managed a project providing planning, engineering, and monitoring services to Seattle Parks and Recreation for the treatment of Green Lake with aluminum sulfate (alum) during the spring of 2004 to reduce the internal loading of phosphorus and resulting toxic algae blooms. He conducted a comprehensive study to determine the optimum approach to treating Green Lake with alum. Mr. Zisette prepared an integrated phosphorus management plan (IPMP) to obtain coverage under the Washington Department of Ecology's aquatic nuisance plant and algae control National Pollutant Discharge Elimination System (NPDES) general permit. He coordinated engineering and monitoring services for the 14-day alum treatment of Green Lake in the spring of 2004 that included preparation of the treatment specifications, drawings, and engineering cost estimate; contractor bid review and selection; and monitoring to assess pre-treatment, treatment, and post treatment water quality conditions. He prepared the alum treatment monitoring report presenting construction oversight and water quality monitoring results, and comparing those results to the project

objectives. Mr. Zisette also conducted stormwater monitoring and evaluated pollutant sources and treatment methods for controlling inputs of phosphorus and fecal coliform bacteria to the lake. He collected and analyzed sediment cores using divers to evaluate the presence of alum in lake sediments, and conducted underwater video surveys of the treated lake bottom to document disturbance by common carp and other benthic fish. He also developed a carp bioturbation model that predicts effects of sediment disturbance by common carp on lake phosphorus concentrations and loadings. Mr. Zisette prepared the post-treatment monitoring report presenting results of water quality monitoring, sediment monitoring, and carp bioturbation modeling. He also mapped aquatic plants in Green Lake using sonar and GPS, and recommended methods for control of Eurasian watermilfoil.

### **City of Portland Roslyn Lake Alternatives Analysis**

City of Portland, OR

Mr. Zisette prepared a water quality modeling report for the City of Portland Water Bureau that evaluated future conditions of Roslyn Lake in Sandy, Oregon resulting from the decommissioning of a power plant on this storage reservoir. He reviewed a previous water quality modeling effort and gathered background hydrology and water quality data. Mr. Zisette developed lake morphometry and hydrology alternatives that were based on protection of beneficial uses, a new source of inflow, and dramatic reduction of inflow rates. Mr. Zisette selected PHOSMOD as an appropriate model and used it to estimate the seasonal and long term water quality effects of the chosen alternatives. He presented modeling and sensitivity analysis results at a lake management conference.

### **Capitol Lake Water Quality Studies**

Washington Department of General Administration, Olympia, WA

Mr. Zisette prepared a monitoring plan and coordinated field activities for evaluating impacts on water quality, benthic invertebrates, and fish from the drawdown of Capitol Lake in Olympia, Washington. He monitored water quality in Capitol Lake and Budd Inlet before, during, and after lake drawdown.

### **Capitol Lake Adaptive Management Plan**

Washington Department of General Administration, Olympia, WA

Mr. Zisette evaluated sediment quality and dredge disposal options to assist the Washington Department of General Administration with the development of a sediment management strategy for Capitol Lake in Olympia, Washington. He reviewed historical sediment characterization studies and identified additional testing requirements for disposal of dredged sediments at either an upland or open-water disposal site. Mr. Zisette prepared a sediment sampling and analysis plan for review by PSDDA agencies. He collected replicate sediment cores from four locations in a proposed dredging site, validated data according to PSDDA procedures, and compared results to criteria established by PSDDA, MTCA, Thurston County, and surface water quality standards. Mr. Zisette identified locations of potential upland disposal sites, evaluated truck and rail transportation alternatives, summarized permitting requirements, and recommended the most cost-effective method for the handling and disposal of dredged lake sediments.

### **Boundary Reservoir Water Quality Assessment**

Seattle City Light, WA

Mr. Zisette assisted with the development and implementation of a water quality monitoring program for evaluating trophic conditions and potential bull trout habitat in a 12-mile long impoundment of the Pend Oreille River. He evaluated spatial and temporal variability of trophic state indicators (secchi depth, total phosphorus, and chlorophyll a) and plankton populations in the reservoir based on data collected for the monitoring program and previous studies.

### **Green Lake Phase IIC Restoration Project**

Seattle Parks and Recreation, WA

Mr. Zisette coordinated monitoring of water quality in Green Lake, Seattle, Washington, for evaluating the effects of alum treatment. Mr. Zisette prepared specifications for the purchase of an aquatic plant harvester and assisted in developing a harvesting plan for the control of Eurasian watermilfoil in the lake. Mr. Zisette prepared and implemented the stormwater quality monitoring plan for sampling five storm events per year at

17 locations. He evaluated the potential for internal phosphorus loading from results of diurnal studies. Mr. Zisette coordinated development of the lake's water budget and stormwater phosphorus budget.

**Silver Lake Phase II Restoration Project**

Cowlitz County, WA

Mr. Zisette coordinated and participated in monitoring water quality and discharge during five storm events at the two largest inflow streams and the outlet of Silver Lake in Cowlitz County, Washington for evaluating the effects of grass carp introduction. He was responsible for development of the lake's water budget over a two-year period, which included compilation of precipitation, evaporation, and lake level data and modeling stream inflow.

**Horseshoe Lake Phase II Restoration Project**

City of Woodland, WA

Mr. Zisette coordinated monthly water quality sampling and annual benthic invertebrate sampling at Horseshoe Lake in Woodland, Washington for evaluating the effects of lake flushing and alum treatment.

**Lake Sacajawea Phase II Restoration Project**

City of Longview, WA

Mr. Zisette analyzed water samples for various constituents and evaluated the effects of lake flushing upon plankton communities for the restoration analysis of Lake Sacajawea for the City of Longview.

**Lake Ballinger Phase II Restoration Project**

City of Mountlake Terrace, WA

Mr. Zisette mapped the distribution and density of aquatic plant species using a combination of sonar, visual, and sampling techniques in Lake Ballinger for the City of Mountlake Terrace. He analyzed water samples and reported on nutrient and plankton interactions in the lake.

**Phantom Lake Phase I and II Restoration Projects**

City of Bellevue, WA

Mr. Zisette collected water samples from monitoring wells, seepage meters, and lake inlets for the restoration analysis of Phantom Lake for the City of Bellevue. He coordinated development of the lake's water budget and calculation of stormwater nutrient loads using a spreadsheet model.

**Lake Lawrence Phase I Restoration Project**

Thurston County, WA

Mr. Zisette monitored well points and domestic wells on a quarterly basis for the diagnostic study of Lake Lawrence for Thurston County. He evaluated impacts of existing and future land use on water quality and recreational use of the lake. Mr. Zisette assessed chemical results of lake sediment cores for impacts of historical practices in the watershed on the lake's trophic condition.

**Martha Lake Phase I Restoration Project**

Snohomish County, WA

Mr. Zisette coordinated the stormwater monitoring program for the diagnostic study of Martha Lake for Snohomish County. He collected water samples and flow measurements on an hourly basis at three stations for four storm events.

**Pine Lake Phase I Restoration Project**

King County, WA

Mr. Zisette monitored and reported on the lake nutrient budget and trophic state for the diagnostic study of Pine Lake for King County. He identified a wetland as the major external source of phosphorus and primary cause of excessive algal growth in the lake.

# ATTACHMENT C



## COOKE SCIENTIFIC

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COOKESS@COMCAST.NET WWW.COOKESSCIENTIFIC.COM

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, its 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 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

the lakeshore frontage of a particular lot. The herbaceous patches are dominated by soft rush 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.

### **References**

City of Burien, Washington. December 2009. Ordinance 528. City of Burien, Burien Comprehensive Plan Update.

City of Burien 2003. Burien Municipal Code. Chapter Title 19.

Grette Associates. 2008 City of Burien Shoreline Master Program Update Shoreline Inventory.

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 Grette'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 1/2 of

- Grette Associates. 2008 City of Burien Shoreline Master Program Update Shoreline Analysis and Characterization.
- Grette and Associates. 2009 City of Burien Shoreline Master Program Update Cumulative Impacts Analysis.
- Grette and Associates. 2009 City of Burien Shoreline Master Program Update Shoreline Restoration Plan.
- King County Water Quality in Lakes report. 1998 – 2004. Lake testing  
<http://your.kingcounty.gov/dnrp/wlr/water-resources/small-lakes/data/lakepage.aspx?SiteID=43>
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<http://your.kingcounty.gov/dnrp/wlr/water-resources/small-lakes/data/lakepage.aspx?SiteID=43>
- Sheldon, D., T. Hruba, P. Johnson, K. Harper, A. McMillan, T. Granger, S. Stanley, and E. Stockdale. March 2005. Wetlands in Washington State - Volume 1: A Synthesis of the Science. Washington State Department of Ecology. Publication #05-06-006. Olympia, WA.
- Washington State. Revised Code of Washington *RCW 36.70A.172. Growth Management ACT.*
- Washington State. 1972. Revised Code of Washington 90.58. Shoreline Management ACT.
- Washington State. 2003. (WAC 173-26, Part III) Shoreline Master Program Guidelines
- Washington State Department of Ecology. 2010. The Coastal Atlas. Web resource. <https://fortress.wa.gov/ecy/coastalatlus/viewer.htm>
- Washington State Department of Ecology, U.S. Army Corps of Engineers Seattle District, and U.S. Environmental Protection Agency Region 10. March 2006. Wetland Mitigation in Washington State – Part 1: Agency Policies and Guidance (Version 1). Washington State Department of Ecology Publication #06-06-011a. Olympia, WA.

**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



# Cooke Scientific

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## Sarah Spear Cooke, Ph.D.

Wetlands Ecologist, Soil Scientist, Plant Ecologist and Taxonomist

### Expertise

- Wetlands creation, restoration, and enhancement , CAD design and implementation
- Wetlands delineation and delineation methodology instruction
- Invasive weed identification and development of control strategies, control manuals, and field oversight of control efforts
- Ordinary High Water Mark (OHWM) determinations and instruction.
- Regulatory and Permitting Assistance, on local, state and national levels
- Wetland Functional Evaluation, including the "SAM" method and a botanical expert on the development of the State wetland manual
- Masters in Botanical taxonomy, Doctorate in Botany and soils, specializing in wetland plants
- Author *A Field Guide to the Common Wetland Plants of Western Washington & Northwestern Oregon*, published by the Seattle Audubon Society
- Certified soil scientist (hydric soils), soils mapping and classification
- Watershed Analysis
- Rare plant surveys and mapping
- Mine reclamation ecology and uplands restoration

Dr. Cooke has 24 years of experience in wetlands ecological research and environmental consulting, and 27 years of experience in ecological and geological research, in the Pacific Northwest. She specializes in habitat creation, restoration and enhancement projects, both in design and implementation. She excels in permitting assistance on the local, state, and national level. She was a co-senior investigator for the Puget Sound Wetland and Stormwater Management Research Program, a 10-year systematic wetland ecosystem study conducted under the auspices of the Environmental protection Agency, The US Geological Survey, Washington State, and King County in Washington State. Dr. Cooke's areas of expertise include: wetland and stream inventories, delineation, restoration/mitigation designs, baseline studies, permitting, and monitoring programs; weed identification and control; rare plant surveys and vegetation mapping; soil assessments; watershed analysis; and environmental assessments in the region. She has more experience in developing assessment methodologies than any other private wetlands consultant in the PNW. She has extensive experience in classroom instruction of wetlands ecology, restoration ecology and implementation, delineation protocols, functional assessment, weed identification and control, hydric soils, and wetland plant identification. She has 16 years experience in managing multidisciplinary teams, supervising subcontractors, and generating reports, and marketing from a consulting perspective. She currently teaches restoration ecology and implementation, wetland botany, and weed ecology and control at Portland State University. She is a former instructor for the Wetland Certification Program at the University of Washington and Wetland Ecology and Science for the graduate program at the Evergreen State College. She has been teaching classes for the Coastal Training Program through the

Washington State Department of Ecology for eight years and has taught wetland Delineation for the US Army Corps of Engineers. She is also the senior author/editor of the *A Field Guide to the Common Wetland Plants of Western Washington & Northwestern Oregon*. And the Semi Quantitative Wetlands and Buffer Functional Assessment Method used since 2001 by most wetland practitioners.

## Education

Ph.D., University of Washington, Dissertation title: The Edaphic Ecology of Two Northwest American Composite Species. Major: Botany, Geology, and Soils; minor Statistics, Plant Physiology, and Genetics  
M.S., Plant Taxonomy, University of Washington, 1987.  
Honors Degree, Geobotany, McGill University, 1979.  
B.S., Biology and Geology, McGill University, 1979.  
Undergraduate studies in Biology and Geology at Purdue University 1974-76.

## Experience

- Self-employed, Cooke Scientific. Seattle Washington. Projects include wetland mitigation (restoration, enhancement, and creation), wetland delineations, weed identification and control, wetland inventories, wetland functional assessments, wetland and sensitive areas permitting (federal, state and local jurisdictions), rare plant surveys, vegetation and soil mapping, environmental evaluations, environmental impact statements, watershed analysis, and mine reclamation, third party regulatory review for various small jurisdictions. 1998-present.
- Western Washington Representative, Washington State Noxious Weed Board. 2005 to present. Chair, Standards committee. Developed a methodology for inventorying weeds used by County Weed boards in Wa.
- Instructor, Habitat Restoration, and Mitigation. Wetland Training Institute. Syllabus development, classroom instruction, and field trips. Spring 2010.
- Instructor, PNW Winter Twig ID. Coastal Training Program, Washington State Department of Ecology, classroom instruction, and field trips. 2007-present
- Instructor, Grass, Sedge and Rush ID in PNW. Coastal Training Program, Washington State Department of Ecology, classroom instruction, and field trips. 6-class contract, 2004-present.
- Instructor, Washington State Wetland Rating System in Western Washington. Coastal Training Program, Washington State Department of Ecology, classroom instruction, and field trips. 6-class contract, 2005-2006.
- Instructor, Weeds of the Pacific Northwest. Portland State University, Portland, Oregon. Syllabus development, classroom instruction, and field trips. Summer 2004.
- Development Advisory Team. Washington State Wetland Rating for Western Washington. Washington State Department of Ecology. 2002-2004.
- President Pacific Northwest Chapter Society of Wetland Scientists. May 1999- May 2000. Executive Vice President SWS PNW Chapter 1998-1999.
- Development Advisory Team. Washington State Functional Assessment Method. Washington State Department of Ecology. 1996-1998.
- Instructor, WNPS Native Plant Stewardship program, King, Snohomish, Pierce Counties, Washington Native Plant Society, Syllabus development, classroom instruction, Fall 1996- present.
- Instructor, Hydric soils class, University of Washington, College of Forest Resources, Center for Urban Horticulture. 1998, 2006.
- Instructor, Habitat Restoration, and Mitigation. Portland State University, Portland, Oregon. Syllabus development, classroom instruction, and field trips. Fall 1998- 2008.

- Owner, Cooke Scientific Services, Inc. Seattle, Washington. Principal Scientist and President of company. Projects include wetland mitigation (restoration, enhancement, and creation), wetland delineations, wetland inventories, wetland functional assessments, wetland and sensitive areas permitting (federal, state and local jurisdictions), rare plant surveys, vegetation and soil mapping, environmental evaluations, environmental impact statements, watershed analysis, and mine reclamation in upland and wetland areas. 1995-2003.
- Instructor, Wetland Plants of the Pacific Northwest; Winter trees and shrubs; and Grasses, Sedges, and Rushes. Portland State University, Portland, Oregon. Syllabus development, classroom instruction, and field trips. Spring 1998- present.
- Principal Scientist, wetlands Group, Pentec Environmental Inc., Edmonds, Washington. Started, marketed, and managed the wetlands group. Projects included wetland mitigations (restorations, enhancements and creations), wetland delineations, wetland inventories, wetland functional assessments, wetland and sensitive areas permitting (federal, state and local jurisdictions), rare plant surveys, vegetation and soil mapping, environmental evaluations, environmental impact statements, watershed analysis, mine reclamation in upland and wetland areas. 1990 – 1995.
- Instructor, University of Washington, Extension Services, Wetland Certification Program. Wetland Science and Ecological Processes. . Syllabus development, classroom instruction, and field trips. 1994-1996.
- Instructor, University of Washington, Extension Services, Wetlands Flora of Western Washington. Syllabus development, classroom instruction, and field trip. 1990-1996.
- Long-term Research Co-manager, Puget Sound Wetlands and Stormwater Management Research Program. Experimental design, implementation, and coordination of a five-year total ecosystem survey and monitoring study. 1987-1996.
- Project Coordinator, Senior Editor and Author. US Environmental Protection Agency/Washington Native Plant Society. A Field Guide to the Wetland Flora of Pacific Northwest Project. Grant writing, project management, technical coordination, and writing the grass, sedge, and rush sections of book. 1992-1997.
- Instructor, Washington State Department of Ecology, Wetland and Riparian Restoration, a workshop for agency staff and consultants. Co-development of syllabus, text, class instruction for the vegetation portion of the workshop. 1993.
- Co-instructor, Hydric Soils workshop. University of Washington Center for Urban Horticulture, College of Forest Resources. 1992.
- Instructor, Hydric Soils, Processes and Characteristics. University of Washington Extension Services. Development of syllabus, text, classroom instruction, and class field trip. 1992.
- Co-instructor, Wetlands Ecology. The Evergreen State College, Masters of Environmental Science. Co-development of syllabus and co-instructor for wetlands ecology, management, and regulatory policy class. 1991.
- Instructor, Interagency Wetlands Delineation Agency Training/USACOE, EPA, SCS, Fish, and Wildlife Service. Taught vegetation and soils methodology (1987 and 1989 methodologies).
- Field Biologist/Soil Scientist, King County Wetlands Inventory. Paper inventory, development of field assessment protocol, manager field-inventory. 1990.
- Professional Botanist, Washington Native Plant Society. Research, teaching workshops related to the native flora, establishment, and curator of the plant species distribution library. 1989.
- Senior Wetlands Ecologist, Shapiro and Associates. Wetland delineation, plant identification, vegetation analysis, soils assessment, aerial photo

interpretation, and report writing, with emphasis on wetlands problems, and toxic waste. 1988.

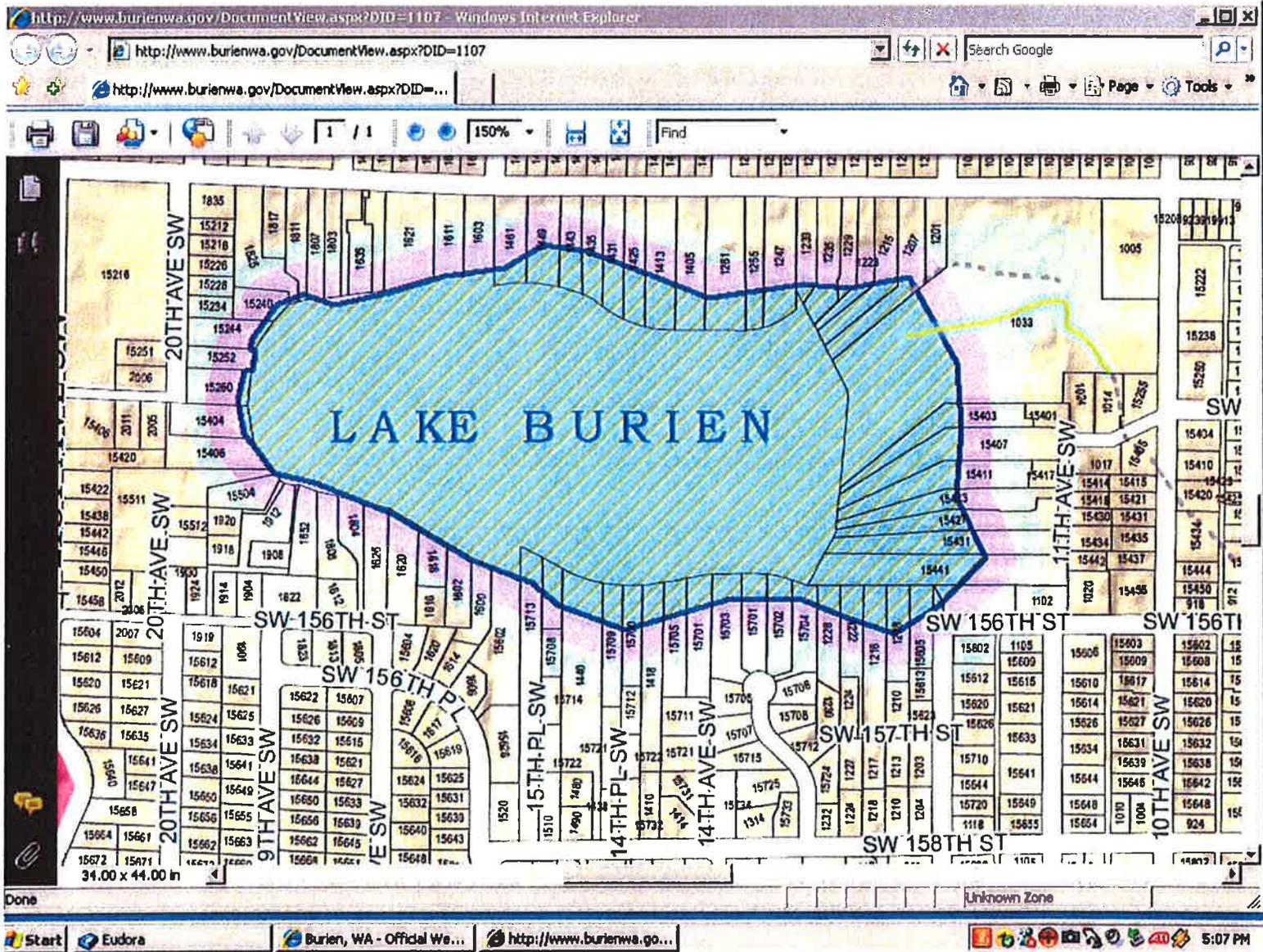
- Botany and Soils Consultant and Subcontractor, Raedeke Associates. Plant identification, vegetation analysis, soils assessment, and aerial interpretation with emphasis on wetlands problems. 1986-1987.
- Team Member, Cedar River Watershed Long-term Wetlands Monitoring Project, Seattle City Light. Design and implementation of vegetation and soils aspects of the study, and air photo interpretation. 1988.

### **Awards**

- International fellow. Society of Wetland Scientists. Dr. Cooke was one of three internationally scientists recognized by the SWS for our contributions to Wetland Science. 2003.
- Elected President, Society of Wetland Scientists, Pacific Northwest Chapter. 1999-2000.
- Best Paper Award. International Serpentine Conference, Society of Serpentine Ecology. 1999.
- Sigma Xi, Forestry Society. Elected to be a member of the Washington State Chapter of Sigma Xi, the professional Foresters Society. 1994.
- Member of Society of Wetland Scientists
- Member Society for Ecological Restoration
- Member Association of State Wetland Managers
- Member Sigma Xi
- Member Ecological Society of America
- Member Consulting Soils Scientists of America

### **Professional Affiliations**

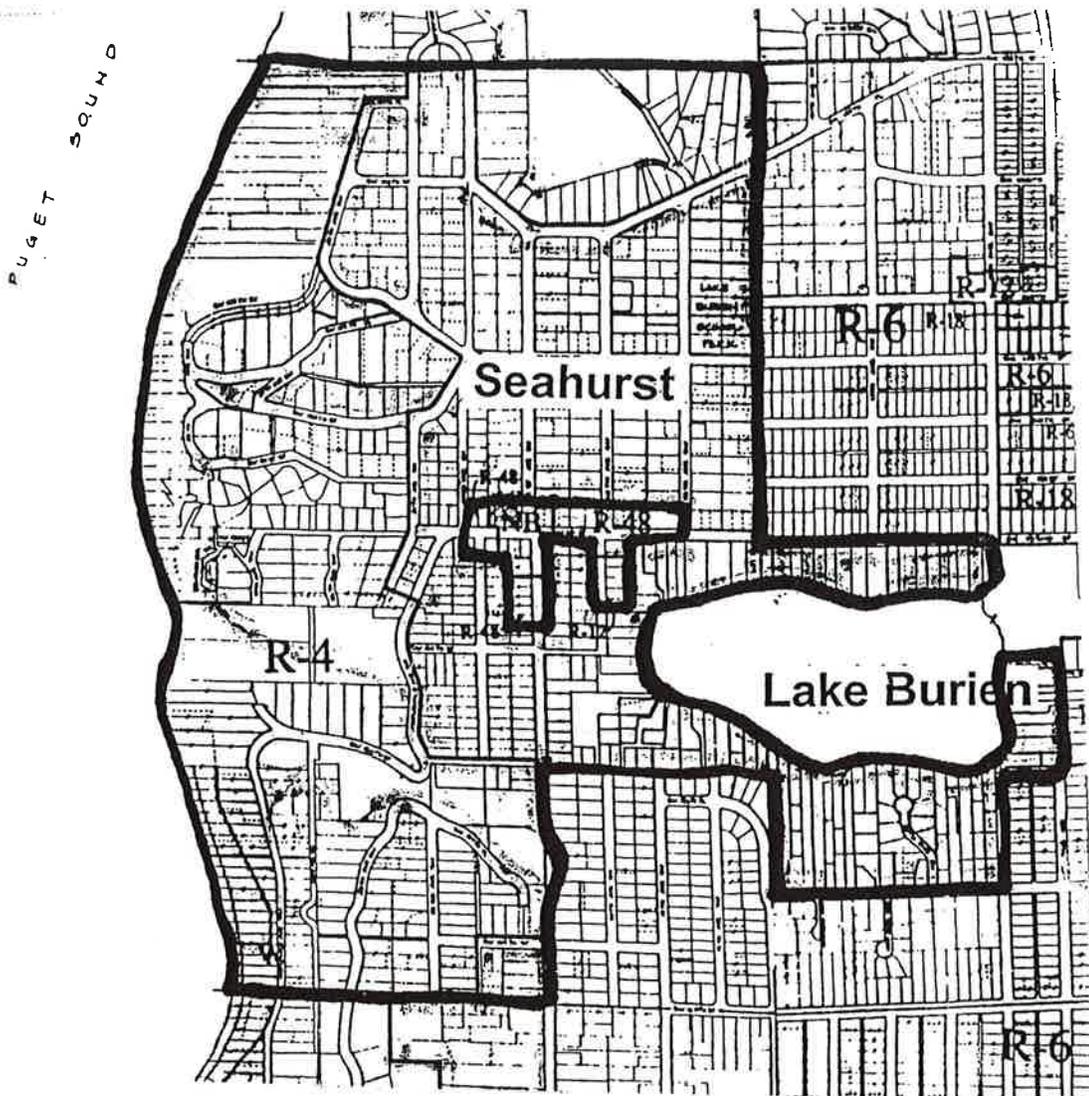
# ATTACHMENT D



aqua color /// = wetlands  
 aqua color = aquifer recharge area  
 \* tan color = seismic/no areas on Lake Burien  
 light pink = wetland buffer  
 green stream = type 4



# ATTACHMENT E



## SEAHURST ANALYSIS AREA

Potential new lots per existing zoning (at 7,200 or 9,600 square feet per lot)	413 (45% increase over existing number of lots)
Potential new lots per Comprehensive Plan (between 12,000-15,000 square feet per lot)	162 (18% increase over existing number of lots)
Base number of potential new lots per compromise "metering" system (at 7,200 or 9,600 square feet per lot)	162 (18% increase over existing number of lots)

## LAKE BURIEN ANALYSIS AREA

Potential new lots per existing zoning (at 7,200 square feet per lot)	53 (66% increase over existing number of lots)
Potential new lots per Comprehensive Plan (12,000 square feet per lot)	2 (3% increase over existing number of lots)
Base number of potential new lots per compromise "metering" system (at 7,200 square feet per lot)	2 (3% increase over existing number of lots)

TAKEN FROM 1999 ADDENDUM TO COMP. PLAN E11 F DRAFT

## C. Interests Protected by the Doctrine

### 1. Interests Protected Under Washington Law

The classic list of interests protected by the public trust include commerce, navigation, and fisheries.<sup>236</sup> The Washington Supreme Court has followed the general trend by recognizing a broad range of public interests. The court noted in Orion that it had extended "the doctrine beyond navigational and commercial fishing rights to include 'incidental rights of fishing, boating, swimming, water skiing, and other related recreational purposes.'"<sup>237</sup>

Under Washington law, environmental quality and water quality are probably also protected interests. The public's interest in fishing can only be realized if water quality and quantity are adequate to support fish.<sup>238</sup> Moreover, the Washington Supreme Court indicated in Orion that it would look favorably on a claim that protecting the environment is a public trust interest. The court noted how it has found trust principles embodied in Shoreline Act underlying policy, "which 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 . . .'"<sup>239</sup> Moreover, in another footnote, the court cited Marks v. Whitney, a California case which recognized the public interest not only in ecological values, but also in preserving tidelands in their natural state.<sup>240</sup> Therefore, given the proper case, the Washington Supreme Court may well follow several other states by recognizing water quality and environmental

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<sup>236</sup>Johnson, Water Pollution and the Public Trust Doctrine, 19 *Envtl. L.* 485, 495 (1989). Even early cases like Arnold v. Mundy, 6 N.J.L. 1, 12 (1821) recognized a broad spectrum of public interests that included "fishing, fowling, sustenance and all other uses of the water and its products."

<sup>237</sup>Orion Corp. v. State, 109 Wash. 2d 621, 641, 747 P.2d 1062, 1073 (1987), quoting Wilbour v. Gallagher, 77 Wash. 2d 306, 316, 462 P.2d 232 (1969) cert. denied, 400 U.S. 878 (1970).

<sup>238</sup>United States v. State Water Resources Board, 182 Cal. App. 3d 150, 227 Cal. Rptr. 161, 201 (1986) (holding that Water Board had authority to supervise appropriators under the public trust doctrine to protect fish and wildlife); Johnson, Water Pollution and the Public Trust Doctrine, 19 *Envtl. L.* 485, 488 (1989).

<sup>239</sup>Orion, 109 Wash. 2d at 641 n.11, 747 P.2d at 1073 n. 11, quoting Portage Bay-Roanoke Park Comm'y Council v. Shorelines Hearings Bd., 92 Wash. 2d 1, 4, 593 P.2d 151 (1979).

<sup>240</sup>Orion, 109 Wash. 2d at 641 n. 10, 747 P.2d at 1073 n.10.

Taken from state document on  
Public Trust Doctrine

domain to acquire trust burdened lands, those lands may become exempt from the trust. The few case precedents on this issue, however, are conflicting.<sup>229</sup>

Third, lands may be exempt from the public trust doctrine because of an Indian treaty or agreement<sup>230</sup> entered into prior to statehood. Presumably the trust would not apply to Indian country because of the rule that state law does not apply to Indian reservations unless Congress clearly expresses such an intent.<sup>231</sup> Whether a treaty gives a tribe title to the beds underlying navigable waters, involves conflicting presumptions. On the one hand, a fundamental principle in interpreting Indian treaties is that they are to be interpreted in the way the Indians would have understood them.<sup>232</sup> Most Indians presumably believed they were receiving the water bodies and beds within or alongside their reservations. On the other hand, under the equal footing doctrine, the federal government held the lands underlying navigable waters in trust for each future state until they entered the Union. These two legal principles collided directly in Montana v. United States.<sup>233</sup> The Court there found that the Crow treaty language did not overcome the presumption that the beds of navigable waters remain in trust for future states and pass to the new states when they assume sovereignty. The Court noted that the Crow Tribe had historically depended on buffalo and other upland game rather than on fishing. Therefore, it concluded that the state, not the tribe, held title to the bed of the Big Horn River. Whether an Indian tribe or the state holds title to the bed of navigable waters is likely to turn on the language of the treaty or agreement, and on whether the tribe has historically depended on resources located in the water or on submerged land.<sup>234</sup> If the tribe has title then the public trust interest under state law is probably extinguished, on the theory that state law does not generally apply on an Indian reservation unless Congress clearly expresses such an intent.<sup>235</sup>

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<sup>229</sup>See, e.g., U.S. v. 1.58 Acres, 523 F. Supp. 120, 124 (D. Mass. 1981) (noting that the federal government is as restricted in its ability as states are in abdicating its sovereign *jus publicum* to private individuals); but cf. United States v. 11.037 Acres, 695 F.Supp. 214 (N.D. Cal. 1988) (holding that where the federal government exercises its powers of eminent domain, the state public trust doctrine is extinguished). See also supra Section III.A. for a discussion of the existence of a federal public trust doctrine.

<sup>230</sup>No treaties were signed with Indian tribes after 1871. However, reservations were created thereafter, usually by agreement between the tribe and the Executive, approved by Congress. Additional reservations were created by Executive Order and by congressional legislation. F. Cohen, Federal Indian Law 103 (1982 ed.).

<sup>231</sup>For a general discussion of federal preemption of state law, see Cohen, supra at 270-79.

<sup>232</sup>United States v. Winans, 198 U.S. 371 (1905).

<sup>233</sup>450 U.S. 544 (1981).

<sup>234</sup>For a recent case where the court found that a tribe had title to the water beneath a navigable waterway, see Puyallup Indian Tribe v. Port of Tacoma, 717 F.2d 1251 (9th Cir. 1983), cert. denied, 465 U.S. 1049 (1984). See also Note, Not on Clams Alone: Determining Indian Title to Intertidal Lands, 65 Wash. L. Rev. 713 (1990).

<sup>235</sup>Cohen, supra at 270-79.

preservation as public trust interests.<sup>241</sup> If water quality is a protected interest, then the public trust doctrine might affect activities which degrade water quality, including discharges of wastes into public waters, activities which cause erosion and thus silting of waterbodies, and prior appropriations which reduce the assimilative capacity of waterbodies and thus result in quality degradation.<sup>242</sup> Needless to say, any application of the public trust doctrine in these areas would have to take account of existing federal and state laws on water pollution, the prior appropriation code, and the legitimate economic expectations of those affected.

Early courts did not often expressly address environmental quality as a protected public trust right. It was widely thought that nature's bounty was limitless. More recent experience has shown that pollution can limit or destroy public enjoyment of trust resources just as much as filling or committing tidelands and shorelands to private, monopoly uses.<sup>243</sup> In the past, the public trust doctrine did not allow such monopolization; now that the threat to public environmental rights is in the form of pollution and environmental degradation, the courts are expanding their interpretation of the public trust doctrine to protect the public rights from that threat.

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<sup>241</sup>Several courts have recognized environmental quality as a public trust interest. See, e.g., National Audubon Society v. Superior Court of Alpine County, 33 Cal.3d 419, 658 P.2d 709, 189 Cal. Rptr. 346 (1983); Marks v. Whitney, 6 Cal.3d 251, 259-60, 491 P.2d 374, 380, 98 Cal. Rptr. 790, 796 (1971); Kootenai Environmental Alliance v. Panhandle Yacht Club, 105 Idaho 622, 632, 671 P.2d 1085, 1095 (1983) (extending the doctrine to cover "navigation, fish and wildlife habitat, aquatic life, recreation, aesthetic beauty, and water quality"); Treuting v. Bridge and Park Commission of Biloxi, 199 So.2d 627 (Miss. 1967); Just v. Marinette, 56 Wis. 7, 17, 201 N.W. 761, 768-69 (1972) (finding a public right to preserve wetlands because "they serve a vital role in nature"). In 1987 the Oregon Legislature enacted two statutes indicating that the public trust doctrine covers water quality. Or. Rev. Stat. §§ 537.336, .460 (1987). See also Johnson, *supra* note 235, at 496-98. But cf. MacGibbon v. Board of Appeals of Duxbury, 369 Mass. 512, 517-18, 340 N.E.2d 487, (1976) (holding that preservation of ocean food chain and tidelands in natural state was not as "practical" or "productive" as dredging and filling wetlands).

<sup>242</sup>Johnson, *supra* note 35, at 505.

<sup>243</sup>D. Stale, et al., *supra* note 35, at 133.

## 2. Interests Potentially Protected in Washington

### a. Right of Public to Walk and/or Harvest shellfish on Privately Owned Tidelands

The Washington Supreme Court has not had an opportunity to consider whether the public has a right to walk across privately owned tidelands, or whether the public may dig clams on those tidelands. One commentator notes that nearly all states recognize that the public trust doctrine provides the public a right to pass and repass over public trust tidelands.<sup>244</sup> While states' courts have issued opinions which generally lend support to the public's right of access, precious few have directly addressed the issue of whether the public has a right to walk across privately owned tidelands.

For example, the Rhode Island Supreme Court in Jackvony v. Powel,<sup>245</sup> looked to Rhode Island's Constitution which guarantees to the people "all the privileges of the shore," and concluded that one of those privileges included the right to pass along the shore.<sup>246</sup> The case did not, however, involve the public's rights to pass along a privately held beach. It involved an attempt by a beach commission to fence off a beach owned by the city of Newport. Similarly, in Tucci v. Salzhauer,<sup>247</sup> a New York court held that the public had a right to pass and repass over lands owned by the Town of Hempstead. Thus, Tucci, like Jackvony, recognized a public right of passage, but did not specifically address the question of whether the public would have a right to pass over privately held tidelands.

New Jersey Supreme Court decisions suggest that the public would have a right to walk over privately held tidelands. The public's rights to use tidal lands and water "encompasses navigation, fishing and recreational uses, including bathing, swimming and other shore activities."<sup>248</sup> Presumably, "other shore activities" would include the right to walk along tidelands. Also significant is the fact that New Jersey has recognized the public's right to use the dry sand area of privately owned beaches under the public trust doctrine.<sup>249</sup> Because the New Jersey Supreme Court was willing to go so far as to recognize public's right to use privately owned dry sand areas of beaches, it probably would not have a problem recognizing the public's right to walk over privately held tidelands.

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<sup>244</sup>D. Slade et al., supra note 35, at 162.

<sup>245</sup>21 A.2d 554 (R.I. 1941).

<sup>246</sup>Id. at 558. See also Nixon, Evolution of Public and Private Rights to Rhode Island's Shore, 24 Suffolk U.L. Rev. 313, 325-26 (1990) (discussing a recent amendment to the Rhode Island Constitution that listed a right to pass along the shore as a public right).

<sup>247</sup>40 A.D. 2d 712, 336 N.Y.S.2d 721 (1972). The court noted that the public's right of passage even included the right to push a baby carriage along the shore. Id., 336 N.Y.S.2d at 724.

<sup>248</sup>Matthews v. Bay Head Improvement Association, 471 A.2d 355 (N.J. 1984).

<sup>249</sup>Id.

# ATTACHMENT G

## II. SPECIFIC TO LAKE BURIEN VOLUME I:

1. The PCP shows the Ruth Dykeman Children's Center as being zoned Downtown Commercial and as part of a Special Enhancement Area.

COMMENT: The residents and landowners on Lake Burien absolutely object to this re-zone and all the implications stated or otherwise, or that may be implied by future bureaucratic interpretation that this designation carries.

2. The residential area surrounding Lake Burien is R-3. This is covered by Pol RE 1.5 The Low Density Residential Neighborhood designation on page II-8. This is, appropriately, the lowest density of units per acre in the hierarchy of residential/multi-family designations. The Ruth Dykeman Children's Center's changed designation is covered by Pol BU 1.6 The Downtown Commercial designation on page II-18. This is a designation of higher commercial intensity of use exceeding that of the Neighborhood Center, The Intersection Commercial, and The City Center Commercial designations.

### ANALYSIS:

BU 1.3 The Neighborhood Center contains the following: "The design of these areas, including the size, location and design of parking lots, shall be strictly regulated to ensure compatibility with the surrounding neighborhood."

BU 1.4 The Intersection Commercial contains the following: "The edges of these areas need to be well-defined to contain development and limit encroachment into single family areas."

BU 1.5 The City Center Commercial contains the following: "Development on the edge of this area must be compatible with the character of adjacent single family neighborhoods."

BU 1.6 The Downtown Commercial designation contains absolutely no similar limiting, defining, or constraining provision as part of this policy statement as set forth in above in Bu 1.3, 1.4, and 1.5.

The Downtown Commercial designation contains no limiting, defining or constraining provisions to protect the adjacent "Low Density Residential Neighborhood" zoned single family residential area.

COMMENT: The residents and landowners on Lake Burien absolutely object to the absence of any protective provision in The Downtown Commercial designation as it applies to the Ruth Dykeman Children's Center and the adjacent "Low Density Residential Neighborhood" zoned single family residential area.

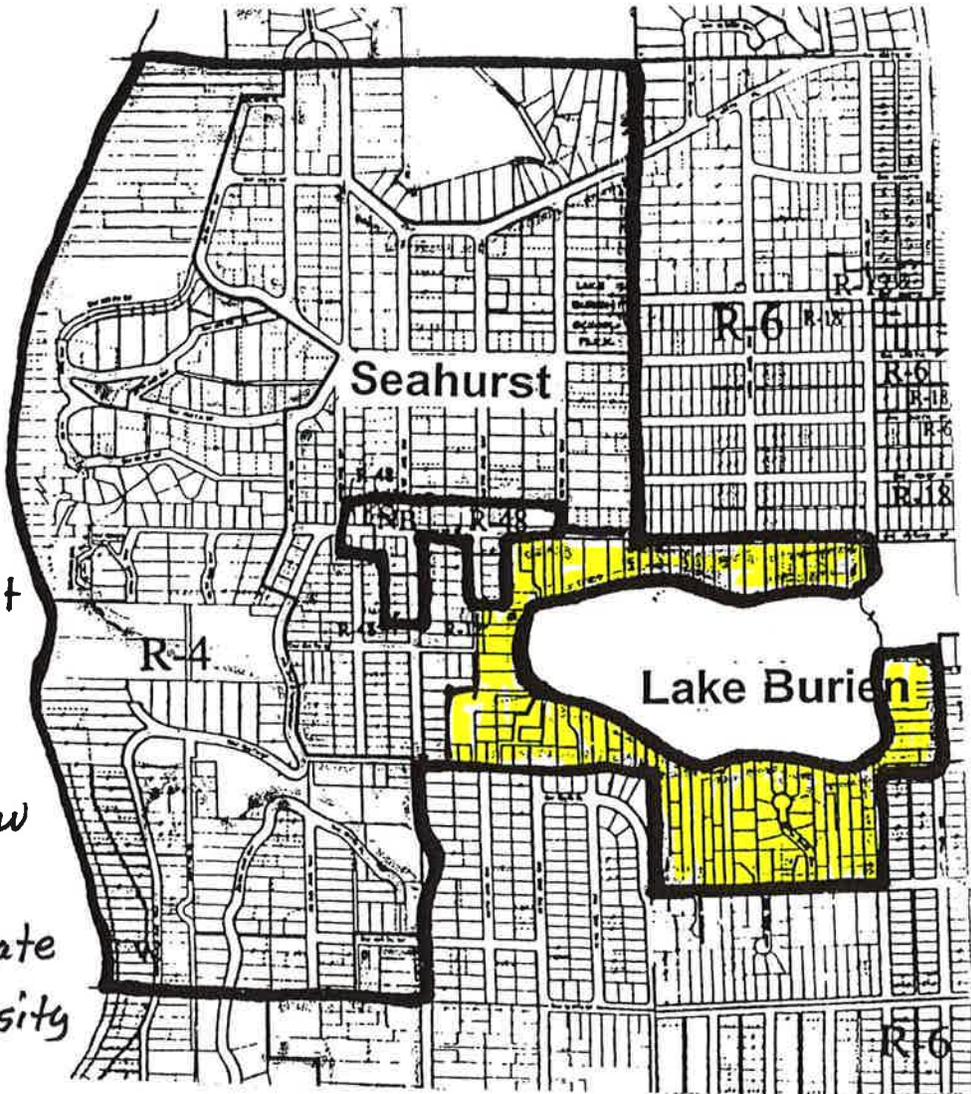
(NOTE: Pol. RE 1.5 the "first" 2nd statement is incorrect. Map LU-2 shows only Steep Slopes, Suburban and Urban. It does not show any "rural".)

*Taken from letter submitted to The City of Burien Council Members by J. J. Wozniak, President and on behalf of The Lake Burien Shore Club, October 30, 1997*

# ATTACHMENT H

CE

PUGET SOUND

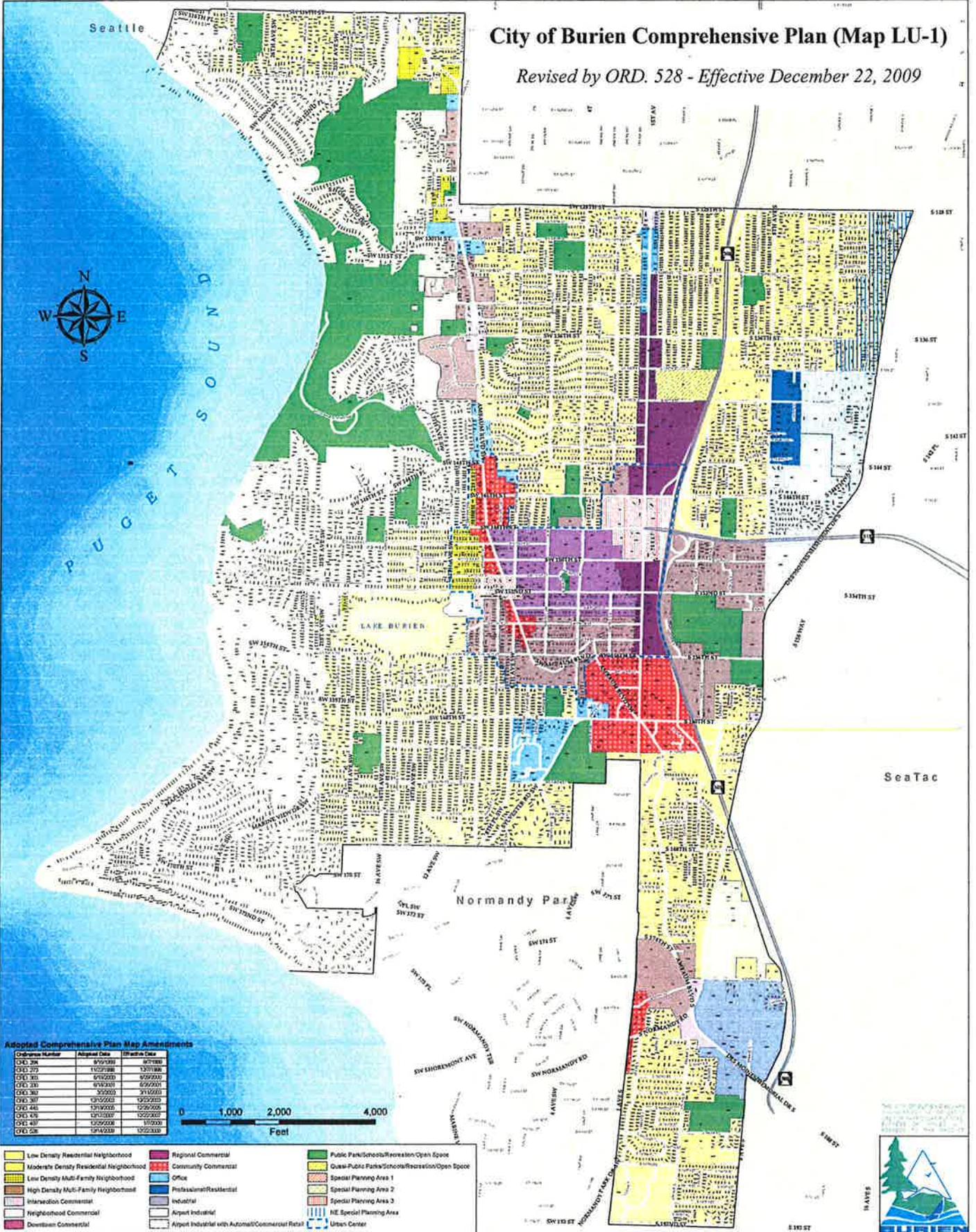


Map Amendment Change

Area in yellow  
to change  
from moderate  
to low density  
residential

# City of Burien Comprehensive Plan (Map LU-1)

Revised by ORD. 528 - Effective December 22, 2009



### Adopted Comprehensive Plan Map Amendments

Ordinance Number	Effective Date	Expiration Date
ORD. 29	5/10/1988	8/7/1988
ORD. 275	1/22/1988	12/31/88
ORD. 303	5/10/2000	5/9/2001
ORD. 333	6/10/2001	6/9/2001
ORD. 360	3/28/03	3/1/2003
ORD. 387	10/22/03	10/22/03
ORD. 448	12/19/03	12/22/03
ORD. 476	12/15/07	12/22/07
ORD. 487	12/22/08	1/1/2009
ORD. 528	12/22/09	12/22/09



- Low Density Residential Neighborhood
- Regional Commercial
- Public Parks/Schools/Recreation/Open Space
- Moderate Density Residential Neighborhood
- Community Commercial
- Quasi-Public Parks/Schools/Recreation/Open Space
- Low Density Multi-Family Neighborhood
- Office
- Special Planning Area 1
- High Density Multi-Family Neighborhood
- Professional/Residential
- Special Planning Area 2
- Intersection Commercial
- Industrial
- Special Planning Area 3
- Neighborhood Commercial
- Airport Industrial
- NE Special Planning Area
- Downtown Commercial
- Airport Industrial with Automall/Commercial Retail
- Urban Center



## **DECISION CRITERIA**

### **BMC 19.65.095 Comprehensive Plan Amendments.**

4. Criteria. The City may approve or approve with modifications a Comprehensive Plan amendment if:
  - A. The request has been filed in a timely manner; and
  - B. There is a public need for the proposed amendment; and
  - C. The proposed amendment is the best means for meeting the identified public need; and
  - D. The proposed amendment is consistent with the overall intent of the goals and policies of the Burien Comprehensive Plan, Growth Management Act and Countywide Planning Policies; and
  - E. The proposed amendment will result in a net benefit to the community; and
  - F. The revised Comprehensive Plan will be internally consistent; and
  - G. The capability of the land can support the projected land use; and
  - H. Adequate public facility capacity to support the projected land use exists, or, can be provided by the property owner(s) requesting the amendment, or, can be cost-effectively provided by the City or other public agency; and
  - I. The proposed amendment will be compatible with nearby uses; and
  - J. The proposed amendment would not result in the loss of capacity to meet other needed land uses, such as housing; and
  - K. For a Comprehensive Plan map change, the applicable designation criteria are met and either of the following is met:
    - i. Conditions have so markedly changed since the property was given its present Comprehensive Plan designation that the current designation is no longer appropriate; or,
    - ii. The map change will correct a Comprehensive Plan designation that was inappropriate when established.

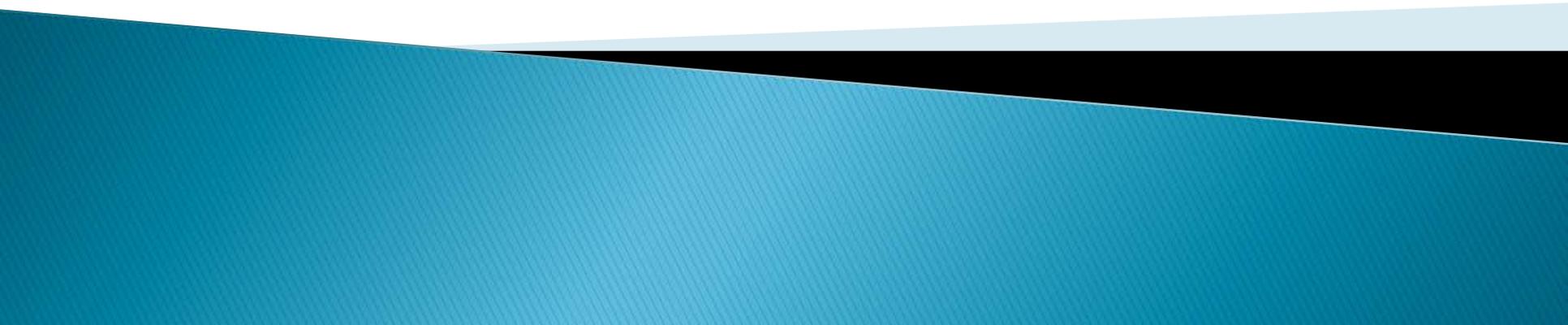
### **BMC 19.65.090 Rezones.**

3. Criteria. The City may approve or approve with modifications an application for a rezone of property if:
  - A. The rezone is consistent with the Comprehensive Plan; and
  - B. The rezone bears a substantial relation to the public health, safety, or welfare; and
  - C. The rezone will not be materially detrimental to uses or property in the immediate vicinity of the property; and
  - D. The rezone has merit and value for the community as a whole.

# **2010 Annual Comprehensive Plan Amendments**

## **Planning Commission Public Hearing**

### **October 12, 2010**



# 2010-1

## Property Acquisition Areas Goal and Policy Text Amendment



- ▶ Staff Initiated
- ▶ Repeals all of Goal PA-1 and Policies PA 1.1 – PA 1.9 on Pages 2-36 & 37
- ▶ Ordinance 529, adopted December 2009 revised zoning designations for NERA and repealed BMC 18.130 Property Acquisition by Public Entities
- ▶ Comprehensive Plan language in support of BMC 18.130 was overlooked during the 2009 revision process
- ▶ Removal of the goal and policies will ensure consistency between Comprehensive Plan and Zoning Code

2010-2

Chestine and Bob Edgar for Lake Burien  
Neighborhood Amendment and Rezone



- ▶ Property Owner Initiated
- ▶ Comprehensive Plan change from Moderate Density Residential Neighborhood to Low Density Residential Neighborhood
- ▶ Zoning Map change from RS-7,200 to RS-12,000 Single-Family Residential zone
- ▶ Applicant indicates that Lake Burien is a critical Area and warrants a more environmentally compatible comprehensive plan map designation
- ▶ Applicant contends that there is a conflict between the Comprehensive Plan text and the Comprehensive Plan map designation for the area



# Plan Amendment Schedule

## ▶ October 12<sup>th</sup>

- Planning Commission Public Hearing/Possible Recommendation

## ▶ October 27<sup>th</sup>

- Planning Commission Recommendation (if needed)

## ▶ November 8<sup>th</sup>

- City Council review and discussion of 2010 Comprehensive Plan Amendments

## ▶ November 22<sup>nd</sup>

- City Council possible adoption of 2010 comprehensive plan amendments.

**Comments Received at  
October 12<sup>th</sup> Planning  
Commission Public  
Hearing**

To the Burien Planning Commission  
From Chestine Edgar  
Re Comprehensive Plan Text Amendment no. 2010-1  
October 12, 2010

To the Planning Commissioner:

The Burien Area citizens became a city in order to protect themselves <sup>from</sup> for the expansion of the Port of Seattle into their lands. When the area became a city, Goal PA-1 was put into the Comprehensive Plan to protect the city from Port expansion. Residents were concerned that the Port would build or lease to businesses that were not in keeping with the vision and character of the city. The citizens did not want to become the Port's parking garage or dump facility.

The amendment before you, completely removes all of those protects from the Comprehensive Plan. The Port pays no tax dollars to the city of Burien for the lands that it holds in the city. So it does not contribute to the tax base.

This amendment would allow the Port to use its lands with no control by the city. According to this amendment the Port will not have to follow the zoning, planning, development standards, and health or safety requirements of the city. The Port can develop land or lease to businesses that are not in keeping with the character of the city. It will be able to modify, demolish and relocate buildings and structures without any regulation from the city. The port will not have to do an EIS of a SEPA determination on before construction on any of its lands in the City of Burien.

Lastly, the Port will be able to lease these lands and make money off of them without having to pay taxes on the lands and without being accountable to the citizens of Burien.

I am concerned about completely striking out Goal PA.-1 from the Comprehensive Plan. It appears that we are giving away the store to the Port of Seattle. We organized into a city to avoid exactly what we are allowing to happen by removing Goal PA.-1.

I am requesting that the Planning Commission seriously consider whether this is really in the best interest of the City of Burien. I do not think it is.

Re: 2010-1  
Received & Review Hg  
October 12, 2010  


To The Burien Planning Commission  
From Chestine Edgar  
Re Request for change to Comp Plan Map-Lake Burien Neighborhood.  
October 12, 2010

To the Planning Commissioners;

The issue before you relates to an inconsistency that exists in the Burien Comprehensive Plan text and the Comprehensive Plan map. The Lake Burien Neighborhood is Low Density Residential by the text designation but appears as Moderate Density Residential on the Land Use Map. When there is an inconsistency, the text rules over the map. We are asking that a correction be made in the Comp. Plan Land Use Map.

The Lake Burien Neighborhood matches the Low Density Designation Criteria on numbers 1, 2, 3. The city claims that the neighborhood is characterized by greater than 4 units per acre by using a "buildable units per acre model" for calculation. This model is not listed in the Comprehensive Plan under the definition for density. Additionally, it gives an inaccurate calculation for current density because it **removes all the unbuildable** land before calculating units per acre. This model is not accurate for areas that have large amounts of critical areas.

The models that are referred/defined in the Comprehensive Plan **keep all of the unbuildable land in** the calculation of units per acre. These are the model that must be used for current density whenever calculations are being done for areas/neighborhoods that have large amounts of critical areas.

According to the two models referenced in the Comp Plan definitions, the Lake Burien Neighborhood has a current density of less than 3 units per acre—source King County Records. Therefore, we are requesting that the city correct the model that it is using to calculate current density for the Lake Burien Neighborhood.

An inconsistency exists between the text and the map for this neighborhood. We are requesting that this be corrected by changing the Land Use Map to show the Lake Burien Neighborhood as Low Density Residential. The Lake Burien Neighborhood has significant amounts of critical areas in it.

Additionally, we want the record to show that we/the applicants did not want a zoning change with this request. The city staff insisted that one had to be filed by the applicants and filed with the request to correct an inconsistency in the Comp Plan to get a correction in the Land Use Map.

Lastly, in response to a question asked by a Commissioner last week, a Low Density Residential Neighborhood can have more than one zoning category according to the Comp Plan.

Re: 2010-2  
Request a Public Hearing  
October 12, 2010  
CED

To: Planning Commission  
Subject: Public Hearing Comments-Growth Management Policies  
Address: 12674 Shorewood Dr SW  
Date: October 12, 2010

The Washington State Growth Management Act (Chapter 36.70A RCW) provides the policies which jurisdictions must follow when preparing or updating a Comprehensive Plan.

The Mandatory Elements section of the Growth Management Act (GMA) (Section RCW 36.70A.070 Comprehensive plans – Mandatory Elements) as well as the Land Use Plan Implementation section of the 2009 Burien Comprehensive Plan (Land Use Plan Implementation, Goal PI.1) both state that the Comprehensive Plan shall be an internally consistent document.

When the Comprehensive Plan is not consistent, the GMA requires that a jurisdiction must resolve the inconsistency once it is brought to their attention.

When a Comprehensive Plan document is not consistent, such as between a land use map and the land use designation policy statement, the 2009 Burien Comprehensive Plan policy specifically states, *“If there is a conflict between the comprehensive plan land use map and the land use designation policies, the land use designation policies control.”* (2.2 LAND USE ELEMENT, Land Use Conflicts, Pol. PI 1.6)

If the inconsistency affects a Critical Area, such as Lake Burien, the GMA states that there must be an evaluation of the Critical Area (RCW 36.70A.060(2), RCW 36.70A.170(1) (d)) that typically requires the use of Best Available Science (RCW 36.70A.172(1)).

A review of the historical record suggests that previous 1999 and 2003 amendments to the Burien Comprehensive Plan had affected Lake Burien which is designated as a Critical Area and that this level of evaluation was not done by the City of Burien as stipulated in the GMA policies.

Now that this inconsistency has been brought to the attention of the City AND this inconsistency also affects a Critical Area, the City of Burien cannot avoid adhering to the GMA policies.

Therefore, the Burien Comprehensive Plan Land Use Map needs to be corrected to be consistent with the land use designation criteria and show the Lake Burien Neighborhood as a “Low Density Residential Neighborhood”.

Bob Edgar

Re: 2010-2  
Rec'd @ Public Hearing  
October 12, 2010  
[Signature]

To The Planning Commission  
October 7, 2010

One of the requirements this request for a change to the Comp Plan Map must meet is: the proposed amendment will result in a net benefit to the community. The net benefit will result in protecting water quality.

Water quality in Lake Burien is of great importance to me since I swim in the lake regularly as do many other residents.

One of the best means for protecting the lake and the critical areas around the lake is to reduce density. The Burien Comp Plan talks about this and even has provisions for doing just that in Chapter 2 of the Comp Plan under the topic of Residential Neighborhoods. In spite of the policy stated on page 2-9 (Land designated as potential landslide hazard area, steep slope area, or wetland on the City of Burien's Critical Areas Map should be low density), the city has put the Lake Burien Neighborhood on the Comp Plan Map as a moderate density residential neighborhood. This makes no sense. Lake Burien is on the Critical Area Map but the city put it on at moderate density. Why?

I have attached the most recent articles from the B-Town Blog about the toxic algae bloom that has happened on Lake Burien, the first time there has been a concern in my 70 years on the lake. Water quality is a public/community benefit and it cannot, and has not, been taken care of by storm water regulations and the critical area designations of this city. Gordon Shaw has spent many minutes at the City Council meetings talking about how our storm water management is inadequate for this city. Dennis Clark mentions the fact that upgrading water runoff is so important to us all.

I am requesting the Lake Burien Neighborhood be shown on the Comp Plan Land Use Map as low density to protect the water quality of the lake and to work toward cleaning up the sound since water runoff from far away properties and the streets run into Lake Burien which drains into Miller Creek which travels through Normandy Park into the sound. That is a net benefit to both communities.

Tanya Engeset  
1449 SW 152

Re: 2010-2  
Aid @ Public Hearing  
October 12, 2010  
(initials)

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<http://www.b-townblog.com> -

## Toxic Algae Found In Lake Burien By King County Water Resource Staff

Posted By [Scott Schaefer](#) On August 29, 2010 @ 9:20 pm In [Headlines,Life,Politics,Science](#) | [5 Comments](#)



[1]

A toxic blue-green algae bloom was recently discovered in Lake Burien, but may not be visible in this panoramic photo (click to see larger image). Photo taken Aug. 12, 2010 by Scott Schaefer.

**A toxic blue-green algae bloom was recently discovered in Lake Burien – whose shoreline residents have extolled the quality of its water – by King County water resource staff.**

"Blue-green algae was first observed by King County staff working with lake neighbors on invasive plant control on Lake Burien on August 16," **Dennis Clark**, public outreach/ stewardship coordinator for Watershed Resource Inventory Area (WRIA) 9, has informed the city.

WRIA 9 encompasses the Green/Duwamish watershed and the central Puget Sound region.

Clark said county staff took a sample of the algae and analyzed it during the week, confirming on Aug. 20 that it is blue-green algae – which can cause health problems for people and dogs.

"Residents should take steps to minimize their exposure to this algae" and keep their dogs from drinking lake water, he added. Swimmers and retrieval dogs should stay out of areas of the lake where the water is scummy.

Nitrogen and phosphorus, which come from lawn and garden fertilizers, are primary nutrients for algae," Clark noted. "Residents can reduce the amount of nutrients and enhance the lake through a variety of steps."

Here is detailed information about blue-green algae included in the notice from King County to Burien:

### **What is the algae and what does it look like?**

The algae is cyanobacteria and is commonly called blue-green algae. A blue-green algae bloom often looks like green paint floating on the water and is hard to pick up or hold. It can take the form of a scum. Despite its name, it can be a range of colors including bright green, blue-green, olive, yellow-brown, and red. Because the algae is often at the surface, the wind blows it around and it can get caught up in shoreline vegetation.

### **Why is blue-green algae a cause for concern?**

The Washington State Department of Ecology notes that some blue-green algae blooms pose a human health concern and have killed pets and livestock. Although most blue-green blooms are not toxic, some blue-green algae produce nervous system or liver toxins. Toxicity is hard to predict, especially by sight. The size or intensity of the scum do not indicate the toxicity. A single species of algae can have toxic and non-toxic strains. A bloom that tests non-toxic one day can become toxic the next day.

People may become ill after swimming or water skiing in lakes with toxic blue-green algae. Human health effects may include stomach pains, vomiting, diarrhea, skin rashes,

and nerve and liver damage. Pets and wildlife have died after exposure to toxic blue-green algae in Washington lakes.

#### **What is the type and concentration of blue-green algae in Lake Burien?**

The type of blue-green algae found on Lake Burien produces toxins that harm the liver, known as hepatotoxins. The analysis showed this type of toxin present at a concentration of 5.72 micrograms per liter. This concentration is just below the state's proposed recreational guideline of 6 micrograms per liter. Note that this sample represents a shoreline concentration as opposed to a whole lake average. Because the toxin is concentrated mostly in the algae, in this case found along the shore, concentrations of the toxin in the open water of the lake may well be lower.



King County steward Dennis Clark.

#### **How should I reduce my exposure to this algae and its toxins?**

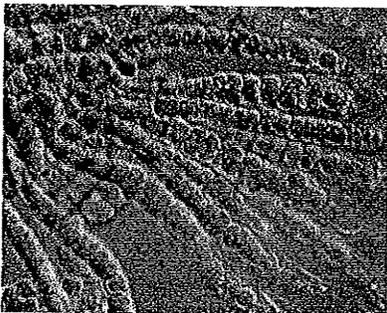
Lake Burien residents should take steps to reduce their potential exposure to toxins that may be in the water:

- People should avoid swimming, playing, or boating in areas where the water is scummy or blue-green algae has accumulated.
- Swimmers should take care to minimize accidental ingestion of water.
- Clean fish well and discard the guts.

The most immediate health risk – given the current low level of toxins present – is to dogs. Owners should take care to keep their dogs from drinking lake water. Owners should avoid "retrieval" games with dogs who will ingest water when fetching balls or sticks in the water. Dogs should be kept out of the scum because they can ingest the algae when cleaning themselves.

#### **How long is the algae going to be a problem?**

Blue-green algae will die out with the onset of cold weather but may be present in the lake into November. King County staff will sample algae every two weeks if algae continue to be reported. The Washington State Department of Ecology pays for the cost of analyzing samples.



#### **How can I learn more about blue-green algae?**

A good source of information in the Washington State Department of Ecology's website:

Cyanobacteria health effects may include stomach pains, vomiting, diarrhea, skin rashes, and nerve and liver damage.

<http://www.ecy.wa.gov/programs/wq/plants/algae/index.html> [2]

More general information on algae in local lakes is [here](#) [3] (PDF file).

**What if I see blue-green algae in the lake at my property?**

Please report sightings of blue-green algae to the Miller/Walker Creek basin steward Dennis Clark, [dennis.clark@kingcounty.gov](mailto:dennis.clark@kingcounty.gov) [4], or at **206-296-1909**. Reports on the presence of algae will help staff determine when and where to take future samples.

**How can I stay informed of the results of future algae samplings?**

Sampling results will be posted at the Miller/Walker basin web page:

<http://www.kingcounty.gov/environment/watersheds/central-puget-sound/miller-walker-creeks.aspx> [5]

If algae conditions worsen significantly, you will be notified through this newsletter, local media, and notices sent to shoreline properties. You may contact Miller/Walker Creek basin steward Dennis Clark, [dennis.clark@kingcounty.gov](mailto:dennis.clark@kingcounty.gov) [4], or at **206-296-1909** at any time to learn more.

**Is there anything we can do to reduce the likelihood blue-green algae will recur in future years?**

A big driver of algae blooms are nutrient inputs including nitrogen and phosphorous. Residents can reduce the amount of nutrients and enhance the lake through a variety of steps. Many of these steps are associated with lawn and garden care. For more information, please see the "Living with Lakes" website:

<http://www.kingcounty.gov/environment/waterandland/lakes/facts/garden.aspx> [6]

 [7]

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10 people like this.

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URL to article: <http://www.b-townblog.com/2010/08/29/toxic-algae-found-in-lake-burien-by-king-county-water-resource-staff/>

URLs in this post:

[1] Image: <http://b-townblog.com/wp-content/images/lakeburienpano-1000.jpg>

[2] <http://www.ecy.wa.gov/programs/wq/plants/algae/index.html>:  
<http://www.ecy.wa.gov/programs/wq/plants/algae/index.html>

[3] here: <http://your.kingcounty.gov/dnrp/library/archive-documents/wlr/waterres/smlakes/algae101.pdf>

[4] [dennis.clark@kingcounty.gov](mailto:dennis.clark@kingcounty.gov): <mailto:dennis.clark@kingcounty.gov>

[5] <http://www.kingcounty.gov/environment/watersheds/central-puget-sound/miller-walker-creeks.aspx>: <http://www.kingcounty.gov/environment/watersheds/central-puget-sound/miller-walker-creeks.aspx>

[6] <http://www.kingcounty.gov/environment/waterandland/lakes/facts/garden.aspx>:  
<http://www.kingcounty.gov/environment/waterandland/lakes/facts/garden.aspx>

[7] Image: <http://www.addthis.com/bookmark.php?v=250&username=btownblog>

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## UPDATE: Increase Found In Lake Burien's Toxic Algae; Warning Issued

Posted By [Scott Schaefer](#) On [September 1, 2010](#) @ 4:56 pm In [Featured Stories, Headlines, Life, Science, Sports](#) | [2 Comments](#)



On Wednesday (Sept. 1st), we received an update from Miller/Walker Creek Basin Steward Dennis Clark that new tests show an increase in the toxic algae found last week in Lake Burien (read our previous report [here](#) <sup>[1]</sup>).

According to Clark, a lake resident took another water sample from Lake Burien on Monday, Aug. 30th, and had it analyzed by King County. Preliminary analysis shows an increase in the algae toxin (microcystin) from 5.72 to 9.4 micrograms per liter – a 64.3% increase.

Clark adds:

This new concentration is above the state's proposed recreational guideline "caution level" of 6 micrograms per liter and should be taken seriously.

Small children and dogs should be kept out of the water to avoid ingestion of the algae.

King County staff encourage people to continue to follow the other recommendations listed [here](#) <sup>[2]</sup> (PDF file).

Owing to the upward trend in the toxin concentration from Aug. 16 to Aug. 30, King County will begin analyzing samples on a weekly basis while recreation use of the lake remains high.

All updates on the toxin concentrations in Lake Burien will be posted at the Miller/Walker Creek basin webpage [here](#) <sup>[3]</sup> (we'll also post them as we get them).

 SHARE [4]

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URL to article: <http://www.b-townblog.com/2010/09/01/update-increase-found-in-lake-buriens-toxic-algae-warning-issued/>

URLs in this post:

[1] here: <http://www.b-townblog.com/2010/08/29/toxic-algae-found-in-lake-burien-by-king-county-water-resource-staff/>

[2] here: <http://your.kingcounty.gov/dnrp/library/water-and-land/watersheds/central->

On Tuesday, September 14, a water sample was taken from Lake Burien and analyzed for the presence of toxins in the algae. Results came back Friday (Sept. 17).

The latest sample showed a substantial decrease in the algae toxin (microcystin) from 6.0 micrograms per liter (on September 7) to 2.68 micrograms per liter (on Sept. 14). This new concentration is well below the state's proposed recreational guideline "caution level" of 6.0 micrograms per liter. Although this latest result was far below the state guideline, it came from a sample of visibly clear lake water, unlike previous samples that contained algae scum in which the toxins are more concentrated. This suggests that the toxin may still be present in higher concentrations in any algae scums that do remain around the lake.

We will take another sample Monday.

With the cool, rainy weather forecast for the next few days, we would expect the concentrations to continue to diminish.

*Source B-Town Blog 9/2010*



**Looks like the Creature from the B-Town Lagoon might be back folks – Miller/Walker Creek Steward Dennis Clark says that the most recent tests for toxic algae in Lake Burien shows a dramatic increase.**

According to Clark's report, a Sept. 21st sampling from a different part of the lake shows algae at **698.0** micrograms per liter, up from the Sept. 14th results of **2.68** micrograms per liter – a very dramatic increase.

However, the most recent sampling was done at the northeast outlet to the lake, in an area that contained "thick algae scum."

Clark still recommends that lake users should keep small children and pets out of the water, as well as to avoid areas with algae scum.

Here's what Clark had to say about this news:

It remains very important for Lake Burien users to avoid the algae scums.

The microcystin (toxicity) result from the September 21 sample of algae at Lake Burien was 698.0 micrograms per liter. These are final, confirmed results.

I observed the collection of the September 21 sample at the northeast outlet to the lake. The sample contained thick algae scum. We should assume that any other algae concentrations in the lake may have similarly high concentrations of microcystin.

Although the latest results represent a dramatic change from the September 14 results of 2.68 micrograms per liter, the September 14 results were of clear lake water.

My provisional recommendations based on my discussion with Ecology staff – until I hear otherwise from my County colleagues – is that lake users should continue to avoid algae scums. People should continue to keep small children and dogs out of the water so they do not inadvertently ingest algae. Older children and adults should follow all the guidelines in the summary sheet posted here.

Clearly, the lake is still producing toxic algae even if concentrations in the water column are below the state recommended "caution level" of 6.0 micrograms per liter. Next week, we may sample both any scums found AND clear water to quantify the relationship between the toxin concentrations in the different types of samples.

*Source B-Town Blog 9/2010*

**puget-sound/miller-walker-creeks/LakeBurien-cyanobacteria-8-23-10.pdf**

[3] here: <http://www.kingcounty.gov/environment/watersheds/central-puget-sound/miller-walker-creeks.aspx>

[4] Image: <http://www.addthis.com/bookmark.php?v=250&username=btownblog>

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October 12, 2010

Honorable members of the planning Commission:

My name is Robbie Howell, I live at 15240 20<sup>th</sup> Ave. SW, on Lake Burien.

**Although Lake Burien is a critical area on the City of Burien's critical area map due to its wetlands and aquifer recharge areas, the city has not treated Lake Burien as a critical area in its city planning. Therefore it has not used Best Available Science for protection to save its critical areas.**

The Growth Management Act requires that a city's Comprehensive Plan identify the critical areas in the city and use **Best Available Science** when developing land use and development standards for the city.

The **King County Comprehensive Plan**, which serves to guide **Countywide Planning Policies**, recognizes the importance of Critical Areas in **Chapter 1 and Chapter 4**. In the **2009 Burien Comprehensive Plan**, the need to protect Critical Areas is recognized in **Chapter 2-Plan Policies**.

In all of previously mentioned documents, **the requirement of Best Available Science (BAS) is required when dealing with Critical Areas**. The **2009 Burien Comprehensive Plan, Natural Environment, Goal** states "The City requires the use of **Best Available Science** for protecting critical areas within the community pursuant to the Growth Management Act."

While buffers and mitigation have been strategies used to protect wetlands and critical areas, they have been **proven not adequate to prevent no net loss to these critical areas**

(King County website, PSWSMRP, Wetlands and Urbanization, Azous and Horner, 1997). **Based on Best Available Science the Lake Burien Neighborhood should be considered a Low Density Residential Neighborhood due to its significant amounts of critical Areas.**

For this reason, I am requesting that the **Lake Burien Neighborhood** be placed on the **Burien Comprehensive Plan Map** as a **Low Density Residential Neighborhood**. It in no way matches the designation criteria for a moderate density neighborhood. **Moderate density neighborhoods cannot contain significant amounts of critical areas.**

Thank you for your consideration.

*Re: 2010-2  
Revised Public Hearing  
October 12, 2010  
CWH*

To: City of Burien, City Council, City Manager, Community Development Director, Sr. Planner, etc.

From : Don Warren :: Lake Burien Shore Club President and Lake Steward,  
Ruth Dykeman Children's Center Board of Governors

Date : Tuesday, October 12, 2010

Regarding : Comments for Public Hearing on Comp Plan Amendment request 2010-2

---

## Introduction

I am speaking tonight as an individual, not as the representative of a group or organization.

This allows me to speak my mind without regard to any appointment or seat that I hold.

Tonight I will summarize the situation and tell you how I would decide this matter if I was in the lucky role of either a Planning Commissioner or City Council Member.

I will proceed in the following manner

- 1) The neighborhood and the lake .. general characteristics and sensitivities
- 2) Pointing out the core of the request in 2010-2
- 3) The multiple criteria to allow any amending / changing of the Comprehensive Plan.
- 4) Impacts of yes vs no; to the request
- 5) Pointing out the logical chain supporting the advised decision for Commission and Council

In the last Planning Commission Meeting, Planner/Staff person Chip Davis noted his calculation method is on buildable area. BUILDABLE .. which is not the same as how King County or the City itself identifies general density. This is done a gross density most commonly. The Edgar's and Howell's and others have shared with you an existing density calculation. The neighborhood is characterized by gross existing density that is LOW density at or below 4 units per acre.

The Lake has always been a sensitive area in reality, and the City of Burien is getting the right things in place, over that last decade or more, in order to properly identify the city's sensitive and critical areas. The City is also working on various schemes by which these sensitive areas and unique bodies of water can be assured to improve where possible and feasible. The city's ongoing commitment to using best available science towards assuring no net loss to ecological function is admirable!

So that's the general situation; we are presently built out at low density and generally speaking the entire lake and its shore lands are sensitive areas. Where specific wetlands do not exist on a particular, that property is still joined to the wetlands via the lake waters themselves. So, all properties on lake affect all the wetlands on the lake.

The next point from me is to reinforce the core of the request from the Edgar's. As noted, the lake is a sensitive area. And in the State requirements on Moderate vs Low density .. any properties with critical areas / sensitive areas /etc ... can NOT be zoned a moderate density residential area. That is written into

Re: 2010-2  
Read @ Public Hg.  
October 12, 2010  
CW

the Comp Plan for City of Burien. BUT, the map in the Comp Plan shows the area as Moderate Density Single Family ..Therein lies the contradiction that we discovered during review of city documents during the SMP Draft update process.

So, how do we fix this? The amendment request has been made. And there are multiple criteria that Must ALL be satisfied for the amendment to pass. Well I read thru all of those and I can make a good case for each being satisfied by this amendment request. Of course my three minute allotment tonight will not allow me to note all of the reasons why .. so you will have to ask me to discuss it with you outside of meetings, my fine Planning Commissioners so that you can properly adjudicate on facts and opinions and points of view beyond those that the staff has time or interest in sharing. They are of course very busy people and working single mindedly on protecting the Lake ecology is not a luxury they are afforded.

Now, let's talk about impacts of supporting or denying this amendment request.

If the amendment passes, quoting Chip Davis, there are fewer than 15 properties at this time that would be affected. They would be for the most part unaffected since most everyone develops at a low density as evidenced by the character of the neighborhood at this time.

If the amendment does not pass, per city's own calculations for GMA reference, the city could get as many as 63 more residences in the same area.

Well that's too dense for my tastes. And as the Lake steward for the past 7 years, things are not getting better with lake health. Anything we can do to protect the lake from overdevelopment and over use is going to be supportive of the lake ecology and the downstream ecological needs for the salmon spawning beds. So, although staff says that they have all these other, mostly unnamed, projects that will have more positive impacts, I did not notice that they thought this had no merit in conjunction. Staff only noted that the amendment on its own is not enough to protect the lake. I concur, we need this amendment AND I the other good ideas and projects the community can agree to; specifically storm water system improvements, sewer line internal camera inspections, and public education on spills / fertilizer / car washes in street .. let's protect our watershed in the interests of all the species beyond humans that rely on it.

So, to summarize, the logical chain that supports the Commissioners and Council Members in supporting this inconsistency rectifying amendment to the Comp Plan....

- 1) The area is already low density by gross lot size based calculations
- 2) The shore lands of Lake Burien can be and ARE generally characterized already by city of Burien as being sensitive / critical.
- 3) Moderate density residential is not allowed in sensitive /critical areas
- 4) The text so states BUT the map in the comp plan shows the Lake Burien Neighborhood as Moderate Density; this is the error to be corrected.
- 5) The amendment when enacted supports positive ecological outcomes by reducing the possibility for new and uncharacteristic loads thru higher density uses.

- 6) All criteria are well met for Comp Plan changes ... I can support good and reasonable arguments on all points .. time is short tonight.. please ask me or be seen deleterious in your office.
- 7) All criteria for a requested zoning change .. well a zoning change was not requested ,the present zoning is reflective of a mistake in the guiding document; Comp Plan guides the Zoning Guide. If we fix the inconsistency in the Comp Plan, then it is not really a zoning change but a correction to a view point that has erroneously survived for a decade or three. Regardless, the logic for benefit to community as a whole is without a doubt very positive. Protecting the little bit of fresh water habitat we have left is very important.

We are merely stewards of the earth on which we live for such a short time. Do not let your foresight be as short as your time on this earth. Do something positive for the environment whenever you can without getting into trouble with the law ! We are merely asking to be fixed something that accidentally became inconsistent over time from 1993 to the present as the Comp Plan passed thru its various incarnations under various tenures of Commission, Council, Manager and Staff.

I really appreciate a good conversation that gets at truth and throws out baloney along the way. Please do not decide quickly against this amendment. Instead give it reasonable thought and give yourselves time to think thoroughly thru this. Otherwise the existing inconsistency will remain and will spark additional negative outcomes as long as it remains in there. I look forward to aiding in any way I can such that the Commissioners and Council Members have a balanced point of view prior to deciding the matter of this amendment.

Being done well is much better than being done quickly, especially when it is about such a fragile and sensitive resource and ecological web as the lake and the downstream waters it feeds.

Best Regards and Many Thanks

Don Warren

206 679 1550 mobile

15702 13<sup>th</sup> ave SW

Burien, WA 98166

To The Burien Planning Commission  
For-The Hearing on the Request about the Lake Burien Neighborhood  
October 12, 2010  
To The Planning Commission Members,

We appreciate your time and effort on this request before you.

The Planning Commission can;

1. send the request on as is to the City Council stating that there is an inconsistency between the text and the map and a rezone is needed as stated,
2. recommend to remove the rezone portion out of the request and correct the inconsistency between the text and map,
3. recommend to correct the inconsistency between the text and the map and to change the map and have 2 zoning categories in the Low Density Residential Neighborhood-all lots adjoining the lake at 12,000' and upland properties at 7,200' or,
4. accept the city staff recommendation that there is no inconsistency.

We would appreciate the Planning Commission at least recognizing that an inconsistency exists between the text and map for the Lake Burien Neighborhood in the Comprehensive Plan. We are further requesting the **Comprehensive Plan Land Use Map needs to be corrected for the Lake Burien Neighborhood to show it as a Low Density Residential neighborhood.** I am turning in 132 signatures on behalf of my neighbors requesting this change.

Thanks for your time.

Sincerely,

Kathi Skarbo

Re: 2010-2  
Rec'd. @ Public Hearing  
October 12, 2010  


**TO THE BURIEN PLANNING COMMISSION AND BURIEN CITY COUNCIL:**

**WE ARE REQUESTING THAT THE CITY OF BURIEN CORRECT THE COMPREHENSIVE PLAN LAND USE MAP TO SHOW THE LAKE BURIEN NEIGHBORHOOD AS LOW DENSITY RESIDENTIAL. THE LAKE BURIEN NEIGHBORHOOD HAS ALWAYS BEEN LOW DENSITY RESIDENTIAL AS DESIGNATED BY THE COMPREHENSIVE PLAN TEXT. THE TEXT AND MAP MUST BE IN AGREEMENT WITH EACH OTHER AND, WHEN NOT IN AGREEMENT, THE TEXT CONTROLS (Burien Comprehensive Plan, Pol. PI 1.6).**

	NAME - Signature	ADDRESS
1	<i>John A. Linn</i>	113 SW 154 <sup>th</sup> ST Burien
2	<i>Doris Leivers</i>	1222 SW 157 Burien
3	<i>Diane K. Gibson</i>	113 SW 154 <sup>th</sup> St Burien
4	<i>Cynthia R. Nicholson</i>	1228 SW 157 <sup>th</sup> Burien
5	<i>Kelley Bretz</i>	1224 SW 157 <sup>th</sup> St. Burien
6	<i>Jeff Bray</i>	1224 SW 157 <sup>th</sup> St. Burien
7	<i>Mary Ellen Ambros <sup>Mary Ellen</sup> Aunt</i>	1213 SW 157 <sup>th</sup> St. Burien
8	<i>Jesse Brock Jefferson</i>	15605 12 <sup>th</sup> Ave SW Burien
9	<i>Sunny Sun</i>	15613 12 <sup>th</sup> SW Burien
10	<i>Phuon</i>	15626 12 <sup>th</sup> Ave SW Burien
11	<i>Cathleen Hilling</i>	1208 SW 157 <sup>th</sup> St Burien
12	<i>Dennis Hilling</i>	1208 SW 157 <sup>th</sup> St Burien
13	<i>John Leivers</i>	1222 SW 157 <sup>th</sup> St. Burien
14	<i>Michael Hickox</i>	1227 SW 157 <sup>th</sup> St, Burien
15	<i>Elaine Hickox</i>	1227 SW 157 <sup>th</sup> St Burien
16	<i>J. J. Leivers (Paul Ambros)</i>	1213 S.W. 157 <sup>th</sup> St. Burien, WA
17	<i>David Ammerman (David Ammerman)</i>	1217 SW 157 <sup>th</sup> St. Burien, WA
18	<i>Mark Hance</i>	1203 S.W. 157 <sup>th</sup>
19	<i>Brooke Rollins</i>	15623 SW 12 <sup>th</sup> ; 98166
20	<i>Mary K. (also)</i>	1216 SW 137 <sup>th</sup> St. 98166

**TO THE BURIEN PLANNING COMMISSION AND BURIEN CITY COUNCIL:**

**WE ARE REQUESTING THAT THE CITY OF BURIEN CORRECT THE COMPREHENSIVE PLAN LAND USE MAP TO SHOW THE LAKE BURIEN NEIGHBORHOOD AS LOW DENSITY RESIDENTIAL. THE LAKE BURIEN NEIGHBORHOOD HAS ALWAYS BEEN LOW DENSITY RESIDENTIAL AS DESIGNATED BY THE COMPREHENSIVE PLAN TEXT. THE TEXT AND MAP MUST BE IN AGREEMENT WITH EACH OTHER AND, WHEN NOT IN AGREEMENT, THE TEXT CONTROLS (Burien Comprehensive Plan, Pol. PI 1.6).**

	NAME - Signature	ADDRESS
21	John Ball	1602 SW 156th St Burien WA 98146
22	Camela M Ball	1602 SW 156 Burien, WA 98146
23	Clark H. Bentley	15714 15th Pl. SW. BURIEN WA 98146
24	Garren Bentley	15714 - 15th Pl SW Burien 98166
25	Stacy Jackson	15708 15th Pl SW Burien 98166
26	[Signature]	" "
27	Julia Pearson	1622 SW 156 St 98146
28	Robert Pearson	1620 SW 156 St 98166
29	John P. Baker	1618 SW 156th St 98146
30	Jessie K. King	1616 SW 156th St 98166
31	Henry C. King	1616 SW 156th St. 98166
32	Bill King	15703 15th SW 98146
33	Frank Schell	15712 14th Pl SW 98166
34	Linda Pleck	1600 SW 156th St
35	Barbara Hope Schultz	<del>1600 SW 156th St</del>
36	Ken Corwin	1600 SW 156th St
37	Homer E. Schutt	15700 - 12th Pl SW
38	Homer E. Schutt - Dorothy	1825 8th 152nd - Burien
39	Kim Hatling	1229 SW 152nd Burien
40	Robert King	1626 SW 156th St, Burien

**TO THE BURIEN PLANNING COMMISSION AND BURIEN CITY COUNCIL:**

**WE ARE REQUESTING THAT THE CITY OF BURIEN CORRECT THE COMPREHENSIVE PLAN LAND USE MAP TO SHOW THE LAKE BURIEN NEIGHBORHOOD AS LOW DENSITY RESIDENTIAL. THE LAKE BURIEN NEIGHBORHOOD HAS ALWAYS BEEN LOW DENSITY RESIDENTIAL AS DESIGNATED BY THE COMPREHENSIVE PLAN TEXT. THE TEXT AND MAP MUST BE IN AGREEMENT WITH EACH OTHER AND, WHEN NOT IN AGREEMENT, THE TEXT CONTROLS (Burien Comprehensive Plan, Pol. PI 1.6).**

	NAME - Signature	ADDRESS
41	Lynnda Eck	PO Box 389 Seahurst 98062
42	Alexandra Ayta	2012 SW 156th St Burien WA 98160
43	Thyllan	2012 SW 156th St Burien WA 98160
Duplicate	Robert & Dorothy Lockett	1825 S.W. 152 Seattle 98160
44	Don Halliday	1229 SW 152nd St. Burien 98160
45	Arline Fosse	1904 SW 155th Pl
46	Paul & Dawn <sup>Don</sup> <sub>Worven</sub>	15702 13th Ave SW
47	Edda G. Moore	15260 20th Ave SW
48	Mon A. O.	15404-20th Ave SW
49	Maureen	15404-20th S.W.
50	Ben K. Day	1930 S.W. 156th St.
51	Dallie Sun	1930 S.W. 156th St.
52	John W. Thomas	15401 11th Ave S.W.
53	Lyle Hove	15401 11th Ave SW
54	Robert Perry	15407-11th Ave S.W.
55	Deanna Perry	15407 11th Ave S.W.
56	Don Brown	15423 11th S.W.
57	Jack	15435 11th Ave SW
58	John McLaughlin	15252 20th Ave SW
59	Paul McLaughlin	15252 20th Ave SW

**TO THE BURIEN PLANNING COMMISSION AND BURIEN CITY COUNCIL:**

**WE ARE REQUESTING THAT THE CITY OF BURIEN CORRECT THE COMPREHENSIVE PLAN LAND USE MAP TO SHOW THE LAKE BURIEN NEIGHBORHOOD AS LOW DENSITY RESIDENTIAL. THE LAKE BURIEN NEIGHBORHOOD HAS ALWAYS BEEN LOW DENSITY RESIDENTIAL AS DESIGNATED BY THE COMPREHENSIVE PLAN TEXT. THE TEXT AND MAP MUST BE IN AGREEMENT WITH EACH OTHER AND, WHEN NOT IN AGREEMENT, THE TEXT CONTROLS (Burien Comprehensive Plan, Pol. PI 1.6).**

	NAME - Signature	ADDRESS
60	Wendy Deyman	1317 SW 152nd, BURIEN
61	Chestine Edgar	1811 SW 152nd, Burien
62	Robert C Howell	15240 20th Ave SW
63	Roberta Jean Howell	15240 20th Ave SW
64	Suzanne Kerkmann	15406 20th Ave SW
65	M. J. [Signature]	1918 SW 155 Place, Burien
66	Cynthia Zartarolo	1918 SW 155th Place Burien
67	Robert Edgar	12674 Shorewood Dr SW
68	William Binger	1908 SW 155th Pl SW
69	[Signature]	1914 SW 156th
70	[Signature]	1914 SW 156th
71	[Signature]	1921 SW 156th St
72	Ken D. Math	1822 SW 156th St.
73	[Signature]	1812 SW 156th St.
74	[Signature]	15403 11th Ave SW
75	Rosemary Williams	15441-11 SW
76	Sandra N. Gladhill-Young	1936 S.W. 168th St
77	Tommy L. Fouse	1904 S.W. 155th Pl.
78	Jean + Jerry Smith	1410 SW 158th St.
79	Katherine L. Skarbo	1621 SW 152nd St

**TO THE BURIEN PLANNING COMMISSION AND BURIEN CITY COUNCIL:**

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	NAME - Signature	ADDRESS
80	Jungo Engset	1449 SW 152
81	Carl Hauke	1405 SW 152nd St
82	Stan A. <del>_____</del> MILKANSKI	1431 SW 152nd St
83	Terry L. Ferry	1904 SW 155 Pl.
84	Diane & Jerry Smith	1410 SW 158th St
85	Barbara Foster	1803 SW 152nd Street
86	Mary Oemko	1603 SW 152 Street
87	Hilchen M. Jackson	1461 SW 152nd
88	Ken Woodring	1435 SW 152
89	Bea Anna M. Hauke	1443 SW 152nd
90	Barbara K. Calvo	1247 SW 152nd
91	- Marjorie Abolofia	1239 SW 152nd St
92	JEFF ABOLOFIA	1239 SW 152nd St.
93	JAMES S. Coury	1235 SW 152nd St.
94	Jimm Majors	1235 SW 152nd Street
95	Mark Peterson / My Pet	1723 SW 152nd St Burien
96	Beth Joyce	##
97	Schal Farness	1207 SW. 152 <sup>NE</sup> ST
98	Christine L. James	1207 SW 152nd St
99	Rodger Parr	1215 SW 152nd St

**TO THE BURIEN PLANNING COMMISSION AND BURIEN CITY COUNCIL:**

**WE ARE REQUESTING THAT THE CITY OF BURIEN CORRECT THE COMPREHENSIVE PLAN LAND USE MAP TO SHOW THE LAKE BURIEN NEIGHBORHOOD AS LOW DENSITY RESIDENTIAL. THE LAKE BURIEN NEIGHBORHOOD HAS ALWAYS BEEN LOW DENSITY RESIDENTIAL AS DESIGNATED BY THE COMPREHENSIVE PLAN TEXT. THE TEXT AND MAP MUST BE IN AGREEMENT WITH EACH OTHER AND, WHEN NOT IN AGREEMENT, THE TEXT CONTROLS (Burien Comprehensive Plan, Pol. PI 1.6).**

	NAME - Signature	ADDRESS	
duplicate	Samaha M. Hedhill-Young	1936 S.W. 168 <sup>th</sup> St. Burien WA	98146
100	Rozella Hedhill	15705-13 <sup>th</sup> Ave SW Burien WA	98166
101	Berg	1240 SW 158 <sup>th</sup> St Burien WA	98166
102	James B. Bennett	1218 SW 158 ST BURIEN	98166
103	Doreen M. Bennett	1218 S.W. 158 Burien	98166
104	Charles E. Pongor	1224 SW 158 <sup>th</sup> Burien	98166
105	Ruth S. Nelson	15724-13 <sup>th</sup> Ave SW	98166
106	Marcia Moen	16003 16 <sup>th</sup> Ave SW Burien	98166
107	Kathleen K. Crane	15706-13 <sup>th</sup> Ave SW Burien	98166
108	[Signature]	15715-13 AVE SW BURIEN WA	98166
109	[Signature]	15715-13 AVE SW BURIEN WA	98166
110	[Signature]	14217 2nd Ave. SW. Burien WA	98166
111	[Signature]	15701-14 <sup>th</sup> Ave SW - Burien	
112	Lori Bradley & Eric Bradley	15401 14 <sup>th</sup> Ave SW Burien WA	98166
113	[Signature]		
114	[Signature]	15731 14 <sup>th</sup> Ave SW Burien	98166









According to the Growth Management Act, the text/policies of a Comprehensive Plan are supposed to be first developed. Then the Comprehensive Plan Map is supposed to be developed based on those policies. Lastly, the zoning codes and zoning map are developed based on the Comp Plan text and Map. The text and map of the Comprehensive Plan drive zoning.

*\* are supposed to*

When the 1997 Burien Comp Plan was developed this process appears to have been followed. However, when the Burien Comp. Plan was amended in 1999, it appears that the city allowed the zoning code to drive the both the text and the map of the Comp Plan. Attached are three letters that clearly state that *the amendments before the City Council would base the Comprehensive Plan on the existing zoning codes.*

I am requesting that the Planning Commission not make the same error again with regard to this request before them. I am requesting that the city and this Planning Commission make a decision about this request to change the Comp Plan Map based on the text of the Comp Plan.

Based on the Comp Plan text, the Lake Burien Neighborhood is a Low Density Residential Neighborhood. Therefore the Comp Plan Map should be changed to show the Lake Burien Neighborhood as a Low Density Neighborhood. Zoning codes and maps *Zoning* should not be driving what happens in this request.

John S. Ball  
1602 SW 156th ST.  
Burien, WA 98146

Re: 2010-2  
Received @ Public Hg  
October 12, 2010  
CWD



# CITY OF BURIEN

415 Southwest 150th Street  
Burien, Washington 98166-1975

Phone: 206-241-4647  
Fax: 206-248-5539

Mayor  
Kitty Milne

Deputy Mayor  
Georgette Valle

Councilmembers  
Shirley Basarab  
Larry Gilbert  
Stephen Lamphear  
Sally Nelson  
Don Newby

January 13, 1999

Dear Burien Property Owner,

In response to a challenge brought to the Central Puget Sound Growth Management Hearings Board, the Burien City Council has directed that policy and map amendments to the Comprehensive Plan be prepared. These amendments would direct that in the single-family areas of Burien, the density of new development (the number of houses that can be built on one acre of land) be based on the zoning that was in effect prior to the Comprehensive Plan's adoption in November of 1997.

In many single-family neighborhoods of the city, the Comprehensive Plan would reduce the density from what the current zoning would permit. In your area, the density would be reduced from six houses per acre to three per acre. None of these amendments would affect existing homes but could affect the ability of property owners to subdivide their land in the future. The change also could affect the number of new homes that may be built in the city. However, in no case would the density be increased above what the current zoning permits.

The amendments before the City Council would base the Comprehensive Plan on the existing zoning. In your particular area, this would mean that the density of houses in the future again would be six houses per acre. Please be aware that this is only a maximum number of homes and does not suggest that houses must be built at that density; the policies only set the maximum that could occur. The amendments do not affect multi-family housing except in the downtown where the proposal would raise the potential density.

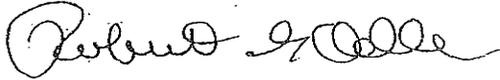
**At 7 PM on Jan. 25, 1999 at Burien City Hall (415 SW 150<sup>th</sup>), the City Council will conduct a public hearing on the proposed amendments. You are cordially invited to attend the hearing and provide comments to the City Council on the proposed amendments or you may send written comments to the above address in care of the City Council.**

Following the public hearing, the City Council will review the proposed amendments and will take action on them no sooner than its meeting on Feb. 1, 1999. Should you have any question on the proposed amendments or would like a copy of the draft amendments, please contact the Department of Community Development at 248-5510.



If you are also interested in helping prepare the long-term development policies and regulations for the City of Burien, the City Council is accepting applications to fill Planning Commission vacancies that will occur in March. The Planning Commission is composed of volunteers who provide advice to the City Council on land use policies and regulations within the city. Applications are due by Jan. 31, 1999 and the Council will review the applications in February. If you are interested in receiving an application, please contact the City Clerk's Office at 248-5517.

Sincerely,

A handwritten signature in cursive script, appearing to read "Robert G. Odle".

Robert G. Odle  
Community Development Director



# CITY OF BURIEN

415 Southwest 150th Street  
Burien, Washington 98166-1973

Phone: (206) 241-4647

Fax: (206) 248-5539

**Mayor**  
Kitty Milne

**Deputy Mayor**  
Shirley Basarab

**Councilmembers**  
Larry Gilbert  
Stephen Lamphear  
Sally Nelson  
Don Newby  
Georgette Valle

January 12, 1999

Planning Director  
City of SeaTac

In response to a challenge that was brought before the Central Puget Sound Growth Management Hearings board, the Burien City Council has directed that policy and map amendments to the Comprehensive Plan be prepared. These amendments would establish that for single family areas within the city the density would be based on the zoning that was in effect at the time the Plan was adopted. In many areas of the city the Comprehensive Plan would reduce the density from that permitted under the zoning. In no case in the single-family areas would the density be increased above that permitted under the current zoning. The proposed amendments would also raise the density in the downtown but would not affect the density in any other areas of the city.

The Burien City Council will conduct a public hearing on the proposed amendments at 7:00PM on January 25, 1999 at the Burien City Hall [415 SW 150<sup>th</sup>]. The City Council will take action on the amendments no sooner than its meeting on February 1, 1999. Should you have any questions or comments on the proposed amendments, please contact me at 248-5501.

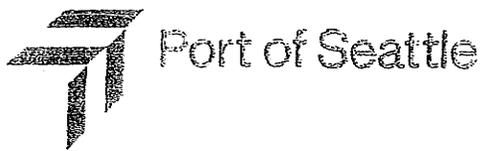
Sincerely,

Robert G. Odle  
Community Development Director

---

## Attachments

1. Proposed Amendments



Via fax 248-5539 (original to follow via U.S. Mail)

January 21, 1999

Mr. Rob Odle  
Community Development Director  
City of Burien  
415 Southwest 150<sup>th</sup> Street  
Burien, WA 98166

Subject: Comments on Proposed Amendments to the Burien Comprehensive Plan

Dear Mr. Odle:

The Port of Seattle has reviewed the proposed amendments to the Burien Comprehensive Plan that are scheduled for public hearing on January 25, 1999. We strongly encourage the City to reconsider the amendments that could increase the density of residential development in areas impacted by aircraft noise from Seattle-Tacoma International Airport.

The adopted Burien Comprehensive Plan includes a policy that calls for matching the planned densities in single family neighborhoods with the existing built densities (Policy RE 1.1). The Plan states that there are many neighborhoods within the City where the existing density of development is less than the zoned density. As a result, this policy has the effect of limiting the potential introduction of new residences. We support the existing Policy RE 1.1 as it is.

The proposed amendment to Policy RE 1.1 now before the City calls for removing the above provision and instead calls for matching the planned densities in single family neighborhoods with the zoned density. This would increase the maximum allowable residential density in single family areas by approximately 1,879 homes, according to the City's Addendum to the Final Environmental Impact Statement for the Plan amendment. We oppose this amendment and amendments to the Comprehensive Plan Land Use Map to the degree that such increased residential density would occur in areas impacted by aircraft noise (e.g., within the 65 DNL noise contour).

The Port looks forward to continuing to work with Burien on issues of land use compatibility between the Airport and the community. If you have any questions, please contact Troy Brown, Senior Planner, at 439-7707.

Sincerely,

A handwritten signature in cursive script that reads "Diane Summerhays".

Diane Summerhays  
Manager, Aviation Planning

cc: Scott Greenberg, Senior Planner, City of Burien

CA:\xbfile\letters\Burien12.doc

Seattle-Tacoma  
International Airport  
P.O. Box 68727  
Seattle, WA 98168 U.S.A.  
TELEX 703433  
FAX (206) 431-5912



October 12, 2010

Dear Planning Commission members,

My parents purchased their Lake Burien property in 1952 and subsequently built their home on it. Five generations of our family have used and enjoyed it for decades. Those of us who remain know this neighborhood in intimate detail. In all of that time, the Lake Burien neighborhood has always been low density in character. Additionally, during those years no one has disputed that Lake Burien has a significant amount of sensitive/critical areas in and around it. King County has been recording these areas on the King County Assessor's record for many years.

In 1993, on becoming a city, Burien recognized Lake Burien as a sensitive area. In the 1997 Burien Comprehensive Plan, the Lake Burien neighborhood was put in the plan and the map as a low density neighborhood due to the character of the neighborhood.

When the LU-2 map was developed, the Lake Burien neighborhood was put on that map as a lower density neighborhood. In 2003 Lake Burien was identified as a critical area in the Critical Area Ordinance. The Lake Burien neighborhood matches the designation criteria for a **Low Density Residential Neighborhood** according to criteria numbers 1,2 and 3 in the Comprehensive Plan.

Therefore we are requesting that the Burien Comprehensive Plan map be changed to show Lake Burien as a **Low Density Residential Neighborhood**. Lowering the density of land use is one of the most important ways of protecting critical areas and water quality. Protecting critical areas and water quality are both issues that are of net benefit to the community.

Whenever there is a disagreement between the text and the map in the Comprehensive Plan, the text rules. **The Comprehensive Plan Land Use map needs to be changed /corrected for the Lake Burien neighborhood.**

Thank you for your careful consideration of my family's request.

Sandy Gledhill-Young

*Sandy Gledhill-Young*

Rozella H. Gledhill

*Rozella H. Gledhill*

*Re: 2010-2*

*Rec'd @ Public Hearing  
October 12, 2010  
1-20*

October 12, 2010

Honorable members of the Burien Planning Commission.

My name is : Robert Howell and I live at 15240 20<sup>th</sup> Ave. SW.

I am here to confirm that the present density of the Lake Burien properties related to the Comprehensive Plan Map Amendment is less than 3 units per acre. This value has been determined using the "Net Site Density" method described in the 2005 Burien Comprehensive plan on page 1-19.

This method involves calculating the area of all the parcels and dividing by all the dwelling units. The parcel data, for both area and number of dwelling units, is obtained from the King County Department of Assessments. The data from each tax parcel is entered in tabular format into a spreadsheet program that calculates the total acreage, number of dwelling units and the average dwelling units per acre.

Printouts from the spreadsheet program, listing each property and associated data, are attached for your examination.

Please note that this process defines the present density of the area under study. It is not a tool to predict the possible growth and development in the future.

Thank you for your attention.

Re: 2010-2  
Reid R. Public Hearing  
October 12, 2010  
CWD

## Properties Adjacent to Lake Burien - Units Per Acre

House Number	Year Originally Built	Lot Size per King County Records		# of Existing Lots	Number of Houses
		Acres	Sq Ft		
1201 SW 152ND ST	2006	0.34	14,838	1	1
1207 SW 152ND ST	1939	0.49	21,179	1	1
1215 SW 152ND ST	1925	0.43	18,645	1	1
1223 SW 152ND ST	1948	0.29	12,850	1	1
1229 SW 152ND ST	1943	0.29	12,650	1	1
1235 SW 152ND ST	1912	0.43	18,602	1	1
1239 SW 152ND ST	1996	0.35	15,360	1	2
1247 SW 152ND ST	1921	0.61	26,359	1	1
1255 SW 152ND ST	1930	0.40	17,400	1	1
1261 SW 152ND ST	1957	0.78	34,087	1	2
1405 SW 152ND ST	1936	0.62	26,868	1	1
1413 SW 152ND ST	1937	0.60	25,966	1	1
1425 SW 152ND ST	1995	0.42	18,090	1	1
1431 SW 152ND ST	1920	0.33	14,336	1	1
1435 SW 152ND ST	1925	0.28	12,264	1	1
1443 SW 152ND ST	1936	0.25	11,072	1	1
1449 SW 152ND ST	1920	0.37	16,224	1	1
1461 SW 152ND ST	1937	0.39	16,800	1	1
1603 SW 152ND ST	1925	0.47	20,520	1	2
1611 SW 152ND ST	2010	0.53	24,730	1	1
1621 SW 152ND ST	1918	0.90	36,638	1	1
No Address	Vacant	0.30	13,061	1	1
1635 SW 152ND ST	1930	0.37	16,089	1	1
No Address	Vacant	0.23	10,096	1	1
1803 SW 152ND ST	1939	0.40	17,400	1	1
1807 SW 152ND ST	1939	0.40	17,400	1	1
1811 SW 152ND ST	1951	0.45	19,630	1	1
1825 SW 152ND ST	1947	0.60	26,076	1	1
15232 20TH AVE SW	2006	0.30	13,222	1	1
15244 20TH AVE SW	1992	0.47	20,530	1	1
15252 20TH AVE SW	2007	0.29	12,837	1	1
15260 20TH AVE SW	1985	0.45	19,477	1	1
15404 20TH AVE SW	1933	0.51	22,200	1	1
15406 20TH AVE SW	1957	0.57	24,800	1	1
15511 20TH AVE SW	1915	2.02	87,991	1	3
15504 20TH AVE SW	1949	0.35	15,302	1	1
Common		0	0	0	0
1912 SW 156TH ST	1959	0.62	26,983	1	1
1908 SW 156TH ST	1910	0.23	9,960	1	1
1652 SW 156TH ST	1946	0.46	20,060	1	1
1808 SW 156TH ST	1945	0.43	18,730	1	1
1804 SW 156TH ST	1949	0.35	15,240	1	2
1626 SW 156TH ST	1942	0.48	20,944	1	1
1620 SW 156TH ST	1918	0.68	29,670	1	2
1618 SW 156TH ST	1961	0.27	11,782	1	1
1602 SW 156TH ST	1926	0.39	17,094	1	1
1600 SW 156TH ST	1975	0.31	13,320	1	2
15602 16TH AVE SW	1999	0.93	40,515	1	2
15703 15TH PL SW	2008	1.02	44,400	1	2
Common		0	0	0	0
1440 SW 158TH ST	1937	1.27	55,380	1	1
15709 14TH PL SW	1953	0.35	15,180	1	1
15700 14TH PL SW	1997	0.25	10,800	1	1
1418 SW 158TH ST	1953	0.59	25,860	1	1
15705 14TH AVE SW	1955	0.39	16,907	1	1
15701 14TH PL SW	1954	0.44	18,980	1	1

## Properties Adjacent to Lake Burien - Units Per Acre

House Number	Year Originally Built	Lot Size per King County Records		# of Existing Lots	Number of Houses
		Acres	Sq Ft		
15703 13TH AVE SW	1952	0.49	21,270	1	1
15701 13TH AVE SW	1959	0.37	16,101	1	1
15702 13TH AVE SW	1951	0.36	15,658	1	1
15704 13TH AVE SW	1955	0.36	15,704	1	1
1228 SW 157TH ST	1978	0.35	15,320	1	1
1222 SW 157TH ST	1958	0.33	14,395	1	1
1216 SW 157TH ST	1947	0.51	22,259	1	1
1208 SW 157TH ST	1978	0.24	10,644	1	1
15605 12TH AVE SW	1953	0.25	10,900	1	1
No address	Vacant	0.04	1,590	0	0
No address	Vacant	0.40	17,300	1	1
15441 11TH AVE SW	1950	0.61	26,593	1	1
15435 11TH AVE SW	1956	0.43	18,610	1	2
15427 11TH AVE SW	1955	0.41	17,773	1	1
15423 11TH AVE SW	1999	0.38	16,460	1	1
15413 11TH AVE SW	1955	0.36	15,752	1	1
15407 11TH AVE SW	1909	0.65	28,320	1	1
15403 11TH AVE SW	1937	0.33	14,586	1	1
Totals:		33.57	1,461,039	71	82

## Properties Upland from Lake Burien - Units Per Acre

House Number	Year Originally Built	Lot Size per King County Records		# of Existing Lots	Number of Houses
		Acres	Sq Ft		
1817 SW 152ND ST	1935	0.34	14,700	1	1
2012 SW 156TH ST	1955	0.18	7,680	1	1
2006 SW 156TH ST	1956	0.19	8,400	1	1
15512 20TH AVE SW	1978	0.25	10,800	1	1
1930 SW 156TH ST	1956	0.19	8,400	1	1
1924 SW 156TH ST	1956	0.19	8,400	1	1
1920 SW 155TH PL	1959	0.19	8,446	1	1
1918 SW 155TH PL	1959	0.20	8,526	1	1
1914 SW 156TH ST	1955	0.21	9,100	1	1
1904 SW 156TH ST	1960	0.22	9,750	1	1
1822 SW 156TH ST	1948	0.48	21,060	1	1
1812 SW 156TH ST	1949	0.34	15,000	1	1
1616 SW 156TH ST	1946	0.23	10,026	1	1
15610 16TH AVE SW	Vacant	0.19	8,449	1	1
15616 16TH AVE SW	Vacant	0.17	7,325	1	1
15622 16TH AVE SW	2008	0.17	7,202	1	1
1520 SW 158TH ST	1997	0.34	15,011	1	1
15708 15TH PL SW	1963	0.19	8,400	1	1
15714 15TH PL SW	1963	0.19	8,400	1	1
15722 15TH PL SW	1934	0.19	8,400	1	1
1510 SW 158TH ST	1998	0.28	12,000	1	1
No address	Vacant	0.22	9,598	1	1
1490 SW 158TH ST	2008	0.22	9,598	1	1
15723 14TH PL SW	1983	0.33	14,400	1	1
1438 SW 158TH ST	1963	0.21	9,000	1	1
15732 14TH PL SW	1955	0.25	10,797	1	1
15722 14TH PL SW	1962	0.18	7,798	1	1
15712 14TH PL SW	1974	0.20	8,698	1	1
1410 SW 158TH ST	1975	0.28	12,000	1	1
1414 SW 158TH ST	1940	0.28	12,375	1	1
15731 14TH PL SW	1966	0.39	16,927	1	1
15721 14TH PL SW	1960	0.35	15,237	1	1
15711 14TH AVE SW	1960	0.38	16,702	1	1
15734 14TH AVE SW	1968	0.37	15,997	1	1
1314 SW 158TH ST	1986	0.24	10,601	1	1
15733 13TH AVE SW	1953	0.21	9,122	1	1
15725 13TH AVE SW	1926	0.38	16,504	1	1
15715 13TH AVE SW	1956	0.34	14,600	1	1
15707 13TH AVE SW	1958	0.29	12,800	1	1
15705 13TH AVE SW	1959	0.26	11,200	1	1
15706 13TH AVE SW	1953	0.26	11,200	1	1
15708 13TH AVE SW	1953	0.24	10,600	1	1
15712 13TH AVE SW	1951	0.25	11,000	1	1
15724 13TH AVE SW	1960	0.27	11,755	1	1
1232 SW 158TH ST	1924	0.15	6,595	1	1
1224 SW 158TH ST	1940	0.21	9,302	1	1
1218 SW 158TH ST	1960	0.22	9,580	1	1
1210 SW 158TH ST	1932	0.23	9,857	1	1
1204 SW 158TH ST	1940	0.23	9,857	1	1
1203 SW 157TH ST	1922	0.26	11,385	1	1
1213 SW 157TH ST	1931	0.23	10,135	1	1
1217 SW 157TH ST	1922	0.24	10,413	1	1
1227 SW 157TH ST	1923	0.25	10,690	1	1
1230 SW 157TH ST	1923	0.24	10,486	1	1
1224 SW 157TH ST	1924	0.23	10,099	1	1
1210 SW 157TH ST	1923	0.27	11,662	1	1
15623 12TH AVE SW	1953	0.15	6,491	1	1
15613 12TH AVE SW	1959	0.15	6,491	1	1
1102 SW 156TH ST	1969	0.29	12,693	1	1
15411 11TH AVE SW	1957	0.17	7,219	1	1
15401 11TH AVE SW	1960	0.19	8,469	1	1
Totals:		15.04	655,408	61	61

### Lake Burien Neighborhood Properties - Units Per Acre

	Acres	# of Existing Lots	Number of Houses	Units/acre	
				Based on # of existing lots	Based on # of houses
Properties adjacent to Lake Burien	33.57	71	82	2.11	2.44
Properties upland from Lake Burien	15.04	61	61	4.06	4.06
Combined properties totals	48.61	132	143		
Calculation of combined properties totals				2.72	2.94


 USING THE BURRIEN COMPREHENSIVE PLAN DEFINITION FOR DENSITY (NET SITE DENSITY) THE DENSITY OF THE LAKE BURRIEN NEIGHBORHOOD IS LESS THAN 3 UNITS PER ACRE.

**CITY OF BURIEN, WASHINGTON  
MEMORANDUM**

**DATE:** October 26, 2010

**TO:** Planning Commission

**FROM:** Stephanie Jewett, AICP  
Planner

**SUBJECT:** Introduction and Discussion - El Dorado West Retirement Community Rezone Request

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**PURPOSE:**

The purpose of this agenda item is to share the staff recommendation on a request to rezone two parcels of land from Residential Multifamily-18 to Residential Multifamily-24 in order to redevelop the existing 68-unit El Dorado West Retirement Community at a higher density.

**BACKGROUND:**

A site specific rezone, in contrast to an area-wide rezone request, is a “Quasi-Judicial” proceeding. Because the El Dorado West rezone request is “Quasi-Judicial” you should not discuss the pending land use application with opponents or proponents of the proposal outside of the public hearing. This type of contact is called “Ex Parte Contact” and it may violate the Appearance of Fairness doctrine, which was created to ensure that decision makers act without bias when deciding land use requests.

**PLANNING COMMISSION ACTION:**

No action is necessary at the meeting. Questions and discussions are welcome.

**NEXT STEPS:**

A public hearing and possible recommendation to City Council on the El Dorado West Retirement Community Rezone Request is scheduled for November 9, 2010.

If you have any questions before the meeting, feel free to contact me at (206) 439-3152 or by e-mail at [stephaniej@burienwa.gov](mailto:stephaniej@burienwa.gov).

**Attachment:**

**PLA 10-0780, El Dorado West Retirement Community Rezone Request Staff Recommendation**



## CITY OF BURIEN, WASHINGTON

Department of Community Development

400 SW 152<sup>nd</sup> Street, Suite 300, Burien, Washington 98166

Phone: (206) 241-4647 Fax: (206) 248-5539

### Rezone Request

### PLA 10-0780

**APPLICANT:** Dave Baus with Village Concepts for El Dorado West Retirement Community

**LOCATION:** 1010 SW 134<sup>th</sup> Street (see Attachment 1-Vicinity Map)

**CURRENT LAND USE:** El Dorado West Retirement Community

**TAX PARCEL #s:** 1823049011 & 1823049037

**REQUEST:** Rezone two parcels of the existing El Dorado West Retirement Community site from Residential Multifamily-18 to Residential Multifamily-24.

#### STAFF

**RECOMMENDATION:** Approve Rezone Request

## FINDINGS & CONCLUSIONS

**DISCUSSION:** The Applicant is requesting to rezone two parcels of land from Residential Multifamily-18 to Residential Multifamily-24 in order to redevelop the existing 68-unit El Dorado West Retirement Community at a higher density. The Applicant's intent is to provide 102 assisted living units. Phase 1 is planned to replace the existing building's east wing with 61 units, a kitchen and a dining room. Phase 2 is planned to replace the existing building's west wing with 41 units, a social room, and offices. Preliminary project plans are included in the Applicant's submitted materials (see Attachment 5).

The zoning for the site consists of two designations, Residential Multifamily-24 on the western portion of the site and Residential Multifamily-18 on the eastern portion (see Attachment 2). In order for the site to be redeveloped at the desired higher density, the Applicant is requesting that the eastern portion of the site be rezoned from Residential Multifamily-18 to Residential Multifamily-24.

**REZONE REVIEW CRITERIA:** The City of Burien Zoning Code (Burien Municipal Code 19.65.090) contains the criteria for review of a proposed rezone. To be approved, the proposed rezone must meet *all* of the following criteria.

**A. The rezone is consistent with the Comprehensive Plan.**

1. Facts: The Comprehensive Plan designates the entire El Dorado West site as *High Density Multi-family Neighborhood* (see Attachment 3). As noted in **Policy RE 1.7** of the Comprehensive Plan, the *High Density Multi-family Neighborhood* land use designation is intended to provide for the location of stable and attractive multi-family development near transit, employment, shopping and recreation facilities at densities of up to 24 units per acre. Consistent with this policy direction, the proposed rezone to Residential Multifamily-24 allows for maximum densities of 24 units per acre.

This same policy also specifically calls out “assisted living units for seniors or disabled persons” as a use that should be allowed in areas designated for High Density Multifamily Use and makes allowances for these types of uses to be developed at densities greater than 24 units per acre when the proposed development is appropriate for the site. Consistent with this policy direction, the City’s zoning code allows for “Senior Citizen Assisted Dwelling Units” in the RM-24 zone with densities greater than 24 dwelling units per acre allowed as long as the development is consistent with the City’s Development Standards. Development standards include requirements such as parking, impervious surface and building coverage maximums, height maximums and landscaping.

The Comprehensive Plan also includes the following goal and policy encouraging the development of housing for seniors:

**Goal HS.3** Develop and preserve a variety of housing options for Burien citizens with special needs due to age, disability, or personal circumstance.

**Policy HS 3.3** The City should encourage the dispersal of special needs and senior housing throughout the City. However, special needs and senior housing must still meet the development requirements of the underlying zone. Some clustering of special needs and senior housing may be appropriate if proximity to public transportation, medical facilities or other essential services is necessary.

2. Conclusion: Criteria met.

**B. The rezone bears a substantial relation to the public health, safety or welfare.**

1. Facts: As indicated by the Applicant’s submitted materials (Attachment 5), the rezone is being requested in order to develop an increased supply of clean, safe, housing that provides health care services for the needs of the next generation of seniors.

The redevelopment of the site will also address several public health, safety and welfare issues at the site, including –

- Aging heating and plumbing systems in need of constant repair.
- Doorways not wide enough to accommodate wheelchairs and walkers.

- Bathrooms which are not designed to provide for bathing without assistance.

2. Conclusion: Criteria met.

**C. The rezone will not be materially detrimental to uses or property in the immediate vicinity of the property.**

1. Facts: The following Table summarizes the comprehensive plan land use designations, zoning designations and existing land uses adjacent to the site.

**Table - 1**

Direction	Comp. Plan Designation	Zone	Current Uses
North	Moderate Density Residential Neighborhood	RS 7,200 (Single-Family Residential)	Single Family Residential
Northwest	High Density Multi-Family Neighborhood	RM-24 (Multi-Family Residential)	Multi Family Residential
South	High Density Multi-Family Neighborhood	RM-18 (Multi-Family Residential)	Multi Family Residential
East	Moderate Density Residential Neighborhood	RS 7,200 (Single- Family Residential)	Single Family Residential
West	High Density Multi-Family Neighborhood	RM-24 (Multi-Family Residential)	El Dorado West Retirement Community

The proposed rezone will be compatible with the properties located directly to the west, northwest and south of the site, which are all zoned for multi-family use. The property located to the west of the site is currently designated for High Density Residential use in the Comprehensive Plan, is zoned RM-24 Residential Multi-Family, and is currently developed as part of the existing El Dorado West Retirement Community. The property to the northwest of the site is currently designated for High Density Residential use in the Comprehensive Plan, is zoned RM-24 Residential Multi-family, and is currently developed as the “Squire of Ambaum” apartment complex. The property to the south of the site across SW 134<sup>th</sup> Street is designated for High-Density Residential use in the Comprehensive Plan, is zoned RM-18 Multi-family Residential and is developed as the “Quiet Maple Townhomes”.

The properties to the east and directly north of the site are designated Moderate Density

Residential Neighborhood, are zoned RS-7,200 Residential Single-Family, and are developed with single family homes. These properties may experience some visual impacts given the planned redevelopment of the site. However, any future redevelopment on the site will be required to comply with the City's Transition Area requirements, which are designed to provide standards for creation of a buffer between multi-family and single-family zones, including the following provisions –

- **Installation of a 20 ft. wide “full screen” landscape buffer** along the property line between the site and the adjacent single-family zoned properties to the east and the north of the site. The “full screen” is achieved through specific requirements including the requirement that the buffer consist of primarily evergreen trees and shrubs, with the trees spaced no more than 25 feet on center and the shrubs spaced no more than four feet apart. See Attachment 4 for the location and extent of the required 20 ft. landscape buffer. The purpose of the landscaping buffer is to screen the buildings and activities in order to decrease any impacts to adjoining single-family uses. Landscaping helps mitigate visual impacts and to some degree noise impacts between land uses. It's also important to note that the existing single-family residences adjacent to the eastern and northern boundary of the site currently have existing landscaping screens (see Attachment 1).
- **Building Façade and roofline modulation** will be required on any facades and rooflines that exceed 60 feet in length and face the adjacent single-family zoned properties to the east and the north of the site. The purpose of building façade and roofline modulation is to reduce the visual bulk and mass of buildings to adjacent single-family uses.
- **Truck loading spaces, refuse collection areas and mechanical equipment** will be required to be located as far away as possible from the adjacent single-family zoned properties to the east and the north of the site. The purpose of this requirement is to limit noise and odor impacts, commonly created by these building components, to adjacent single-family uses.

Given these requirements, possible visual and noise impacts to the single-family zoned properties to the north and east of the site from future redevelopment of the site will be mitigated.

In addition, changes to traffic generated from the proposed redevelopment of the El Dorado West site is estimated to be minimal. As stated in the Applicant's submitted Traffic Impact Analysis (Attachment 5) only 4 new AM peak-hour trips and 7 new PM peak hour trips are estimated.

2. Conclusion: Criteria met.

**D. The rezone has merit and value for the community as a whole.**

1. Facts: The rezone has merit and value for the community as a whole given 34 more housing units to serve the needs of senior citizens will be able to be developed compared to what the existing zoning allows.
2. Conclusion: Criteria met.

**ATTACHMENTS**

- 1- Vicinity Map
- 2- Current Zoning Designations
- 3- Comprehensive Plan Land Use Designations
- 4- Twenty Foot Landscape Buffer
- 5- Submitted Application Materials



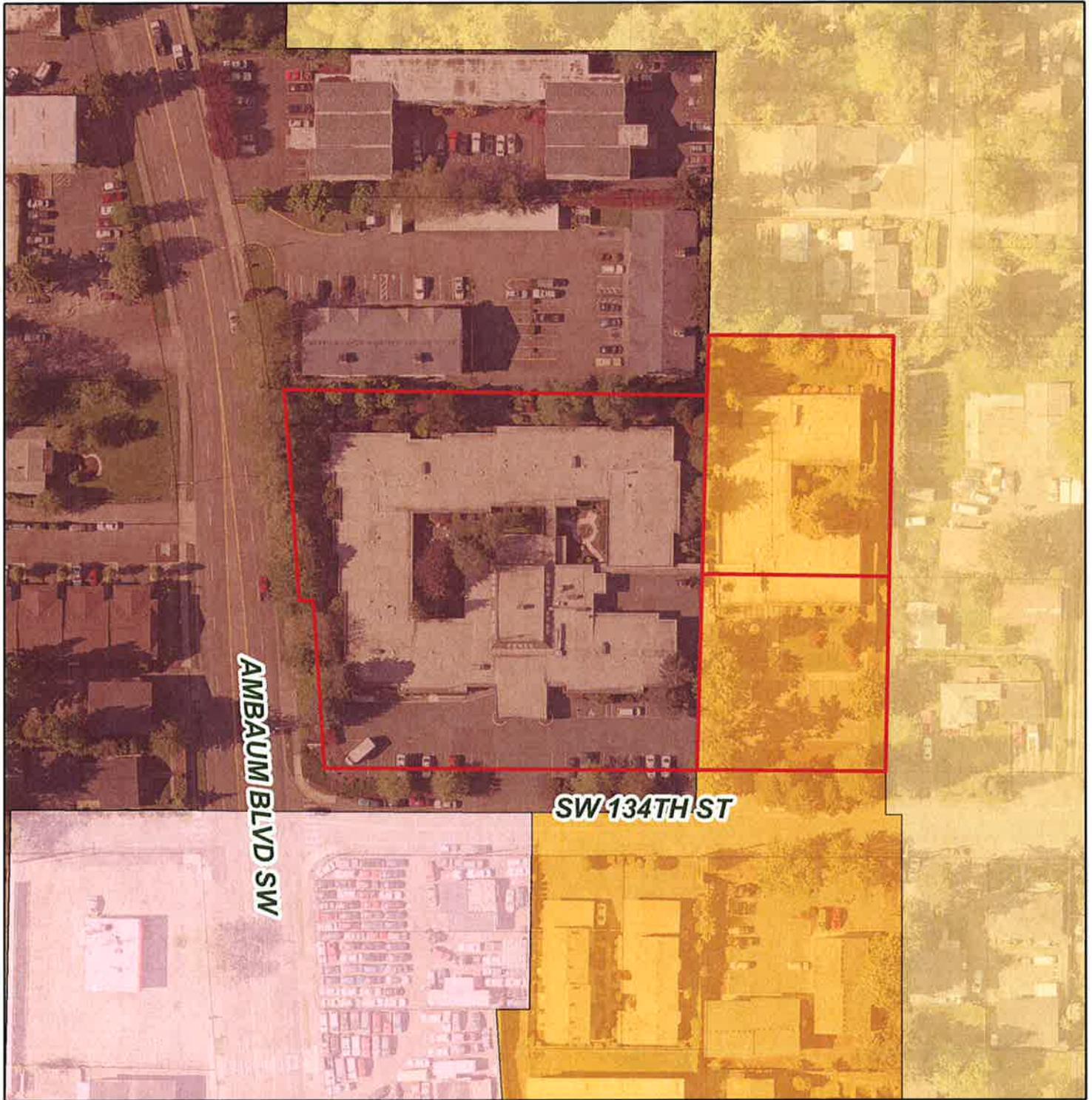
PLA 10-0780  
El Dorado West Rezone Request  
Vicinity Map



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PLA 10-0780  
 El Dorado West Rezone Request  
 Current Zoning



Legend

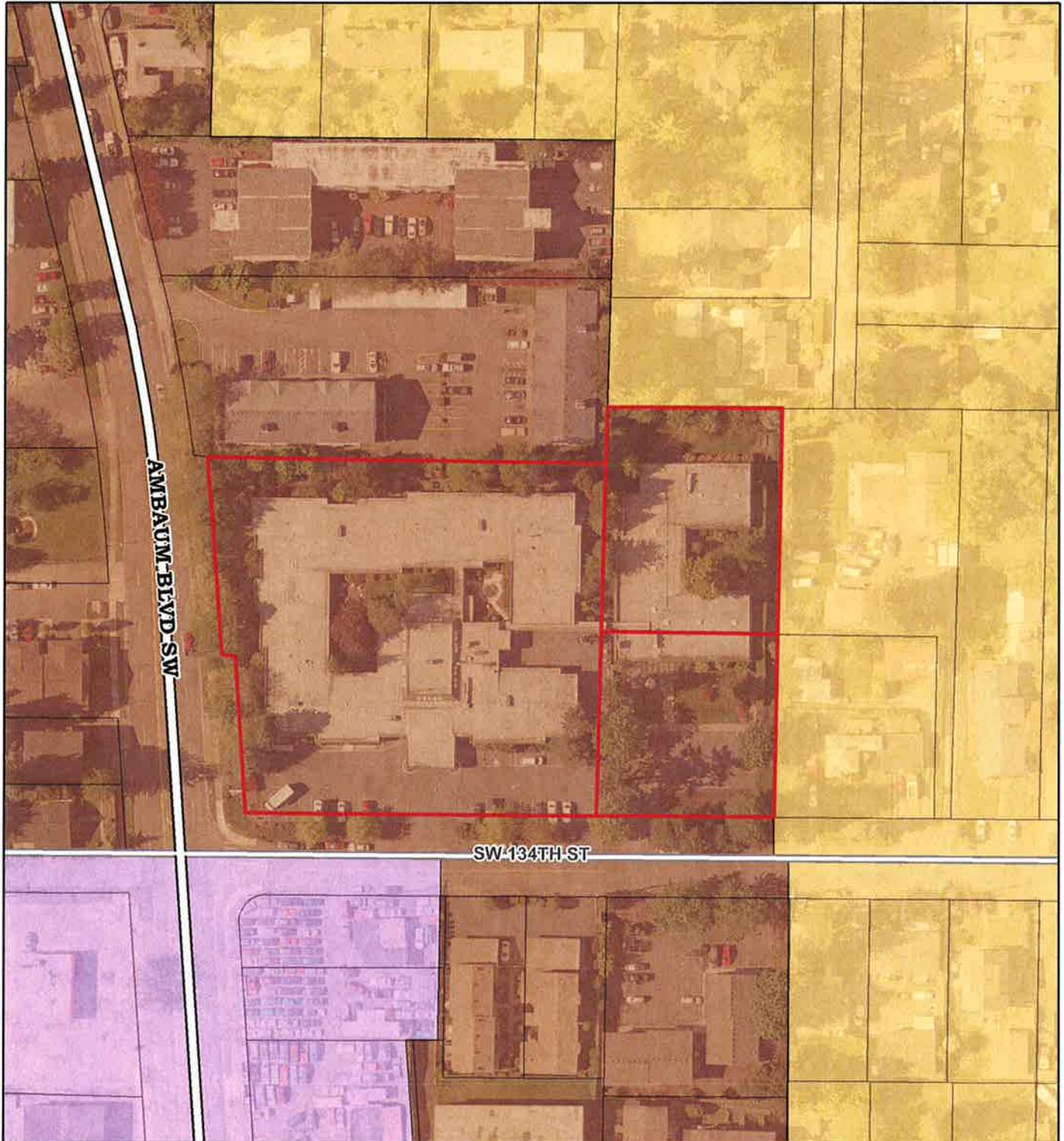
- RM-18 Residential Multi-Family
- RS-7,200 Residential Single-Family
- RM-24 Residential Multi-Family
- CI

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PLA 10-0780  
 El Dorado West Rezone Request  
 Comprehensive Plan Land Use Designations



Legend

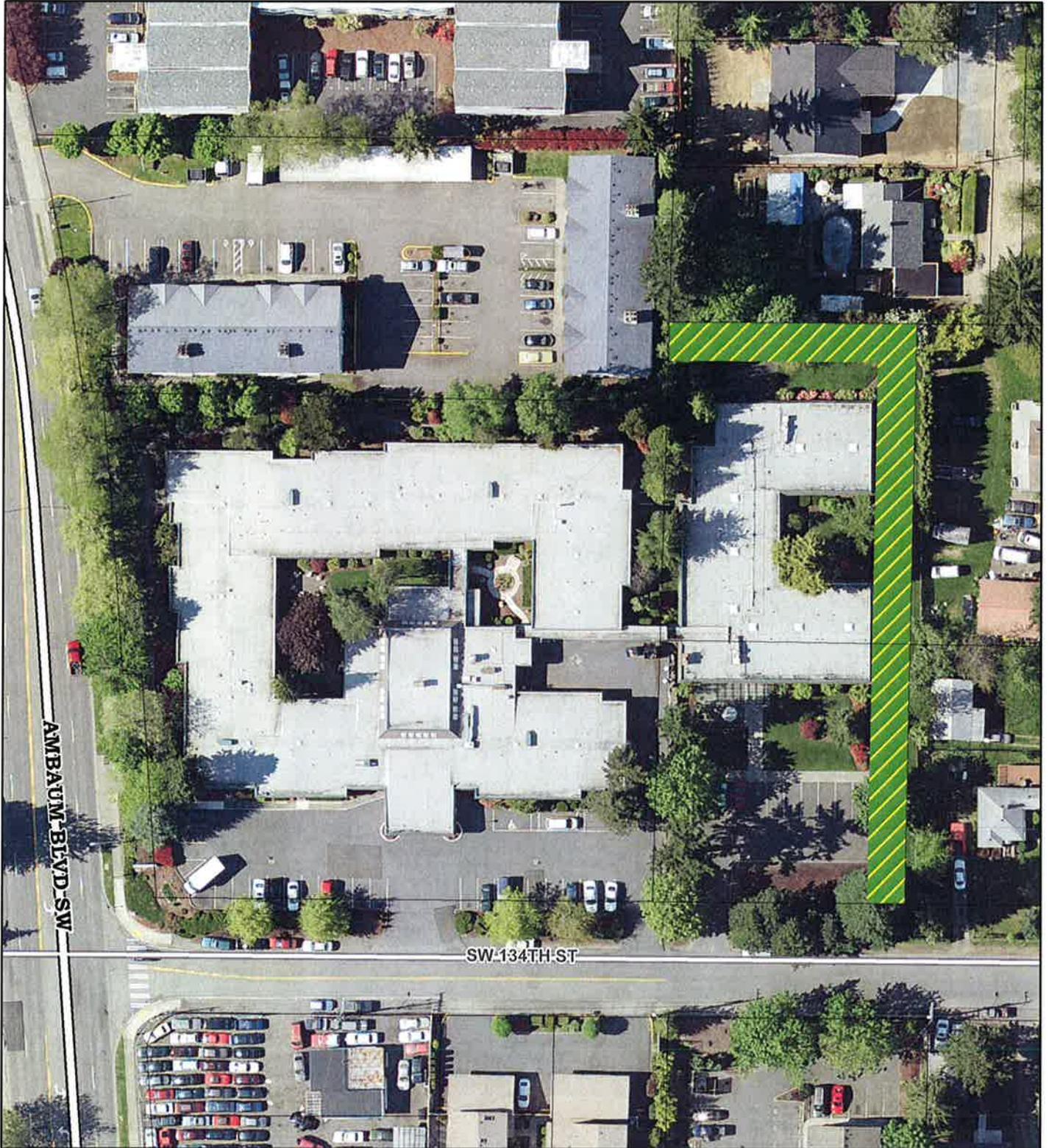
- Moderate Density Residential Neighborhood
- High Density Multi-Family Neighborhood
- Intersection Commercial

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PLA 10-0780  
El Dorado West Rezone Request  
20 FT Landscape Buffer



Legend



Landscape Buffer

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## Re-zone Criteria

BMC 19.95.100.4. Criteria. The City may approve or approve with modifications a proposal to amend the text of this Code if:

- A. The amendment is consistent with the Comprehensive Plan;  
The amendment to the re-zone would allow the subject property zone to be consistent with comprehensive plan.
- B. The amendment bears a substantial relation to the public health, safety or welfare;

El Dorado West, built in 1975 is Village Concepts' original boarding home. The age of the structure, overall esthetics, and the current financial markets concludes that a complete tear down and renovation of El Dorado West is our best option to revitalize this project.

With any building of this age, there are several maintenance issues that need to be addressed. Equipment like the boiler is under constant repairs and maintenance as well as parts are becoming scarce and limited, thus requiring replacement to the equipment as the only option. The plumbing throughout the building, as years of corrosion and sediment buildup continue to wear on the water lines causing breakage and leaks is in need of replacement. The roof will require replacement in the coming years.

The majority of the apartments at El Dorado do not adequately meet the needs of today's seniors. Doorways are not wide enough to accommodate wheelchairs and walkers. Bathrooms are furnished with tub enclosures, which impact the seniors as they are not able to climb in and out of and require additional assistance to complete the simple task as bathing. The call system while operational is not as sophisticated and flexible as systems offered today.

El Dorado West looks a lot like any nursing home built in the late sixties and early 70's. Over the last 35 years senior housing design has substantially changed and this building continues to struggle to be marketable. In order for El Dorado to be marketable in the next 35 years a complete renovation of the exterior, interior common areas and apartments is required.

Two factors do not make a remodel to address these issues a viable option for El Dorado West. First, the number of units in this building does not make a significant investment in a remodel a financial viable option. With only 68 units available the economy of scale for staffing and building cost are very low. Adding additional units makes the project perform better leading to overall stronger project. Secondly, a project that does not add units (creating a stronger project) is nearly impossible to finance due to the condition of the financial markets. Banks are much more stringent than in years past and to make a project viable to underwriting we must present a project that is much stronger than in years past.

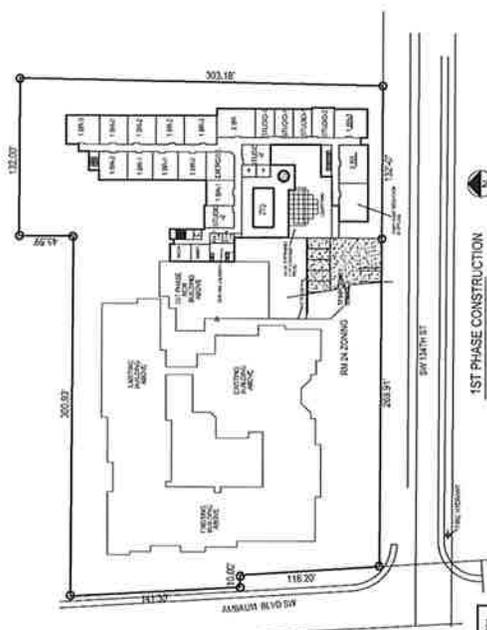
- C. The rezone will not be materially detrimental to uses or property in the immediate vicinity of the property

In the redevelopment of El Dorado West we have made several changes to our current site plan to minimize the overall impact to our adjacent property owners. On the north side of our development we designed a secured private drive; this parking lot is designed for the residents parking and fire truck access. Having this drive along the north side of our development helps minimize the traffic on SW 134<sup>th</sup> and sets the location of the main building in the center of the subject's property. On the east side of our development we will include a 20 ft. landscaped buffer and also move the northeast section of the building an additional 5 ft. from our east property line. On the south side; El Dorado West will improve the frontage along SW 134<sup>th</sup> Street and with the additional access drive on the north side of our development, the overall impact vehicles impact on SW 134<sup>th</sup> Street will be reduced. On the west side; our evaluation plans for El Dorado is to keep the elevation of the building to 2 stories along Ambaum Blvd.

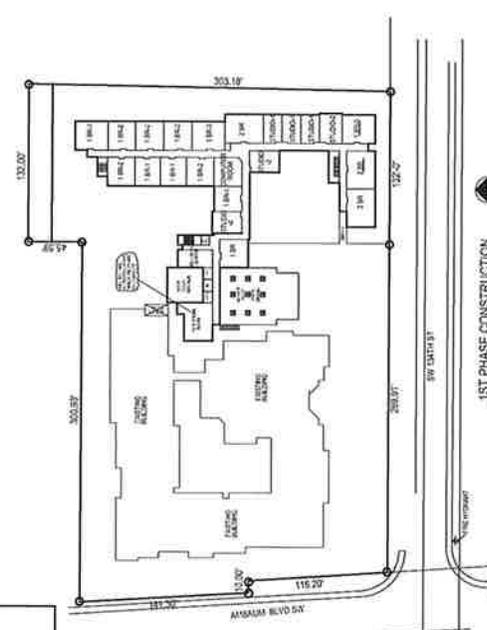
Additional Traffic: The addition 32 units (70 units existing-102 planned) will generate an additional 85 trips a day and having access to Ambaum Blvd. SW and SW 134<sup>th</sup> Street, both accesses will operate at acceptable LOS C with the new development plan. Please see attached the Gibson Traffic Consultants Report dated March 2010.

D. The amendment is in the best interest of the community as a whole.

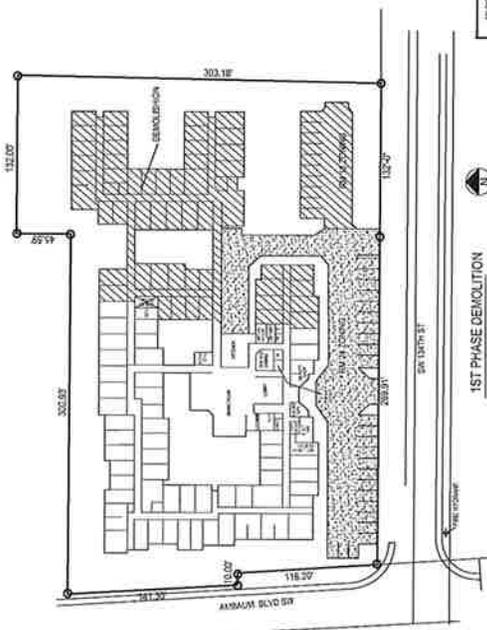
El Dorado West requires the proposed action to create a strong viable product for the community and seniors in the future. Over the next 20 years the baby boomer generation will need housing and health care services that El Dorado West provides. Due to the limited of vacant ground and zoning which allow for this type of housing with care, this development is critical for providing clean, safe, housing that provides health care services for the next generation of seniors to come.



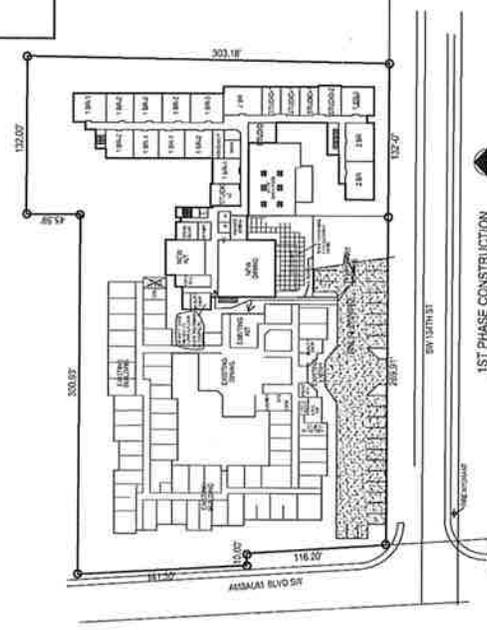
1ST PHASE CONSTRUCTION  
LOWER FLOOR  
13.72' SLOFT



1ST PHASE CONSTRUCTION  
UPPER FLOOR  
16.10' SLOFT



1ST PHASE DEMOLITION  
MAIN FLOOR  
20.20' SLOFT

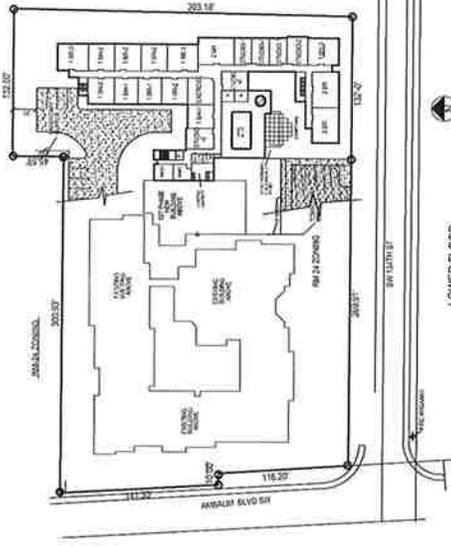


1ST PHASE CONSTRUCTION  
MAIN FLOOR  
20.20' SLOFT

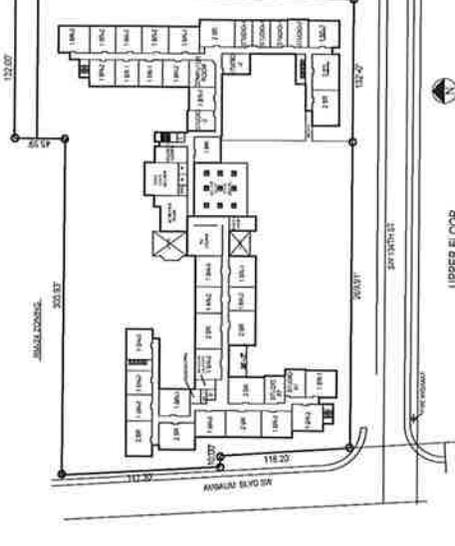
DESIGNER  
 ARCHITECT  
 7301 REVERBY LANE  
 BURDEN, WA 98003  
 PHONE 425-348-2000  
 FAX 425-348-4244

<b>REVISIONS</b>	JOB. NO.	PROJECT	REDEVELOPMENT OF EL DORADO WEST	SHEET <b>P-1</b>
	DATE 16 OCT 09	LOCATION	S.W. 134TH ST. & AMBAUM BLVD. S.W. BURDEN, WA	
	DRAWN BY	OWNER	CHARLES MORGAN & ASSOCIATES ARCHITECTS	7301 REVERBY LANE BURDEN, WA 98003 PHONE 425-348-2000 FAX 425-348-4244
	CHECKED	CONTRACTOR	STATES LICENSED: WASHINGTON, ARIZONA, CALIFORNIA, COLORADO, ILLINOIS, INDIANA, IOWA, MISSOURI, NEBRASKA, NEW JERSEY, NEW MEXICO, NORTH CAROLINA, NORTH DAKOTA, OREGON, SOUTH CAROLINA, TEXAS, VIRGINIA, WISCONSIN, WYOMING	REGISTERED ARCHITECT CHARLES E. MORGAN STATE OF WASHINGTON

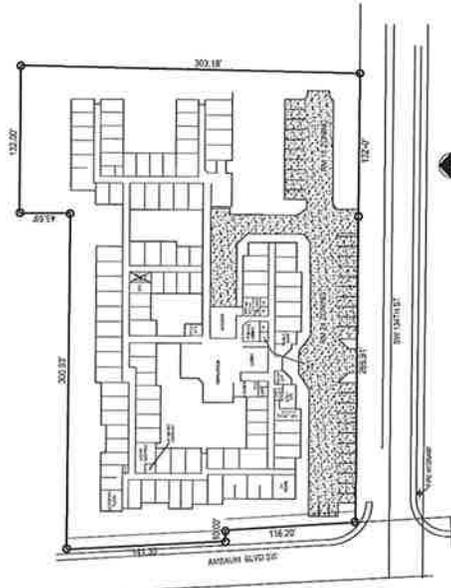




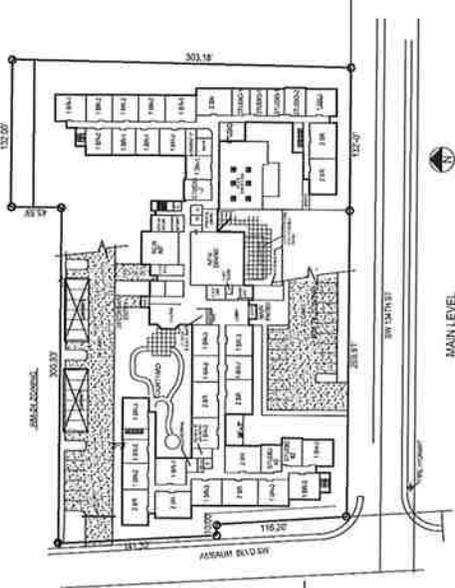
LOWER FLOOR  
7,440 SQ FT (100)



UPPER FLOOR  
7,440 SQ FT (100)



EXISTING BUILDING



MAIN LEVEL  
4,275 SQ FT (100)

TOTAL BUILDING AREA  
97,265 SQ FT

COMPLETED PROJECT

REVISIONS

JOB NO.  
DATE 16 OCT 09  
DRAWN BY  
CHECKED

PROJECT REDEVELOPMENT OF EL DORADO WEST  
LOCATION S.W. 134TH ST. & AMBAUM BLVD. S.W. BUREN, WA  
OWNER  
CONTRACTOR



STATE LICENSES:  
ARCHITECTURE: WASHINGTON, ALABAMA, ARIZONA, ARKANSAS, CALIFORNIA, COLORADO, CONNECTICUT, FLORIDA, GEORGIA, ILLINOIS, INDIANA, IOWA, KANSAS, KENTUCKY, LOUISIANA, MAINE, MARYLAND, MASSACHUSETTS, MICHIGAN, MINNESOTA, MISSISSIPPI, MISSOURI, MONTANA, NEBRASKA, NEVADA, NEW HAMPSHIRE, NEW JERSEY, NEW MEXICO, NEW YORK, NORTH CAROLINA, NORTH DAKOTA, OHIO, OKLAHOMA, OREGON, PENNSYLVANIA, RHODE ISLAND, SOUTH CAROLINA, SOUTH DAKOTA, TEXAS, UTAH, VERMONT, VIRGINIA, WISCONSIN, WYOMING

CHARLES MORGAN & ASSOCIATES ARCHITECTS  
7341 BEVERLY LAKE  
SPRINGTOWN, WA 98083

SHEET  
P-3

EMAIL: [cmorgan@cmorgan.com](mailto:cmorgan@cmorgan.com)  
PHONE: 425-352-2888  
FAX: 425-348-0284

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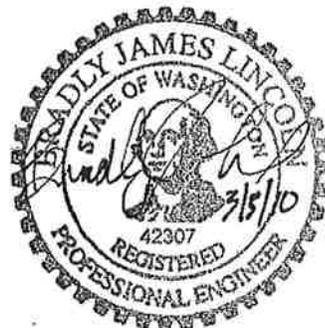
# GTC

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Gibson Traffic Consultants  
2802 Wetmore Avenue  
Suite 220  
Everett, WA 98201  
425.339.8266

## El Dorado West Traffic Impact Analysis

Prepared for: Brown Building, LLC  
Submitted to: City of Burien  
March 2010



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 Turning Movement Volumes ..... C  
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 WSDOT Channelization Warrants ..... F  
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## 1. DEVELOPMENT IDENTIFICATION

Gibson Traffic Consultants (GTC) has been retained to analyze the traffic impacts of the proposed El Dorado West development. GTC is a traffic engineering consulting firm registered and licensed in the State of Washington.

GTC is located at:

2802 Wetmore Avenue  
Suite 220  
Everett, WA 98201  
Phone: 425-339-8266  
Fax: 425-258-2922  
Email: info@gibsontraffic.com

Brad Lincoln, responsible for this report and traffic analysis, is a licensed professional engineer (Civil) in the State of Washington and member of the Washington State section of ITE.

The El Dorado West development will consist of a total of 102 assisted living units. The development will replace the existing 70 assisted living units on site, which have been credited to the development. Phase 1 is planned to replace the existing building's east wing with 61 units, a kitchen and a dining room. Phase 2 is planned to replace the existing building's west wing with 41 units, a social room, and offices. It is anticipated that the new units will be completely occupied by the year 2012.

The site is located in the City of Burien at the northeast corner of the Ambaum Boulevard SW at SW 134<sup>th</sup> Street intersection. Site access is proposed to Ambaum Boulevard SW about 250 feet (centerline to centerline) north of SW 134<sup>th</sup> Street and to SW 134<sup>th</sup> Street about 175 and 300 feet (centerline to centerline) east of Ambaum Boulevard SW. A site vicinity map is included in Figure 1.



## 2. METHODOLOGY

This report has been prepared based on the requirements of the City of Burien's *Traffic Review Checklist*. The El Dorado West development is anticipated to generate less than 10 peak-hour trips, with the credit for the existing units, and is categorized as Project Traffic Level I. This level requires only a description of the project, trip generation calculations and transportation impact fee calculations. Additional analysis has been provided regarding the proposed site access driveways, per the request of City of Burien staff, to determine if additional channelization will be required and if the proposed accesses will be impacted by the vehicle queue from the intersection of Ambaum Boulevard SW at SW 134<sup>th</sup> Street.

## 3. TRIP GENERATION

Trip generation calculations for the El Dorado West development are based on national statistics for assisted living developments contained in the *ITE Trip Generation, 8<sup>th</sup> Edition (2008)*. The trip generation calculations include credit for the 70 assisted living units currently on site.

The average trip generation rates for ITE Land Use Code 254, assisted living, were used for the trip generation calculations. This methodology is consistent with City of Burien requirements.

The El Dorado West development is anticipated to generate 85 new average daily trips (ADT) with 4 new AM peak-hour trips and 7 new PM peak-hour trips. A summary of the trip generation is included in Table 1.

**Table 1: Trip Generation Summary**

Land Use	Units	Average Daily Trips	AM Peak-Hour Trips			PM Peak-Hour Trips		
			Inbound	Outbound	Total	Inbound	Outbound	Total
Assisted Living (To be Removed)	-70 Units	-186	-7	-3	-10	-7	-8	-15
Assisted Living (To be Constructed)	102 Units	271	9	5.00	14	10	12	22
<b>TOTALS</b>		<b>85</b>	<b>2</b>	<b>2</b>	<b>4</b>	<b>3</b>	<b>4</b>	<b>7</b>

The trip generation calculations are included in the attachments.

#### 4. ACCESS ANALYSIS

Site access turning movement volumes have been estimated based on a distribution developed from a PM peak-hour turning movement count conducted by GTC staff in March 2009 at the Ambaum Boulevard SW at SW 134<sup>th</sup> Street intersection and by considering the street connections and surrounding land uses in the site's vicinity. Figure 2 shows the PM peak-hour site access turning movement volumes, which account for the total 102 units. The traffic count data is included in the attachments.

##### 4.1 Sight Distance

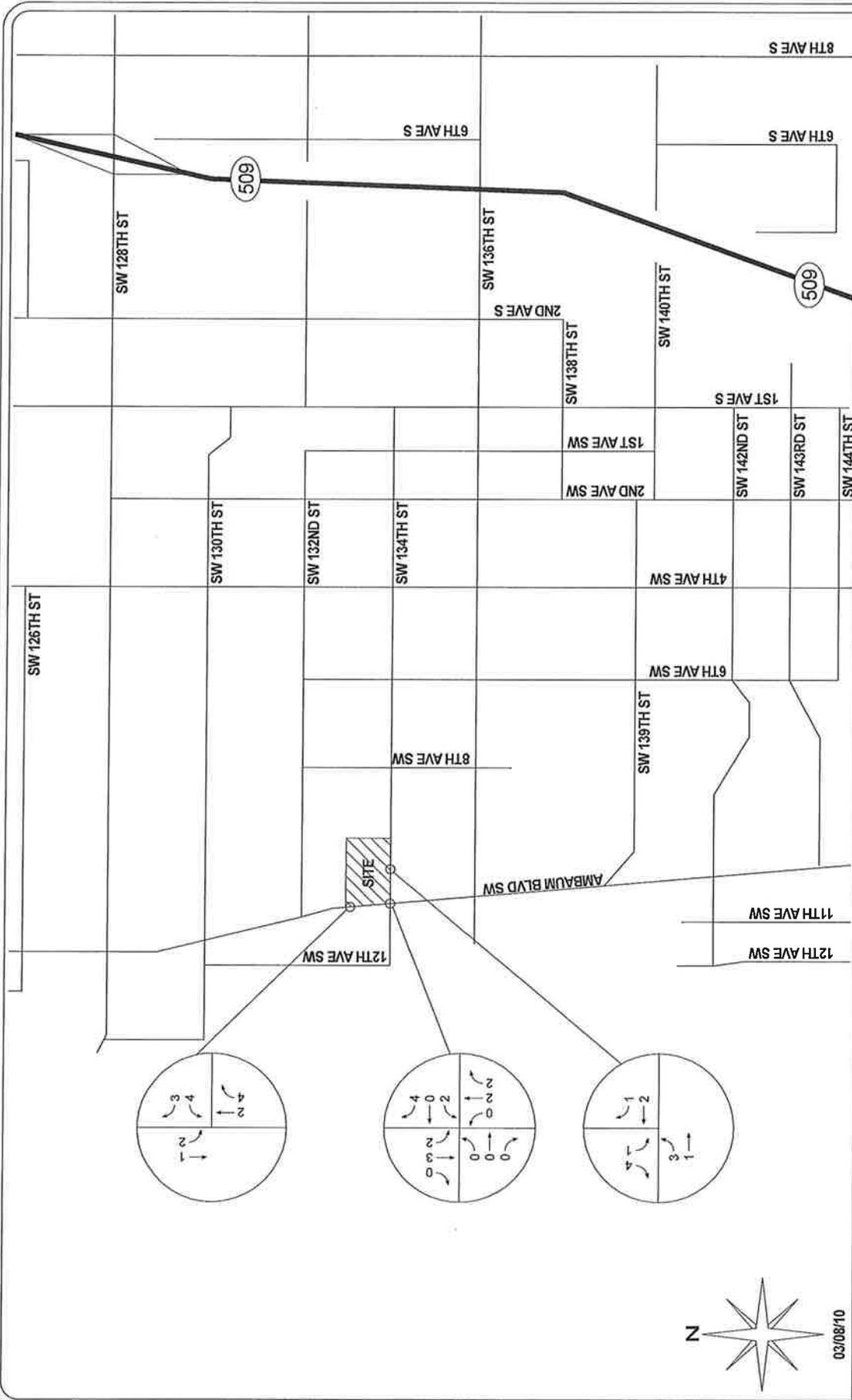
The proposed site access driveways on Ambaum Boulevard SW and SW 134<sup>th</sup> Street have been analyzed to ensure there is adequate sight distance, based on standards contained in *A Policy on Geometric Design of Highways and Streets, 2004* by the American Association of State Highway Officials (AASHTO).

The design speed on Ambaum Boulevard SW is 45 mph, which includes a 10 mph modifier to the posted speed limit of 35 mph. The required stopping sight distance is 360 feet and the required entering sight distance is 500 feet for the 45 mph design speed. At the proposed access, there is over 500 feet of stopping and entering sight distance in each direction.

The design speed on SW 134<sup>th</sup> Street SW is 25 mph, which is the same as the posted speed limit. The required stopping sight distance is 155 feet and the required entering sight distance is 280 feet for the 25 mph design speed. At the proposed west access, Ambaum Boulevard SW is visible to the west and there is over 200 feet of stopping sight distance and over 300 feet of entering sight distance to the east. At the proposed east access, there is over 200 feet of stopping sight distance and 300 feet of entering sight distance in each direction.

##### 4.2 Level of Service Analysis

Congestion is generally measured in terms of level of service (LOS). In accordance with the 2000 Highway Capacity Manual (HCM), road facilities and intersections are rated between LOS A and LOS F, with LOS A being free flow and LOS F being forced flow or over-capacity conditions. The level of service at signalized and all-way stop-controlled intersections is based on the average delay of all approaches. The level of service for two-way stop-controlled intersections is based on average delays for the critical stopped approach. Geometric characteristics and conflicting traffic movements are taken into consideration when determining level of service values. A summary of the level of service criteria is included in Table 2.



**TRAFFIC IMPACT STUDY**  
GTC 09-140

**GIBSON TRAFFIC CONSULTANTS**

**EL DORADO WEST**  
**102 ASSISTED LIVING UNITS**  
**CITY OF BURIEN**

**FIGURE 2**  
**SITE ACCESS**  
**TURNING MOVEMENTS**  
**PM PEAK-HOUR**

**LEGEND**

PM PEAK-HOUR SITE ACCESS  
TURNING MOVEMENT VOLUMES

XXX →

Note: The turning movements at the site access to SW 134th Street have been combined for both accesses.

**Table 2: Level of Service Criteria for Intersections**

Level of <sup>1</sup> Service	Expected Delay	Intersection Control Delay (Seconds per Vehicle)	
		Unsignalized Intersections	Signalized Intersections
<b>A</b>	Little/No Delay	≤10	≤10
<b>B</b>	Short Delays	>10 and ≤15	>10 and ≤20
<b>C</b>	Average Delays	>15 and ≤25	>20 and ≤35
<b>D</b>	Long Delays	>25 and ≤35	>35 and ≤55
<b>E</b>	Very Long Delays	>35 and ≤50	>55 and ≤80
<b>F</b>	Extreme Delays <sup>2</sup>	>50	>80

The City of Burien uses LOS C as the acceptable threshold for operation of intersections outside of the urban center boundary.

The intersection of Ambaum Boulevard SW at SW 134<sup>th</sup> Street has been analyzed based on the projected 2012 future with development conditions during the PM peak-hour, which are shown in Figure 3. The year 2012 traffic volumes were estimated by applying an annually compounding growth factor of 2% to the existing count data and adding in the development trips. The growth factor was developed based on historical WSDOT traffic count data on SR-509 near 128<sup>th</sup> Street SW. The traffic count data is included in the attachments. The two-way stop-controlled intersection of Ambaum Boulevard SW at SW 134<sup>th</sup> Street is projected to operate at LOS C or better for all approaches based on the 2012 future with development conditions. The level of service analysis assumes that westbound left-turn vehicles from SW 134<sup>th</sup> Street can use the two-way left-turn lane on Ambaum Boulevard SW for a two-stage left-turn.. The level of service calculations are included in the attachments.

<sup>1</sup> **Source:** *Highway Capacity Manual 2000*.

LOS A: Free-flow traffic conditions, with minimal delay to stopped vehicles (no vehicle is delayed longer than one cycle at signalized intersection).

LOS B: Generally stable traffic flow conditions.

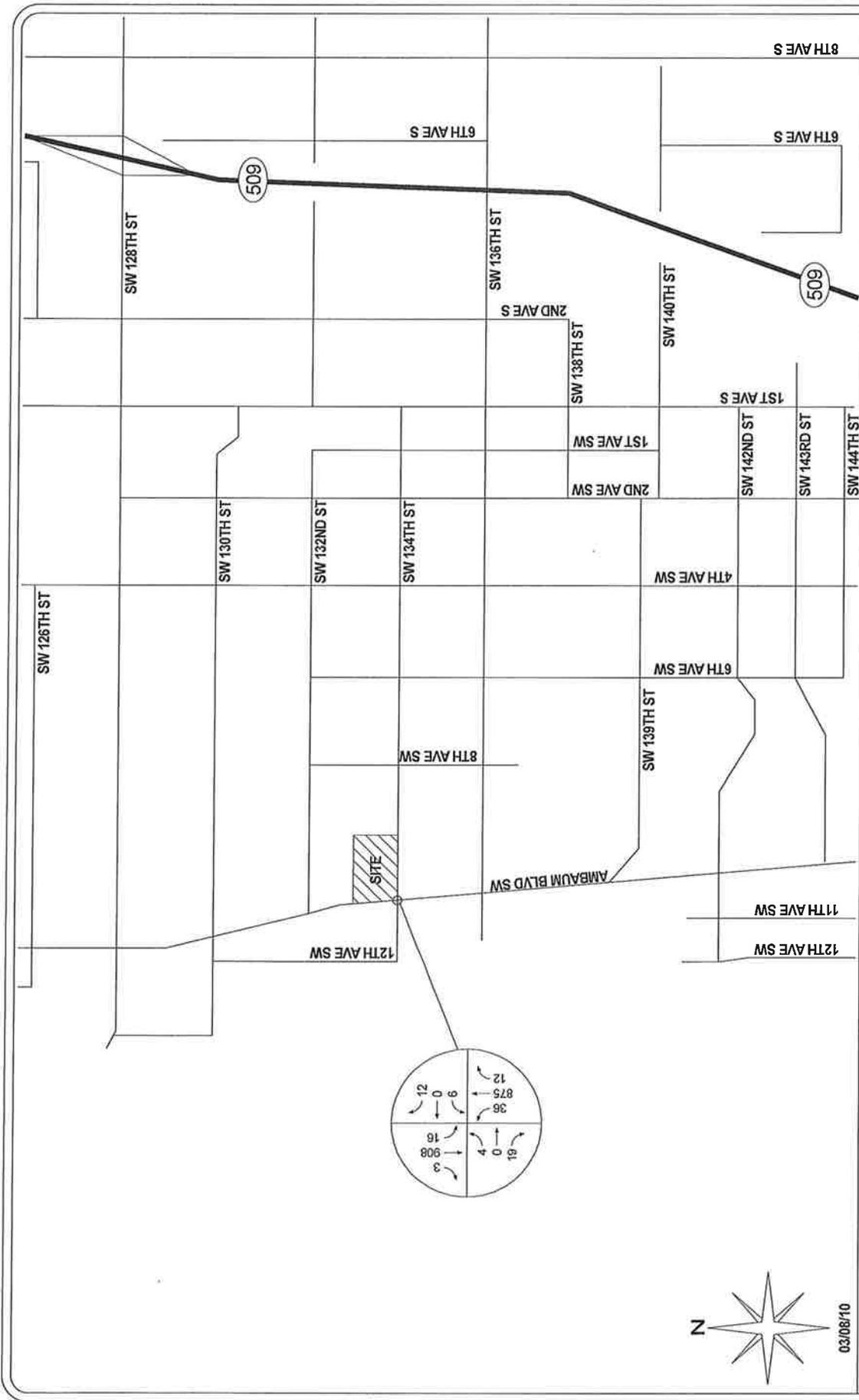
LOS C: Occasional back-ups may develop, but delay to vehicles is short term and still tolerable.

LOS D: During short periods of the peak hour, delays to approaching vehicles may be substantial but are tolerable during times of less demand (i.e. vehicles delayed one cycle or less at signal).

LOS E: Intersections operate at or near capacity, with long queues developing on all approaches and long delays.

LOS F: Jammed conditions on all approaches with excessively long delays and vehicles unable to move at times.

<sup>2</sup> When demand volume exceeds the capacity of the lane, extreme delays will be encountered with queuing which may cause severe congestion affecting other traffic movements in the intersection.



**TRAFFIC IMPACT STUDY**  
GTC 09-140

**GIBSON TRAFFIC CONSULTANTS**

**EL DORADO WEST**  
**102 ASSISTED LIVING UNITS**  
**CITY OF BURIEN**

**LEGEND**

xxx — PM PEAK-HOUR TURNING MOVEMENT VOLUMES

**FIGURE 3**  
**2012 FUTURE**  
**PM PEAK-HOUR**  
**TURNING MOVEMENTS**

### 4.3 Channelization Warrants

The potential need for channelization at the proposed site access on Ambaum Boulevard SW has been evaluated based on criteria from the *Design Manual June 2009* by WSDOT. The turning movements at the access to Ambaum Boulevard SW are based on the 2012 future with development conditions shown in Figure 3. The proposed site access on Ambaum Boulevard SW is projected to have an opposing northbound through volume of 891 vehicles per hour (vph) against a southbound left-turning volume of 2 vph. Left-turn channelization is not required based on Exhibit 1310-12b Left-Turn Storage Guidelines: Four-Lane, Unsignalized. The access is projected to have a northbound through traffic volume of 895 vph (including right-turning vehicles) with a peak hour right-turn volume of 4 vph. Right-turn channelization is not required based on Exhibit 1310-15 Right-Turn Lane Guidelines. The WSDOT channelization warrant exhibits are included in the attachments.

### 4.4 Vehicle Storage/Queuing Analysis

GTC staff observed the vehicle queues of the southbound left-turn and westbound approach at the intersection of Ambaum Boulevard SW at SW 134<sup>th</sup> Street during the PM peak-hour from 4:00 to 6:00 p.m. The maximum vehicle queue observed for both the southbound left-turn and westbound approach was one vehicle. The level of service analysis shows that the southbound queue length will remain at 1 vehicle (shown as 2 feet in the analysis) under the 2012 future with development conditions. The southbound left-turn lane is therefore not required to be lengthened as a result of the development.

The access to Ambaum Boulevard SW is planned to be located 250 feet (centerline to centerline) north of SW 134<sup>th</sup> Street and will be a gated access. The separation from SW 134<sup>th</sup> Street will ensure there southbound queue at SW 134<sup>th</sup> Street will not block the access to Ambaum Boulevard SW. The security gate is planned to be located about 100 feet east of Ambaum Boulevard SW, which should provide for adequate storage on-site for vehicles accessing Ambaum Boulevard SW.

## 5. TRANSPORTATION IMPACT FEE

The Washington Growth Management Act and Revised Code of Washington 82.02.050(2) authorize local jurisdictions to establish proportionate share traffic mitigation fees in order to fund capital facilities, such as roads and intersections. The City of Burien is required to plan under the Growth Management Act and has adopted a Comprehensive Plan which includes a Capital Facilities Program which complies with RCW 36.70A.070(3), RCW 82.02.050(4), and all other applicable requirements. The City's Comprehensive Plan identifies the objective to pursue a transportation impact fee as part of the overall transportation financing mechanism. Consequently, the City of Burien is authorized to impose, collect, and use impact fees.

The El Dorado West development is a residential assisted living development. According to the City of Burien's Table 19.35-2 Schedule of Transportation Impact Fees, included in the attachments, transportation impact fees for assisted living developments are assessed on a per unit basis. The fee is \$209 per bed. It was assumed that each new unit would contain one bed. The El Dorado West development will result in 32 net new units/beds. The required transportation impact fee is \$6,688. The traffic mitigation fee is equivalent to \$65.57 for each of the 102 units that will be constructed.

## **6. CONCLUSIONS**

The El Dorado West development is proposed to consist of 102 assisted living residential units and will receive a credit for the existing 70 assisted living units. The development will generate 85 new average daily trips with 7 new PM peak-hour trips. The development will have access to Ambaum Boulevard SW and SW 134<sup>th</sup> Street. The accesses will have adequate sight distance and will not require channelization with the development. The adjacent intersection of Ambaum Boulevard SW at SW 134<sup>th</sup> Street will operate at acceptable LOS C with the development. The traffic mitigation fees will total \$6,688, which is equivalent to \$65.57 for each of the 102 new units.

# **Trip Generation Calculations**

El Dorado West Rebuild  
GTC #09-140

Trip Generation for: Weekday  
(a.k.a.): Average Weekday Daily Trips (AWDT)

LAND USES	VARIABLE	ITE LU code	Gross Trips				Internal Crossover				IN BOTH DIRECTIONS				NET EXTERNAL TRIPS BY TYPE					
			Trip Rate	% IN	% OUT	In+Out (Total)	% of Gross Trips	Trips In+Out (Total)	TOTAL	PASS-BY		DIVERGED LINK		NEW In+Out (Total)	PASS-BY		DIVERGED LINK		NEW	
										% of Ext. Trips	In+Out (Total)	% of Ext. Trips	In+Out (Total)		In	Out	In	Out	In	Out
Assisted Living	-70 units	254	2.66	50%	50%	-186.20	0%	0	0	0	-186.20	0%	0	0	0	0	0	0	-93.10	-93.10
Assisted Living	102 units	254	2.66	50%	50%	271.32	0%	0	0	0	271.32	0%	0	0	0	0	0	0	135.66	135.66
<b>Totals</b>						<b>85.12</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>85.12</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>42.56</b>	<b>42.56</b>



El Dorado West Rebuild  
GTC #09-140

**Trip Generation for: Weekday, Peak Hour of Adjacent Street Traffic, One Hour between 4 and 6 PM  
(a.k.a.): Weekday PM Peak Hour**

LAND USES		NET EXTERNAL TRIPS BY TYPE																
		Gross Trips					Internal Crossover		IN BOTH DIRECTIONS				DIRECTIONAL ASSIGNMENTS					
		Trip Rate	% IN	% OUT	In+Out (Total)	% of Gross Trips	% of Trips	In+Out (Total)	TOTAL	% of Ext. Trips	In+Out (Total)	% of Ext. Trips	In+Out (Total)	NEW	IN	OUT	IN	OUT
	VARIABLE	ITE LU code																
Assisted Living	-70 units	254	44%	56%	-15.40	0%	0	-15.40	0%	0	0%	0	-15.40	0	0	0	0	-8.62
Assisted Living	102 units	254	44%	56%	22.44	0%	0	22.44	0%	0	0%	0	22.44	0	0	0	0	12.57
<b>Totals</b>					7.04		0	7.04		0		7.04	7.04	0	0	0	0	3.09

# Peak-Hour Counts

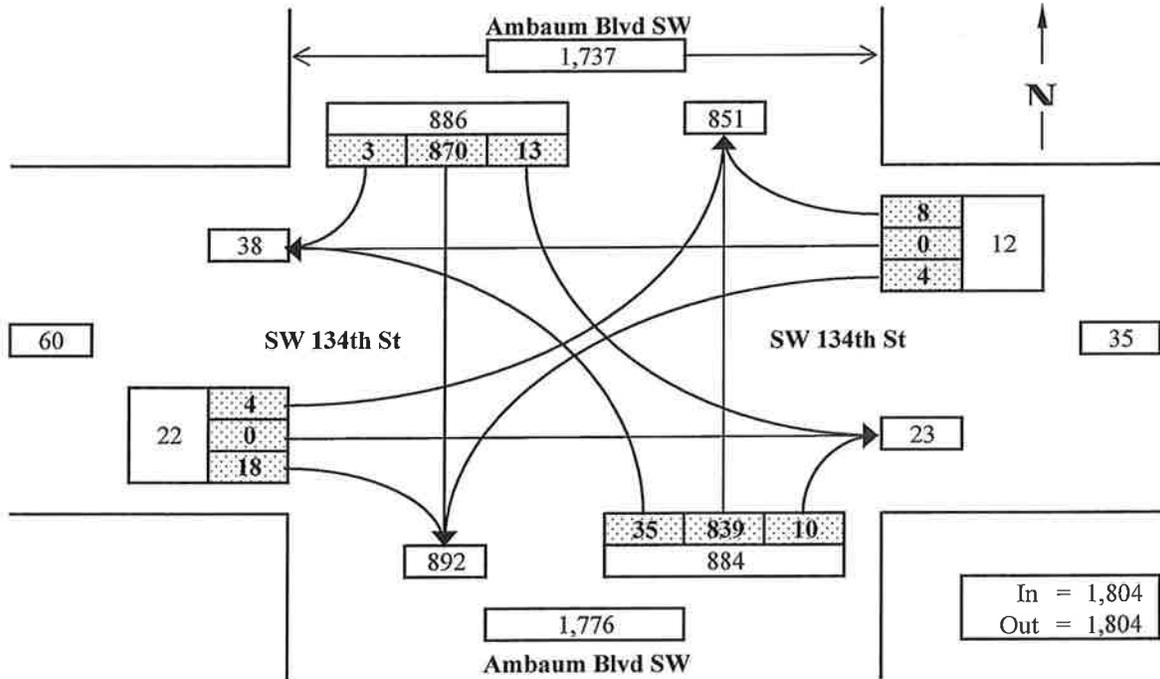
Project No.: 09-140 Day & Date: Tuesday, 03/02/2010  
 Project Name: El Dorado West Rebuild Time Start: 4:00 PM  
 Prepared by: DCJ Time End: 6:00 PM  
 Checked by: \_\_\_\_\_ Weather: overcast, 52 F, sprinkles  
 Location: Ambaum Boulevard SW @ SW 134th Street

Time Interval Ending At	SW 134th St Eastbound				SW 134th St Westbound				Ambaum Blvd SW Northbound				Ambaum Blvd SW Southbound				Total
	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	ALL APP
<b>15 Minute Cumulative Volumes</b>																	
4:15 PM	0	1	0	7	0	3	0	1	3	9	203	2	5	2	236	1	465
4:30 PM	0	1	0	7	0	3	0	1	9	20	369	5	10	2	432	1	841
4:45 PM	0	2	0	14	1	5	0	5	12	24	574	8	14	7	629	1	1,269
5:00 PM	0	5	0	17	1	5	0	6	14	36	784	10	20	10	851	3	1,727
5:15 PM	1	5	0	23	1	5	0	7	17	40	965	14	23	12	1,065	3	2,139
5:30 PM	1	5	0	25	2	7	0	9	19	55	1,208	15	27	15	1,302	4	2,645
5:45 PM	1	5	0	32	2	9	0	11	21	60	1,398	18	29	18	1,447	4	3,002
6:00 PM	2	5	0	39	2	9	1	14	24	67	1,585	22	34	18	1,641	4	3,405
<b>15 Minute Interval Volumes</b>																	
4:15 PM	0	1	0	7	0	3	0	1	3	9	203	2	5	2	236	1	465
4:30 PM	0	0	0	0	0	0	0	0	6	11	166	3	5	0	196	0	376
4:45 PM	0	1	0	7	1	2	0	4	3	4	205	3	4	5	197	0	428
5:00 PM	0	3	0	3	0	0	0	1	2	12	210	2	6	3	222	2	458
5:15 PM	1	0	0	6	0	0	0	1	3	4	181	4	3	2	214	0	412
5:30 PM	0	0	0	2	1	2	0	2	2	15	243	1	4	3	237	1	506
5:45 PM	0	0	0	7	0	2	0	2	2	5	190	3	2	3	145	0	357
6:00 PM	1	0	0	7	0	0	1	3	3	7	187	4	5	0	194	0	403
<b>Hourly Volumes</b>																	
5:00 PM	0	5	0	17	1	5	0	6	14	36	784	10	20	10	851	3	1,727
5:15 PM	1	4	0	16	1	2	0	6	14	31	762	12	18	10	829	2	1,674
5:30 PM	1	4	0	18	2	4	0	8	10	35	839	10	17	13	870	3	1,804
5:45 PM	1	3	0	18	1	4	0	6	9	36	824	10	15	11	818	3	1,733
6:00 PM	2	0	0	22	1	4	1	8	10	31	801	12	14	8	790	1	1,678

EXISTING PEAK HOUR: 4:30 PM — 5:30 PM, Tuesday, 03/02/2010																	
Peak Hour	Eastbound				Westbound				Northbound				Southbound				Total
4:30 PM - 5:30 PM	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	1,804
	1	4	0	18	2	4	0	8	10	35	839	10	17	13	870	3	1,804
Approach	22				12				884				886				1,804
PHF	0.69				0.50				0.85				0.92				0.89
% HV	4.5%				16.7%				1.1%				1.9%				

## GIBSON TRAFFIC CONSULTANTS

EXISTING PEAK HOUR: 4:30 PM to 5:30 PM, Tuesday, 03/02/2010					
Intersection	Eastbound	Westbound	Northbound	Southbound	Total
Approach Name	SW 134th St	SW 134th St	Ambaum Blvd SW	Ambaum Blvd SW	
Peak Hour Factor (PHF)	0.69	0.50	0.85	0.92	<b>0.89</b>
% of Heavy Vehicles	4.5%	16.7%	1.1%	1.9%	



# Turning Movement Volumes



# **SR-509 Historical Traffic Count Data**

STATE OF WASHINGTON - DEPARTMENT OF TRANSPORTATION  
 T R I P S Y S T E M  
 ANNUAL TRAFFIC REPORT

STATE ROUTE	STATE ROUTE MILEPOST	LOCATION	COUPLER CLASS	FUNCT	TRUCK PERCENTAGES SNGL DEL TRIPLE TOTAL	AVERAGE DAILY TRAFFIC VOLUME			
						2005 UNITS	2006 UNITS	2007 UNITS	2008 UNITS
509	020.75	AFTER JCT S 216TH ST	1			10000*	10000	11000	9100*
509	021.79	BEFORE JCT SW 200TH ST	1			11000*	11000	12000	9900*
509	023.07	AFTER JCT NORMANDY RD	1			16000*	16000	17000	14000*
509	023.47	BEFORE JCT 1ST AVE S	1			16000*	16000	16000	14000*
509	023.48	AFTER JCT SR 509*1ST AVE S WYE CONN	1			3000*	3000	3100	2900*
509	023.88B	AFTER JCT S NORMANDY RD WYE CONN	1			11000*	11000	11000	10000*
509	024.24B	AFTER JCT 8TH AVE S WYE CONN	1			16000*	16000	17000	15000*
509	024.34B	LEAVING CITY OF SEATAC	1			13000*	13000*	13000	13000
509	024.35B	AT SR 509 BRIDGE	1			15000*	15000	15000	15000*
509	023.67	AFTER RAMP DES MOINES WAY S	1			29000*	29000	30000	29000*
509	024.83	AT S 160TH ST	1						23000*
509	025.27	BEFORE RAMP SR 518	1			33000	34000	34000	34000*
509	025.73	AT S 146TH ST	1						26000*
509	026.37	AT PTR LOCATION D14	1	03	04	57000*	58000*	59000*	57000+
509	026.90	AT S 128TH ST BRIDGE	1			41000	42000	43000	42000*
509	027.27	AFTER RAMP S 128TH ST	1			48000	48000	49000	48000*
509	028.31	AFTER RAMP S 112TH ST	1			53000	54000	55000	54000*
509	029.59B	AT CLOVERDALE ST	1						44000*
509	029.48	BEFORE RAMP NB CD LANE	1						61000*
STATE ROUTE NO 510 MAINLINE SR 5 TO SR 507/YELM									
510	000.01	AT SR 5 BRIDGE*BEG ROUTE	1			23000	24000*	24000	24000
510	000.48	BEFORE JCT MARTIN WAY SE WYE CONN	1			22000*	25000*	25000	24000
510	002.64	AFTER JCT MARTIN WAY SE WYE CONN	1			22000*	25000*	25000	24000
510	003.77	BEFORE JCT 9TH AVE SE	1			16000*	17000	17000	16000
510	003.80	BEFORE JCT PACIFIC AVE ROUNDABOUT	1			16000	17000*	17000	16000
510	004.32	AFTER JCT PACIFIC AVE ROUNDABOUT	2			11000	12000*	12000	12000
510	006.30	BEFORE JCT OLD PACIFIC HWY WYE CONN	2			10000*	11000	11000	11000

\* BASED ON ACTUAL COUNT  
 + SOURCE OF TRUCK PERCENTAGES

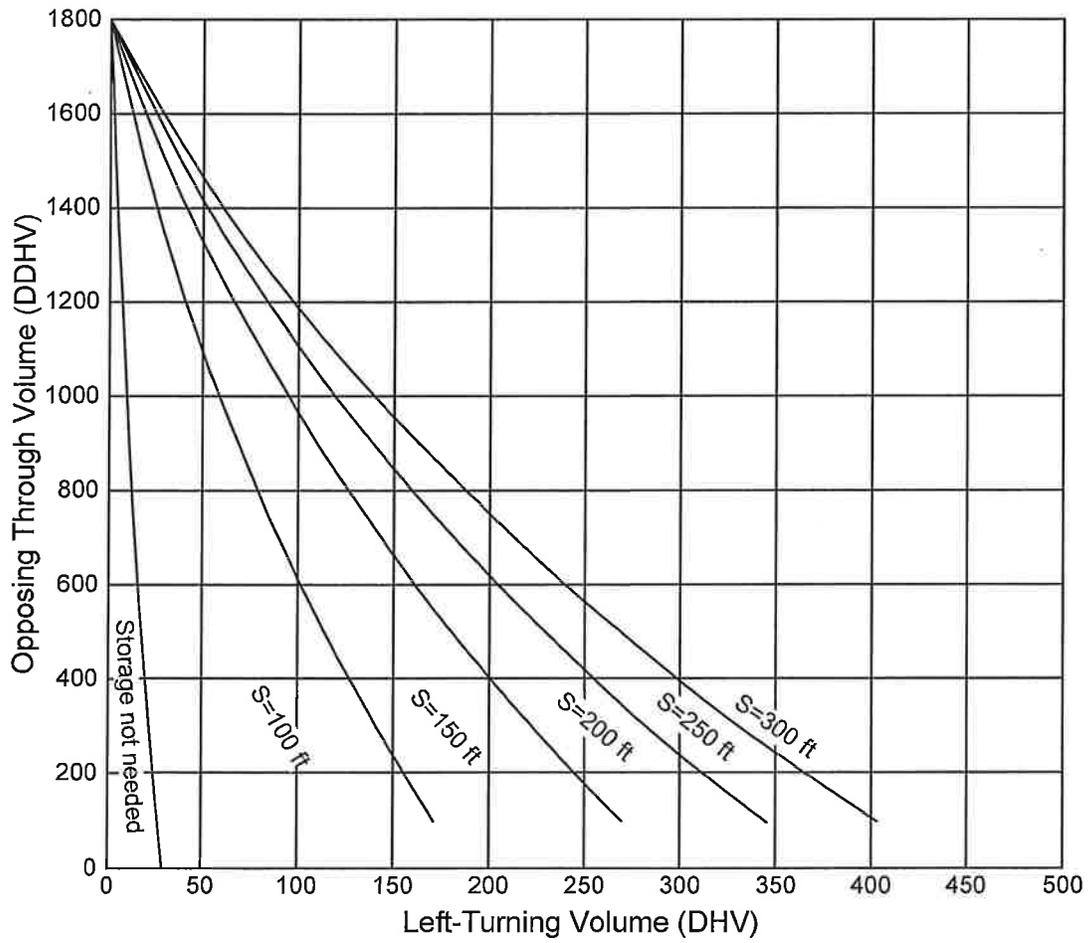
# **2012 Future with Development PM Peak- Hour Level of Service Analysis**

HCM Unsignalized Intersection Capacity Analysis  
 1: SW 134th St. & Ambaum Blvd SW

El Dorado West Rebuild

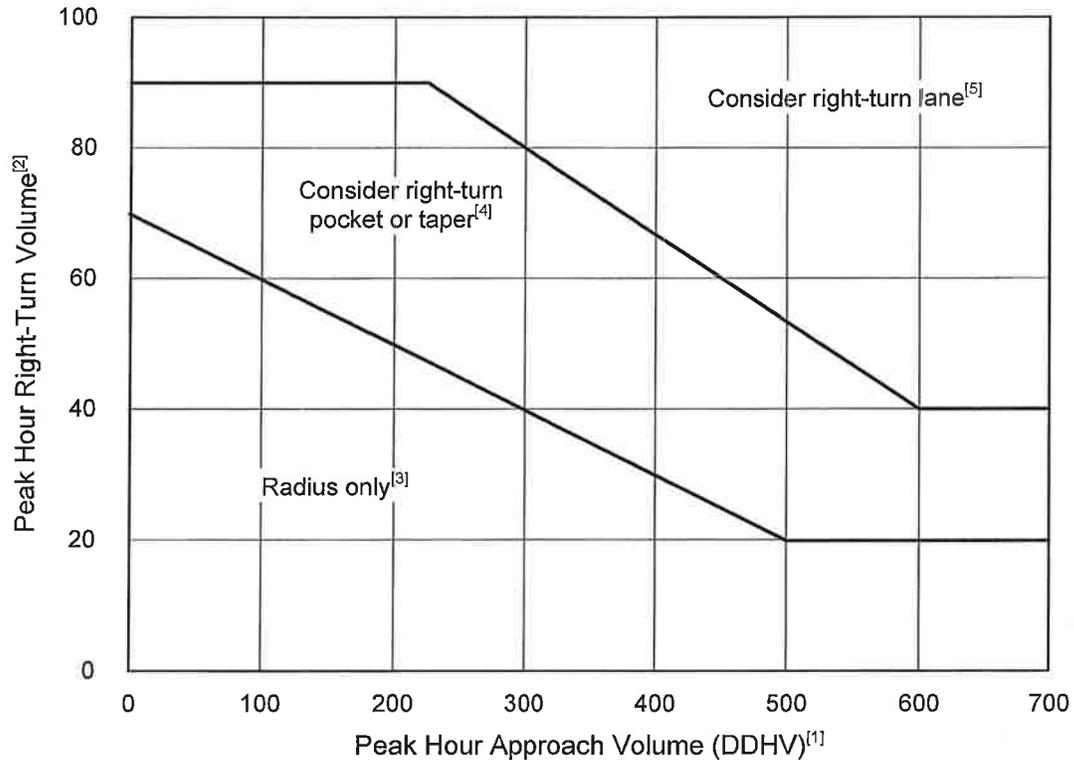
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	4	0	19	6	0	12	36	875	12	16	908	3
Peak Hour Factor	0.69	0.69	0.69	0.50	0.50	0.50	0.85	0.85	0.85	0.92	0.92	0.92
Hourly flow rate (vph)	6	0	28	12	0	24	42	1029	14	17	987	3
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			TWLTL							
Median storage (veh)					1							
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1647	2152	495	1677	2146	522	990			1044		
vC1, stage 1 conf vol				1121	1121							
vC2, stage 2 conf vol				556	1025							
vCu, unblocked vol	1647	2152	495	1677	2146	522	990			1044		
tC, single (s)	7.6	6.6	7.0	7.8	6.8	7.2	4.1			4.1		
tC, 2 stage (s)				6.8	5.8							
tF (s)	3.5	4.0	3.3	3.7	4.2	3.5	2.2			2.2		
p0 queue free %	90	100	95	91	100	95	94			97		
cM capacity (veh/h)	57	42	515	131	123	462	700			662		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3				
Volume Total	33	36	42	686	357	17	658	332				
Volume Left	6	12	42	0	0	17	0	0				
Volume Right	28	24	0	0	14	0	0	3				
cSH	214	250	700	1700	1700	662	1700	1700				
Volume to Capacity	0.16	0.14	0.06	0.40	0.21	0.03	0.39	0.20				
Queue Length 95th (ft)	13	12	5	0	0	2	0	0				
Control Delay (s)	24.9	21.8	10.5	0.0	0.0	10.6	0.0	0.0				
Lane LOS	C	C	B			B						
Approach Delay (s)	24.9	21.8	0.4			0.2						
Approach LOS	C	C										
Intersection Summary												
Average Delay			1.0									
Intersection Capacity Utilization			39.9%		ICU Level of Service				A			
Analysis Period (min)			15									

# **WSDOT Channelization Warrants**



S = Left-turn storage length

**Left-Turn Storage Guidelines: Four-Lane, Unsignalized**  
 Exhibit 1310-12b

**Notes:**

- [1] For two-lane highways, use the peak hour DDHV (through + right-turn).  
For multilane, high-speed highways (posted speed 45 mph or above), use the right-lane peak hour approach volume (through + right-turn).
- [2] When all three of the following conditions are met, reduce the right-turn DDHV by 20.
- The posted speed is 45 mph or below
  - The right-turn volume is greater than 40 VPH
  - The peak hour approach volume (DDHV) is less than 300 VPH
- [3] For right-turn corner design, see Exhibit 1310-11.
- [4] For right-turn pocket or taper design, see Exhibit 1310-16.
- [5] For right-turn lane design, see Exhibit 1310-17.

**General:**

For additional guidance, see 1310.07(3).

**Right-Turn Lane Guidelines<sup>[6]</sup>**  
*Exhibit 1310-15*

**City of Burien**  
**Transportation Impact Fee Table**

**Schedule of Transportation Impact Fees - Table 19.35-2**

Land Use Category - Trip Generation, 7th Edition *	Notes	ITE Land Use Code	ITE Average PM Peak Hour Trip Rate (1)	Unit**	Pass-By Trip Reduction Factor *** (2)	Net New Trip Rate (3)	Impact Fee Per Unit (4)
<b>RESIDENTIAL</b>							
Single-Family Detached Housing	3	210	1.01	Dwelling Unit	1.00	1.01	957
Apartment	3	220	0.62	Dwelling Unit	1.00	0.62	588
Low-Rise Apartment (1-2 Floors)	3	221	0.58	Occupied Dwelling Unit	1.00	0.58	550
High -Rise Apartment (>10 floors)	3	222	0.35	Dwelling Unit	1.00	0.35	332
Mid-Rise Apartment (3-10 floors)	3	223	0.39	Dwelling Unit	1.00	0.39	370
Residential Condominium/Townhouse	3	230	0.52	Dwelling Unit	1.00	0.52	493
Mobile Home Park	3	240	0.59	Occupied Dwelling Unit	1.00	0.59	559
Senior Adult Housing-Detached	3	251	0.26	Dwelling Unit	1.00	0.26	246
Senior Adult Housing-Attached		252	0.11	Occupied Dwelling Unit	1.00	0.11	104
Congregate Care Facility	1	253	0.17	Occupied Dwelling Unit	1.00	0.17	161
Assisted Living		254	0.22	Bed	1.00	0.22	209
Recreational Homes	1	260	0.26	Dwelling Unit	1.00	0.26	246
Residential Planned Unit Development (PUD)	3	270	0.62	Dwelling Unit	1.00	0.62	588
<b>INSTITUTIONAL</b>							
County Park	1	412	0.06	Acre	1.00	0.06	57
Beach Park	1	415	1.30	Acre	1.00	1.30	1,232
Regional Park	1	417	0.20	Acre	1.00	0.20	190
Golf Course	1	430	0.30	Acre	1.00	0.30	284
Multipurpose Recreational Facility	1	435	3.35	1,000 sf GFA	1.00	3.35	3,176
Bowling Alley	1	437	3.54	1,000 sf GFA	1.00	3.54	3,356
Movie Theater with Matinee	1	444	0.07	Seat	1.00	0.07	66
Casino/Video Lottery Establishment		473	13.43	1,000 sf GFA	1.00	13.43	12,732
Tennis Courts	1	490	3.88	Tennis Court	1.00	3.88	3,678
Recreational Community Center	1	495	1.64	1,000 sf GFA	1.00	1.64	1,555
Health/Fitness Club	1	492	4.05	1,000 sf GFA	1.00	4.05	3,839
Elementary School	4	520	n/a (see note)	1,000 sf GFA	1.00	n/a	n/a
Middle School/Junior High School		522	1.19	1,000 sf GFA	1.00	1.19	1,128
High School		530	0.97	1,000 sf GFA	1.00	0.97	920
Church		560	0.66	1,000 sf GFA	1.00	0.66	626
Day Care Center		565	13.18	1,000 sf GFA	1.00	13.18	12,495
Library		590	7.09	1,000 sf GFA	1.00	7.09	6,721
Hospital		610	1.18	1,000 sf GFA	1.00	1.18	1,119
Nursing Home	1	620	0.42	1,000 sf GFA	1.00	0.42	398
Clinic	1	630	1.23	Employee	1.00	1.23	1,166
<b>BUSINESS &amp; COMMERCIAL</b>							
Hotel		310	0.59	Room	1.00	0.59	559
All Suites Hotel	1	311	0.40	Room	1.00	0.40	379
Motel		320	0.47	Room	1.00	0.47	446
Resort Hotel	3	330	0.42	Room	1.00	0.42	398
Building Materials and Lumber Store	2(a), 3	812	4.49	1,000 sf GFA	0.75	3.37	3,192
* Free-Standing Discount Superstore		813	3.87	1,000 sf GFA	0.72	2.79	2,642
Specialty Retail Center	1, 2(b), 3	814	2.71	1,000 sf GLA	0.66	1.79	1,696
Free-Standing Discount Store		815	5.06	1,000 sf GFA	0.83	4.20	3,981
Hardware/Paint Store	3	816	4.84	1,000 sf GFA	0.74	3.59	3,395
Nursery (Garden Center)	2(a)	817	3.80	1,000 sf GFA	0.72	2.74	2,594
Nursery (Wholesale)	2(a)	818	5.17	1,000 sf GFA	0.72	3.72	3,529
Shopping Center	5	820	n/a (see note)	1,000 sf GLA	0.66	n/a	n/a

Land Use Category - Trip Generation, 7th Edition *	Notes	ITE Land Use Code	ITE Average PM Peak Hour Trip Rate (1)	Unit**	Pass-By Trip Reduction Factor *** (2)	Net New Trip Rate (3)	Impact Fee Per Unit (4)
<b>BUSINESS &amp; COMMERCIAL (con't)</b>							
Factory Outlet Center	2(b)	823	2.29	1,000 sf GFA	0.66	1.51	1,433
New Car Sales	2(a)	841	2.64	1,000 sf GFA	0.75	1.98	1,877
Automobile Parts Sales	1,3	843	5.98	1,000 sf GFA	0.57	3.41	3,231
Tire Store		848	4.15	1,000 sf GFA	0.72	2.99	2,833
Tire Superstore	2(e)	849	2.11	1,000 sf GFA	0.72	1.52	1,440
Supermarket	3	850	10.45	1,000 sf GFA	0.64	6.69	6,340
Convenience Market (Open 24 Hours)		851	52.41	1,000 sf GFA	0.39	20.44	19,377
Convenience Market (Open 15-16 Hours)	1, 2(f)	852	34.57	1,000 sf GFA	0.39	13.48	12,781
Convenience Market with Gasoline Pumps		853	19.22	Vehicle Fueling Position	0.34	6.53	6,195
Discount Supermarket	3	854	8.90	1,000 sf GFA	0.77	6.85	6,497
Discount Club	2(f)	861	4.24	1,000 sf GFA	0.77	3.26	3,095
Home Improvement Superstore		862	2.45	1,000 sf GFA	0.52	1.27	1,208
Electronic Superstore	1	863	4.50	1,000 sf GFA	0.60	2.70	2,560
Toy/Children's Superstore	1, 2(b)	864	4.99	1,000 sf GFA	0.66	3.29	3,122
Pet Supply Superstore	1, 2(b)	866	4.96	1,000 sf GFA	0.66	3.27	3,103
Office Supply	1, 2(f)	867	3.40	1,000 sf GFA	0.77	2.62	2,482
Book Superstore	1, 2(b)	868	19.53	1,000 sf GFA	0.66	12.89	12,220
Discount Home Furnishing Superstore	1, 2(b)	869	4.01	1,000 sf GFA	0.66	2.65	2,509
Apparel Store	2(b)	870	3.83	1,000 sf GFA	0.66	2.53	2,396
Art and Craft Store	1, 2(f)	879	6.21	1,000 sf GFA	0.77	4.78	4,533
Pharmacy/Drug Store without Drive-Through		880	8.42	1,000 sf GFA	0.47	3.96	3,752
Pharmacy/Drug Store with Drive-Through		881	8.62	1,000 sf GFA	0.51	4.40	4,168
Furniture Store		890	0.46	1,000 sf GFA	0.47	0.22	205
Video Rental Store	2(b), 3	896	13.60	1,000 sf GFA	0.66	8.98	8,509
Walk-in Bank	1, 2(d)	911	33.15	1,000 sf GFA	0.53	17.57	16,656
Drive-in Bank		912	45.74	1,000 sf GFA	0.53	24.24	22,982
Quality Restaurant		931	7.49	1,000 sf GFA	0.56	4.19	3,976
High Turnover (Sit-Down) Restaurant		932	10.92	1,000 sf GFA	0.57	6.22	5,901
Fast Food Restaurant without Drive-Through	1, 2(g)	933	26.15	1,000 sf GFA	0.50	13.08	12,395
Fast Food Restaurant with Drive-Through		934	34.64	1,000 sf GFA	0.50	17.32	16,419
Quick Lubrication Vehicle Shop	2(c)	941	5.19	Service Position	0.57	2.96	2,804
Automobile Care Center	1, 2(c)	942	3.38	1,000 sf GLA	0.57	1.93	1,826
Automobile Parts and Service Center	1, 2(c)	943	4.46	1,000 sf GLA	0.57	2.54	2,410
Gasoline/Service Station		944	13.86	Vehicle Fueling Position	0.58	8.04	7,621
Gasoline/Service Station w/ Convenience Market		945	13.38	Vehicle Fueling Position	0.44	5.89	5,581
Gasoline/Service Station w/ Convenience Market & Car Wash	2(h)	946	13.33	Vehicle Fueling Position	0.44	5.87	5,560
Self-Service Car Wash	2(h)	947	5.54	Wash Stall	0.44	2.44	2,311
<b>OFFICE</b>							
General Office Building	3	710	1.49	1,000 sf GFA	1.00	1.49	1,413
Corporate Headquarters Building	3	714	1.40	1,000 sf GFA	1.00	1.40	1,327
Single Tenant Office Building	3	715	1.73	1,000 sf GFA	1.00	1.73	1,640
Medical-Dental Office Building	3	720	3.72	1,000 sf GFA	1.00	3.72	3,527
Government Office Building	1	730	1.20	1,000 sf GFA	1.00	1.20	1,138
United States Post Office		732	10.89	1,000 sf GFA	1.00	10.89	10,324
Office Park	3	750	1.50	1,000 sf GFA	1.00	1.50	1,422
Research and Development Center	3	760	1.08	1,000 sf GFA	1.00	1.08	1,024
Business Park	3	770	1.29	1,000 sf GFA	1.00	1.29	1,223

Land Use Category - Trip Generation, 7th Edition *	Notes	ITE Land Use Code	ITE Average PM Peak Hour Trip Rate (1)	Unit**	Pass-By Trip Reduction Factor *** (2)	Net New Trip Rate (3)	Impact Fee Per Unit (4)
<b>INDUSTRIAL</b>							
General Light Industrial	3	110	0.98	1,000 sf GFA	1.00	0.98	929
General Heavy Industrial	1	120	0.88	Employee	1.00	0.88	834
Industrial Park		130	0.86	1,000 sf GFA	1.00	0.86	815
Manufacturing	3	140	0.74	1,000 sf GFA	1.00	0.74	702
Warehousing	3	150	0.47	1,000 sf GFA	1.00	0.47	446
Mini-Warehouse		151	0.28	1,000 sf GFA	1.00	0.26	246
Utilities	1	170	0.76	1,000 sf GFA	1.00	0.76	720
<b>PORT and TERMINAL</b>							
Truck Terminal	1	30	0.55	Employee	1.00	0.55	521
Park-and-Ride Lot with Bus Service	3	90	0.62	Parking Space	1.00	0.62	588

\* Trip Generation, Institute of Transportation Engineers, 7th Edition, 2003

\*\* Abbreviations include: GFA = Gross Floor Area, sf = square feet, and GLA = Gross Leasable Area.

\*\*\* The Pass-By Trip Reduction Factor reduces the Average Trip Rate based on average Pass-By trip percentages published in the ITE Trip Generation Handbook (2nd Edition, 2004).

NET NEW TRIP RATE CALCULATION:

ITE Trip Rate (1)	X	Pass-By Reduction Factor (2)	=	Net New Trip Rate (3)
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IMPACT FEE CALCULATION:

Net New Trip Rate (3)	X	Per New PM Peak Hour Trip \$948	=	Impact Fee per Unit of Development (4)
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**NOTES:**

(1) Trip Generation (7th Edition, 2003) has less than 6 studies supporting this average rate. Applicants are strongly encouraged to conduct, at their own expense, independent trip generation studies in support of their application.

(2) No pass-by rates are available. Pass-by rates were estimated from other similar uses.

Code	Land Use	Pass-By Trip Reduction Factor
2 (a)	No Data Available 25% Estimated Pass-by	0.75
2 (b)	Shopping Center (850)	0.66
2 (c)	Auto Parts Sales (843)	0.57
2 (d)	Bank/Drive-In (912)	0.53
2 (e)	Tire Store (848)	0.72
2 (f)	Discount Supermarket (854)	0.77
2 (g)	Fast Food Restaurant with Drive-Through (934)	0.50
	Gasoline/Service Station w/ Convenience	0.44
2 (h)	Market (945)	0.44
2 (i)	Convenience Market (24 Hr) (851)	0.39

(3) Alternatively, the PM peak hour trip regression equation in Trip Generation can be used instead of the average trip rate identified in the table. However the equation must be used according to the instructions in Trip Generation.

(4) No Average PM peak hour trip rate available. Need to perform own PM peak hour traffic count for the identified land use to calculate impact fee.

(5) ITE Trip Generation (7th Edition, 2003) equation used instead of trip rate.