

# Chuckanut Community Forest Baseline Documentation Report

May 8, 2017



# **Chuckanut Community Forest Baseline Documentation Report**

Prepared for: Chuckanut Community Forest Park District  
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Document Prepared In cooperation with the City of Bellingham

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*Photographs by: Ann Eissinger including file photos from Nahkeeta Northwest*

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## **1. Conservation Easement Certification**

### **1.1. Conservation Easement Summary**

The Chuckanut Community Forest Conservation Easement was recorded January 6, 2014, as a permanent binding agreement between the landowner or Grantor: the City of Bellingham and the recipient of the easement or Grantee: the Chuckanut Community Forest Park District (CCFPD).

The Conservation Easement is the primary legal instrument guiding the use and protection of the Chuckanut Community Forest (CCF), and the CCFPD Board of Commissioners is the governing body in charge of monitoring and enforcement of the Conservation Easement. The Conservation Easement authorizes the CCFPD to assign its interest in the Conservation Easement to a qualified organization under the Internal Revenue Code and RCW 64.04.130 and RCW 84.34.250.

### **1.2. Baseline Documentation Report Definition and Purpose**

Baseline Documentation Reports are the means by which a Grantee of a conservation easement records the relevant conditions and conservation values of a property that is subject to the conservation easement. The baseline report serves as a supporting document to the conservation easement, and forms the basis for future monitoring and enforcement of the easement.

The Chuckanut Community Forest Baseline Documentation Report was prepared in accordance with the Land Trust Alliance – Land Trust Standards and Practices 2004. These standards and practices are the accepted directives for Land Trusts and other organizations holding Conservation Easements in the United States. These guidelines also meet the requirements set forth by the IRS and Treasury Regulations §1.170A-14(g)(5)(i)].

### 1.3. Certification Statement and Signatures

Chuckanut Community Forest Conservation Easement Parties:

Grantor: City of Bellingham

Representatives: Kelli Linville, Mayor

Leslie Bryson, Director, Department of Parks and Recreation

Grantee: Chuckanut Community Forest Park District

Representative: Vincute Biciunas, President

This is to certify that I, Kelli Linville and Leslie Bryson, as representatives of the City of Bellingham, the Grantor, and I, Vincute Biciunas, representing the Chuckanut Community Forest Park District, the Grantee of a conservation easement on land located in Bellingham, Washington known as the Chuckanut Community Forest, executed by the parties and recorded in the real property records of Whatcom County, Washington, are familiar with the condition of the land subject to said conservation easement and do acknowledge and certify that this Baseline Documentation Report, and all of its inclusions, is an accurate representation of the condition of the property as of the date of the conservation easement.

Signatures and Dates

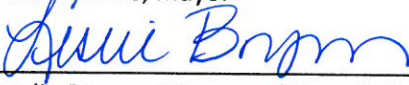
Grantor:

City of Bellingham Representative:

  
Kelli Linville, Mayor

Date: 5.16.17

City of Bellingham Representative:

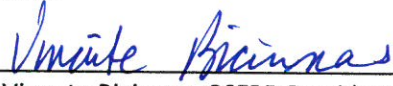
  
Leslie Bryson, Director of Parks & Recreation

Date: 5.16.17

Grantee:

Chuckanut Community Forest Park District

Representative:

  
Vincute Biciunas, CCFPD President

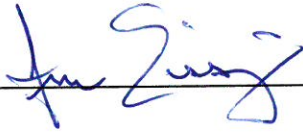
Date: 5/15/17

### Certification of Completion

I, Ann Eissinger of Common Futures LLC, have prepared and signed this Chuckanut Community Forest Baseline Documentation Report, for the Chuckanut Community Forest Park District and the City of Bellingham, with the understanding and agreement that this report will be used for, but not limited to, monitoring of the property depicted and described in this report for compliance with the Chuckanut Community Forest Conservation Easement of January 6, 2014.

I affirm that I visited this property personally and that this report including the maps and photographs accurately describes and depicts the physical features, relevant site conditions, and current land uses on the property.

Ann Eissinger, Common Futures, LLC :



Date:

5/8/2017

Contact information for all parties is included at the end of this document.



## 2. Introduction

The Chuckanut Community Forest (CCF), located in Bellingham, Washington, was acquired by the City of Bellingham in 2011. The acquisition was enabled by the foreclosure of the 82-acre forested development property by Washington Federal Savings and backed by broad community support. The land was acquired with Greenways levy funds, Park impact fees and a loan from the Bellingham Greenway Endowment fund.

Following the CCF purchase, voters approved the formation of the Chuckanut Community Forest Park District (CCFPD). The CCFPD mission is to ensure the entirety of the property is protected in public ownership in perpetuity, with respect for its ecological, recreational, and educational functions and to serve as a fiscal mechanism through which the District, via a tax levy, will repay the City of Bellingham for the Greenways Endowment Fund loan. The Conservation Easement is intended to serve as consideration for repayment of this loan.

In 2013 the City of Bellingham and Chuckanut Community Forest Park District negotiated a Conservation Easement for the Chuckanut Community Forest for the purpose of protecting the natural attributes of the land while providing for recreational, educational and scientific uses. The Conservation Easement was recorded in early 2014.

Under the terms of the Conservation Easement, this Baseline Documentation Report was prepared in order to establish the present condition of the property so as to be able to properly monitor future uses of the property and assure compliance with the terms and purpose of the Easement. A baseline report is an inventory of the property's relevant features and conditions.

The contents of this baseline report are based on a combination of existing information including:

- reports, field work and data collected by consultants, and Environmental Impact Statements for past proposed developments on the property;
- maps prepared by the City of Bellingham GIS personnel using existing data;
- on site information and photos collected by the preparer;
- citizen contributions from prepared documents related to prior development proposals and personal communication;
- City of Bellingham critical areas information and prior city-wide assessments;
- Washington State Department of Fish and Wildlife Priority Habitats and Species information.

All information sources used in the preparation of this document are cited in the body of the text and reference section.

This Baseline Documentation Report provides the necessary information for the Chuckanut Community Forest Parks District or its successor to perform regular monitoring of the CCF. Standard protocol for grantees of conservation easements is annual monitoring of subject property as a measure of change and compliance with the conservation easement.

In addition to serving as the basis of annual monitoring, the Baseline Documentation Report will also be used to inform the park master planning process for the property. This process will be led by the Bellingham City Parks Department, in cooperation with the Chuckanut Community Forest Parks District with opportunity for public input. Adoption of a master plan is required before construction of new facilities or upgrades of existing facilities can occur.

Due to the volume of information related to the CCF from prior documents, the ecological sensitivity of the property and its natural attributes, and the community concern for the property and its management, every effort was made to include the most pertinent information and factual documentation.

## 2.1. Quick Reference Fact Sheet

### Chuckanut Community Forest Baseline Documentation Report Property Reference Sheet

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**Date Public Draft Issued:** October 13, 2015

**Date of Completion:** May 8, 2017

**Common Names of Property:** Chuckanut Community Forest (CCF), Hundred Acre Wood, Chuckanut Ridge, Fairhaven Highlands, and Fairhaven Park. Note: a formal naming process for the property has not been conducted.

**Property Location:** Bellingham, Washington, southwest corner of city near Fairhaven  
Township 37N, Range 3E, Section 12 – S1/2 SW1/4

**Total Acreage:** 81.34

**Number of Lots:** 5

**Tax Lot Numbers and Acreage– Whatcom County Assessor Website:**

A. Property ID# 19323 Geo ID# 370212 359328 0000 Acres: 20.00

Legal Description: S 1/2 SW NE-SUBJ TO CONSERVATION ESMT REC AF 2020700109

B. Property ID# 19329 Geo# 370212 364207 0000 Acres: 42.00

Legal Description: THAT PTN OF NW SE-OF SW SE LY NLY OF CHUCKANUT DR-SUBJ TO CONSERVATION ESMT REC AF 2020700109

C. Property ID# 19471 Geo# 370212 478165 0000 Acres: 15.90

Legal Description: LOT B CHUCKANUT TRUST LLA AS REC BOOK 36 SHORT PLATS PG 18-EXC 51% OIL-MIN RTS AS RES AF 751229-SUBJ TO CONSERVATION ESMT REC AF 2020700109

D. Property ID# 19405 Geo# 370212 447323 0000 Acres: 1.1478

Legal Description: DIFFENBACHER'S ADD TO FAIRHAVEN LOTS 1 THRU 4-21 THRU 24 BLK 1-SUBJ TO CONSERVATION ESMT REC AF 2020700109

E. Property ID# 19468 Geo# 370212 477313 0000 Acres: 2.2957

Legal Description: DIFFENBACHER'S ADD TO FAIRHAVEN LOTS 5 THRU 20 BLK 1-SUBJ TO CONSERVATION ESMT REC AF 2020700109

**Current Land Owner:** City of Bellingham

**Current Land Manager:** City of Bellingham Parks and Recreation Department

**Property Purchase Date:** October 11, 2011 (date deed recorded)

**Property Purchase Price:** \$8,230,000.00

**Conservation Easement Grantor:** City of Bellingham

**Conservation Easement Grantee:** Chuckanut Community Forest Park District – a metropolitan park district (per: RCW 35.61) with the mission: to ensure the entirety of the Chuckanut Community Forest property is protected in public ownership in perpetuity, with respect for its ecological, recreational, and educational functions and to serve as a fiscal mechanism through which the District, via a tax levy, will repay the City of Bellingham for the Greenways Endowment Fund loan.

**Conservation Easement Date Recorded:** January 6, 2014

Auditor File# 2140100259

**Conservation Easement Purpose:** To assure that the natural features, functions and values of the Property are protected in perpetuity including the existing wetlands, forest, wildlife habitat, wildlife habitat corridors, and other features of ecological significance; while also allowing for the recreational, educational, and scientific uses named in Section IV of the conservation easement.

**Conservation Easement Duration:** In perpetuity and tied to the land, but transferable, with conditions defined in Section X and Section XI of the Conservation Easement, and Item 3 of the Interlocal Agreement between the City of Bellingham and the Chuckanut Community Forest Park District (signed January 3, 2014).

**Conservation Easement Permitted Uses:** Nature oriented, non-motorized public recreational, scientific, and educational uses and construction of appropriate facilities to enhance the nature oriented public recreational or education/research uses such as those specific uses listed under Section IV of the Conservation Easement. The uses allowed pursuant to Section IV shall be sited, designed, maintained and operated so as to minimize the impact to the natural attributes of the Property. Adverse impacts to critical areas shall be mitigated as required by the City's Critical Areas Ordinance – Bellingham Municipal Code Chapter 16.55.

**Conservation Easement Restrictions on Use:** Section V of the Conservation Easement specifies restricted uses including 16 specific restrictions, and allows the Grantor to prohibit additional uses independent of the Conservation Easement.

**Additional Conditions of the Conservation Easement:** Interlocal Agreement between City of Bellingham and Chuckanut Community Forest Park District – which defines the association between the City of Bellingham and the Chuckanut Community Forest Parks District, including a Park Master Plan process, terms of loan repayment of \$3,232,021 to the City of Bellingham Greenways Endowment Fund, and dissolution of the Park District once the loan is paid off and Park Master Plan adopted, in approximately 10 years.

**Current Property Improvements:** Old access road, gravel pit, fence fragments, ground water monitoring wells. There are no built structures or utilities on site.

**Current Use:** Passive recreation, citizen science, nature viewing, non-motorized use of unimproved trails.

**Current Property Zoning:** Park/Open Space (COB rezone 2014)

**Adjacent Land use:** Single-family residential, City of Bellingham Fairhaven Park and Interurban trail and undeveloped open space, Chuckanut Drive or Washington State Route 11.



3. Background Information

Map 1: Location



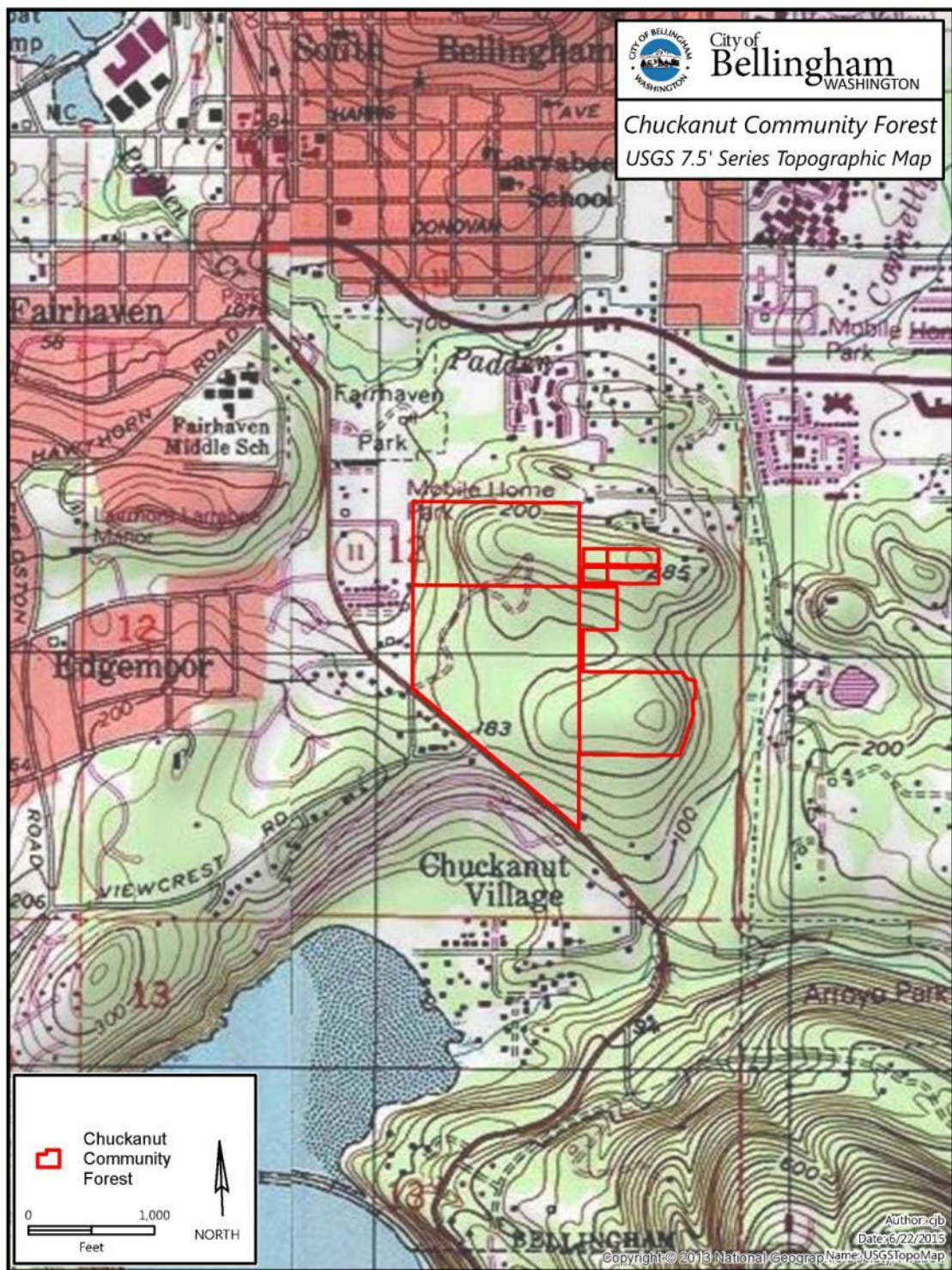


Map 2: Location





Map 3: USGS 7.5 Series Topographic Map



### **3.1. Description and Location**

The Chuckanut Community Forest (CCF) is located in Bellingham Washington, near the Fairhaven and South Neighborhoods (Township 37N, Range 3E, Section 12 – S1/2 SW1/4) (Map 1). The 82-acre forested open space is situated west of Interstate 5 and east of State Route 11 (Map 2). This property has been the subject of two major development proposals over the past twenty years and was recently purchased by the City of Bellingham in 2011.

The Chuckanut Community Forest Park District (CCFPD) was formed in 2013 by the vote of the people who reside in the district and is supported by a property levy, which will be used to offset part of the purchase cost of the property. In addition to the levy, the Park District entered into an Interlocal Agreement with and is the grantee of a Conservation Easement from the City of Bellingham. The CCF Conservation Easement area is the subject of this Baseline Documentation Report.

### **3.2. Property History**

The early history of the Chuckanut Community Forest land is not well documented. However, a historical account is included in the Final Environmental Impact Statement for Chuckanut Ridge Development, City of Bellingham, 1997:

Northwest Archaeological Associates performed an archaeological survey of the Chuckanut Ridge site in August and September 1992. They reviewed files of the Office of Archaeology and Historic Preservation, searched the ethnohistorical library resources, and conducted a field reconnaissance. None of these investigations identified archaeological sites. A summary of Northwest Archaeological Associates' report is included in the FEIS. The full text of the report is available for review at the offices of City of Bellingham Planning and Community Development and Gacek Associates.

This cultural resources overview for the Chuckanut Ridge was based primarily on the history and prehistory of the area, and the current understanding of past environmental and cultural settings.

Source: City of Bellingham, 1997. Section 2. Additional Information, Archaeology Survey, page 19. Final Environmental Impact Statement for Chuckanut Ridge Planned Development, Bellingham WA.

According to the 1997 FEIS account, an indigenous camp was maintained at the mouth of Chuckanut Creek for clamming and seafood harvest. Although this camp was associated with the Nooksack peoples, other groups used Chuckanut Bay, including the Lummi, Samish and Nuwaha. Since this camp site was located just down slope from the CCF about ¼ mile, it is possible that early people roamed through, hunted and gathered materials from this land. Also, according to the 1997 FEIS, the first European to arrive in Chuckanut Bay was the Spanish explorer Jose Narvaez in 1791. He was followed by Captain Vancouver a year later.

European settlement of the region started in the 1850's. According to the 1997 FEIS account much of the CCF land was held by the Bureau of Land Management until 1890. The early homestead claims, ownerships or divisions of the property were not investigated or recorded for this report. One early ownership was Cyrus Gates (Parcel C), a business man and business partner with Charles Larrabee. With Larrabee's vision for a scenic drive between Bellingham and Bow, together they financed the Fairhaven section of the road in 1907 which was located along the southwest side of the CCF. The two continued



to promote the roadway, and by 1909 government funding was appropriated to begin construction between Skagit and Fairhaven. The road was finished in 1916, and later became U.S. Route 99 extending to Burlington. This road is the present day Chuckanut Drive.

Since the CCF land has not been developed, its early history is assumed to be natural, and the site of old-growth or ancient forest for thousands of years, prior to European settlement and large-scale logging. An inventory of historical maps was cited in the 1997 FEIS, but not included in the document as stated, so additional detail was not accessed. The detail of the early logging of the site is not known. The FEIS speculated that the old-growth trees were logged in the 1890's, at the time Chuckanut Bay's virgin forest was harvested, and also the 1930s-1940s. However, based on the size and coring of select wetland associated trees in 2009 by Urban Forestry Services Inc., the current maximum forest is estimated to be 80-90 years. This would indicate the forest was logged in the mid 1920's to 1930's, but there may also have been areas logged later. Also, the lack of large old-growth stumps (tall stumps with spring-board notches) or very large decomposing old-growth logs on the property indicates the property had been cleared and possibly burned following the original logging. The forest was allowed to regenerate naturally which is evidenced by the diverse forest and native plant communities, all emerging from native seed stock from the original ancient forest. No ancient trees remain in the area, however, one relic Sitka Spruce tree, located near the northeast corner of Parcel A, is estimated to be roughly 200-300 years old.

Following logging, at some point, there was gravel extraction from the property. Areas of disturbance are located in Parcels A and B. It is not known when or how much material was extracted, but the areas of previous disturbance are relatively small at 1.04 acres. The site was described in 1997 as disturbed ground with saplings around the edges, so extraction likely occurred in the 1970s or 1980s. In addition to the borrow pits, a primitive road was created across the property from Chuckanut Drive to 24<sup>th</sup> Street. Although portions of this primitive road were surfaced with gravel, the interior portions appear to have only been compacted and used infrequently. The changes to the site are minimal, given that the disturbed areas are now grown over and naturalized, and the road is used as a trail. Steel gates were installed across the haul road entrances to the CCF to curtail dumping. A previous owner of the site also installed the 3 groundwater monitoring wells now in place on the north part of Parcel A. These hydrology monitoring ring wells were used to measure stormwater infiltration (V. Jackson pers. comm.).

Between the mid-1980's and 2011 the property became the subject of controversy centered around two major development proposals, including Chuckanut Ridge Development: a 1,464 multi-family unit development on 101 acres proposed in 1991 by Madrona Development Corporation; and Fairhaven Highlands a 739 single and multi-family unit development on 82 acres, proposed in 2005 by Greenbriar Northwest Associates LLC. Both development proposals required extensive review and Environmental Impact Statements. Final approval and permitting was not obtained for either proposal.

During this roughly 30-year period, citizens of Bellingham and others organized into groups to oppose the developments including the Interurban Neighbors, and later, Responsible Development. Other groups and organizations also became involved in attempts to protect the land as a natural area, locally known as the "Hundred Acre Wood," or "Chuckanut Ridge."

In 1990, citizens of Bellingham passed the first Greenway Levy which included a vision for protecting the Hundred Acre Wood. In 1997 following the passage of the Beyond Greenways Levy, the City earmarked \$1.6 million dollars for this property, to acquire a trail and greenway corridor between Fairhaven Park and the Interurban Trail. While efforts to purchase any of the property were not successful, the City did acquire over 100 acres of open space, east of CCF, along the Interurban Trail between Old Fairhaven

Parkway and Old Samish Highway. In addition, 17 acres were donated to the Whatcom Land Trust, and latter deeded to the City, primarily for protection of wetlands.

The 2005 development proposal by Greenbriar Northwest Associates required a re-evaluation of the property and ultimately a new Environmental Impact Statement. The draft EIS was released in 2009 and was the subject of considerable public review and debate. On the heels of the national economic downturn, and before the final EIS was completed, the project folded. In early 2010 failure of development partner and project financier Horizon Bank forced the Fairhaven Highlands property into foreclosure. Subsequently, Washington Federal Savings Bank acquired the property when it took over Horizon Bank and negotiated to sell the property to the City of Bellingham. The City's purchase of the remaining 82 acres for \$8.23 million was completed in 2011. This purchase was made with a combination of Greenway levy funds, City Park Impact fees, and a loan from the Greenway III maintenance endowment. No City of Bellingham General Funds were used.

The formation of the Chuckanut Community Forest Park District was the citizens' solution to protecting all of the 82 forested acres from future development, and paying back the Greenway Endowment loan used to purchase the property. A possible alternative was for the City of Bellingham to sell 25 acres of the property for development. The Chuckanut Community Forest Park district was proposed in 2012, using the Metropolitan Park District mechanism as allowed under RCW 35.61. The District would be governed by a Board of five Commissioners. The proposed district included areas of south Bellingham west of I-5, totaling 13 precincts. Following signature gathering, and petition validation, on February 12, 2013 the ballot measure passed, and the Chuckanut Community Forest Park District was created.

The mission of the Chuckanut Community Forest Park District (CCFPD) is: To ensure the entirety of the property is protected in perpetuity in public ownership, with respect for its ecological, recreational, and educational functions and to serve as a fiscal mechanism through which the District, via a tax levy, will repay the City of Bellingham Greenways Endowment Fund loan.

In order to secure and protect the Chuckanut Community Forest for the future, a Conservation Easement was negotiated with, and granted by, the City of Bellingham to the newly created Chuckanut Community Forest Park District in 2014. The Chuckanut Community Forest Park District entered into an Interlocal Agreement with the City which included the obligation to grant the District a conservation easement, develop a park master plan, and for the District to repay the Greenway Endowment Fund loan of \$3.2 million over an estimated 10-year period via tax levy. The first tax levy was collected in 2014 at a rate of \$0.28/\$1,000 assessed value of real property.

The complete property history is somewhat more complex and detailed. In order to obtain further detail, please refer to the individual documents related to prior development review and public process leading up to the purchase and protection of the Chuckanut Community Forest. These documents are available from the City of Bellingham and some are posted on their website as part of the Fairhaven Highlands development permitting at:

<http://cob.org/government/departments/pcd/fairhaven-highlands/index.aspx>

Additional information is posted on the Chuckanut Community Forest Parks District website:

<http://www.chuckanutcommunityforest.com/>

## **4. Conservation Easement Summary and Purpose**

### **4.1. Summary**

The Conservation Easement for the Chuckanut Community Forest (CCF) is the primary legal instrument guiding the use and protection of the CCF, which includes five parcels totaling about 82 acres. The Chuckanut Community Forest Park District was formed by public vote, to oversee the conservation of these lands and collect a levy to finance a portion of the CCF purchase. The Park District Board of Commissioners is the governing body in charge of monitoring and enforcement of the Conservation Easement. The Conservation Easement for the CCF was granted in perpetuity and is bound to the property title. The Grantor of the Conservation Easement, the City of Bellingham, maintains control and ownership of the property within the framework of the Conservation Easement, and bears all costs of ownership, improvement, maintenance and management of the CCF. The City also is responsible for all liabilities associated with ownership and public use of the property.

An Interlocal Agreement between the City of Bellingham and the Chuckanut Community Forest Park District was required to define the terms and conditions under which the Park District will repay the City's Greenways Endowment Fund Loan in exchange for a conservation easement. This agreement further defines the life of the Park District and provisions for reassigning the Conservation Easement to a third party once the loan is repaid and the Park District dissolved in approximately ten years.

The Conservation Easement and the Interlocal Agreement were signed in January 2014. The Conservation Easement was recorded in January 2014.

### **4.2. Conservation Easement Purpose and Values**

The intent of the City and Park District and purpose of the Conservation Easement is "...to assure that the natural features, functions and values of the Property are protected in perpetuity including the existing wetlands, forest, wildlife habitat, wildlife habitat corridors, and other features of ecological significance; while also allowing for the recreational, educational, and scientific uses named in Section IV. The uses allowed pursuant to Section IV shall be sited, designed, maintained, and operated so as to minimize the impact to the natural attributes of the Property."

The CCF Conservation Easement is intended to protect the ecological function and value of the CCF property, while providing for public access and use of the site within the parameters of minimizing impact to natural attributes. The provision for public use is not limited to passive recreation.

The list of permitted uses includes the allowance for the construction of appropriate facilities to enhance the recreation, education and scientific use on site. Under Section VIII of the easement, a master plan for the property shall be adopted prior to the construction of new facilities, and the location, design and construction shall avoid, and where necessary, minimize impacts to critical areas and wildlife habitat. It is surmised that the conceptual siting of any improvements to the property, including permanent structures, will be defined in the master plan.

### **4.3. Conservation Easement Reserved Rights and Permitted Uses**

Section IV of the Conservation Easement, titled “Permitted Uses, Practices and Rights Reserved By Grantor” identify 8 allowances for the property, primarily related to public use, safety and maintenance.

The first allowance, IV.1, names 19 specific recreational, scientific and educational uses. These include: motor vehicle parking, facilities for on-site education or research, trails, signage, plaques, benches, restrooms, pavilions, and educational/interpretive buildings, among others. The exception to any use listed, is that it may not adversely impact the critical areas on the property without adequate mitigation as allowed and approved under the City’s Critical Area Ordinance.

Allowances IV.2-7 pertain to maintenance, limited tree clearing for views, specific tree removal for public safety, and use of motorized vehicles for the maintenance and development of the property.

Allowance IV.8 is a broad provision providing for those activities necessary or required to protect public health and safety on the Property. No specific actions or activities are identified. This allowance is qualified by the directive that “any such activity shall be conducted so that interference to the ecological values of the Property is avoided or... minimized to the maximum extent possible.”

In addition to the allowances listed in Section IV, a provision in Section VII - Baseline Data, requires the documentation of off-site references made for comparison of Section V, Restrictions on Use. Appendix 11.1 of this document provides the off-site references as examples of allowed uses.

Several allowed uses stated in Section IV would permanently alter, impact, or change the CCF’s current conditions. Therefore, monitoring of the Conservation Easement will require close consideration of the original easement purpose and values, which is the standard reference for compliance.

Please refer to the Conservation Easement for complete language (Appendix 11.3.1).

### **4.4. Conservation Easement Restrictions**

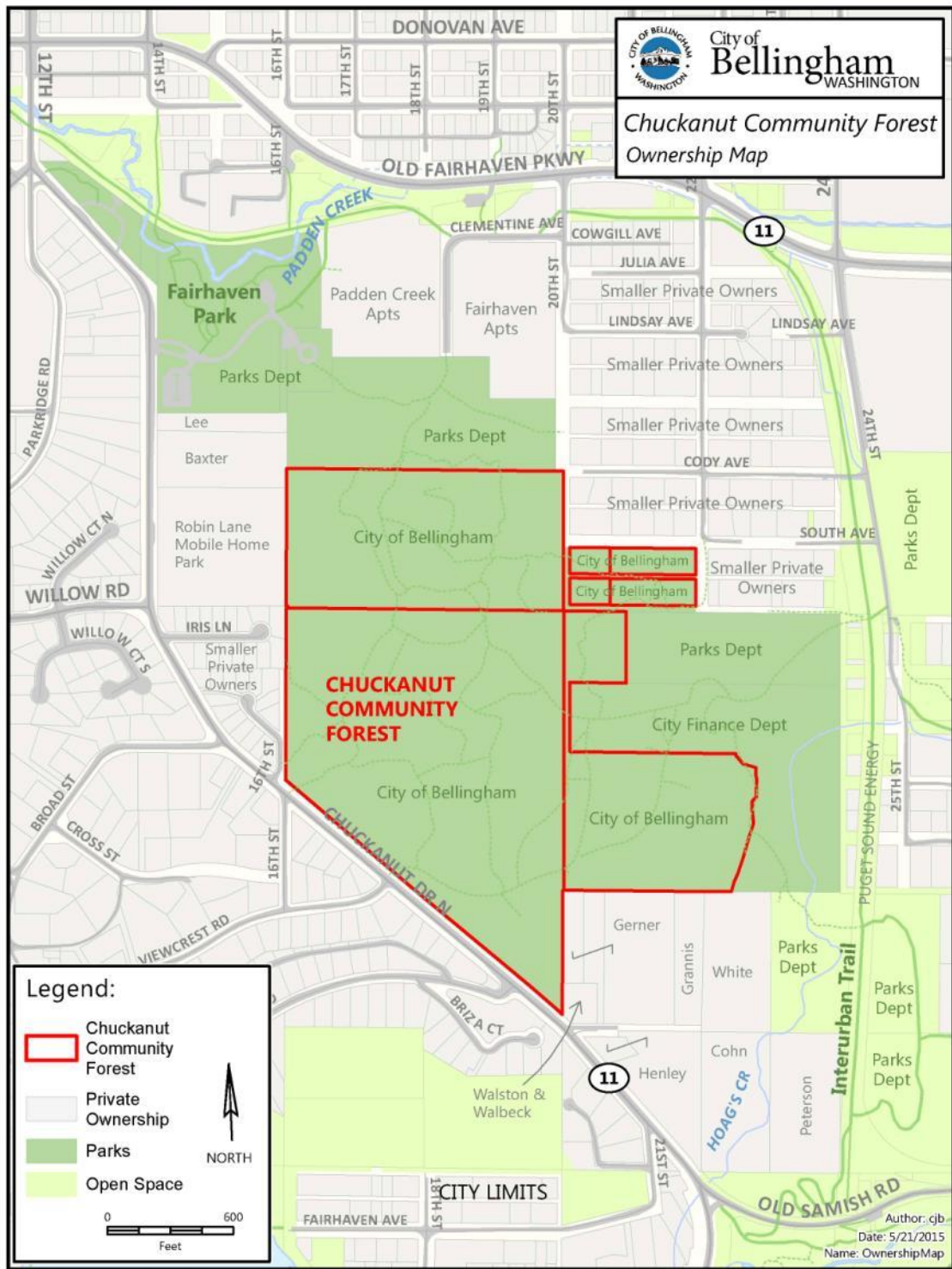
Section V. of the Conservation Easement contains the restrictions on use, a total of 16 items. The grantor may also prohibit uses independent of the easement.

Please refer to the Conservation Easement for complete language (Appendix 11.3.1).



## 5. Current Baseline Conditions

Map 4: Ownership



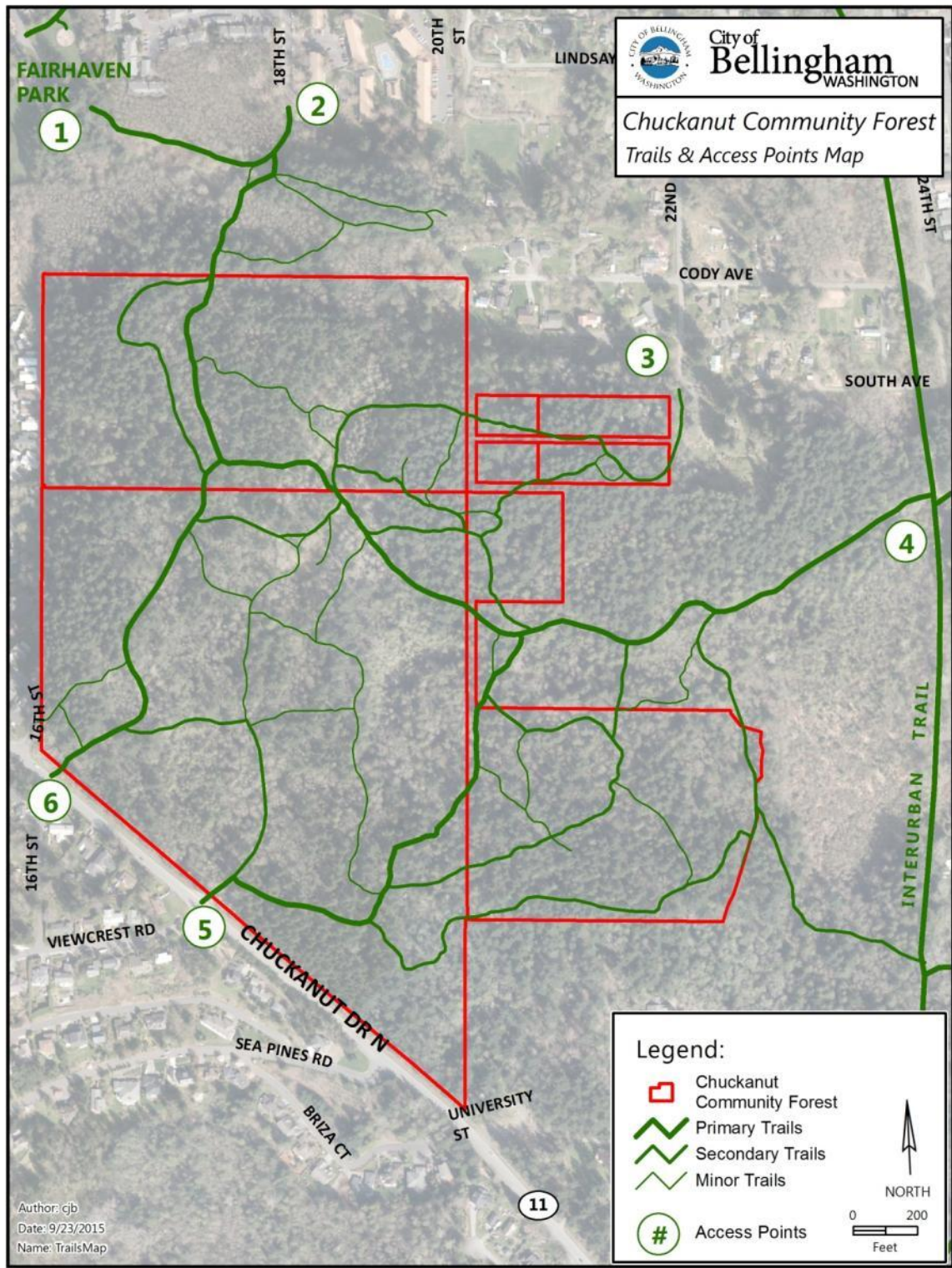
## **5.1. Property Ownership and Access**

### **5.1.1. Ownership**

The Chuckanut Community Forest land base of about 82 acres is currently owned by the City of Bellingham. Previously, this land and additional acreage to the north and east totaling approximately 100 acres, were privately owned, and since the 1980's the object of several developments proposals.

Currently, the land ownership adjacent to the CCF is a mix of private residential, public park and open space. A portion of the original 100 acres located to the east of the CCF boundary, Parcel C, is protected under a conservation easement which prohibits development (see Parcel C description 5.2.1).

Map 5: Access Points





### 5.1.2. Access

The Chuckanut Community Forest is accessed from 6 main entry points originating from public park or street right-of way. These points are described in the following text with supporting photos and are illustrated on Map 5.

1. **Fairhaven Park** – A trail originates from the park, behind the group picnic shelter. This trail crosses a wetland before entering the CCF. The boundary of the CCF is unmarked. Public parking is available at Fairhaven Park. Photos of trail from Fairhaven Park leading to CCF are shown below. A portion of the trail between Fairhaven Park and 18<sup>th</sup> Street was relocated in 2015 to avoid the wetland.



2. **18<sup>th</sup> Street** – trail access from the end of 18<sup>th</sup> Street. A trail passes through the undeveloped portion of Fairhaven Park and crosses a wetland before entering the CCF. The boundary of the CCF is unmarked. Limited street parking is available at the end of 18<sup>th</sup> St. Photos of access point and trail head below.





3. **22<sup>nd</sup> Street** – trail access from the south end of 22<sup>nd</sup> St. originates at the intersection with South Ave, south of Cody Ave. This is direct access to the CCF property. No public parking is available. Photos of access point and trail below.



4. **Interurban Trail** – trail access from the Interurban Trail, south of South Ave. This is not direct entry to the CCF, but an undeveloped trail passes through City owned open space land before entering the CCF. The boundary of the CCF is unmarked. No immediate parking, but public parking is available at Interurban trailheads. Photos of access point and trail head below.





5. **Chuckanut-Viewcrest** – trail access from Chuckanut Drive at the east end of Viewcrest Rd. This is direct access to CCF lands. No public parking available. Photos of access point and trail head below.



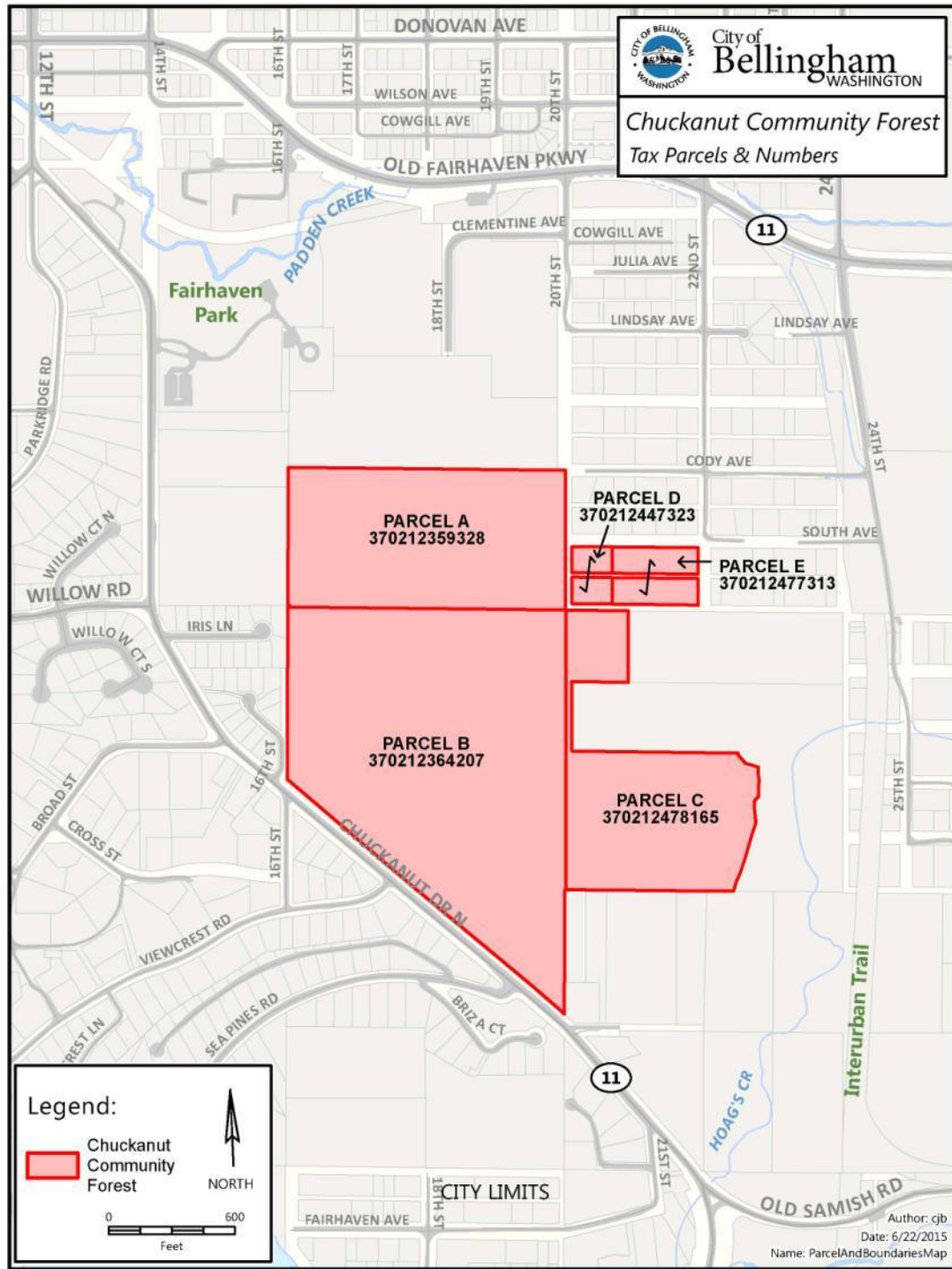
6. **Chuckanut- 16<sup>th</sup> Street** – trail access from Chuckanut Drive near 16<sup>th</sup> St. is available at 2 points. One directly from the east side of Chuckanut Dr., just south of 16<sup>th</sup> St., and another from 16<sup>th</sup> St. This is direct access to CCF lands. No public parking is available. Photos of access point and trail head below.



The CCF is accessible by foot or non-motorized bike only. The trails within the CCF are undeveloped, meaning no surfacing, drainage or structures over water exist. Also, with the exception of Park Regulations signs at most entry points, there is no signage within the forest or along trails.

## 5.2. Parcel and Corner Descriptions, with Title Details

Map 6: Parcels





### **5.2.1. Parcel Descriptions**

The Chuckanut Community Forest is made up of five individual parcels (Map 6), all of which are connected and form a contiguous block of land, with the exception of several rights of way that bisect parcels D and E. The following list provides each CCF Parcel identifier (A-E) as defined by the Conservation Easement, the Parcel number as related to the Whatcom County Assessor's Geographic ID or Geo parcel number, followed by a brief physical description, the legal description - as appears in the Conservation Easement - Exhibit A, and a list of any encumbrances on the title which are identified in the Title Policy - Schedule B. Wetlands for each parcel are designated by an "alpha" identifier applied during past delineation, and are fully described and mapped in Section 6.2.5. Title related documents are included in Appendix 11.3.3.

#### **PARCEL A (370212 359328 0000)**

##### **General Description**

Parcel A totals 20 acres, is fully forested, with native vegetation. Both human and wildlife trails exist throughout the parcel. The topography of this parcel is dynamic overall, with a total elevation rise and fall of 150', including steep slopes, gullies and drainages. A total of 6 wetland areas have been delineated on this Parcel - two of which are connected (Wetland BB). This parcel has additional COB park land to the north and CCF designated land to the south/southeast, and private residential lands border the west and a portion of the east side.

##### **Legal Description**

The south half of the southwest quarter of the northeast quarter of Section 12, Township 37 North, Range 2 East of W.M., except that right-of-way lying along the easterly line thereof, commonly referred to as 20<sup>th</sup> Street.

#### **PARCEL B (370212 364207 0000)**

##### **General Description**

Parcel B totals 42 acres, is fully forested with native vegetation. Two borrow pits from past gravel mining exist along with ground water monitoring wells (see Phase 1 Environmental Site Assessment, Fairhaven Highlands Property, September 8, 2011). Both human and wildlife trails exist throughout the parcel, including some that were old access roads. The topography is varied with a rather flat to gentle sloped center and steep areas in the northeast. Overall there is a total elevation rise and fall of 150'. A total of 7 wetland areas have been delineated on this Parcel. Bordering this parcel is additional park land to the east, CCF designated land to the north, Chuckanut Drive south, and private lands west.

##### **Legal Description**

That part of the northwest quarter of the southeast quarter, and that part of the southwest quarter of the southeast quarter of Section 12, Township 37 North, Range 2 East of W.M., lying northerly of Chuckanut Drive.

##### **Title Details**

1. A single family residential driveway easement may encroach on the southerly tip of Parcel B and is described in the Conservation Easement Sec. V.8. It is not possible to determine if the driveway actually encroaches onto the Park Property based on on-site evaluation and review by COB GIS staff. Further review of existing land survey documents is needed.

2. Easement over and across Iris Lane (at the northwest corner of Parcel B) to the CCF property - for temporary emergency vehicle ingress and egress, and for construction and subsequent maintenance and operation of utilities.

### **PARCEL C (370212 478165 0000)**

#### **General Description**

Parcel C totals 15.9 acres, is an odd shape consisting of two lobes (north and south) and a narrow connector in the middle resulting from a lot-line adjustment in 1996. The Parcel is fully forested, with native vegetation. Both human and wildlife trails exist throughout the parcel, including portions of an old access road. The topography of this parcel is varied with the northern portion entirely sloped south, and the southern lobe containing a rise in the middle and then sloping in all directions, but most sharply to the east. Overall there is a total elevation rise and fall of about 125'. A total of 2 wetland areas intersect this Parcel (Wetland KK and LL). Bordering this parcel is park land to the east including the Interurban, CCF west and north, and private lands south.

#### **Legal Description**

Lot B, as delineated on Chuckanut Trust Lot Line Adjustment, according to the plat thereof, recorded under Auditor's File No. 961219101, records of Whatcom County, Washington.

#### **Title Details**

1. 1996, Deed of Gift which divided the land of which Parcel C is the western half. This included a lot line adjustment and transfer of development rights to the Whatcom Land Trust. The Deed of Gift included restrictions and reservations which no longer apply due to the CCF Conservation Easement.
2. A 51% share of oil and mineral rights dating back to 1952. Current zoning and other land use laws and regulations effectively preclude activities related to oil and mineral exploration and extraction. The Conservation Easement recognizes the existence of these rights at Section V.3.
3. Mineral rights in the form of oil and gas lease granted in 2001 to Jordon Exploration Company LLC, Traverse City Michigan. Current zoning and other land use laws and regulations effectively preclude activities related to oil and mineral exploration and extraction. The Conservation Easement recognizes the existence of these rights at Section V.3.

### **PARCEL D (370212 447323 0000)**

#### **General Description**

Parcel D totals 1.15 acres, is fully forested with native vegetation, and has no human built structures or improvements. Parcel D and E are separated by an undeveloped right-of-way at the northeast side of CCF and consist of 24 residential lots. Both human and wildlife trails exist throughout the parcel. The topography is gently undulating, with a total elevation rise and fall of less than 50'. Bordering this parcel is CCF east, west and south, and private land to the north.

#### **Legal Description**

Lots 1 through 4 and Lots 21 through 24, inclusive, Block 1, Map of Diffenbachers Addition to Fairhaven, now a part of the consolidated City of Bellingham, Whatcom County, Washington, according to the plat thereof, recorded in Volume 1 of Plats, Page 51, records of Whatcom County, Washington.

**Title Details**

A 30-foot-wide street right-of-way exists around Block 1 of the Diffenbachers Addition (Appendix 11.3.3), which would include the north, south and west side of Parcel D.

**PARCEL E (370212 477313 0000)****General Description**

Parcel E totals 2.29 acres, is fully forested with native vegetation, and has no human built structures or improvements. Parcel D and E are separated by an undeveloped right-of-way at the northeast side of CCF, and consists of 24 residential lots. Both human and wildlife trails exist throughout the parcel. The topography is dynamic on the edges with steep slopes particularly to the east, but overall the ground is gently undulating, with a total elevation rise and fall of less than 100'. The highest point of the CCF is located on this parcel at an elevation of 298'. Bordering this parcel is CCF designated land to the west, additional Park land south and private land to the north and east.

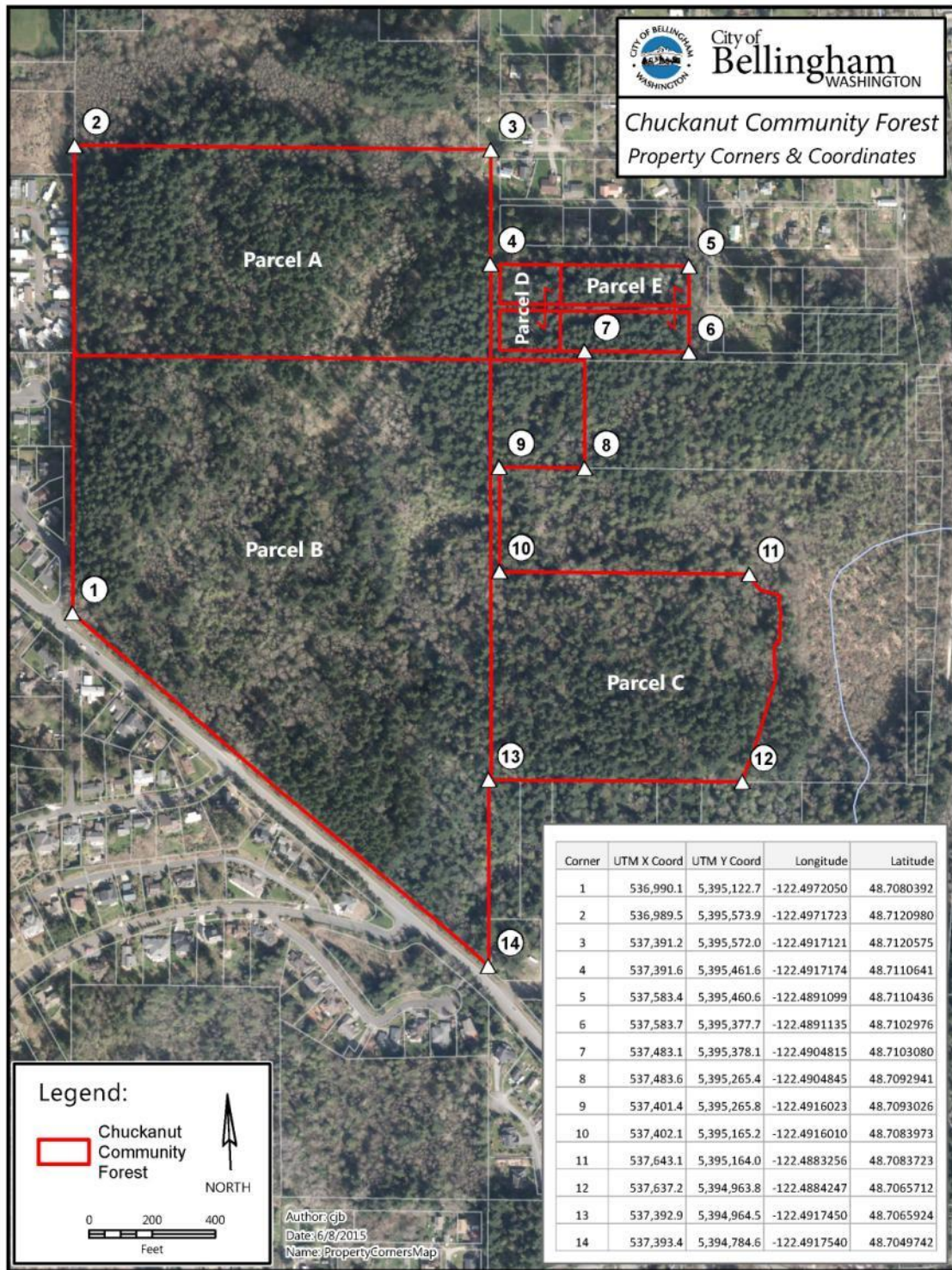
**Legal Description**

Lots 5 through 20, inclusive, Block 1, Map of Diffenbachers Addition to Fairhaven, now a part of the consolidated City of Bellingham, Whatcom County, Washington, according to the plat thereof, recorded in Volume 1 of Plats, Page 51, records of Whatcom County, Washington.

**Title Details**

A 30-foot-wide street right-of-way exists around Block 1 of the Diffenbachers Addition (Appendix 11.3.3), which would include the north, south and east side of Parcel E.

## Map 7: Property Corners





### 5.2.2. Corner Descriptions

The Chuckanut Community Forest (CCF) property as a whole, contains 14 corners (Map 7). These corners are a result of the 6 parcels joined irregularly across the landscape. The current condition of each corner will be described in the following section with photo documentation for each corner. The Property Corners Map 7 provides LAT-LONG and UTM for reference.

#### Corner 1 – Parcel B

Located at the southwest corner of the CCF, at the intersection of Chuckanut Drive and 16<sup>th</sup> Street at the entrance to a 15-lot development, identified as the Fairhaven Farms Short Plats. The property corner is on the northeast side of Chuckanut Dr. approximately 42 feet from the painted road edge, or from the utility pole at this corner - 16.8 feet northeast. No corner marker was found.

The current condition of this corner is a natural state, fully forested, with mixed mature forest, an edge of shrubs paralleling the roadway, and a small wetland area contiguous to Wetland CC. There is an undeveloped trail access point marked by a small sign off the southeast side of 16<sup>th</sup> St. immediately past the corner from Chuckanut Dr. Another access point at a gated entry is located directly south of the utility pole along Chuckanut Dr. No parking is available. Below are photos of this corner.





## Corner 2 – Parcel A

Located at the northwest corner of the CCF at an unmarked location, this corner is situated along a derelict wood post-barbwire fence line running north/south. To locate this property corner, a GPS unit is necessary.

The current condition of this corner is in a natural state and is situated in a partly forested wetland complex with standing water. This wetland location corresponds to Wetland BB (west), extending well into the neighboring privately owned undeveloped parcel to the west, where the land had been cleared and soils disturbed in the past, now growing up in blackberry, knot weed, reed canary grass and young sapling red alders. The CCF corner was dominated by a diverse variety of wetland associated native plants, with large patches of a tall sedge, salmonberry, ferns and a sparse overstory of mature red alder and some western red cedar. Standing water was present throughout.

Due to the relatively secluded nature of this site currently, signs of wildlife use and well worn game trails intersected this corner. No trails or easy access is available. No survey or corner marker was found. Access to the corner was via game-trail and GPS. Below are photos of this corner.



### Corner 3 – Parcel A

Located at the northeast corner of the CCF, at the west end and termination point of Cody Ave. Records from 1991 indicate a 4"x4" concrete monument ID # 5187 marking this corner. This corner was located by GPS and a neighbor stated that the monument marker was now buried in a large blackberry patch where a marker with flagging tape was observed but not accessed.

The parcel immediately north of Parcel A is an undeveloped section of Fairhaven Park, owned by the City of Bellingham. The boundary of the City parcel, north of Parcel A, is marked by a huge Sitka spruce tree, reported by a neighbor to be an estimated 300 years old. This tree is situated about 50' north of Parcel A, directly on or slightly west of the boundary. The corner of Parcel A is off-set to the east from the Parks lot by about 40', extending east and adjoining a private lot for this portion on the north side. As a result, the north side of the corner is garden and mowed lawn.

The current condition of this corner is disturbed on the edge, but natural within ~50' of the edge. The edge appears to have been partly cleared by the immediate neighbors. The corner lacks trees and is dominated by blackberries in the immediate area around the marker. A driveway extends about 80' south along a right-of-way adjoining the CCF property and along this driveway extending about 30' onto CCF land is mowed lawn.

A freshwater seep also originates at this corner and flows onto CCF land down slope (west), both spreading and feeding into a large complex wetland (Wetland BB) extending west to Fairhaven Park and Corner 2. Adjacent to the CCF Corner 3 are 2 single-family residences one on the north and one on the south side of Cody Ave. To the north and south behind both of these residences is a sharp topographic ridge created by sandstone veins running east and west forming a sort of trough with Cody Ave. running centrally between both ridges. These veins are forested and relatively natural.

This corner is easy to find, with access available by a short path at the end of Cody Ave., but use GPS for confirmation. No parking is available. Below are photos of this corner.





## Corner 4 – Parcel A and D

Located at the northwest corner of Parcel D, at the middle of Parcel A's eastern boundary, this corner is situated inside the forest on the upper edge of the sandstone ridge immediately south of Cody Ave. The ridge edge is nearly vertical and from the top provides partial views north to WWU and Sehome Hill. No marker was found.

The current condition of the site is natural forest, with large mature conifers, dominated by Douglas fir and an understory dominated by salal, Oregon grape (tall) and sword fern. The soil is dry and well drained. A well-used trail is situated near this corner approximately 50' to the south. The adjacent lot to the northeast is privately owned and undeveloped, subsequently it is also natural and the vegetation is contiguous with the CCF, providing a buffer to the built lots along Cody Ave.

This corner requires GPS, and is accessed via the secondary trail originating at South Ave. and 22<sup>nd</sup> St., stay right on the trail to the GPS coordinates shown on the map. Below are photos of this corner.





## Corner 5 – Parcel E

Located at the northeast corner of Parcel E at the end or terminus of 22<sup>nd</sup> St. and intersection with South Ave. At this intersection, two driveways split to the southeast where an old gate marks a trail entrance to the CCF, the trail leads south. This corner is not visible from the street or trail, but is situated in the forest and marked by a brightly colored flagged corner marker.

The current condition of the site is natural mixed forest, with large mature trees including western red cedar, Douglas fir and big-leaf maple. The understory is sparse due to the closed canopy, and dominated by sword fern. The forest extends from the corner 60' or more north to the edge of the adjacent private built lot. This undeveloped area includes a 30-foot right-of-way for the western portion of South Ave.

This corner is accessed from the north end of 22<sup>nd</sup> Street. Look for the Witness Post at the base of the metal gate to the right of the trail entrance. From the Witness Post, walk west 30', then south 30' to the marker situated in the forest on a steep north facing slope. Notes from 2007 indicate a concrete monument #94 (not found). No parking is available. Below are photos of this corner.



## Corner 6 – Parcel E

Located at the southeast corner of Parcel E, in forest, just off the trail from 22<sup>nd</sup> St., this corner is surrounded by contiguous mature forest, with no clearing or development within sight. Adjacent to this corner is City of Bellingham park land to the south and a private undeveloped lot to the east. No marker was found.

The current condition of this corner is natural, mature forest, dominated by Douglas fir with a closed canopy. The understory contains sword fern and other low-light tolerant native plants.

To access this corner, follow the trail originating at the end of 22<sup>nd</sup> St. and follow the trail south until the trail starts to turn right or west – the corner is located at this bend in the trail, which is on an east facing slope. Use GPS to verify location. Note GPS reading may be delayed or misleading due to the closed canopy and cloud cover. Below are photos of this corner.





### **Corner 7 – Parcel C** (Note: Parcel C has 7 corners)

Located at the northeast corner of Parcel C abutting the south boundary of Parcel E, this corner is situated just off the trail from 22<sup>nd</sup> St. This corner is surrounded by contiguous mature forest and publicly owned park lands. There are no clearings or development within sight. No survey marker was found. A notable natural marker is a ~50 y/o western red cedar that has had a section of bark pulled off from its base forming an exposed scar. This tree is located near the corner just off the trail to the east.

The current condition of this corner is natural, mature forest, dominated by Douglas fir, with occasional cedars, but the site is high, dry and drops sharply a little further east. The understory contains Oregon grape (low), sword fern and other native plants.

To access this corner, follow the trail originating at the end of 22<sup>nd</sup> St. and follow the trail south, past corner #6 and turning west the trail continues, past the intersection with two trails to the north, then as the trail takes a slight turn south along a flat area, watch for the cedar to your left (east) off the trail – the scar faces the trail. Use GPS to find and verify location. Note GPS reading may be delayed or misleading due to the closed canopy and cloud cover. Below are photos of this corner.



## Corner 8 – Parcel C

Located along the east side of Parcel C, this corner is poorly defined and no marker was found. The corner is located in the middle of publicly owned park lands and is not on the trail network.

The current condition of this corner is natural, mature mixed forest on a fairly steep south facing slope.

To access this corner use GPS for direction and to verify coordinates. Note GPS reading may be delayed or misleading due to the closed canopy and cloud cover. This corner is located about 200' +/- east of trail originating at the end of 22<sup>nd</sup> St. and about 150' north of the mainline trail, just east of the junction with the 22<sup>nd</sup> St. trail. Refer to the composite map showing trails and CCF boundaries.

No Photo

## Corner 9 – Parcel C

Located at the western-lying indent along the east side of Parcel C, this corner is poorly defined and no marker was found. The corner is located in the middle of publicly owned park lands and is not on the trail network.

The current condition of this corner is natural, mature mixed forest on a south facing slope.

To access this corner use GPS for direction and to verify coordinates. Note GPS reading may be delayed or misleading due to the closed canopy and cloud cover. This corner is located about 75' +/- west of trail originating at the end of 22<sup>nd</sup> St. and about 150' +/- north of the mainline trail, just west of the junction with the 22<sup>nd</sup> St trail. Refer to the access map (Map 5) showing trails and CCF boundaries to orient.



Photo at trail junction  
SE of Corner 9



## Corner 10 – Parcel C

Located at the western-lying indent along the east side of Parcel C, this corner is poorly defined and no marker was found. The corner is situated in the middle of publicly owned park lands and is on the trail network.

The current condition of this corner is natural, mature mixed forest, on low, level, wet ground. The corner is situated at the eastern edge of Wetland LL. This site is dominated by lush wetland-associated native plants. The overstory includes a mix of red alder, large mature big-leaf maples, and cottonwood with western red cedars on drier rises.

To access this corner use GPS for direction and to verify coordinates. Note GPS reading may be delayed or misleading due to the closed canopy and cloud cover. This corner is located south of the mainline trail wetland hub, about 150' +/- along a secondary trail/western spur. Because of the large network of trails in this area, refer to the composite map (Map 21) showing trails and CCF boundaries to orient. Below are photos of this corner.



## Corner 11 – Parcel C

Located on the upper east corner of the southern lobe of Parcel C, this corner demarks the northern point of an irregular boundary extending south to Corner #12 which is the southeast corner of the CCF. This corner and subsequent boundary line is marked by ground-level metal survey markers, with flagging tape, surrounded by black plastic drain pipe, spaced at regular intervals along the mid-slope above the large wetland system, Wetland JJ situated east of CCF.

The current condition of this corner is natural, undisturbed mature mixed forest. The corner is situated on an east facing slope at the base of which is the large wetland complex associated with Wetland JJ. Near this location and along the boundary south are fresh water seeps flowing downslope. The overstory includes a mix of large mature big-leaf maples, red-alder, Douglas fir, and western red cedar. Immediately down slope are alder, maple and willow near the wetland edge. The understory is dotted with large clumps of Pacific waterleaf and a variety of ferns including wood fern, which are not a common species. A side trail passes by this corner and follows the boundary part way south.

To access this corner use GPS for direction and to verify coordinates. Note GPS reading may be delayed or misleading due to the closed canopy and possible cloud cover. This corner is located south of the mainline trail, about 150' +/- along a secondary trail/western spur. Because of the large network of trails in this area, refer to the composite map (Map 21) showing trails and CCF boundaries to orient. Below are photos of this corner and vicinity.





## Corner 12 – Parcel C

This is the southeast corner of the CCF property. Located on the lower east corner of the southern lobe of Parcel C, this corner demarks the southern point of an irregular boundary extending north to Corner #11. This corner and subsequent boundary line to the north is marked by ground-level metal survey markers, with flagging tape, surrounded by black plastic drain pipe, spaced at regular intervals along the mid-slope above the large wetland system, Wetland JJ, lying east of CCF. No monument or obvious corner marker was found.

The current condition of this corner is natural, undisturbed mature mixed forest. The corner is situated on a steep east facing slope, at the base of which is the large wetland complex associated with Wetland JJ. The corner is a mix of big-leaf maple, Douglas fir and cedar overstory. The understory is mostly sword fern with other native herbaceous species mixed in.

To access this corner use GPS for direction and to verify coordinates. Note GPS reading may be delayed or misleading due to the closed canopy and possible cloud cover. From Corner #11 follow the trail south, mid-slope, and follow the survey markers (ground level) as described above, as the trail fades. The corner is at or near the last survey marker. Below are photos of this corner.





### Corner 13 – Parcel C

Located at the southeast side of the property, this corner is at the southern-most intersection of Parcels B and C. This corner is situated in a relatively level forested area, immediately south of the main southern trail.

The corner is in a natural forested condition, with an open understory. The dominant overstory species is Douglas fir, and the understory is sword fern and low growing Oregon grape.

To access the corner, take the trail access point #5 (Map 5) traveling east from Chuckanut Drive, after the third spur trail north and just as the trail turns north – where there is a group of large exposed rocks, the corner is directly south about 100' and there may be a spur trail leading in the vicinity. No marker found, however the land to the south is an undeveloped private lot with no trespassing signs posted along the property line. Below are photos of this corner and vicinity.



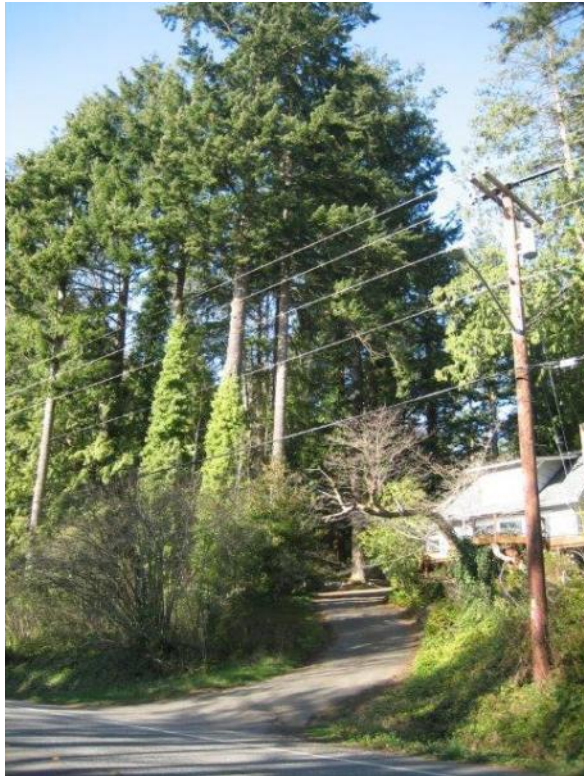
## Corner 14 – Parcel C

Located at the southern most point of the CCF and Parcel B, this corner is situated on or at the north edge of a residential driveway leading along Chuckanut Drive. The corner and driveway are located slightly northwest of the intersection of Chuckanut Drive and University Street, on the northeast side of Chuckanut Dr.

The current condition of this corner is slightly disturbed due to the nearby residence and driveway, however away from the edge within about 50' the condition is natural, mature Douglas fir dominated forest with native understory.

To access this corner, walk from University Ave. north along Chuckanut Dr. to the first (only) driveway on the right and the corner is situated in the shrubs north of the driveway. A corner maker may exist, but was not found. Use GPS to verify coordinates. Below are photos of this corner.

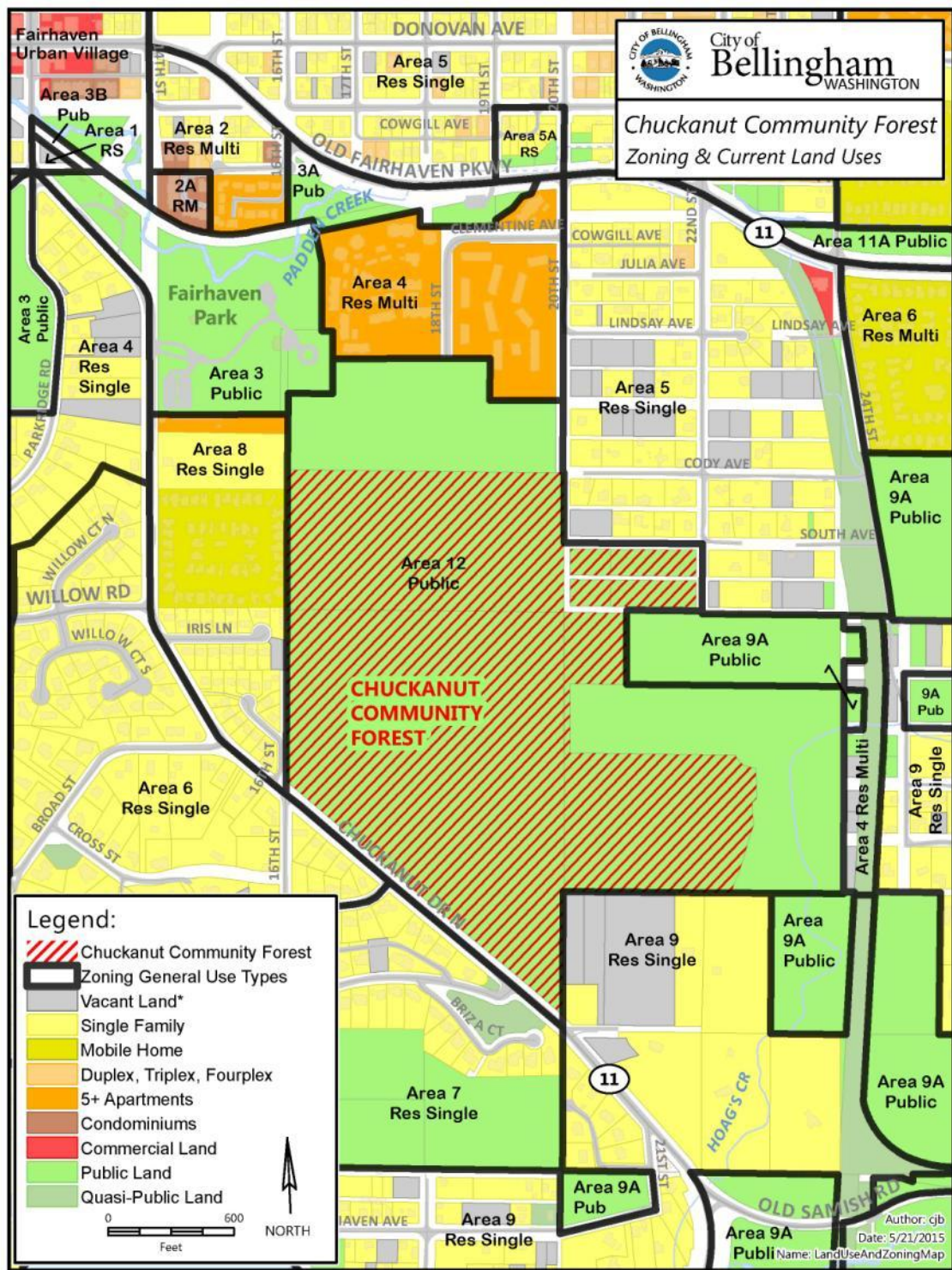
No access trail to the CCF or public parking is available from this corner.





### 5.3. Landuse – Current Use and Zoning

Map 8: Zoning and Landuse





Current land use and zoning of the Chuckanut Community Forest is Park/Open Space. The Chuckanut Community Forest is currently undeveloped, except for trails, and has not been built on or developed in the past. The property also does not contain utilities of any kind and does not show legal utility easements on the property; however, there is an easement allowing access for emergency vehicles and "...for the construction and subsequent maintenance and operation of utilities..." on the western edge extending from Iris Lane (Appendix 11.3.3.).

The CCF land is mostly in a natural forested state, with little disturbance and/or improvements, except for primitive trails. The activities that occur on the property currently are passive, non-motorized, public recreation, such as: walking, dog-walking, running, biking, bird watching and nature viewing. In addition, at least one Citizen Science program utilizes the site for on-going amphibian monitoring.

The property is situated within the City limits of Bellingham near the southern city boundary, west of I-5 and east of State Route 11 or Chuckanut Drive (Map 1 and 2). The CCF property was acquired by the City of Bellingham in 2011, for public use and protection of its natural attributes.

The CCF land at the time of acquisition by the City of Bellingham was zoned Residential Multi-Planned. Following acquisition, a public process ensued to explore optional uses for property. In June 2012, a rezone of the property was proposed to ensure protection from future development. This proposal was approved by City Council and the zoning was changed in 2014 to Public - Open Space, as part of the Comprehensive Plan update. In addition to the CCF 82 acres, the 13 acres immediately north, and 16 acres to the east, all owned by the City of Bellingham, were rezoned to Public – Open Space as part of the same rezoning docket.

The CCF property is bordered by single family residential, mobile home, and public - open land use zoning types (Map 8). There is no commercial zoning adjacent to the CCF. The following lists the zoning and land use adjacent to the CCF.

To the north and east are publicly owned, undeveloped park and open space lands. These tracts link to additional park lands including Fairhaven Park and the Padden Creek corridor to the northwest. To the east lies a large wetland area Wetland JJ, (part of the same property up to 1996), and Hoag Creek, which provides a natural corridor south to Arroyo Park and Chuckanut Creek. The Interurban Trail (named after the old electric railway) borders these lands to the east and provides a well used public trail running north-south.

To the northeast are single family residential lots, several of which are not developed including 2 lots along the property boundary – one large lot at Corner 4 and one small lot at Corner 6. Also associated with Parcels D and E is an existing 30' wide street right-of way across the property, which is an extension of 20<sup>th</sup>, South, and Harrison Streets.

To the southeast are large private lots and acreage, all zoned single family residential. Three lots adjacent to the CCF in this corner (Corner 13) are undeveloped.

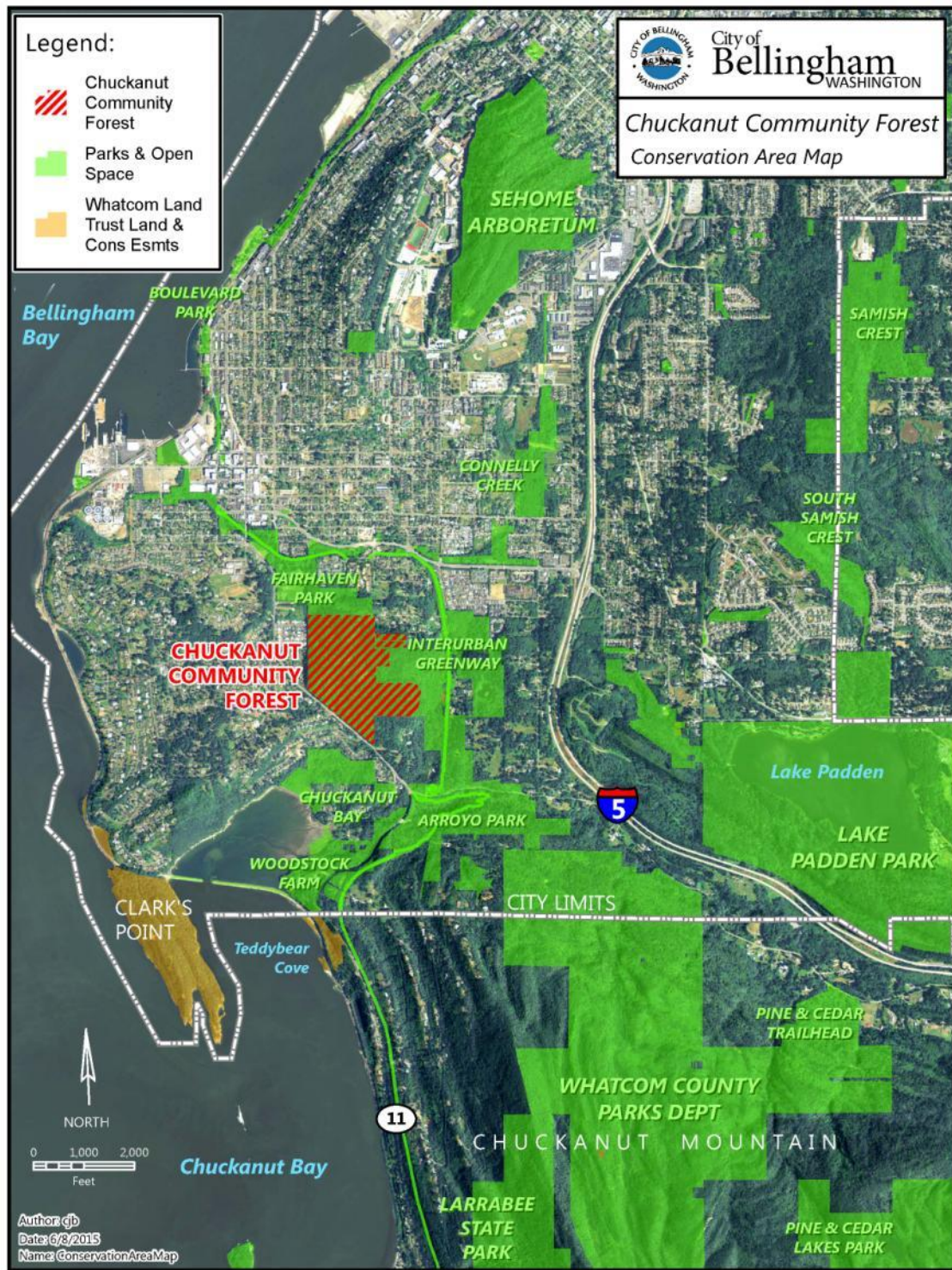
The southwest boundary of CCF is Chuckanut Drive (State Route 11). Across Chuckanut Drive are developed single family lots flanked by more park and open space leading to Chuckanut Bay.

Along the CCF western boundary are developed and undeveloped single family residential, a 50-unit mobile home park (Robin Lane) and a small multi-family (5+) apartment complex.

In addition to human use, the CCF provides vital natural functions and linkages on the landscape for plants, wildlife and ecological processes. With natural areas extending in three directions, the CCF also serves as an important habitat node providing refugia on the landscape and forms a natural habitat bridge between two watersheds and significant stream corridors. This linkage connecting natural areas, park lands, trails and habitat is invaluable for both humans and wildlife.

#### 5.4. Proximity to Conservation Areas

Map 9: Conservation Areas





Proximity to conservation areas is an attribute of the Chuckanut Community Forest lands. The CCF is an important open space and habitat component piece in a larger conservation landscape (Map 9). The area around the CCF has been identified as a valuable natural area for wildlife, habitats and human enjoyment. The City of Bellingham's Greenway program has acquired adjacent lands for open space and trails. In the 2008 Bellingham Parks, Recreation and Open Space Plan, potential open space corridors were identified for a city-wide network. Within those corridors open space anchors were also identified, which are larger sites that visually break up development patterns and preserve large tracts of ecologically important areas. The CCF was identified as one of these open space anchors (Map 10).

Developed parks and undeveloped open space areas adjacent to the CCF include the following.

- To the north, abutting the CCF is 13 acres of an undeveloped area of Fairhaven Park. This parcel is contiguous with the CCF and forms an extension of the mature forest, open wetland meadow (wetland BB) complex and shares the same natural features and habitat values as the CCF.
- The developed area of Fairhaven Park is located northwest, with a trail connector through the above property, linking the CCF with the rest of the park. Fairhaven Park is one of the oldest parks in Bellingham. Totalling 35 acres, the park includes developed and natural areas. The developed area of the park includes parking, restrooms, play area, picnic shelter, pavilion, tennis courts, basketball courts, children's water feature, mowed lawns, and ball field. Padden Creek runs through the park with forested trails and natural areas. The former rose garden area is now the Chuckanut Center, which provides community education related to food sustainability.
- To the east are undeveloped public open space lands and a major trail corridor. This area includes the large forested wetland area (wetland JJ) – originally part of the Chuckanut Ridge property, but was severed off the project as a conservation area (16.5 acres) in 1996 as a lot-line adjustment (Appendix 11.3.3). Adjacent to the wetland and associated natural area is the Interurban Greenway and Trail offering 3 miles of trail on 113 acres of natural forested open space, all of which shares the same contiguous forest cover as the CCF. This greenway extends south to Chuckanut Creek and the 86-acre Arroyo Nature Area. Continuing south the forested open space links into the greater Chuckanut/Blanchard Mountain complex of open space, parks and public forest lands totaling approximately 8,000 acres.
- To the southwest of the CCF across Chuckanut Drive and down slope is an undeveloped open space corridor leading to Chuckanut Bay.

In both the 1995 and 2003 City of Bellingham Wildlife and Habitat Assessments, the Hundred Acre Wood or CCF lands and adjacent habitat areas are described as a high quality contiguous habitat block of 313 acres of mature forests, diverse vegetation communities and structure, and high topographic relief, supporting a great diversity of species. This was also identified as an important habitat node where corridors converge from adjoining habitat areas including Chuckanut Creek, Chuckanut Bay and Padden Creek. Conservation of this habitat block was urged, particularly the CCF, due to its intact high quality habitat values, biodiversity, wetland complex, mature forest and location on the landscape (Eissinger 2003).

City Limits  
2006 City of Bellingham Proposed U.G.A.  
2008 Whatcom County Adopted U.G.A.

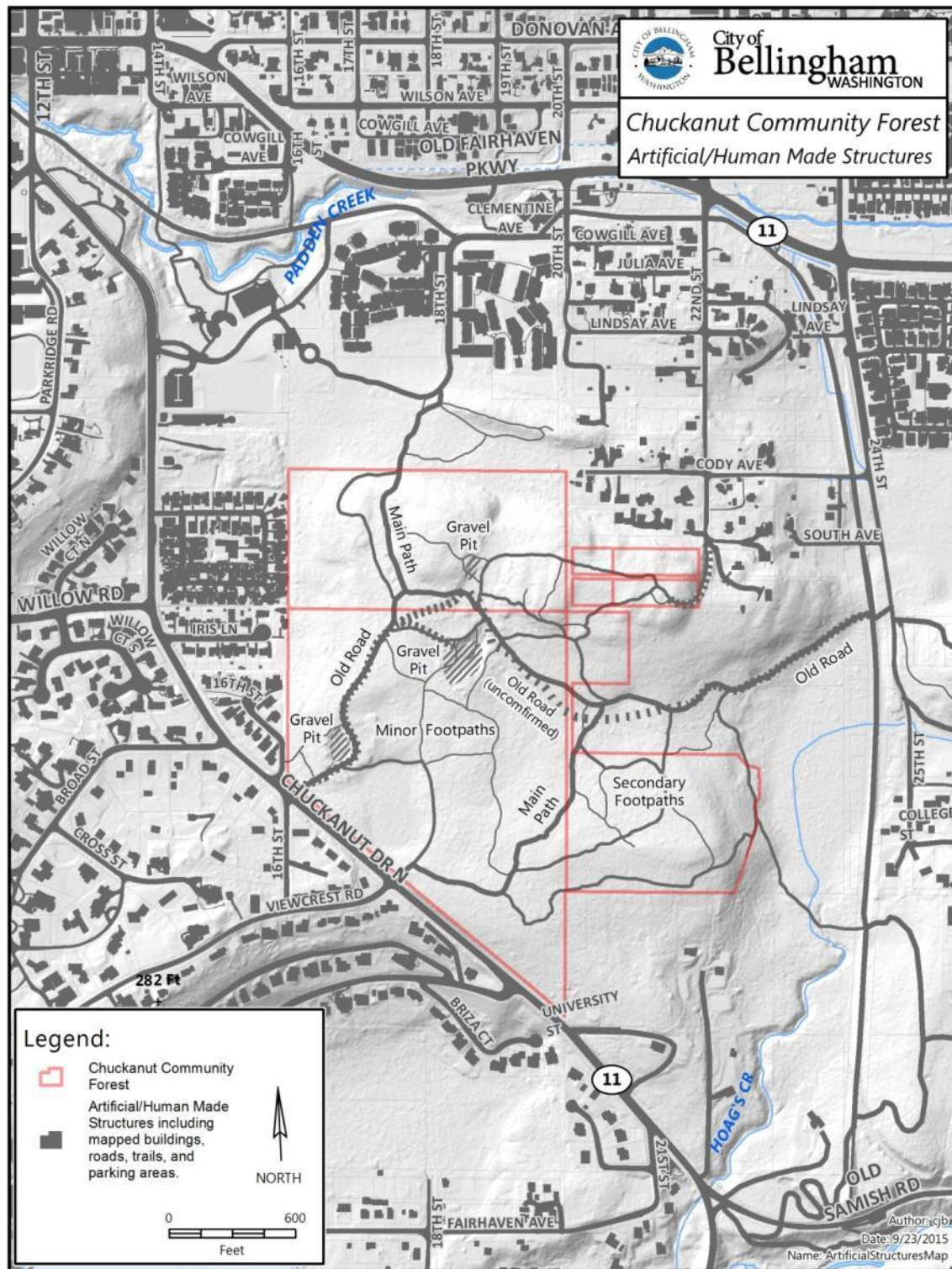
Bellingham Parks, Recreation & Open Space  
September, 2008

HBB  
LANDSCAPE ARCHITECTURE  
NORTH



## 5.5. Manmade and Structural Features

Map 11: Manmade Structures





The man-made and structural features of the Chuckanut Community Forest are few. The CCF land has remained in a relatively natural state since it was logged 80-90 years ago. Over time there is no record or evidence of structures built or utilities installed on the property.

The only man-made features on the property are remnant fencing, old access roads which now serve as trails, places where gravel and other material were extracted (Map 11), and monitoring wells. The total area of disturbance (current trails and previous gravel extraction) is approximately 2.06 acres (Behee, 2015).

The remains of an old split-cedar post and barbed-wire fence are located on the northwest property boundary. The fence discovered at Corner 2, is standing in places, but portions are on the ground. The fence should be removed as the barbed wire poses a risk and serves no purpose. Other old fences may also occur on the property.

The old access roads on the property are still present and are used as part of the informal trail network. Property records are unclear about what portions of the road was originally used or improved to service the gravel and borrow pits or logging, and it may be that the extracted material was used to create the narrow road bed on the property. Map 11 provides an estimate of the road placement and extension on the property. Due to re-vegetation or naturalizing of the roads over time it is difficult to determine what is an old road and what is a well-worn trail. Also, by viewing the Lidar image used as the base for Map 11, there appears to have been some earth movement in the past, possibly from a bulldozer creating tracks for equipment access on the property.

The gravel pit, borrow pit and scrapes where sand and gravel were extracted are relatively small areas (1.04 acres) and constitute minor disturbances on the property at this point in time. These areas were active an estimated 30-40 years ago, and have mostly revegetated and naturalized. Although top soil was removed from these areas, exposing the gravel underlayment, thin soils have formed over time and plants, many non-native, have taken root, except for well traveled trails and pathways. These areas include: the gravel pit, the wetland A complex, and wetland DD and EE. Descriptions are as follows:

The gravel pit (0.65 acres) located just east of wetland HH was excavated to 20-25 feet in depth (NES 2007). The vegetation that has subsequently grown over the site has stabilized the steep banks on three sides (east, west and north) and created a meadow-like flat area on the floor of the excavated area. There is also a test pit/gauge at this location

The wetland AA, AX and AY complex are all situated in an area of disturbance associated with gravel mining (NES 2007). This disturbed area is about 0.12 acres in size. In addition to the wetlands in this area, is an open meadow that is gradually being invaded by cottonwoods and other deciduous tree saplings.

The wetlands of DD and EE were likely formed by extraction. This area is 0.27 acres. Wetland DD is a deep and interesting pool with a large erratic boulder on one side. Wetland EE is a shallow depression.

The informal trail network has developed over the years by human use. Beginning with old access roads and game trails, human use has created a well-worn trail network, including both main trails and side trails or footpaths with an estimated total length of 3.6 miles. There are no recent trail improvements including surfacing, bridges, or drainage of any kind. Additionally, no signage exists on the property except near certain access points. An old iron gate remains at Access Pt. 3 (Map 5).

## 6. Natural Features and Conditions

The natural features and conditions of the Chuckanut Community Forest are both complex and dynamic. These features include the physical: topography, geology, soils, and hydrology; the biological: microbes, plants and animals; and the ecological which organize these into multifaceted functional systems.

The natural features of the CCF have been assessed in the past for development and regulatory purposes. These reviews and associated reports provide the bulk of information available and used for this report. Most of these reports are specialized, focusing on specific features, therefore the reference document(s) will be listed at the beginning of each applicable topic.

It must also be stressed that although there is a large volume of technical information related to this property, it was collected and presented for the purpose of supporting a development proposal, not conservation. Consequently, certain elements may not be fully examined or reported in the context of ecological connections or significance.

To begin the natural features and conditions, it is useful to first review the topic elements of this section in reference to the Conservation Easement Purpose which includes protecting the function and values, as well as ecological significance of natural features on the CCF property. In an effort to organize these elements in a form that is both understandable and informative, the following Natural Features Table is presented.

### 6.1. Natural Features Table

**Table 1: Natural Features of the Chuckanut Community Forest: Functions, Values and Ecological Significance**

PHS = Washington Department of Fish and Wildlife Priority Habitats and Species

DOE= Washington Department of Ecology

Natural Feature	Function	Value	Ecological Significance
<b>Mature Forest</b> 80 acre coniferous and mixed forest >80y/o	contiguous forest and openspace, visual backdrop	high aesthetic value for community, supports wildland appreciation	Connects the local human community with wildlands and ecological values
	mixed native plant assemblages forming a complex system	supports native biodiversity	Increasingly rare in the Puget Lowlands, particularly in developed areas
	mature native forest ecosystem	mature native coniferous forest cover >80% and associated habitat values	Washington State Priority Habitat (PHS)
	Unfragmented large forest block providing interior forest conditions	Habitat for sensitive interior forest dependent species	Support of PHS species and populations over time
	Water storage	Storm control	Stable water flow
	Nutrient cycling and soil stability	Soil building and ecosystem support	Essential function and value of mature forests
	Carbon sequestration	Carbon offset	Reduces effects of historically high atmospheric CO <sub>2</sub>
	produce snags and large woody debris	Critical habitat for many forest-associated species	PHS Habitat and necessary for maintaining forest ecosystem

Natural Feature	Function	Value	Ecological Significance
<b>Wetlands (all)</b> 14 wetlands = 6.6 acres	Wetlands both connected and not, forming a habitat mosaic	Supports biodiversity, complex habitat areas	Contains regulated critical areas and PHS areas
	Aquatic and vernal pool habitats	Support suite of diverse native aquatic and semi-aquatic species	Sensitive species occurrence – rare in region
	Support year-round hydrology and water storage	Maintains hydrologic connectivity	Wetland network of unique natural quality in Bellingham
	Water storage and metered release	Protects/improves water quantity	Provides baseflow contributions to both Padden and Chuckanut Creeks
	Water filtration and nutrient cycling	Improves water quality and supports ecological function	Natural processes maintained over time and provides clean water to Padden and Chuckanut Creeks.
<b>Wetlands (Mature Forested only)</b> 4 wetlands = 5.6 acres	High biodiversity areas, supports unique and sensitive species	Intact ecological functions formed over 100+ years that are difficult if not impossible to replace	State Priority Habitat, DOE Category 1 wetlands of high ecological value, irreplaceable
	Forms intact aquatic-upland connectivity	Supports full life-cycle requirements for certain invertebrates, amphibians and reptiles	Maintains specialized wildlife populations currently and over time, such as species requiring undisturbed aquatic-upland interface
<b>Topography</b> Rolling terrain with steep slopes, swales and multiple rises – overall elevation change 200 ft.	Unique natural terrain with unusual variety - creating diverse conditions, plant communities and habitats	Supports biodiversity	Cliffs may qualify as PHS habitat
	Creates swales that retain water and form wetlands	Supports wetlands and associated plant communities and wildlife	Northern reach of Chuckanut formation and related habitat niches
<b>Complex Habitat</b> Aquatic/terrestrial areas and their interface supporting multiple habitat types.	Provides habitat for a variety of species both aquatic and terrestrial	Supports biodiversity	Frequently overlooked and vital combination of habitat types supporting native species with low mobility and special habitat needs
<b>Habitat Node and Corridor</b>	habitat bridge spanning two watersheds	Interconnection of like habitats	PHS Biodiversity Area and Corridor
	Supports faunal flow across the landscape	Maintains genetic diversity with the dispersal of species	Landscape feature vital to maintaining native species diversity over time
	Contiguous habitat with larger landscape	Increases biodiversity, provides corridors for sensitive forest interior species	Increasingly rare in Puget Sound lowlands, particularly within one mile of marine shoreline.



## 6.2. Physical Features and Conditions

The physical condition of the Chuckanut Community Forest (CCF) constitutes the natural landform and function of the site including topography, geology, soils, and hydrology. Together these elements make up the land base on which the biological communities are established. Due to the highly variable land form, this site presents mixed conditions, including light exposure, moisture, hydrology and soils, which in turn support biological diversity.

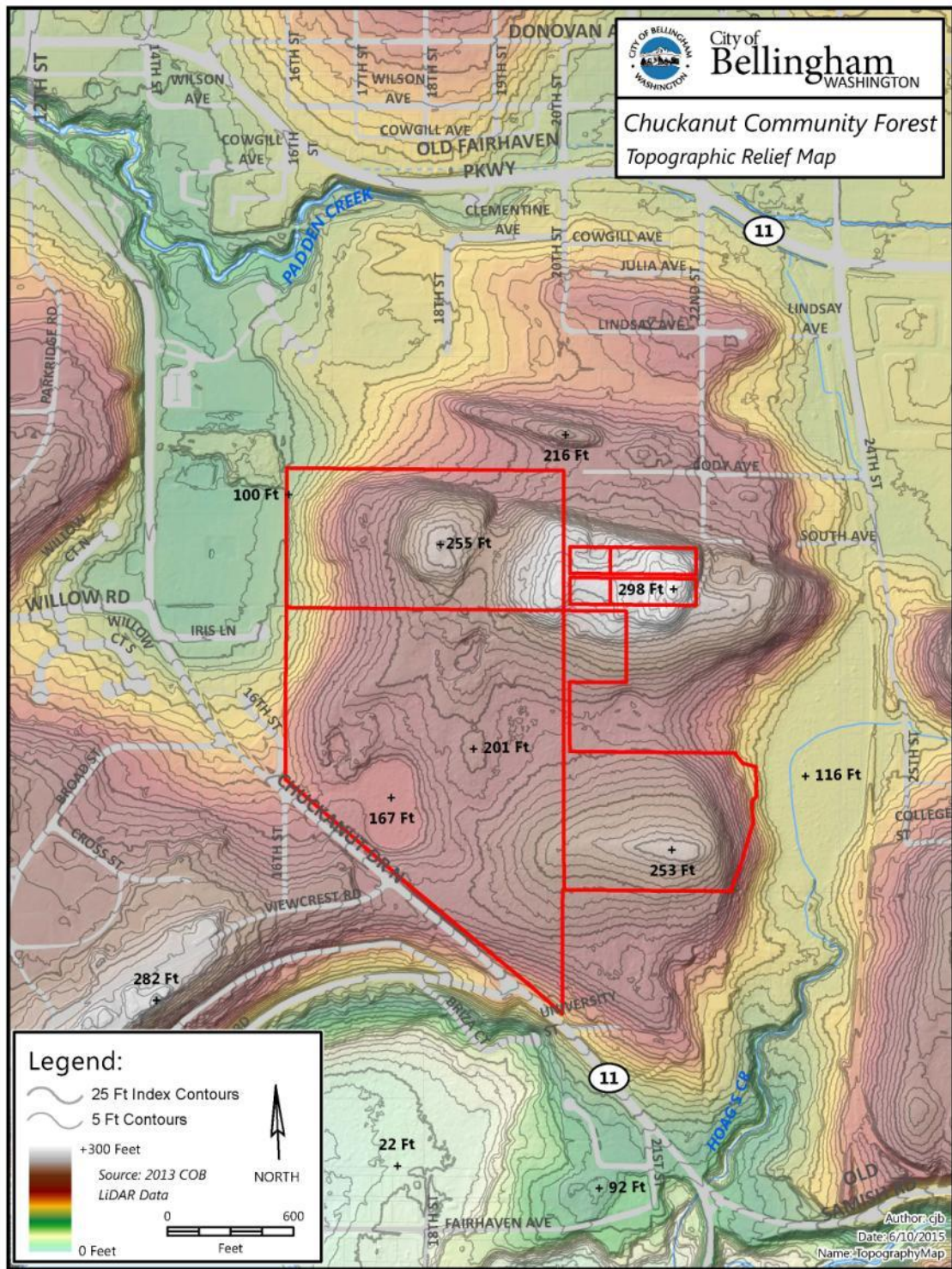
Information for this section includes existing reports, primarily from previous development project review. These include:

- Existing Geological Hazards Study Chuckanut Ridge Project, Golder Assoc. 1991;
- Wetland Delineation for Fairhaven Highlands Development, Northwest Ecological Services 2005;
- Earth Elements Technical Report, Geotechnical Engineering Report for Proposed Fairhaven Highlands Development, GeoEngineers 2009;
- Citizens Environmental Impact Statement – Responsible Development 2012.

Included in this list are notable studies of the site. These include the wetland delineation (Northwest Ecological Service 2005) and subsequent reports, which included examination of soils and hydrology in and around the wetland areas for the CCF, and the GeoEngineers 2007 report, which describe the results of 10 borings and 46 test pits on the property. As a result of this work and others, the site has been thoroughly examined. Because the site conditions are relatively complex, the interaction between surface, hydrologic, geologic and hydrogeologic elements should be reviewed carefully prior to any future activity or action on the CCF property, to the extent required by any permitting agency.

## 6.2.1. Topography

Map 12: Topography



The topography of the Chuckanut Community Forest lands is quite dynamic for its relatively small footprint (Map 12). Overall, this 82-acre property is located only 1,900 feet (0.36 miles) from the marine shoreline of Chuckanut Bay and is situated from 100 feet elevation at its lowest point at the northwest corner - Parcel A, to 298 feet elevation at its highest point at the northeast edge - Parcel E. The overall elevational rise and fall is about 200 feet. The property is undulating, containing three distinct high points, at 298', 255' and 253' respectively, occasional terraces, a combination of both steep and gentle slopes, and low-lying swales or depressions.

The greatest topographic relief is concentrated at the north half of the property, with near-vertical bedrock near the north boundary. The steep slope drops off to the north into a gully containing wetlands and a small drainage, then rises again off site on another sandstone vein or ridge in an undulating manner. Steep slopes also wrap along the eastern boundary, extending south. At the base of these slopes is the largest wetland in the complex.

Based on the GeoEngineers, Inc. 2009 slope analysis, the north portion of the property is steep, with inclination between 33 to 90 percent. The southern and eastern portions have inclination ranging between 20-60 percent. Certain steep slopes qualify as "Critical Areas" regulated under the City of Bellingham Critical Areas Ordinance. Steep slopes are part of the City's Geohazards data base and these areas could be mapped using existing data. Some steep slope areas of the CCF have very thin soils that are easily disturbed; these areas may also harbor specialized plant and animal communities adapted to steep exposed terrain and xeric (dry) conditions.

The southwest and central portion of the property is made up of more gentle slopes and depressions with wetlands scattered throughout.

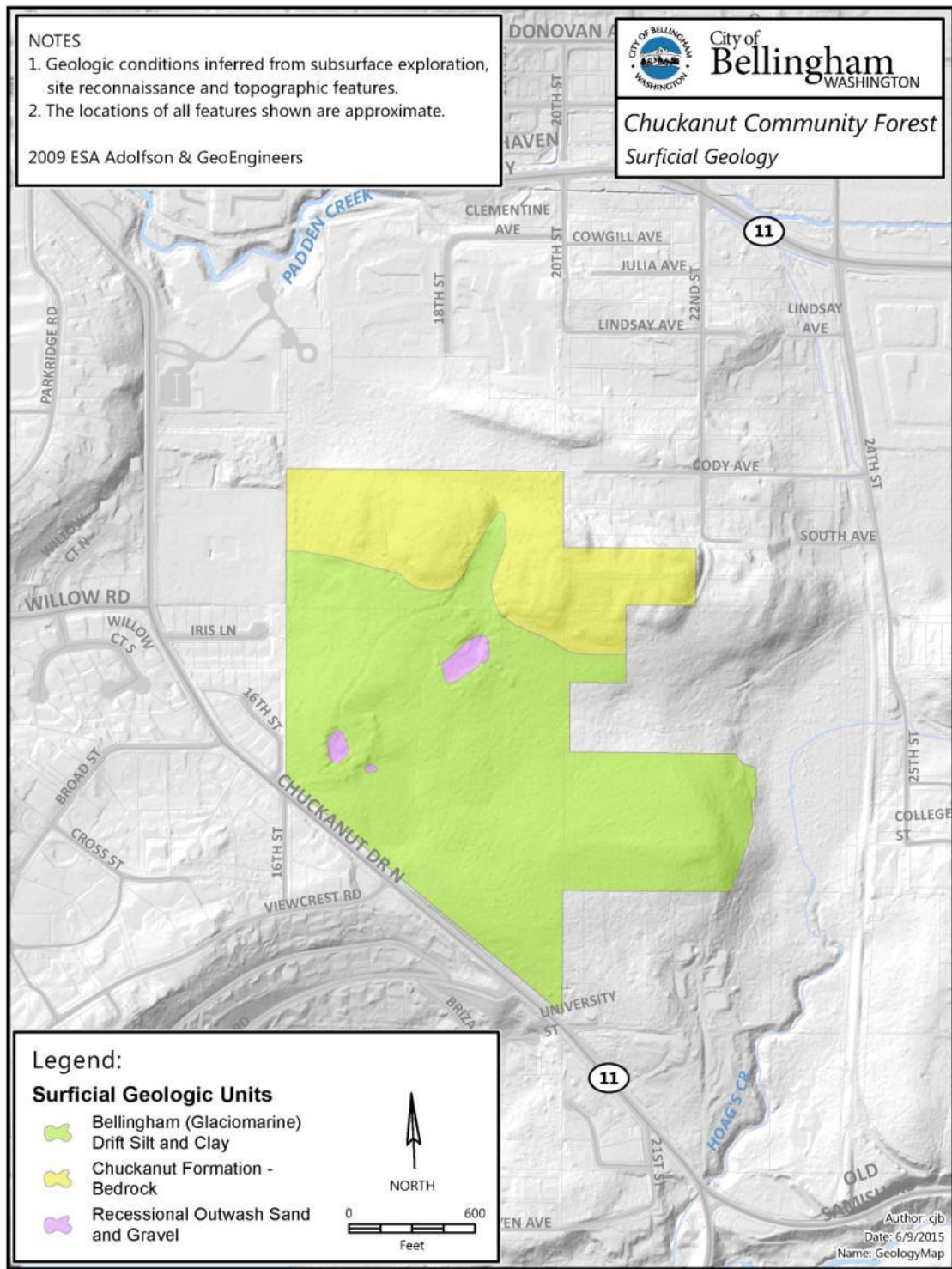
At the lower points of the property, permanent and ephemeral hydrology have formed wetlands in depressions, which are connected by surface or subsurface water flow from higher areas. Many of these areas contain deep nutrient-rich soils and diverse vegetation.

Together with adjoining open space properties this landform provides ample variation to support microhabitats, and distinct biotic communities.



## 6.2.2. Geology

Map 13: Geology



The geology of the Chuckanut Community Forest is an interesting study. Like all of Puget Sound, this area was covered in dense glacial ice over 10,000 years ago, and as the glacier receded it carved the bedrock and laid down layers of sediments and materials carried by the glacier, including clay, sand, gravel, and glacial erratics. While the northern portion of the property is dominated by the east-west ridges of Chuckanut sandstone, the remainder of the site is a mix of materials that make up the Bellingham Drift.

The surficial geology of the CCF is made up of 3 geologic units as described by GeoEngineers (2009) (Map 13). The Chuckanut Formation is the bedrock foundation on which Bellingham (glaciomarine) Drift and Recessional Outwash layers have formed. Glacial till is also a component of the site's geology. All of these units are of mixed materials and vary in hardness and resistance to exposure to air and water.

Based on the GeoEngineers, 2009 Earth Elements Technical Report descriptions, the following geologic units make up the CCF, from oldest to newest.

- The Chuckanut Formation forms the bedrock of the site and consists of sandstone, conglomerate, shale and coal. This bedrock was formed during the Eocene (34-56 million years ago) and has since been uplifted and eroded by glaciers.
- Glacial till, a very dense silty sand that is deposited in front of glacial ice and overridden forming a layer on the bedrock. This layer can vary, but has been compressed and has low permeability.
- Recessional outwash materials, mainly sand and gravel deposited during glacial recession.
- Bellingham (glaciomarine) Drift is an unsorted, unstratified silt and clay with varying amounts of sand and gravel including cobble and occasional boulders. This layer is the result of sediment and materials melted out of floating glacial ice and deposited on the sea floor 11-12,000 years ago, when the ground was depressed by glacial loading and was underwater.

On this site, areas where gravel or borrow pits are located have exposed gravel and sand pockets. The higher ridges and exposed steep slopes have areas of exposed bedrock and thin soils. There are also medium to large exposed cobbles and small boulders scattered throughout the site, in addition to a few large glacial erratics.

Another important geological aspect of the CCF is the shaping of the landscape from the glacial action. The topography, including the sandstone ridges to the wetland swales, was all created by a combination ancient bedrock formation followed by more recent carving of the rock by the glacier and rebounding of the ground to form today's landscape.

The glacial erratics and scattered cobbles, exposed bedrock and gravel areas, all make up an important part of the CCF natural history.

Geologically hazardous areas were an important element of past evaluations of this site for development per the City of Bellingham Critical Areas Ordinance. The potential hazards evaluated were landslide, erosion, seismic and mines. These evaluations utilized a combination of source information including the City's known, mapped areas, existing information and on site studies. The identification of hazardous areas and the assessment of hazards were based on the project proposal and planned actions at the time.

Based on the GeoEngineers 2009 review of geohazards for the CCF site, the following findings were reported. Steep slopes along the north edge and northeast corner of the property are at risk of slides. Small slides in this area were reported in 1991, but more recent signs of instability were not observed. Soils on site were determined to be at low risk for erosion in their undisturbed natural state, due to well established and dense vegetation cover. However, the soils have a high susceptibility to erosion if disturbed, particularly along slopes. Seismic and flood risk was reported to be low for this site in its current undisturbed natural state.

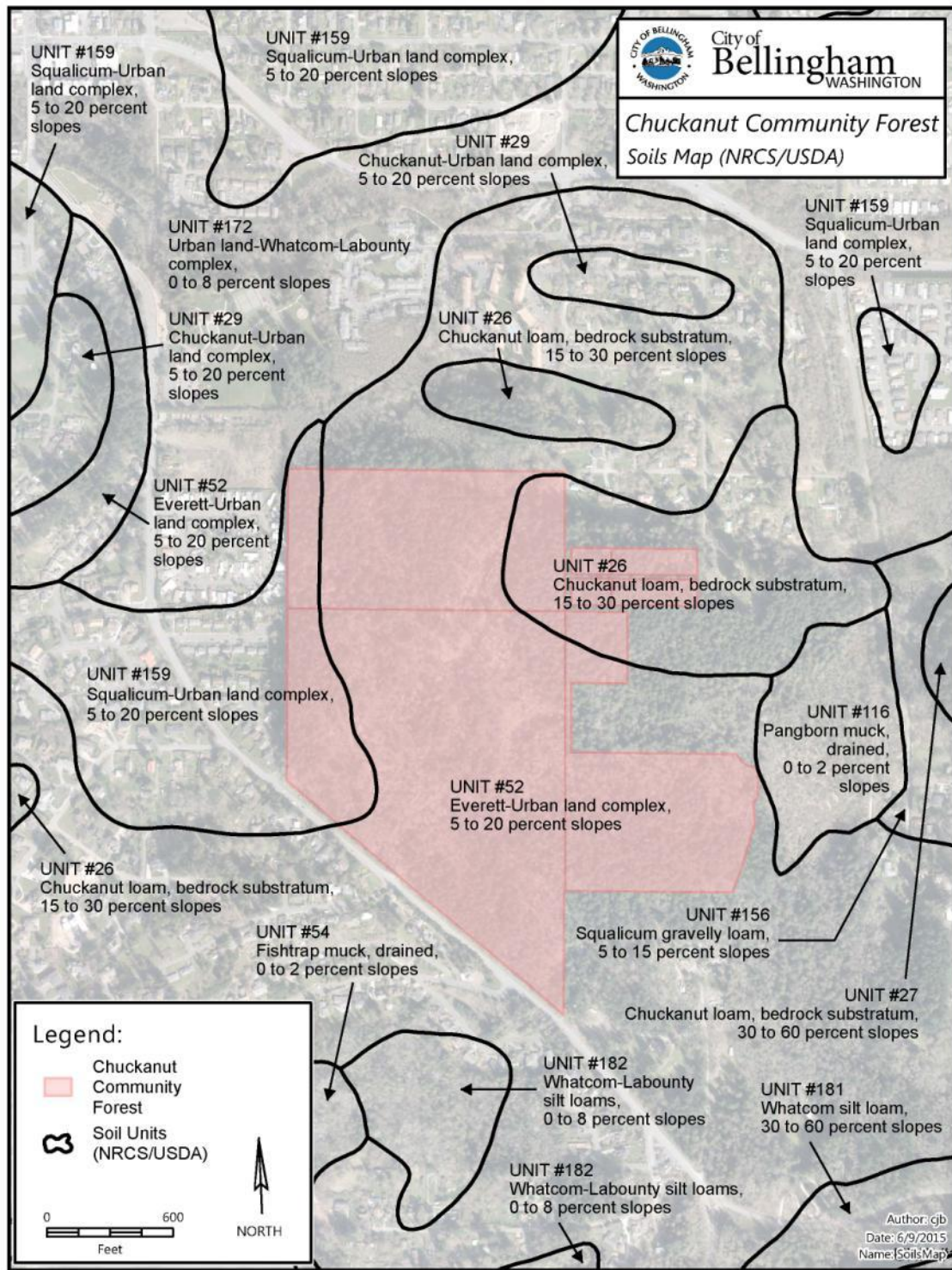
As part of the geo-technical review for this site by GeoEngineers, a search for possible existing mines was conducted. Records were reviewed to determine the status of mines in the area due to the prevalence of mining in certain areas of Bellingham. The only reference to mines near the site was from a 1984 reference to a mine located off site about 2,500 feet away from the property at an undisclosed location.

A review of the geohazards, with the exception of mines, would be useful for both onsite and offsite impacts in the event this property was to undergo any permanent development, alteration or disturbance of its natural condition.



### 6.2.3. Soils

Map 14: Soils



The soils of the Chuckanut Community Forest are well studied, for both upland areas and wetlands. The primary sources of information for this section are USDA Natural Resources Conservation Service (NRCS), GeoEngineers (2009) and Northwest Ecological Services (NES) (2005).

Soils throughout the property vary in moisture, richness and depth. All of the undisturbed forested areas, have an organic layer or duff which covers the soil surface at different depths depending on slope, canopy cover and moisture. This surface layer is important for the forest ecology, including nutrients, soil building, moisture retention, and as habitat for numerous organisms.

The mineral soils, under the duff layer, are represented by the soils map (Map 14), which is based on USDA Natural Resource Conservation Service (previously Soil Conservation Service).

The soils map identifies 3 soil type units on the property. The primary Unit #52 is Everett-Urban land complex, 5 to 20 percent slopes. The northeast corner Unit #26 is Chuckanut Loam, bedrock substratum, 15-30 percent slope. The third Unit# 159 along the western edge is Squalicum-Urban land complex, 5-20 percent slopes.

Another source of soil information is provided by Northwest Ecological Services and their examination of the site. In their Wetland Delineation Report 2005, they stated that the majority of upland soils were typically silt loams or gravelly loams. A general description of soils was provided, and relate to the NRCS soil types as follows.

Everett- Urban land complex is typically 50% Everett gravelly sandy loam and 30% urban land. Urban land includes areas covered by streets, buildings and other structure that obscure soil, so identification is not possible. Everett gravelly sandy loam is a deep, well drained soil located on outwash terraces, which formed in a mixture of volcanic ash and alluvium over glacial outwash and glacial till. Chuckanut, Squalicum Sehome, Whatcom and Labounty soils are also included in this soil series.

Chuckanut loam is a deep, well drained soil located on toe slopes and slide slopes of foothills, which formed in a mixture of volcanic ash and colluvium derived from glacial drift and sandstone. Nati, Squalicum and Bellingham soils are also included in this soil series.

Squalicum- Urban land complex is typically 50% Squalicum gravelly loam and 30% urban land. Squalicum gravelly loam is deep, moderately well drained soil located on foothills, which formed in a mixture of volcanic ash, loess, and slope alluvium over glacial till. Chuckanut, Everett, Labounty, Sehome, and Whatcom soils are also included in this soils series.

NES (2005) examined wetland and upland soils, which were described as typically either mucky mineral, silt loam or clay loam soils. In their Wetland Delineation Report 2005, soil bore holes were used to examine soils for hydric indicators. The 16"-20" deep pits were labeled and included on an associated delineation map. Soils are described in detail for each individual wetland and adjacent upland.

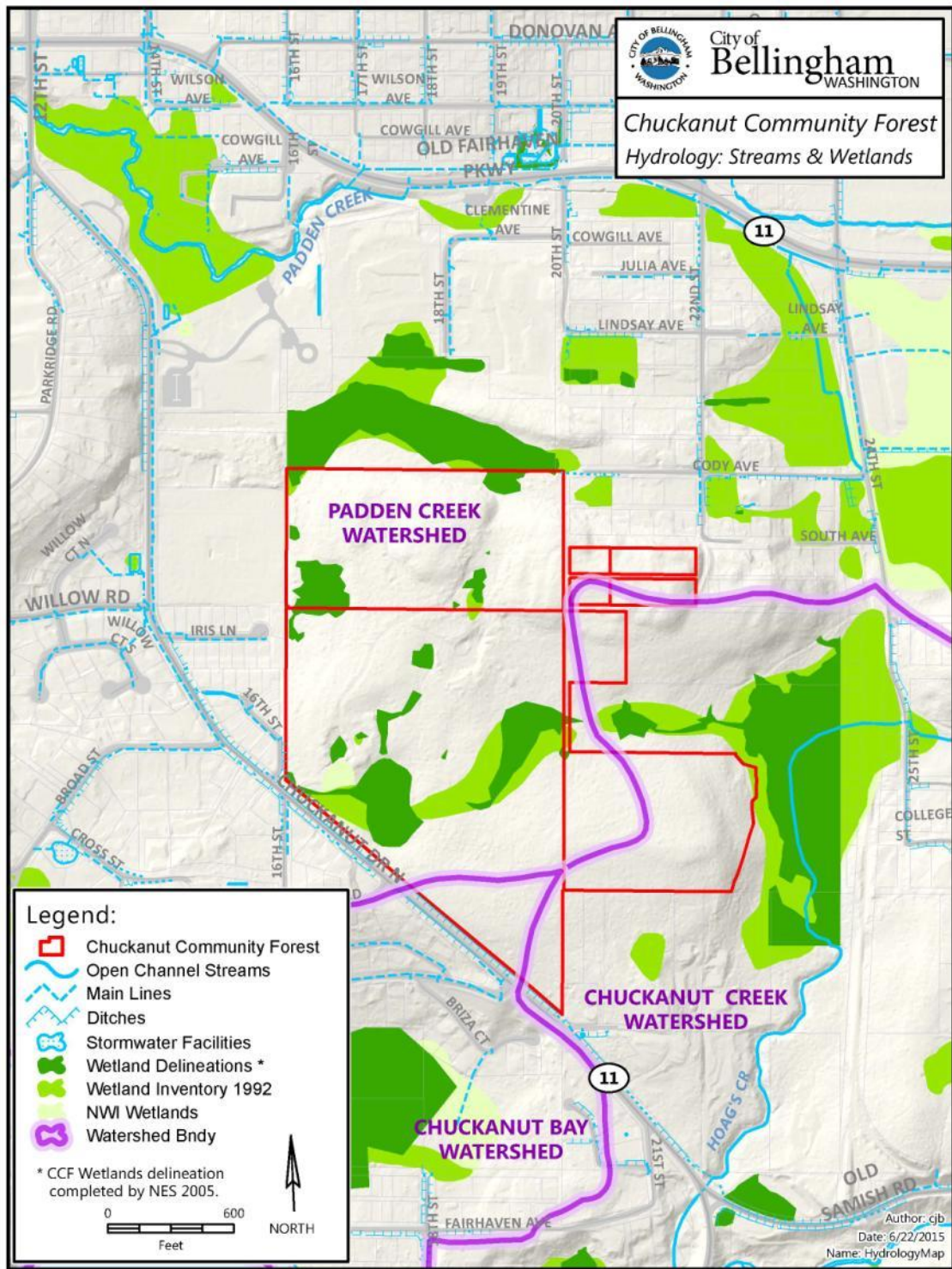
A third source of soil information was provided by GeoEngineers. They made an extensive assessment of the soils and conditions on the property in 2007. Their study of the site included 10 borings and 46 test pits throughout the site. These test sites were used to monitor ground water, infiltration and examine soils and subsurface conditions at specific locations.

The GeoEngineers 2007 findings included topsoils varying in thickness from 6 inches to 2 feet. Subsurface layers included silt, clay, and silty sand soils representative of glaciomarine drift; sand with gravel deposits, up to 50 feet deep in places - representative of glacial outwash; silty sand soils representative of glacial till; and sandstone bedrock. A more detailed description and map is available in the GeoEngineers 2009 report.



## 6.2.4. Hydrology

Map 15: Hydrology



The hydrology of the Chuckanut Community Forest is complex and very much site-specific, due to precipitation as a primary input. The movement of water on and off the property is a function of location, geomorphology, climate, and vegetation.

The CCF is situated on the watershed boundary between three watersheds: Padden Creek (north); Chuckanut Creek (south); and Chuckanut Bay (southwest) (Map 15). The watershed boundary defines the split between the three primary drainages, and the topography defines additional smaller sub-basins.

The climate at this location is temperate. The average annual precipitation is about 35 inches; precipitation is in the form of rain, with occasional snow fall in winter with no accumulation. The highest rainfall occurring in November to January ranges from 4-6 inches per month. Average high temperature in July and August are 71-72° F with extremes in the 90's° F and average lows in December and January are 32-33° F with extremes in the single digits (NOAA Climate Data Center Online).

There are no external hydrological influences on this property such as perennial streams or large water bodies; however, seasonal surface flows and seeps occur in several areas. What surface flow occurs on the property is related to seasonal precipitation and conditions, influencing water movement either down slope, from seeps, exiting from wetland areas, and possibly groundwater exchange, particularly where sand deposits are located. One stream is defined by NES 2005 as the outflow from Wetland CC flowing off site northwest into a ditch which leads to Padden Creek, via the storm water system.

Due to the large complex of wetlands and depressions on the property and the intact forest and forest floor, most of the precipitation on this site is likely absorbed or captured prior to runoff. Water is also absorbed and stored by plants, particularly large trees, and later transpired into the atmosphere. However, the water storage capacity of the site has not been studied. Excess surface water draining from this site is likely well filtered when it leaves the site in its current state and makes its way to salmon-bearing systems.

The prominent hydrological features of the property are the wetland areas. These areas are a result of ground and surface water collection into smaller basins or depressions, aided by soils, geology and topography of the site. One of the most important features of the CCF wetlands is hydroperiod. Hydroperiod is the seasonal pattern of water level in the wetlands and is highly variable on this site.

The 2009 GeoEngineers technical report and related field evaluation in cooperation NES, describes the hydrological function of the property and each individual wetland. Based on this report, each wetland is supported by the surface and subsurface flows within each individual basin. The subsurface flows are from perched groundwater from upper weathered soil horizons, or seeps in most cases. Most on-site wetlands are connected on or off site. Wetlands BB and FF flow west or north into the Padden Creek system, KK to CC, flowing west off site, eventually to Padden Creek, and JJ flows east into the large wetland which is drained by Hoag Creek south to Chuckanut Creek (Map 16).

The large wet area between Wetlands KK and JJ, was previously evaluated by GeoEngineers, who determined that the two wetlands were not connected by subsurface flow due to a heavy clay layer. NES later determined that Wetland KK outflows to the west into Wetland CC and that there is no significant hydrological connection between Wetland JJ and KK. However, the break between the wetlands has connectivity function and would explain the on-site indication of surface connectivity given saturated soils, standing water, and associated plants. The trail junctions at this location will need to be addressed in a wetland-sensitive manner and trails should be carefully sited.

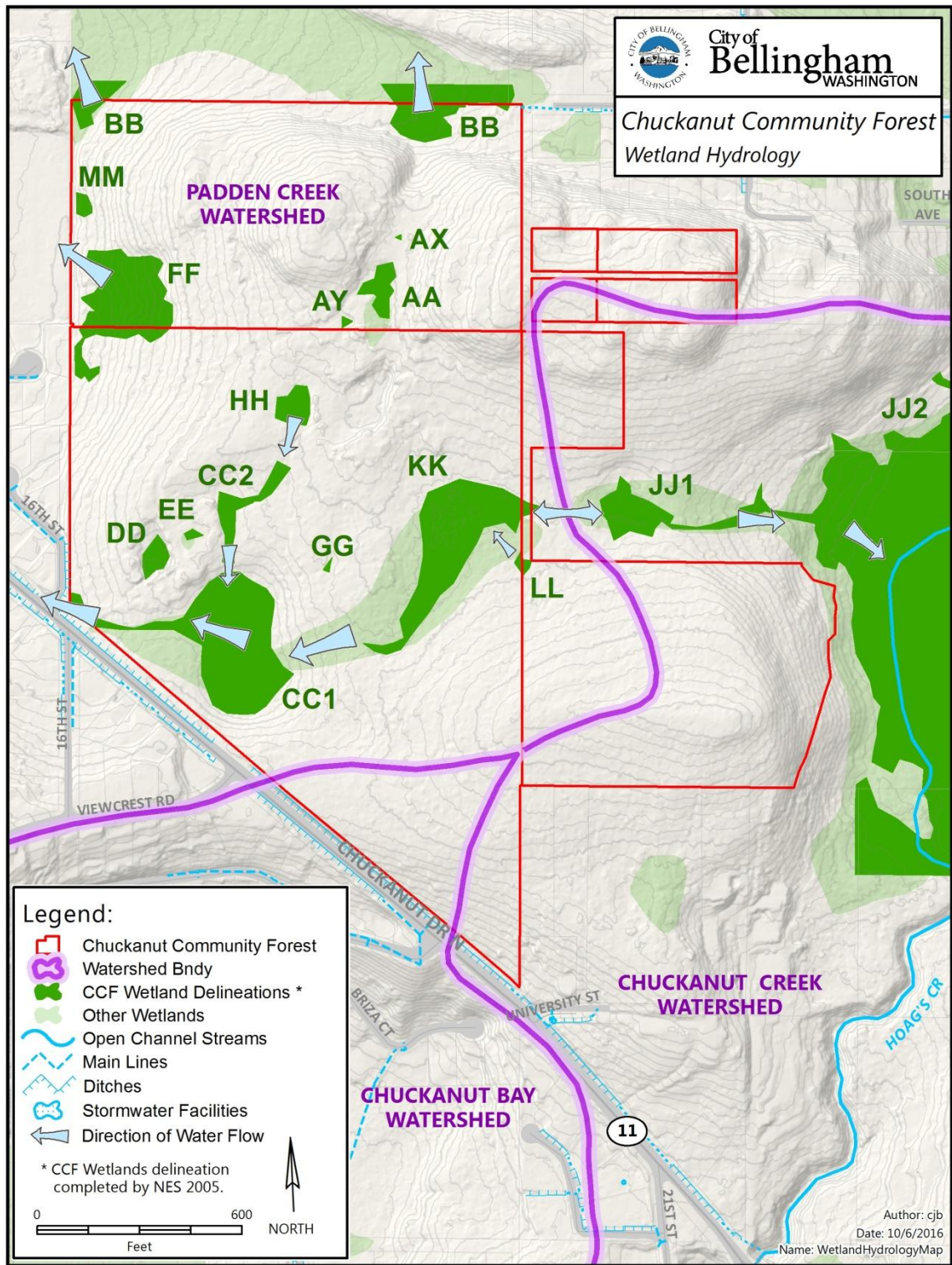
Wetlands are further described in the next section.

Groundwater conditions were also evaluated and described by GeoEngineers (2009). This evaluation included field evaluation, three borings equipped with piezometers and a large-scale pilot infiltrate test in the former gravel pit. These test pits are still present on the site. The results were that two groundwater conditions on the property: seasonally perched groundwater in the upper soils occurring during the winter months, and a deeper aquifer located in the glacial outwash (sand and gravel) soils. The glacial outwash layer is extensive in the central and southeast portion of the property, but thicknesses of the layers vary. At one sample site this layer was from 35-50 feet, holding groundwater at 37 feet. Based on geological conditions the groundwater from this property is thought to flow southeast.

The detail of each wetland's hydrology is described in the GeoEngineers and NES reports. Based on these reports a flow map is provided (Map 16).



Map 16: Wetland Hydrology – Water Movement



### 6.2.5. Wetlands (physical features)

The wetlands within and near the Chuckanut Community Forest are an integral part of the property's physical and biological complexity. They are also a dominate feature on the property and play a significant role in the overall natural history of the CCF.

This section will describe the wetlands physical features and values based on the available reports and information. Several wetland related reports were produced during the development review processes in the 1990's and 2000's. Of these reports, some were modifications of existing data, additions of new data, and/or changes to categorization, rating or adjustments due to regulatory change. As a result, the wetland reports as a whole are complex.

The wetlands were mapped using a combination of source data, depicting each source in a different color (Map 15). The sources utilized include:

- National Wetlands Inventory
- Bellingham Wetlands Inventory 1992
- Northwest Ecological Services Delineation 2005

The wetlands of the CCF were originally identified in the National Wetlands Inventory, and further defined in the 1992 Bellingham Wetland Inventory. The wetlands were first delineated in the 1990's and each was measured, evaluated and given a numerical identifier. In 2005, the new wetland delineation applied new methodology for assessment and evaluation and modified the identification of each wetland with a two-letter identifier (Map 16).

In order to provide some perspective, the wetlands of the CCF were the subject of considerable review and study due to their status, regulatory requirements and protection. Because wetland regulation is complex in its own right, and governed at federal, state and local levels, the process of wetland delineation, evaluation, classification, and rating, requires professionals certified to perform the work.

A total of two baseline wetland delineations were conducted for the CCF property. These include the following.

1. Shapiro and Associates (S&A) conducted field delineations in October 1990 and September 1992, for the Chuckanut Ridge Planned Development and reported in the Draft Environmental Impact Statement for Chuckanut Ridge Planned Development: Technical Appendix 3A, Jurisdictional Wetland Determination by Shapiro and Associates, for the City of Bellingham Department of Planning and Community Development, March 1996.
2. Northwest Ecological Services (NES) conducted field delineations in March, April and October 2005, for Fairhaven Highlands, a planned development, and reported in a Wetland Delineation for the Fairhaven Highlands, Bellingham WA., in October 2005.

Northwest Ecological Services continued to monitor wetlands on the site for one year following the delineations.

Subsequent wetland reports and revisions include the following.

- 12/11/2008 Memorandum: by NES RE: Fairhaven Highlands Wetland Categorization (revision)
- 2/12/2009 Fairhaven Highland Earth Elements Technical Report (Wetlands Hydrology), by GeoEngineers, Inc, Bellingham WA.
- 1/16/2009 Fairhaven Highlands Wetland Tree Survey, by James Luce, Park Arborist for the City of Bellingham, Mayor's Office.
- 2/27/2009 Tree Ring Assessment Wetlands CC, KK, JJ, Fairhaven Highlands, by Urban Forestry Services, Mt Vernon WA.
- 3/31/2009 Plant and Animal EIS Technical Report, Fairhaven Highlands, by NES
- 5/13/2009 Memorandum: by NES RE: Fairhaven Highlands – Wetland FF
- 8/17/2009 Memorandum: by NES RE: Fairhaven Highlands, Addendum to Delineation Report
- 8/17/2009 Memorandum: by NES RE: Fairhaven Highlands, Wetland Categorization Wetlands BB, FF and KK
- 9/2009 Fairhaven Highlands Draft Environmental Impact Statement (Chapter 3.4.2.5 Wetlands) by ESA Adolfson for the City of Bellingham

In addition to the above reports is a third-party review of wetlands: 10/14/2009 Review and Comment of Fairhaven Highlands DEIS Wetlands and Critical Areas by Sarah Spear Cooke for Responsible Development: Citizens Environmental Impact Statement. This expert opinion concludes that wetlands CC and JJ are each one wetland, not two wetlands as indicated in the 2009 DEIS and this report.

The wetland descriptions and tables in this baseline report are based on the best available information at the time of preparation, and attempt to reflect changes in wetland reporting over time, including reassessments and division of wetlands (Table 2). Spatial data for the wetland maps is based on the most recent wetland delineation accepted by the City of Bellingham (NES 2005). For a complete background, please refer to the original documents and associated data.

For development review purposes, the 1992 S&A delineation served as the master wetland mapping, with the 2005 NES delineation limited to newly identified or changed wetlands; as a result, Wetlands BB and FF were not revisited for delineation purposes. The NES wetland descriptions are detailed and include water quality, hydrology, vegetation and habitat values, these are valid and useful, and should be referred to for each wetland individually.

The 2005 wetland delineation was completed applying the Army Corps of Engineers Wetlands Delineation Manual methodology, using three parameters: vegetation, soils and hydrology (NES 2005). Wetlands were categorized using US Fish and Wildlife Cowardin classification codes, and rated according to Washington State Department of Ecology (DOE) as of the date of the report. However, due to project vesting, the 1991 City of Bellingham Wetland and Stream Ordinance standards were applied.

As of January 1, 2015, the DOE has instituted a new wetlands rating system, the City of Bellingham has updated its Critical Areas Ordinance and there are also changes expected to the Federal wetlands regulations that may or may not affect this site.

In review of the available wetland reports, the number of wetlands and acreage vary. This variation was due in part to changing methods, particularly between the 1990's and 2000's, and later, monitoring and re-evaluation 2005-2009. The 1992 (S&A) delineation appears to have been basically incomplete. The 2005 (NES) provided a delineation based on updated methods and more thorough coverage. In addition to the 2005 inventory, NES continued to monitor the wetlands and make adjustments to wetland



profiles and certain division of wetlands based on re-evaluation. Changes in individual wetland profiles and/or ratings were also made as a result of GeoEngineers 2007 hydrology study of the site including wetlands, changes in the DOE classifications and rating system, wetland-mature tree survey, and discovery of a new wetland area.

Based on the available wetland reports the total number of wetlands and area vary. The most recent reporting (DEIS 2009) for the CCF Parcels A, B and C, included 14 wetlands, with a total wetland area of 287,586 square feet or 6.0 acres. This wetland area makes up 8% of the CCF total area. No wetlands are identified for Parcels D or E.

**Table 2: Wetlands of the Chuckanut Community Forest**

Wetland data from: Shapiro 1990 & 1992; Northwest Ecological Services 2005: Draft Fairhaven Highlands EIS - ESA Adolfson 2009

	Wetland S&A 1992	Size (sq ft)	Wetland NES 2005	Size (sq ft)	Wetland DEIS 2009	Size (sq ft)	Notes
Parcel A	5	6,098	AA	8,997.6	AA	8,998	
	-		AX	130.2	AX	130	
	-		AY	499.1	AY	499	
	6	4,356	BB	21,516	BB	21,516	Re-evaluated in 2009 – mature forested wetland
	4	50,094	FF	65,340	FF	57,543	Re-evaluated in 2009 – mature forested wetland
					MM	2,402	New wetland added 2009
		60,548		96,482.9		91,088	
Parcel B	2	91,912	CC	109,538	CC 1	93,964	Mature forested wetland
					CC 2	12,791	Re-evaluated and divided into 2 wetlands in 2009
	7	1,307	DD	5,919.2	DD	5,919	
	8	1,307	EE	918.9	EE	919	
	-		GG	329.3	GG	329.3	
	-		HH	8,764	HH	8,764	
	3	84,071	KK	72,181	KK	72,181	Re-evaluated in 2009 – mature forested wetland
		178,597		197,650.4		194,867	
Parcel C	-		LL	1,630.5	LL	1,631	
TOTAL		239,145		295,764 sf		287,586 sf	
Acres		5.49 ac		6.79 ac		6.60 ac	8.3% =2005 8%=2009 of total CCF area
Off Site	1	321,037	JJ 1	43,609	JJ 1	28,842	Located immediately east of CCF – in CCF drainage
	-		JJ 2		JJ 2	Off site	Located immediately east of CCF– in CCF drainage

The wetlands and wetland area by Parcel are as follows.

For monitoring purposes, a description, including conditions of individual wetlands, is summarized in the following section by parcel. Each individual wetland description is based on NES 2005 Wetland Delineation Report and is augmented with information from additional sources (listed above). The wetland map -Map 16 - illustrates the wetland location and identifier. Further wetland descriptions are included in the Biological Section of this report and relate to habitat functions, values and buffers.

## **PARCEL A WETLANDS**

### ***Wetland AA***

Wetland AA is located in the south central portion of Parcel A, situated in a depression between the two high points to the northwest and southeast of the property. This wetland is 8,998 square feet in size, approximately half of the wetland is vegetated with deciduous trees and shrubs, and half is vegetated with grasses and weedy herbaceous plants. A small seasonally ponded area is located in the forested portion of the wetland.

This is one of three small wetlands (AA, AX, AY) in the immediate area that were created as a result of gravel extraction. This area is relatively flat, open meadow-like, with patches of shrubs, and young trees, and forest on the edges. Although this site was disturbed in the past it has naturalized and vegetation has re-established. At least two informal trails meander through this area, along and in some cases through shallow wetland areas causing disturbances to the wetlands, soils, vegetation and organisms.

### ***Wetland AY***

Wetland AY is located immediately southwest of Wetland AA and is a small depressional wetland of 499 square feet. The wetland is vegetated primarily with native trees and shrubs, and contains small localized depressions creating seasonal ponds.

### ***Wetlands AX***

Wetland AX is located just northeast of Wetland AA in the meadow-like area, and is a small depressional wetland of 130 square feet. The wetland area consists of mostly bare ground with a fringe of grasses and weedy herbaceous plants which ponds during the wet season. Immediately to the north of this site the meadow end and the ground drops sharply into a gully running north.

### ***Wetland BB***

Wetland BB is located at the very north edge of the CCF and is a large depressional wetland of 21,516 square feet. Only a portion of this wetland is on CCF property, which includes two lobes of the wetland, at the northwest corner of the property and near the northeast corner. During a site visit in April 2015, the wetland area at the CCF northwest corner had standing water extending well into the neighboring property to the west and a small feeder stream was running through the middle of the wetland from east to west. The surface flow from this wetland drains to and connects with Padden Creek. The wetland area is vegetated with a diverse mix of native trees, shrubs, sedges, ferns and other plants. In 2009, Wetland BB was designated as a mature forested Class I wetland.

Trails to and from the CCF traverse this wetland and cross a feeder stream on the lot north of CCF.

***Wetland FF***

Wetland FF is a slope wetland located along a west-facing slope on the western edge of the CCF. This moderately sized wetland is 57,543 square feet. The wetland is a result of shallow seeps which drain downslope and eventually into Padden Creek. The wetland has surficial organic soils, which is vegetated with native shrubs and herbaceous plants. The surrounding upland forest provides approximately 40 to 70% cover over the wetland.

This wetland is not near any trails and apart from it being near the western boundary, it is relatively isolated and likely undisturbed.

***Wetland MM***

Wetland MM was discovered in 2009. It is a small slope wetland located in the middle of the western edge of Parcel A. This wetland is 2,402 square feet in size and fed by ground water seeps creating small areas of standing water. Water from this wetland drains to the neighboring property west and is diverted by a berm and small channel allowing for water to pass into a ditch. The wetland vegetation includes a mixed forest over story, and a few shrubs with dense herbaceous understory.

This wetland was first defined in 2009 and does not appear to be near any trails or areas of disturbance.

**PARCEL B WETLANDS*****Wetland CC (CC 1 and CC 2)***

Wetland CC is the largest wetland on the CCF property with a total of 109,538 square feet or 2.5 acres. This wetland is located near Chuckanut Dr., from Corner 1 where the wetland drains, east to the main body of the wetland and north. This is a large depressional wetland underlain by glaciomarine drift and glacial outwash with ground water about 5 feet below the surface providing moderate water quality functions. Sources of water feeding the wetland include surface water, perched ground water, both from the CC basin, from Wetland KK and surface flow from HH. The wetland is primarily vegetated with mature native trees, some shrubs and herbaceous plants and contains numerous localized pockets which become seasonally ponded and vegetated upland hummocks. The wetland drains from the west side from a surface stream to an offsite ditch which runs along Chuckanut Drive and eventually to Padden Creek.

Wetland CC is a high quality, Category 1 mature forested wetland and was recognized as such since the original delineation in 1990. In 2009 however, the wetland was re-evaluated by NES and divided due to evidence that the northern arm of the wetland was not connected to the main body by hydric soils and only seasonally connected by surface water. This condition was exacerbated by a trail, or possibly an old road bed, with a compacted soil and gravel surface which bisects the wetland at this location. As a result, the wetland was divided to CC1 the main body, and CC2 the northern arm.

The wetland as a whole is in a natural state and relatively undisturbed. It is however surrounded by trails, and as mentioned one trail bisects the wetland at the north end of the main body CC1 and north arm CC2. Foot paths into the wetland were not identified, but may exist and could be a source of disturbance.



***Wetland DD***

Wetland DD is located between Wetland CC the western property boundary. This wetland is situated in a small depression, which appears to have been artificially created. The wetland is deep; and becomes seasonally ponded and detains a significant amount of water (three to six feet) during the wet season. The wetland is primarily open water/ bare ground, with a fringe of moderate to dense trees and shrubs around the edges.

This wetland is relatively undisturbed with the exception of one access point on the east side near a large erratic. There are trails on three sides of the wetland and one on the south relatively close and providing access.

***Wetland EE***

Wetland EE is located just northeast of Wetland DD, between DD and CC2. This wetland is a small 919 square feet, shallow depressional wetland and appeared to be excavated. It is vegetated with primarily herbaceous plants.

One trail skirts the wetland's west side, but is well connected to upland areas that continue undisturbed to Wetland CC2 and to the north.

***Wetland GG***

Wetland GG is located between Wetlands CC1 and KK. This is a small, natural, shallow depressional wetland, of 330 square feet. It is vegetated primarily with herbaceous plants and surrounded by forested uplands.

This site is undisturbed. One trail passes at a distance to the south, otherwise it is relatively isolated.

***Wetland HH***

Wetland HH is located north of Wetland CC2 near the north center of Parcel B. This is a small to moderate sized depressional wetland, of 8,764 square feet. The wetland is underlain with low permeability glacial soils, and is hydrologically connected to Wetland CC2. This wetland provides moderate water quality function and hydrologic stormwater and base flow function. This wetland is vegetated with trees, shrubs, and herbaceous plants. Dominant vegetation in the wetland is herbaceous among large areas of standing water and/or bare ground. The wetland fringe is characterized by trees and shrubs. A small island of native trees and shrubs is located within the center of the wetland.

This wetland is relatively undisturbed; however, a trail skirts the wetlands' north side. Access points were not noted. Otherwise the wetland has good upland connectivity on three sides.

***Wetland KK***

Wetland KK is centrally located on the east side of Parcel B. The east tip of Wetland KK extends over the parcel boundary through a narrow section of Parcel C, then off site, nearly connecting with Wetland JJ. To the south, Wetland KK extends toward CC1 and is hydrologically connected by perched groundwater flow, and surface flow in the wet season. Wetland KK is underlain with glaciomarine drift, low permeable clay and is fed by perched groundwater and surface water from this basin. This wetland is a large depressional wetland of 72,181 square feet, or 1.66 acres, and contains permanent standing water and seasonally ponded areas. This wetland provides moderate water quality functions. This wetland is primarily vegetated with trees and herbaceous plants. Trees growing on upland hummocks and in the surrounding forested buffer provide approximately 40 to 80% canopy cover.

Although this wetland is relatively undisturbed, given its location, it has trails in close proximity on three sides and one trail bisects the southwest tail of the wetland area. At the northeast tip, a large muddy area spans across a flat area to the western tip of Wetland JJ. This area is a hub or convergence of several trails, and as a result this portion of the wetland is disturbed. Access points to the main body of the wetland need to be identified and evaluated for potential disturbance and future restoration.

This wetland was subject to reevaluation in 2009 and determined to be a Category 1 Mature Forested Wetland.

## **PARCEL C WETLANDS**

### ***Wetland LL***

Wetland LL is located at Corner 13 of Parcel C and spans over the western boundary into Parcel B. This is a small wetland of 1,631 square feet, and is a shallow depression that is primarily vegetated with shrubs and herbaceous plants with large cottonwood trees nearby. This wetland provides moderate water quality function.

This wetland is located on a side trail leading from a major trail junction to the north.

## **Off-Site Wetlands**

### ***Wetland JJ***

Wetland JJ is located off-site on a parcel to the east, but is part of the large wetland complex of the CCF. This is the largest wetland in the complex and needs to be mentioned for that reason. The portion of Wetland JJ on the boundary of Parcel C is a slope wetland which appears to drain east into a larger depressional wetland at the toe of the slope. The wetland contains interspersed areas that are vegetated with trees, shrubs, and/or herbaceous species. The main body of the wetland is over 7 acres in size and was, in the 1980's, occupied by beaver (*Castor canadensis*). Evidence of beaver activity, including damming of the wetland and dropping of trees, was observed by the author and other biologists at that time.

The slope wetland has continuous vegetation cover by herbaceous and woody plants, the degree of the slope and subsequent moderate movement of water through the wetland provides little detention time and therefore lowers water quality treatment. Two drainage ditches are located in this portion of the wetland, and during storm events water appears to move quickly through the wetland. The main body is, however, a high-quality wetland with standing water and a perennial stream running through it, Hoag Creek, which drains to Chuckanut Creek.

## **Future Wetland Assessment**

The wetland delineations for CCF property were conducted 10 or more years ago. Although no deliberate alterations have been made to the land or vegetation during that time, physical changes may have occurred naturally. Due to this duration, the wetland delineation and categorization are no longer valid for permitting under the City of Bellingham CAO, which specifies that wetland delineation reports are only valid for 5 years. Additionally, certain regulations governing wetland delineation methodology, classification and rating have changed, including the Washington Department of Ecology, and the City of Bellingham Critical Areas Ordinance (CAO). Due to these regulatory changes the wetland assessment for the CCF will need to be updated prior to any actions that could affect wetlands or their buffers.

### 6.3. Biological Features and Conditions

The Chuckanut Community Forest (CCF) represents one of the largest remaining, undisturbed mature forest/forested wetland communities within the City of Bellingham. This 82-acre area is contiguous with adjacent forested open space and parklands that span from the Padden Creek corridor north, to Chuckanut Creek and the expansive Chuckanut Mountain area to the south – refer to Map 2 earlier in the document. This larger contiguous area has not been assessed or mapped as a whole, but contains habitat for threatened and endangered species and supports uncommon large mammals including black bear and cougar.

The CCF property is in a natural state, with the exception of historical disturbances related to logging and localized gravel extraction, which have since revegetated and naturalized. The fact that the property has not been developed, and public access has been limited, has provided unintended benefits, including the protection for the site's natural features and diversity over several decades.

In the past 20+ years, this area was subject to regulatory-based environmental review for 2 major developments, including Chuckanut Ridge mid-1980's-1997, and Fairhaven Highlands 2005-2009. Both development proposals required Environmental Impact Statements, with supporting technical review, documentation, and public comment. As a result, site assessments were made for biological attributes including: plants, wildlife, mature tree survey (wetlands only). The results were compiled in technical reports and summaries.

The available information from these documents was reviewed for this report. An abundance of information exists. Unfortunately, due to the nature of regulatory-based environmental review, the process does not require a full accounting of environmental components, biodiversity, ecological function, interaction or services. As a result, some critical information is missing, and full understanding of the site's natural function and value is incomplete.

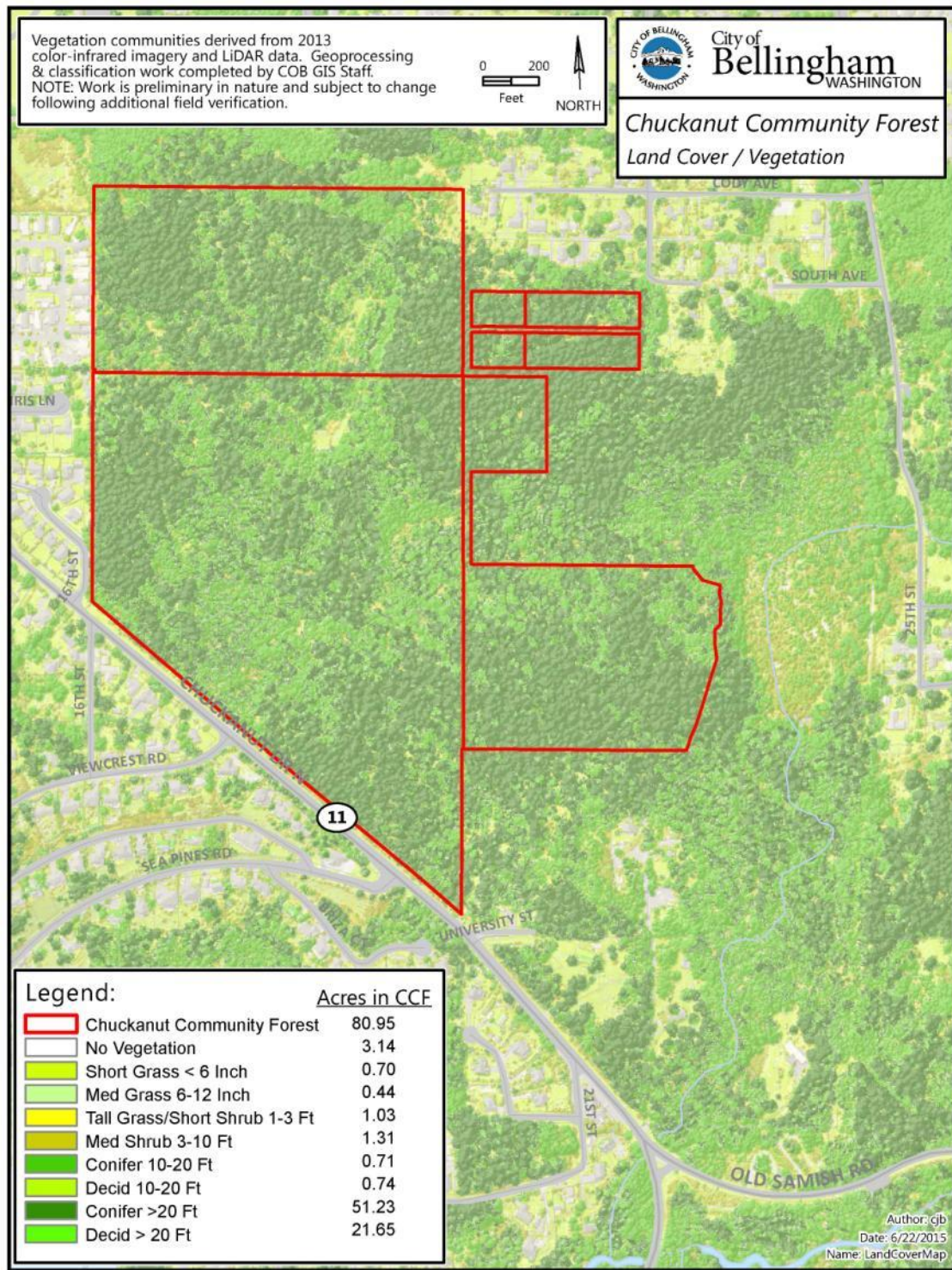
Rather than focus on species of concern or threatened and endangered, which regulatory processes require, it is important to seek to understand the ecological function and value of the area first, including those within the boundaries of the site, those connected to and contiguous with the site, and those that simply come and go. These functions and values include: the physical – geology, soils and hydrology; the biological inhabitants - plants, microbes, vertebrate and invertebrate wildlife, and humans; and the ecological processes that connect and service all of those elements, such as water storage and purification, nutrient cycling, soil building, carbon sequestration, oxygen production, habitat creation, and the overall maintenance of living systems.

This section will focus on the living system and summarize the best available information for the CCF lands and biota.



### 6.3.1. Forest, Plants and Fungi

Map 17: Vegetation Cover Type



The Chuckanut Community Forest lands support a minimally disturbed, native mature forest near an urban setting. This site is also connected to and contiguous with open space and conservation lands. In addition to terrestrial forest, the CCF contains a healthy network of wetlands, including mature forested wetlands, situated on a dynamic landscape. The land cover is described as contiguous forest with small canopy openings occurring occasionally at certain wetlands or previous cleared areas such as old access roads. It is the relatively undisturbed state of the property that has provided for a rich mix of native plants and wildlife to develop since it was originally logged approximately 80-90 years ago.

The forest and native plants of the CCF appear generally to be both healthy and diverse; however, the plant communities have not been systematically inventoried or mapped, therefore a full baseline is not available. Plant and fungi species lists based on existing reports are included in Appendix 11.2.

During the preparation of this baseline report, a current analysis of the land cover was performed by COB-Senior GIS Analyst Chris Behee, using 2013 high-resolution color-infrared imagery and Lidar data (Map 17). The resulting aerial image and classification illustrates the land cover-type breakdown into vegetation cover types. The results differentiate vegetation cover types by height, resulting in acreage by each category. The largest area coverage is represented by conifer trees >20 ft (63%), second, deciduous trees >20 ft. (27%), both representing mature forest cover for a total of 90%. The remainder (10%) is a mix of smaller trees (2%) shrub (3%), grass (1%) and no vegetation (~4%) according to this assessment.

What this mapped analysis tells us is, the CCF is a relatively closed canopy, unfragmented forest, with over half of the area coverage with conifer trees species and nearly one third with deciduous tree species. There are also areas of predominately conifer, deciduous and a mixed forest component as well. It also indicates that during the winter months, about one third of the canopy is open, allowing for light and rain to enter unhindered to the forest floor and wetland areas. This type of analysis provides a valuable tool for tracking overstory vegetation or cover type conditions over time. This analysis provides a snapshot of current conditions. It does not, however, provide species specific data or data for the understory or ground level vegetation, which would require on-site evaluation and mapping to provide this level of information.

What is known about the specific plants and forest of the CCF is based on existing information collected during on-site development review which include general forest and plant descriptions and species lists – mainly focused on wetland areas. One systematic survey and inventory of plants has been conducted on the CCF property in 1995 (Aqua-Terr Systems); however, the complete data for this survey has not been found to date. Additional plant identification was performed during wetland delineations in 2005-2006; these surveys did not provide full coverage of the site.

The pertinent reports and documents include the following.

- Aqua-Terr Systems, Inc. (ATS), Chuckanut Ridge Flora and Fauna Assessment, November 1994. For Draft Environmental Impact Statement for Chuckanut Ridge Planned Development: Technical Appendix 5B, City of Bellingham Department of Planning and Community Development, March 1996.
  - This report was based on data collected on site in June 1993 and September-October 1994. Data collected included structure and species composition of plant communities. The methods used included transects 100 ft. apart for species composition and sample plots within each plant community. Percent cover was also sampled using circular plots. Data and species list from these surveys is not available.

- Northwest Ecological Services (NES), Flora and Fauna Assessment for the Fairhaven Highlands, Bellingham WA., March 2007 – based on vegetation information collected in 2005-2006.
- Northwest Ecological Services (NES), Plant and Animal EIS Technical Report for the Fairhaven Highlands, October 2008.

All of the existing reports divide the CCF property into four primary “habitat types,” Coniferous Forest, Mixed Coniferous/Deciduous Forest, Wetland, and Disturbed. These descriptions also include: canopy height and cover, tree DBH (in sample areas only), habitat features and common associated species. These designations are generalized and focus on the overstory and wetlands, lacking the necessary definition to separate actual plant communities or habitats on the property. The rolling topography of the site, together with soil types, slope aspects and moisture levels, provide varied conditions to support diverse plant communities that could be further delineated and described.

For monitoring purposes, the forest descriptions provide some quantifiable data for features and sampling maps which could be compiled and used as parameters for tracking over time. These include, select tree DBH, canopy height, canopy closure, and certain features. The wetland vegetation is detailed and relates to individual features and conditions, providing a relatively complete profile of plants present. Aspects of the vegetation which have not been quantified or mapped includes species composition/diversity, understory plant communities, and non-native plant infestations.

The forest descriptions and quantifiable features could be updated. This could include a delineation of forest type using aerial analysis and ground truthing, and a representative sampling of tree species, DBH, and canopy height. If possible an effort to age trees would be useful. The only existing tree-age data for the CCF is limited to certain wetland areas and was collected using DBH (diameter at breast height) (Luce, 2009) and by coring (Barborinas, 2009). The results of these limited samples included a maximum tree age of >80 years based on core samples and maximum DBH of 54 inches. Evaluation of upland trees would add valuable information to the current baseline.

Symbiotic relationships between organisms in native forest ecosystems are essential for the forest to function. Groups of organisms such as epiphytes (plants growing on plants), lichens and fungi contribute to a larger commensalistic process mentioned in one report (Aqua-Terr 1996). In that report, five plant species were identified as commensalistic and particularly sensitive to disturbance. The lichens and mosses of the CCF have not been inventoried. Fungi and slime molds were surveyed in 2013 by the Northwest Mushroomers and a species list was provided to the CCFPD in 2015 (Appendix 11.2). Because of the importance of these organisms in the function of the forest, further study and mapping for monitoring, would be useful. Concentrations and areas containing sensitive species could be identified for management and protection.

Based on the existing reports the following provides a synthesis of descriptions for CCF forest and plants.



#### 6.3.1.1. Conifer Forest

A conifer dominated forest is located in patches on the CCF property. Based on Map 17, there are five areas of concentrated coniferous overstory. These are located on the CCF in the northwest, western edge, northeast, southeast and southwest edge for the CCF.

The specific conditions in these areas are not well defined, but were reported as “a wide range of micro climates.” This forest cover type has a dense canopy with 80 to 100% cover in most areas. Estimates of tree height and age vary. In 2005, the average canopy height is approximately 70 to 80 feet with an average tree DBH of 20 inches (wetlands only) (NES 2007). In 1993-4 “older trees” were 80-90 feet high and estimated age of 60-80 years, with younger trees in the southwest corner (Aqua-Terr 1996). A sampling of forest characteristics could be done systematically across the property and include all forest types.

The following plant lists are directly from Aqua-Terr Systems, 1996 and Northwest Ecological Services, 2005, 2007, 2008.

#### Conifer Forest Plant Composition

The coniferous forest is dominated by Douglas fir (*Pseudotsuga menziesii*), with western red cedar (*Thuja plicata*), western hemlock (*Tsuga heterophylla*), and grand fir (*Abies grandis*). Cedar and hemlock are more abundant in swales, or depressions and at base of slopes (ATS). Other species were reported as interspersed with conifers including big-leaf maple (*Acer macrophyllum*), red alder (*Alnus rubra*) and western paper birch (*Betula papyrifera*) (ATS).

The understory varies, but tends to be sparse with an open shrub layer and limited herbaceous layer with intermittent low shrub ~3ft. Common understory shrub species include vine maple (*Acer circinatum*), oceanspray (*Holodiscus discolor*), red huckleberry (*Vaccinium parvifolium*), red elderberry (*Sambucus racemosa*), serviceberry (*Amelanchier alnifolia*), Indian plum (*Oemleria cerasiformis*), snowberry (*Symphoricarpos albus*). Low growing plants included sword fern (*Polystichum munitum*), which appears to be ubiquitous throughout the site, two varieties of Oregon grape (*Mahonia nervosa* and *M. aquifolium*), western starflower (*Trientalis arctica*), and trailing blackberry (*Rubus ursinus*). Spiny wood fern (*Dryopteris expansa*), and orange honeysuckle (*Lonicera ciliosa*) are also mentioned.

Understory was particularly well developed near wetlands with vine maple, Indian plum, salmonberry (*Rubus spectabilis*), trailing blackberry, false lily of the valley (*Maianthemum dilatatum*), red elderberry, large-leaved avens (*Geum macrophyllum*), lady fern (*Athyrium filix-femina*), sword fern and youth-on-age or piggy-back (*Tolmiea menziesii*).

Certain plants favored decomposing stumps and logs as noted in 1993-4, including Indian plum, western starflower and red huckleberry. However, many of these habitat features may have fully decomposed.

Several species commensalistic w/ fungi and conifers were noted, Indian pipe (*Monotropa uniflora*), rattlesnake plantain (*Goodyera oblongifolia*), western coralroot (*Corallorhiza mertensiana*), striped coralroot (*Corallorhiza striata*) and reportedly fairy slipper (*Calypso bulbosa*) all of which are sensitive to disturbance.

Some understory areas lacked vegetation but had an abundance of downed logs and thick duff (ATS).

Forest reproduction was reported as sparse except where canopy openings are present and species in those areas tended to be young western hemlock and red cedar.

### Conifer Forest Habitat Features

One of the most important features of mature conifer forest habitat is the year-round cover, and for forest of this size the interior forest condition. The forest interior is known for its moderate microclimate and stable air mass lending itself to optimal year-round nesting, roosting and refugia for wildlife. Certain species have coevolved with temperate forests and depend on these conditions.

Habitat features reported (NES 2005) included numerous downed woody debris and snags in various stages of decay. The understory was commonly dominated by sword fern and large areas of bare ground and a thick duff layer. Downed woody debris and a thick duff layer were common in areas lacking vegetation cover. All of which is valuable for invertebrate and small vertebrate species.

Standing snags, and trees with cavities were noted throughout the CCF in 2015. The on-site woodpecker population has provided excavations and cavities potentially used by woodpeckers, owls, chickadees, squirrels, and other cavity dependent birds and mammals.

Other features include but are not limited to, stratified habitat with multiple layers within the forest. This includes seed and fruit bearing trees and plants which support numerous invertebrate and vertebrate species. Areas of cover were most abundant near wetlands. Large mature trees with strong lateral branches provide nesting substrate for birds of all sizes, including ravens, hawks, jays, thrushes, and other song birds. Certain large, emergent trees (extending above the canopy) have the potential of providing appropriate nesting substrate for Bald Eagle or Osprey.

#### 6.3.1.2. *Mixed Forest*

The mixed-forest cover type includes the interspersed of conifer and deciduous tree species. No definition for this forest type was provided in previous studies and is needed. Both ATS and NES described this cover type as the “dominant community” on-site. Based on Map 17, this cover type occurs throughout the property, but has not been visually delineated. The specific conditions in these areas are not well defined.

This cover type has canopy coverage of 80 to 100 percent in most areas and a dense shrub and/or herbaceous understory (NES and ATS). Vegetation includes a wide range of native species. The average canopy height in 1993-4 was 50-70 feet and the average tree age of 40-60 y/o. In 2005-6 the canopy height was approximately 70 to 80 feet, with an average tree diameter at breast height (DBH) of 20 inches (NES).

Based on ATS - the understory ranges from dense shrub dominated by ocean spray, Indian plum, snowberry, and salmonberry, to areas with little or no vegetation, but deep layers of leaf litter. The average shrub height was 6-10 feet. The herbaceous layer also ranged from continuous carpet of youth-on-age to complex of sword fern, foam flower (*Tiarella trifoliata*) and fringe cup (*Tellima grandiflora*). In areas with heavier coniferous component the understory was dominated by salal (*Gaultheria shallon*), Oregon grape, sword fern and native trailing blackberry.

## Mixed Forest Plant Composition

Common tree species observed in the mixed forest include: western red cedar, big leaf maple (*Acer macrophyllum*), Douglas fir, western hemlock, grand fir, red alder, black cottonwood (*Populus balsamifera*), western paper birch (*Betula papyrifera*) and bitter cherry (*Prunus emarginata*) (1993-4 only).

Common shrubs include: vine maple, red huckleberry, Indian plum, salmonberry (*Rubus spectabilis*), red elderberry, thimbleberry (*Rubus parviflorus*), snowberry (*Symphoricarpos albus*), and oceanspray.

Common ground plants include: sword fern, spiny wood fern (*Dryopteris expansa*), fringe cup, salal, low Oregon grape (*Mahonia nervosa*), Dewey's sedge (*Carex deweyana*), Henderson's sedge (*Carex hendersonii*), orange honeysuckle, youth-on-age, western trillium (*Trillium ovatum*), Pacific waterleaf (*Hydrophyllum tenuipes*), bleeding heart (*Dicentra formosa*), stinging nettle (*Urtica dioica*), trailing blackberry, and non-native Himalayan blackberry (*Rubus armeniacus*).

## Mixed Forest Habitat Features

Mixed forest habitat features are numerous and quite varied. Due to the deciduous component, the forest canopy opens in the fall and allows light to enter the understory as well as allowing precipitation to readily saturate the forest floor and recharge wetland areas. The shedding of leaves also provides annual input to build the top layer of nutrient rich humus. Fallen leaves also create habitat for ground dwelling animals and material for burrows, cavity nests and food for numerous organisms.

Habitat features include numerous downed woody debris and snags in various stages of decay (NES). Snags were generally <12" dbh and most often birch or bitter cherry (*Prunus emarginata*) (1993-4) (ATS). The potential die off of bitter cherry may have been associated with a change in conditions or disease, since this species is not reported in 2005-2009.

Other habitat features include forest/plant associated features previously mentioned.

### 6.3.1.3. Deciduous Forest

The deciduous forest type was not described in previous reports or studies of the site, but appears to occur within the CCF. This forest type is dominantly deciduous species, such as red alder, big-leaf maple and/or black cottonwood. Big-leaf maples are valuable flowering and seed production trees. Concentrations of these species are more commonly associated with moist soils and likely associated with swales and wetland areas. The understory likely varies and could be evaluated and described.

### 6.3.1.4. Upland Meadow

In 2005 the upland meadow habitat was identified and described (NES). This plant community is located in the northern portion of the CCF where the gravel pit and access roads used to be. This community supports a mix of predominately non-native grasses, weedy herbaceous species, and large areas of bare ground (60% in some places). Species observed included tall fescue (*Festuca arundinacea*), orchard grass (*Dactylis glomerata*), velvet grass (*Holcus lanatus*), English plantain (*Plantago lanceolata*), bentgrass



(*Agrostis* sp.), hairy cats paw (*Hypochaeris radicata*), common tansy (*Tanacetum vulgare*), reed canarygrass, Scotch broom (*Cytisus scoparius*), sweet vernalgrass (*Anthoxanthum odoratum*) and creeping buttercup. Himalayan blackberry and Canadian thistle (*Cirsium arvense*) both non-native, invasive species were also observed within this community.

## Forest History

The actual age and history of the forest is not documented. Statements in existing documents refer to past logging, but no dates are substantiated. As described in the property history, no old-growth trees or stumps with spring-board notches remain on the property, indicating that the land was cleared following the logging of the original virgin forest or sometime after. The forest was likely logged between the mid 1920's and 1930's given that age of the trees. Based on limited tree corings as part of wetland tree surveys, (Luce, 2009) (Barborinas 2009), the maximum DBH (diameter at breast height) was 54" and the maximum tree age was 86 years old. In addition to the wetland associated forest, the upland forest areas also exhibit mature forest qualities, but more detailed assessment is needed. At the northeast edge of Parcel A is a Sitka Spruce (*Picea sitchensis*) standing well over 100 feet tall and is reported by a neighbor to be an estimated 200-300 years old.

## Mature Forest Characteristics

In Douglas fir (*Pseudotsuga menziesii*) forests, mature or late-succession forest conditions begin around 80 years of age (Franklin and Spies 1984) (Spies and Martin, 2006). Considering that the CCF forest is entering a late-successional stage and its structural complexity, habitat function and ecological value will continue to increase with age, this forest is not only increasingly rare in the Puget lowlands, its ecological value is enhanced with the presence of a large wetland network, a dynamic topography, varied conditions with aquatic and terrestrial habitats, and its connection to offsite freshwater streams and expansive mature forested landscape within the Chuckanut/Blanchard Mountain complex.

The characteristics of late-succession or old-growth forests include not only large, old trees, but standing dead (snags), broken top or dying trees as well as fallen trees in various stages of decomposition which create habitat and release nutrients to replenish soils. The understory is open with shade tolerant ground plants and shrubs, emerging young trees creating layering in the sub-canopy, and epiphytic growth from the ground to the canopy. An old-growth forest is also rich with habitat opportunities, structure and forage for all associated wildlife species. This is not a neat and tidy place, but instead a dynamic and changing ecosystem.

The Chuckanut Community Forest by virtue of its maturity and habitat complexity, likely qualifies as a Priority Habitat Area as defined by the Washington Department of Fish and Wildlife Priority Habitat and Species. Priority habitats are habitat types or elements with unique or significant value to a diverse assemblage of species (WDFW 2008). The characteristics of the CCF could match the definitions of two Priority Habitats including Old-growth/Mature Forest and Biodiversity Corridor.

Another outstanding feature of the CCF forest is the distinct understory plant communities which occur throughout the property. These communities have not been mapped or described, but are easily identifiable. The rolling topography of the site, together with soil types, slope aspects and moisture levels, provide varied conditions to support diverse plant communities. It would be useful to define these communities and further understand their sensitivity or versatility in the CCF ecosystem.

### 6.3.1.5. Wetland Vegetation

The wetland areas and locations of the CCF have been described earlier in the physical features section of this report. However, the vegetation of these wetlands was only grossly described. For monitoring purposes and tracking natural features over time, it will be useful to refer to the wetland classifications and to the plant communities as indicators of change or disturbance.

The following provides the wetland classifications and associated plant compositions for the wetlands based on the NES wetlands delineation (2004-5), and subsequent monitoring and reports. Some of this text is extracted directly from the NES reports.

### Wetland Classification

Fourteen wetlands were identified within the CCF property between 2003-2009 (NES). Of these, based on the Cowardin system, the majority of the wetlands are mixed palustrine forested/palustrine scrub/shrub wetlands (PFO/PSS), with interspaced palustrine emergent (PEM) communities. What this generally means is that the wetlands are non-tidal, freshwater wetlands, dominated by trees, shrubs, and persistent emergent herbaceous plants. The following is Northwest Ecological Service's 2005 description of wetland types and classes, and the CCF wetlands that apply to each.

**Palustrine Forested Wetland (PFO).** This plant community is located in Wetlands AA, AY, BB, CC, KK and MM. Wetlands AA, AY, BB, and JJ have deciduous canopies dominated by red alder and black cottonwood. Wetlands CC, KK have canopies dominated by western red cedar and an understory dominated by slough sedge (*Carex obnupta*), water parsley (*Oenanthe sarmentosa*) and areas of bare ground and/or standing water. Wetland MM has a canopy of western red cedar and red alder with dense herbaceous understory. Additional species observed within the PFO wetlands included Pacific willow (*Salix lucida*), salmonberry, skunk cabbage (*Lysichiton americanum*), and sword fern on hummocks.

**Palustrine Scrub-Shrub Wetland (PSS).** This plant community is located in Wetlands AY, BB, DD, FF, and LL. Dominant species observed included salmonberry, hardhack (*Spiraea douglasii*), black twinberry (*Lonicera involucrata*), and red osier-dogwood (*Cornus stolonifera*). This plant community is interspersed with the PFO community in Wetland BB, and interspersed with the PEM community in Wetlands DD, FF and JJ. The PSS community is dominant in Wetlands AY and LL.

**Palustrine Emergent Wetland (PEM).** This plant community is located in Wetlands AA, AX, CC, DD, EE, FF, GG, HH, and KK. Wetlands AA and AX are located in a disturbed area where the gravel pit used to be. The PEM community in this area is dominated by grasses and weedy herbaceous species. Species observed included reed canarygrass (*Phalaris arundinacea*), soft rush (*Juncus effusus*), tall horsetail (*Equisetum arvense*), creeping buttercup (*Ranunculus repens*), bentgrass (*Agrostis capillaries*), hairy cats paw (*Hypochaeris radicata*), tall fescue (*Festuca arundinacea*), slender rush (*Juncus tenuis*), velvet grass (*Holcus lanatus*), and tall buttercup (*Ranunculus acris*). The PEM community observed in Wetlands EE and GG had a mix of native and non-native species including slough sedge, skunk cabbage, piggy-back-plant, large leaf avens (*Geum macrophyllum*), creeping buttercup, lady fern (*Athyrium filix-femina*),

American brooklime (*Veronica americana*), stinging nettles, reed canarygrass, and tall mannagrass (*Glyceria elata*). The PEM community in Wetland FF included species similar to those found in Wetlands EE and GG, and was also interspersed with a PSS community dominated by salmonberry. The PEM community in Wetlands CC, HH and KK was dominated by slough sedge, water parsley and areas of bare ground and/or standing water.

### Wetland Plant Composition by Parcel

**Wetlands AA, AX and AY (Parcel A)** are located in the previously disturbed areas associated with past gravel extraction. The wetlands are shallow depressions which become seasonally inundated. In addition to grasses and herbaceous species, Wetland AA is dominated by slough sedge and a sparse canopy of red alder saplings, and Wetland AY is dominated by young red alder and salmonberry.

**Wetland BB (Parcel A)** is mostly located off-site to the north on City owned open space land. This is a PFO wetland dominated by a deciduous canopy of red alder and black cottonwood, a dense shrub layer dominated by salmonberry, and interspersed PEM habitat. Wetland BB has a surface water connection to Padden Creek.

**Wetland FF (Parcel A)** is a PSS slope wetland located along the western property line. The wetland is seasonally saturated and dominated primarily by salmonberry, lady fern, horsetail, and skunk cabbage. Wetland hydrology appears to be supported by groundwater seeps.

**Wetland MM (Parcel A)** is a small slope wetland with localized areas of standing water. The wetland is classified as a palustrine forested wetland, dominated by evergreen trees, few shrubs, and a dense herbaceous understory. Species observed in the wetland included western red cedar, red alder, black twinberry, snowberry (*Symphoricarpos albus*), skunk cabbage, field horsetail (*Equisetum arvense*), and lady fern.

**Wetlands CC and KK (Parcel B)** are the largest wetlands within the CCF and have similar hydrology and vegetation. Canopy species are located along the wetland fringe and on upland hummocks within the interior. The average canopy cover for these wetlands is between 70 and 90 percent. The average tree DBH is approximately 15 inches. Both wetlands are seasonally flooded for long periods during the growing season. Pools within Wetland CC dried during the summer of 2005 and 2006. Pools within Wetland KK dried during the summer of 2005, but remained inundated throughout 2006. Common species observed in the wetlands included western red cedar, red alder, black cottonwood, salmonberry, slough sedge (*Carex obnupta*), water parsley (*Oenanthe sarmentosa*), skunk cabbage (*Lysichiton americanum*), and areas of open water or bare ground. Both wetlands are very hummocky, with upland species growing on downed logs and stumps throughout. Numerous downed woody debris and snags are located in the wetlands and their buffers. Note: in 2009 wetland CC was divided into two separate wetlands CC1 and CC2; and wetland KK was designated a mature forested wetland.

**Wetlands DD and EE (Parcel B)** both appear to have been artificially created. Wetland DD is located in a deep depression, which fills with standing water (three to six feet) during the wet season. The wetland is primarily open water/ bare ground, with a fringe of moderately dense trees and shrubs. Species observed include red alder, black cottonwood, hardhack (*Spiraea douglasii*) and slough sedge. Wetland EE is a shallow depression dominated primarily by non-native grasses and weedy herbaceous species.



**Wetland HH (Parcel B)** is a depressional wetland which becomes seasonally flooded for long periods during the growing season, but dries in the summer season. Slough sedge is the dominant species in the wetland, among large areas of standing water and/or bare ground. The wetland fringe, which is less affected by standing water, is characterized by trees and shrubs. A small island of native trees and shrubs is located within the center of the wetland. Additional species observed within the wetland include western red cedar, red alder, black cottonwood, and salmonberry.

**Wetlands GG (Parcel B) and LL (Parcel C)** are both small, very shallow depressional wetlands which become seasonally saturated and are dominated by shrubs and herbaceous material.

For more detailed information about the on-site wetlands refer to the delineation report (NES October 2006).

#### 6.3.1.6. *Non-Native and Invasive Species*

Non-native or exotic plant species do occur on the CCF property. Areas of non-native concentrations are mainly in the disturbed areas, where previous gravel extraction, roads, trails, dumping, or soil disturbance has occurred, and near entrances facing Chuckanut Dr where regular yard waste dumping has occurred, as described by NES 2007. There are also identifiable patches of non-native invasive plants throughout the CCF, particularly in perimeter areas. These include Himalayan blackberry (*Rubus armeniacus*), Scot's broom (*Cytisus scoparius*), English ivy (*Hedera sp.*), Herb-Robert (*Geranium robertianum*), and periwinkle (*Vinca sp.*). Other species are likely present, which would require a comprehensive effort of identification and mapping.

Control of non-native and invasive species would limit the spread and impacts to native plant communities. It would be useful to map areas where actual invasive species infestations occur and develop a strategy for removal and control. Trained volunteers could help with on-going removal and control.

#### 6.3.1.7. *Plant Species List*

A native plant list has been assembled for the CCF, based on existing plant lists and reports reviewed (Appendix 11.2). This list is intended to form a baseline for the CCF and expanded as new plants are recorded from credible sources. This will serve as a useful tool in future site monitoring.

#### 6.3.1.8. *Fungi and Others*

The Chuckanut Community Forest is a small-scale mature forest ecosystem, which is dependent on fungi, mosses, lichens and other life forms to extract nutrients from the soil to grow normally. There are over 10,000 species of fungi native to the Pacific Northwest and many species are likely present in the CCF.

In 2015 a list of fungi for the CCF was submitted by Fred Rhodes PhD Mycologist and Western Washington University Professor. The list is based on a single sampling of the CCF and associated park land by the Northwest Mushroomers in 2013 and additional records from expert mycologists from the same area, with a total of 106 species reported. The species recorded included 75 gilled mushrooms, 18

non-gilled mushrooms, 8 sac fungi and 5 slime molds. This species list is included in Appendix 11.2. According to Dr. Rhodes this list represents a minority of the species that actually inhabit the CCF and he suggested a more complete inventory be carried out for this ecologically important kingdom.

Currently there is no information or known lists of mosses or lichens occurring in the CCF. These organisms play a vital role in the forest in supporting both the floral and faunal components of the ecosystem and warrant further study.

### **6.3.2. Wildlife and Habitats**

Wildlife is the cornerstone of every conservation area. As a critical component of the Chuckanut Community Forest and its ecological function, the protection of wildlife, its habitats, and associated corridors, are stated goals in the Conservation Easement. Therefore, the wildlife of the CCF requires thorough examination and serious consideration for its protection and management.

The wildlife and habitats of the CCF are discussed in many documents, including EIS's and supporting documentation. However, on close examination of the available surveys, lists, and descriptions, it appears that the body of wildlife information specific to the CCF is limited and somewhat dated. Scientifically based, comprehensive assessment of wildlife (all taxa) and habitats on the CCF has not been conducted; therefore, only a partial list of species known to utilize this site is available, and the habitats are not well defined.

Existing information and reports do provide valuable baseline information for birds and amphibians. Birds were surveyed in 1992 (Shapiro and Associates 1992), 1993-94 (Aqua-Terr Systems 1994) and 2006 (Northwest Ecological Services 2007). Amphibians have been observed over several years of wetland survey and monitoring both in the 1990's, between 2005-2007, and also as part of a Citizen Science project led by the Whatcom County Amphibian Monitoring Program. Two city-wide wildlife and habitat assessments 1995 and 2003 (Eissinger 1995 and 2003) also provide information relevant to this site, however those are dated. Incidental sightings of other wildlife have also been provided by consultants working on development project reviews, but information gaps remain.

Determination of species occurrence and status for the CCF would require additional review and data collection. Agency databases and updated species status information was not obtained for this report. The current presence or occurrence of Endangered, Threatened, Candidate species, or species of other special protection or management consideration cannot be verified at this time. Species of special status as identified from previous reports could be verified and occurrence data updated.

Species and habitat verification recommended herein is not binding on the City or any permitting agency and not required to be completed prior to the City's development of the Chuckanut Community Forest as a City Park, unless otherwise mandated by applicable city, state, or federal laws or regulations.

The following Wildlife and Habitat Section of this report provide the best available information for Invertebrates, Fish, Amphibians, Reptiles, Birds and Mammals. The on-site data and information relevant to wildlife on the CCF utilized for the sections to follow are sourced from the following documents:

1992 Jonathan Merz, Baseline biological water quality assessment for the Chuckanut Ridge Planned Development. Lovell-Sauerland and Associates, Inc.

1996 Shapiro and Associates, Wildlife Studies for the Proposed Chuckanut Ridge Development Project.

1994 Aqua-Terr Systems Inc., Chuckanut Ridge Flora and Fauna Assessment. Information for this report was collected in June 1993 and September-October 1994.

1995 Ann Eissinger, City of Bellingham Wildlife Habitat Assessment and Wildlife Habitat Plan. City of Bellingham Planning Department.

2003 Ann Eissinger, City of Bellingham Wildlife and Habitat Assessment (update).

2007 Northwest Ecological Services, Flora and Fauna Assessment for the Fairhaven Highlands. Data collected for this report was completed during wetland delineation and monitoring site visits 2006-2007 and between June-July 2006 (bird surveys).

Following an examination of the wildlife and habitat data from previous studies, a mapping of known or potentially sensitive wildlife areas was attempted. However, due to the lack of data for most taxa and lacking spatially explicit data, it was determined that developing a current and representative map was not possible for this report. Additional survey and field assessment would be needed to collect the data necessary to identify and map sensitive wildlife areas, habitats, biodiversity hotspots and movement corridors.

The following sections provide a summary of existing information for each wildlife taxonomic group occurring on the CCF. Wildlife species lists for the CCF are included in either the summary sections to follow, or in Appendix 11.2 which include fungi, plants, birds and mammals.

#### 6.3.2.1. *Invertebrates*

Based on the available documents for the CCF, no systematic survey or inventory is known for either aquatic or terrestrial invertebrates. The CCF forest land and wetland areas provide valuable habitat for a diversity of invertebrate groups and these serve a critical role in this ecosystem.

The only records of invertebrates include sampling of macroinvertebrates from three wetlands in 1992, and incidental occurrences identified during consultant surveys on the site as described in NES Plant and Animal EIS Technical Report, 2008. These records are as follows.

A Biological Water Quality Assessment based on aquatic macroinvertebrates was conducted in 1992 by Jonathan Merz of Lovell-Sauerland and Associates, Inc. for the Chuckanut Ridge DEIS (City of Bellingham 1996). The study was intended as a measure of existing biological quality of the aquatic habitat using a Diversity Index of aquatic invertebrates as an indicator of water quality. The sampling of Wetlands CC, KK, and JJ (previously 1, 2, and 3), resulted in a total 107 invertebrate specimens representing 12 different taxonomic groups. The most abundant were fresh water Crustacean known as Ostracods (Class) or seed shrimp. This study was intended to provide basic baseline data. No further studies have been conducted of this type. The list of macroinvertebrates collected in this effort is provided in the original document.



Populations of fairy shrimp were observed by NES staff in Wetlands CC and KK. Fairy shrimp are macroinvertebrates that are characteristic of vernal (or seasonal) wetland systems. There are a number of fairy shrimp species that are indicated as endangered, threatened or sensitive in the United States. Specimens were collected from Wetland KK by Vikki Jackson and sent to Mary Schug Belk in Texas for identification, a recognized expert on fairy shrimp. She identified the specimens as the Oregon Fairy Shrimp (*Eubbranchipus oregonus*). This is not a federally or state listed species. Little data could be located regarding this species. It has a recorded range from California to British Columbia. Fairy shrimp were detected in Wetlands CC and KK; they were more abundant in Wetland KK, and only a few individuals were present in Wetland CC. NES is currently researching the distribution and habitat characteristics of this species in northwestern Washington.

Incidental sightings of butterflies were recorded in the field notes of Biologists making site visits. Of these a total of two species were identified in 2006: Lorquin's admiral butterfly (*Basilarchia lorquini*) and a swallowtail butterfly (*Papilio glaucas*) near wetlands CC & DD, AA & AX (NES).

Invertebrates form the largest taxonomic group in the animal kingdom. In acknowledging the natural function and values of this site, the invertebrates are the foundation of this ecosystem and could be inventoried to provide a baseline. Based on existing information, sensitive species or species of special management may occur on the CCF. Species and habitat verification using best available science would be useful, but not required, prior to any management action that could alter the ecological conditions of the CCF.

#### 6.3.2.2. Fish

Although the CCF contains some permanent water in certain wetland areas, most of the waterbodies of the CCF are ephemeral and do not support fish. Where standing water persists, fish have not been documented in these water bodies. No known fish survey has been conducted on site, and may not be warranted.

No fish bearing streams occur on the CCF, however, one small stream originates from Wetland CC and drains into a ditch along Chuckanut Dr. and ultimately into Padden Creek. The onsite wetlands provide water storage, filtration and runoff that feed into the Padden Creek and Chuckanut Creek systems, both of which are salmon bearing. Closely associated, but off site, is Wetland JJ located immediately east of Parcel C. This wetland and its associated drainage, Hoag Creek, was surveyed by WDFW Biologist Jim Johnston in 1985, and he reported the presence of Cutthroat trout (*Oncorhynchus clarki clarki*), and another report identified three-spine stickleback (*Gasterosteus aculeatus*) both species are anadromous, but their current status is not known. Hoag Creek feeds directly into Chuckanut Creek which support both steelhead and salmon populations, .33 mile southeast of CCF.

#### 6.3.2.3. Amphibians

Amphibians of the CCF have been well documented as part of the wetlands work during both the Chuckanut Ridge and Fairhaven Highlands development reviews. The CCF is also the site of on-going Citizen Science monitoring through the [Whatcom County Amphibian Monitoring Program](#) (WCAMP) led by Vikki Jackson of Bellingham. This monitoring project samples select wetlands in the CCF. Although limited in coverage, the amphibian information is the only wildlife data that is considered relatively

current. A total of 7 species of amphibians have been identified for the CCF, these include the following lists of species by year.

Review of the available data and methods revealed flaws in timing and effort during the 1992 and 1993-94 surveys. Due to the complex life cycles of amphibians, surveys and monitoring requires careful planning, timing during optimal conditions, multi-season field visits and repetition. Also, habitat should not be disrupted during surveys.

The following table provides a list of species detected on the CCF, by survey name, month (where possible) and year. Additional information from the WCAMP surveys may be obtained online.

**Table 3: CCF Amphibians**

	Oct 1992 S&A	Jun1993 Oct 1994 ATS	2005-06 multi NES	2013 WCAMP	2014 WCAMP WetlandKK	2015 WCAMP Wetland KK
<b>Semi Aquatic Species</b>						
Pacific Treefrog <i>Pseudacris regilla</i>	x	x	x		x	x
Red-legged Frog <i>Rana aurora</i>		x	x	X KK	x	X
Northwestern Salamander <i>Ambystoma gracile</i>		x	x	X AA	x	X
Long-toed Salamander <i>Ambystoma macrodactylum</i>		x	x		x	X
Rough-skinned Newt <i>Taricha granulosa</i>			x	X trail CC1		x
Western Toad <i>Anaxyrus boreas</i> (previously <i>Bufo boreus</i> )						
<b>Terrestrial Species</b>						
Ensatina <i>Ensatina eschscholtzii</i>	x		x	not surveyed	not surveyed	not surveyed
Red-backed salamander <i>Plethodon cinereus</i>	x			not surveyed	not surveyed	not surveyed

S&A = Shapiro and Associates

ATS = Aqua-Terr Systems

NES = Northwest Ecological Services

WCAMP = Whatcom County Amphibian Monitoring Project

Western toad *Anaxyrus boreas* (previously *Bufo boreus*) was reported by Herb Brown (1994) breeding in Wetland JJ off site and found in the CCF forest. Undisturbed aquatic-terrestrial habitat connection is critical for toads. Toads breed in aquatic areas, but spend most of their life cycle upland and may travel long distances. Western toads were historically present and common, but lowland populations have greatly declined and no sightings of western toads have been reported in recent years. These areas have been reviewed by WCAMP and Western Toad does not appear to be present in the area any longer (NES 2007). Western Toads are currently a State Candidate Species in Washington State.

The CCF is utilized by amphibians for their full life-cycle which includes: breeding and reproduction in water or under large woody debris; metamorphosis – also in water for aquatic breeders, and dispersal into terrestrial areas, including protected burrow or under large woody debris for winter. Critical for amphibians to complete their life cycle and survive the winter include:

- ponds, wetlands and any standing water, large and small, permanent and temporary, including what may appear to be a “mud puddle” are all viable habitat areas for breeding, egg laying and metamorphosing amphibians;
- areas of undisturbed vegetation and complex habitat structures around wetlands;
- undisturbed corridors between wetlands, and between wetlands to uplands;
- undisturbed forested uplands and undisturbed terrestrial habitats including logs, large stumps, rocks and boulders, animal burrows, and the base of large trees.

In addition to the above list of habitat and lifecycle considerations, based on existing information, sensitive species or species of special management may occur on the CCF. Species and habitat verification using best available science is recommended prior to any management action that could alter the ecological conditions of the CCF, including wetland areas, buffers and potential upland habitats.

#### 6.3.2.4. **Reptiles**

A systematic reptile survey has not been conducted on the CCF property; however, species were recorded when encountered during prior on-site assessments. Garter snakes were reported as common with 2 species of garter snake recorded including: (*Thamnophis sirtalis* and *T. ordinoides*). These were found in sunny locations, on forest edges and the gravel pit. Western terrestrial garter snake (*T. elegans*) is also likely onsite. Garter snakes would also be expected to be present around wetlands, where prey species, such as amphibians occur. The only other reptile recorded for the site was alligator lizard (*Gerrhonotus coeruleus*). These represent the expected suite of reptile species for the CCF, however, less common rubber boa (*Charina bottae*) may also be present in exposed rocky habitat.

Based on existing information, sensitive species or species of special management may occur on the CCF. Species and habitat verification using best available science is recommended prior to any management action that could alter the ecological conditions of the CCF.

#### 6.3.2.5. **Birds**

The birds of the Chuckanut Community Forest are well recognized, and an important natural feature of these lands. With the diversity of habitats, location and connectivity with adjoining natural areas, a richness of species is expected and likely present. An estimated 94 species of birds may be found on the CCF depending on season, timing and conditions. These include year-round residents, seasonal residents, migrants (both longitudinal and elevational) and transient foragers. Birds utilize the CCF for breeding and nesting, foraging, roosting and resting and residing and are a vital component of its biodiversity.



The birds of the CCF have been surveyed in 1992, 1993, 1994 and 2006. These surveys were a result of the Chuckanut Ridge and Fairhaven Highlands development on-site reviews and EIS process. The bird surveys were conducted at fixed points for about 15 minutes each. A total of 7 survey sites were used, sampling 4 habitat or cover types including conifer forest, mixed forest, wetland and disturbed areas (old gravel pit). Specifics of the survey efforts are as follows:

- Shapiro and Assoc. (Mark Rector, Wildlife Ecologist), surveys conducted September 30, 1992 and October 1 1992, results included 23 species.
- Aqua-Terr Systems Inc., surveys conducted June 28-30, 1993 and October, 1-5 1994, results included 28 total species = 20 conifer forest, 15 mixed forest, 17 wetland, 16 disturbed area.
- Northwest Ecological Services, surveys conducted June 27 2006 (AM) and July 10 2006 (PM early afternoon), results included 30 total species = 14 conifer forest, 13 mixed forest, 17 wetland, 8 disturbed area.

Comparing the previous 1992, 1993-94 and 2006 surveys, a total of 42 species were recorded. Of those, 11 species were observed during all surveys. A preliminary list of avian species for the CCF based on previous reports and surveys is provided in Appendix 11.2.

In review of past surveys and results, it is apparent that the methods and timing do not provide the basis for a defensible result. The surveys lacked adequate time, repetition and seasonal coverage to capture species movement, seasonal patterns and most notably the spring breeding season.

A few avian groups were missing or poorly represented in these surveys, including: raptors, waterfowl and neotropical migrants. Although Barred Owls were recorded, other owls, forest dwelling hawks and even falcons are possible and likely at this site. Secretive species such as grouse, snipe and rails could have easily been missed. It is possible that ducks utilize the wetlands seasonally, particularly wood ducks and hooded mergansers, and the neotropical songbirds are likely more diverse than represented in the site assessments. Overall, the survey methods were lacking in seasonal targeting, multi-season sampling, timing and repetition to capture a full species record for this site. The results are also now somewhat dated; however, they do form a partial baseline for future surveys and comparison.

During CCF site visits this spring in March and April 2015, the author of this report (Ann Eissinger) who is a Wildlife Biologist, noted wildlife occurrences while locating property corners and assessing conditions. A total of 25 avian species were recorded during incidental observations. Of these, 9 species had not been recorded during previous surveys. Most notable were Ravens nesting near the northeast corner, 2 Bald Eagles circling overhead and vocalizing, Barred Owls southeast of Wetland CC (possibly nesting), and a Great Blue Heron at Wetland KK foraging. Also, habitat features including the wetlands with associated shrubs, mature trees, snags with cavities, large woody debris on the forest floor, and undisturbed areas provide for a diversity of bird species and life stages. This indicates the avian species diversity for the CCF is greater than what previous surveys suggest.

In review of birds that have a potential association with the CCF property, a total of 146 bird species were selected from the 2015 North American Bird Checklist (ABA) as potential occurrences (Appendix 11.2). This selection was made based on range and migration, habitat availability, including edges, seasonal use, and species observed in the area, from Blanchard Mt. to Fairhaven. Of the species on this list 46 were determined by the author to be likely occurrences based on the existing recorded species for the CCF and a complementary list of bird sightings in and near CCF from John McLaughlin, Professor of Ecology at WWU. This list can serve as a site check list for future reference.

The avifauna (birds) of the CCF are likely much more diverse than is represented in the past surveys. The role of birds in this ecosystem is both complex and tangible. It is not clear how many species are resident, migratory or occasional; however, there are yet to be identified sensitive areas, habitats or easily disturbed populations. Habitat selection and dependence varies by species and individuals and season. Nest sites, snags, including tree cavities, wetland edges, trees, shrubs or on the ground are all sensitive. Foraging areas vary considerably, and change with the seasons, but are required for species success and reproduction.

Based on existing information, sensitive species or species of special management status are known to occur on the CCF. Species and habitat verification using best available science is recommended prior to any management action that could alter the ecological conditions of the CCF.

#### 6.3.2.6. *Mammals*

The mammals of the Chuckanut Community Forest are an important part of the biodiversity of the forest and compose an under-represented group in terms of site specific information. As many as 51 species of mammal (Appendix 11.2) have the potential to occur in the CCF, although a smaller number is likely.

Mammals include a broad range of species from large predators to common raccoons and mice to migratory bats. Some species are easy to find or document, such as Douglas squirrel, and black-tailed deer, however most species are difficult to detect and or verify. Mammal habits and habitat vary by species, habitat availability, and season. Habitat alone is not a determining factor. In many cases, special search or detection methods and equipment are needed in order to determine species presence.

The mammalian life of the CCF is poorly understood and has lacked thorough/systematic survey effort to date. Past survey methods have included transect or trail survey, for tracks, scat, rubbings, other signs and incidental surveys during site visits. A single bait station effort was also employed, but failed to render results. As a result, the mammal list for the CCF is limited to only 9 species in 1994 and 6 in 2006-07. Again, the data is 10-20 years old and could be updated.

The following list includes the past surveys and species documented.

1994, Aqua-Terr Systems: Mammal or mammal sign observed on-site

Common Name	Scientific Name	Observation/ Other Detection
Opossum	<i>Didelphis marsupialis</i>	Prints
Shrew	<i>Sorex sp.</i>	
Coast mole	<i>Scapanus orarius</i>	
Raccoon	<i>Procyon lotor</i>	Prints
Coyote	<i>Canis latrans</i>	Prints and scat
Townsend's chipmunk	<i>Tamias townsendi</i>	
Douglas squirrel	<i>Tamiasciurus douglasii</i>	
Eastern cottontail	<i>Sylvilagus floridanus</i>	Scat
Black-tailed deer	<i>Odocoileus hemionus</i>	Prints, scat, rubbings

2006-2007 Northwest Ecological Services: Mammal or mammal sign observed on-site

Common Name	Scientific Name	Detection
Pacific Water Shrew	<i>Sorex sp.</i>	Visual
Raccoon	<i>Procyon lotor</i>	Prints, visual
Eastern grey squirrel	<i>Sciurus carolinensis</i>	Visual
Douglas squirrel	<i>Tamiasciurus douglasii</i>	Visual, middens
Coyote	<i>Canis latrans</i>	Scat
Opossum	<i>Didelphis marsupialis</i>	Prints
Black-tailed deer	<i>Odocoileus hemionus</i>	Visual, prints, scat

The mammalian species of the CCF is likely much more diverse than past surveys have reported. Many mammals are nocturnal, secretive, well hidden and avoid humans. Due to the mature forest and wetland habitats in the CCF, certain mammalian groups are likely, including a variety of bats, small ground rodents, arboreal rodents such as northern flying squirrel, and mustelids such as skunk and weasel. Slow moving and more vulnerable species such as porcupine and mountain beaver may have been extirpated from the site, but should be considered in any future survey effort or activity. Large ranging mammals including cougar, bobcat and coyote may include this 82-acre forest in their home range.

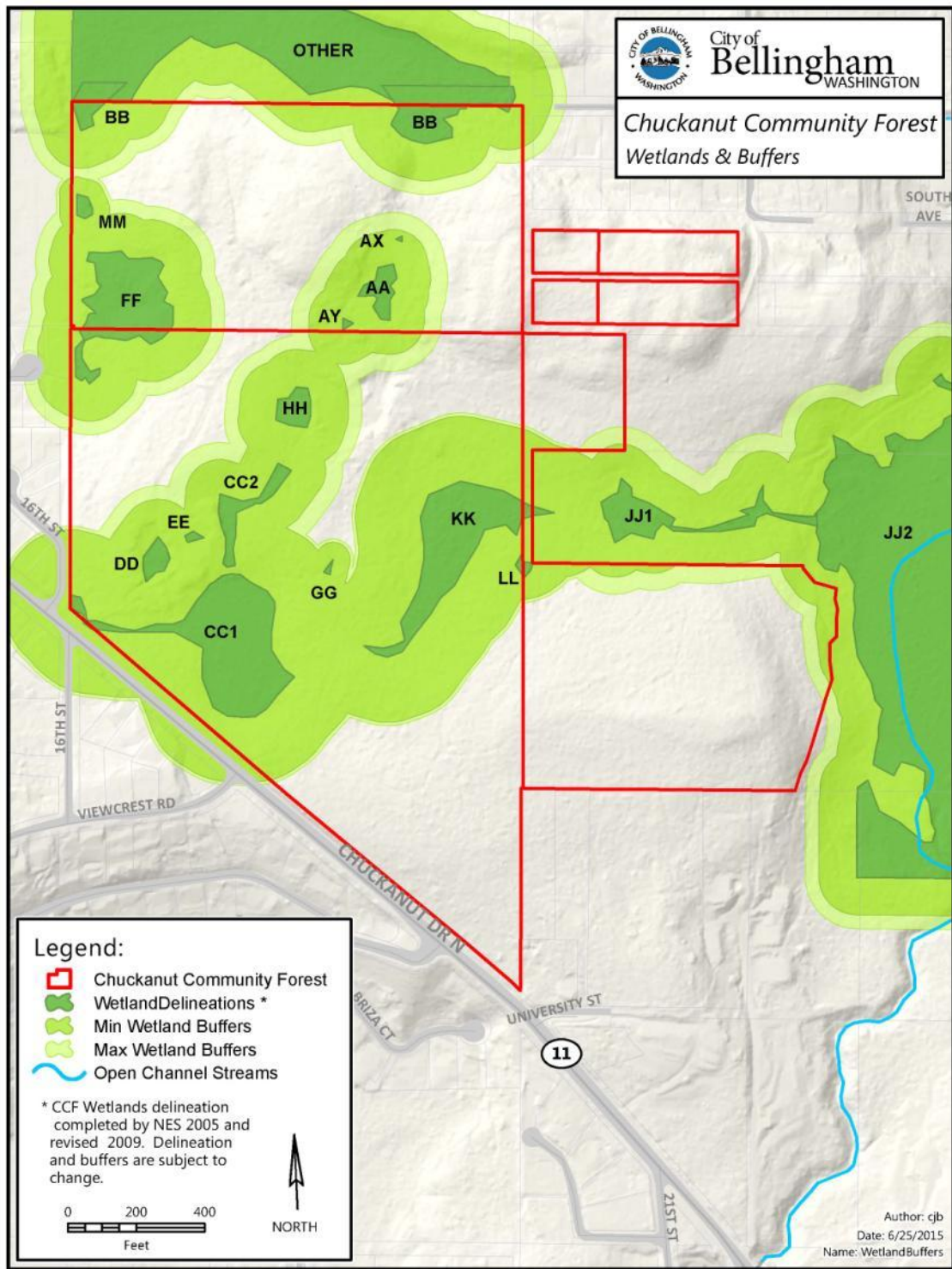
Beaver, (*Castor canadensis*) is included on the site species list, but are unlikely to be found on the property. Beaver were present in the 1980's, in Wetland JJ off site to the east as observed by the author and others. Their activities flooded the wetland area, killing trees – many of which are still standing. However, the beaver disappeared or possibly removed.

Based on existing information, sensitive species or species of special management status may occur on the CCF. Species and habitat verification using best available science is recommended prior to any management action that could alter the ecological conditions of the CCF.



### 6.3.3. Wetlands and Buffers

Map 18: Wetland Buffers



Wetlands are a core ecological and biological feature of the Chuckanut Community Forest. These areas have been described in the prior Natural Features section. The wetlands require further explanation related to their regulatory status and related buffers (Map 18). The buffers associated with wetlands are for the purpose of protecting the wetlands function and value, buffers also affect all of the organisms associated with the wetland, its riparian area, and associated uplands.

A total of two wetland delineations have been completed for the CCF, including Shapiro and Associates (S&A) in 1990 and 1992, and Northwest Ecological Services (NES) in 2005. The 1990-92 delineation identified a total of 8 Wetlands and labeled them 1-8 (one of which was off site – Wetland 1). The 2005 NES delineation identified 13 wetlands (one of which was off site – Wetland JJ). Following the NES delineation, were a series of reviews and re-evaluations of certain wetland boundaries, site hydrology, and/or special features resulting in changes to ratings, and the division of Wetlands CC and JJ (off site). A new wetland was also added (MM) and that brought the CCF on-site wetland number to 14 in 2009.

The early delineations for the Chuckanut Ridge Development project (1990-92) were completed when wetland delineation was an emerging science and the regulatory process was in its infancy, with the first federal delineation manual published in 1989. As a result of the Washington State Growth Management Act, and subsequent rules in 1995, local governments were required to identify and protect the function and values of critical areas, which included wetlands. This prompted the State of Washington to begin developing a regionally specific wetlands manual, based on federal guidelines, for delineating wetlands in this state. In 1996 the first wetland delineation guidelines and manual were published by the Washington Department of Ecology (DOE). As the science emerged, changes to both the Federal and State wetland guidelines have been made with regular updates to delineation methods, classifications and rating systems. The most recent revisions were in 2015.

Wetland buffer requirements are a function of the local Critical Areas Ordinance or CAO. Once wetlands are delineated and relevant data collected, the wetlands are classified using the Cowardin classification system and the Hydrogeomorphic Method (HGM) based on hydro period and geomorphic qualities, then rated and scored according to Washington State Department of Ecology (DOE) Wetlands Rating system for Western Washington. This information is then used to determine buffers set by the City of Bellingham CAO standards.

The best representation of regulated wetland buffers for the purposes of this Baseline Documentation Report are defined in Table 4 and illustrated on Map 18. These buffers are based on the NES 2005 wetland delineation including 2009 revisions, and apply the 2009 DOE wetland rating system and the 2005 City of Bellingham CAO. These buffers are the closest representation of conditions at the time the Conservation Easement was signed in 2014. Wetland buffers reflected in the 2009 Fairhaven Highlands EIS were based on earlier vesting and no longer apply.

The wetlands and wetland area by Parcel are as follows in Table 4. Each wetland is identified by a two-letter code and the numbers related to the old 1990 identifiers. The table also provides wetland data updated in 2009. This includes, area, category - based on both state and local ratings, regulation status under the CAO, and buffer widths based on the wetlands category as of 2009. The 2005 CAO buffer widths have been applied and reflect three buffer widths based on proposed land use and are broken down in three levels of intensity: high, moderate and low (CAO 16.55.340). These buffers are also illustrated on Map 18.

**Table 4: Wetlands Rating and Buffers**

Wetland data from Northwest Ecological Services 2005-6 with DEIS changes and updates 2009

	Wetland	Size (sq ft)	DOE Habitat Score	Cat DOE	Cat. COB	Reg.	Buffer Range (2005 CAO)	Notes
Parcel A	AA (5)	8,997.6	21	III	III	Y	150/110/75	
	AX	130.2	23	III	III	N	none	<1,000 sq ft
	AY	499.1	21	III	III	N	none	<1,000 sq ft
	BB (6)	21,516	27	I	I	Y	150/110/75	Re-evaluated, mature forested wetland (8/17/09)
	FF (4)	65,340	27	I	I	Y	150/110/75	Re-evaluated, mature forested wetland (8/17/09)
	MM	2,402	18	III	III	Y	80/60/50	New wetland added 2009
Parcel B	CC1 (2)	93,964	31	I	I	Y	200/190/150	Re-evaluated, mature forested wetland (8/17/09), sensitive amphibian and fairy shrimp habitat
	CC2	12,791	24	III	II	Y	150/100/60	CC split in 2 units in 2009
	DD (7)	5,919.2	22	II	II	Y	150/110/75	
	EE (8)	918.9	17	III	III	N	none	<1,000 sq ft
	GG	329.3	17	III	III	N	none	<1,000 sq ft
	HH	8,764	20	II	II	Y	150/110/75	
	KK (3)	72,181	31	I	I	Y	200/190/150	Large mature forested wetland, sensitive amphibian habitat
Parcel C	LL	1,630.5	18	III	III	Y	80/60/50	
Off site	JJ1	28,842	26	III	II	Y	200/190/150	Re-evaluated 2009 – JJ split in 2 parts
Off site	JJ2 (1)	321,037*	28	I	I	Y	200/150/100	Large wetland east of CCF, part of COB park/openspace

\*Wetland JJ split into 2 units in 2009, needs re-evaluation. Total area from Shapiro 1992

The wetland delineations for CCF property were conducted 10 or more years ago. Although no deliberate alterations have been made to the land or vegetation during that time, physical changes may have occurred naturally, or impacts may have occurred from unmanaged public use.

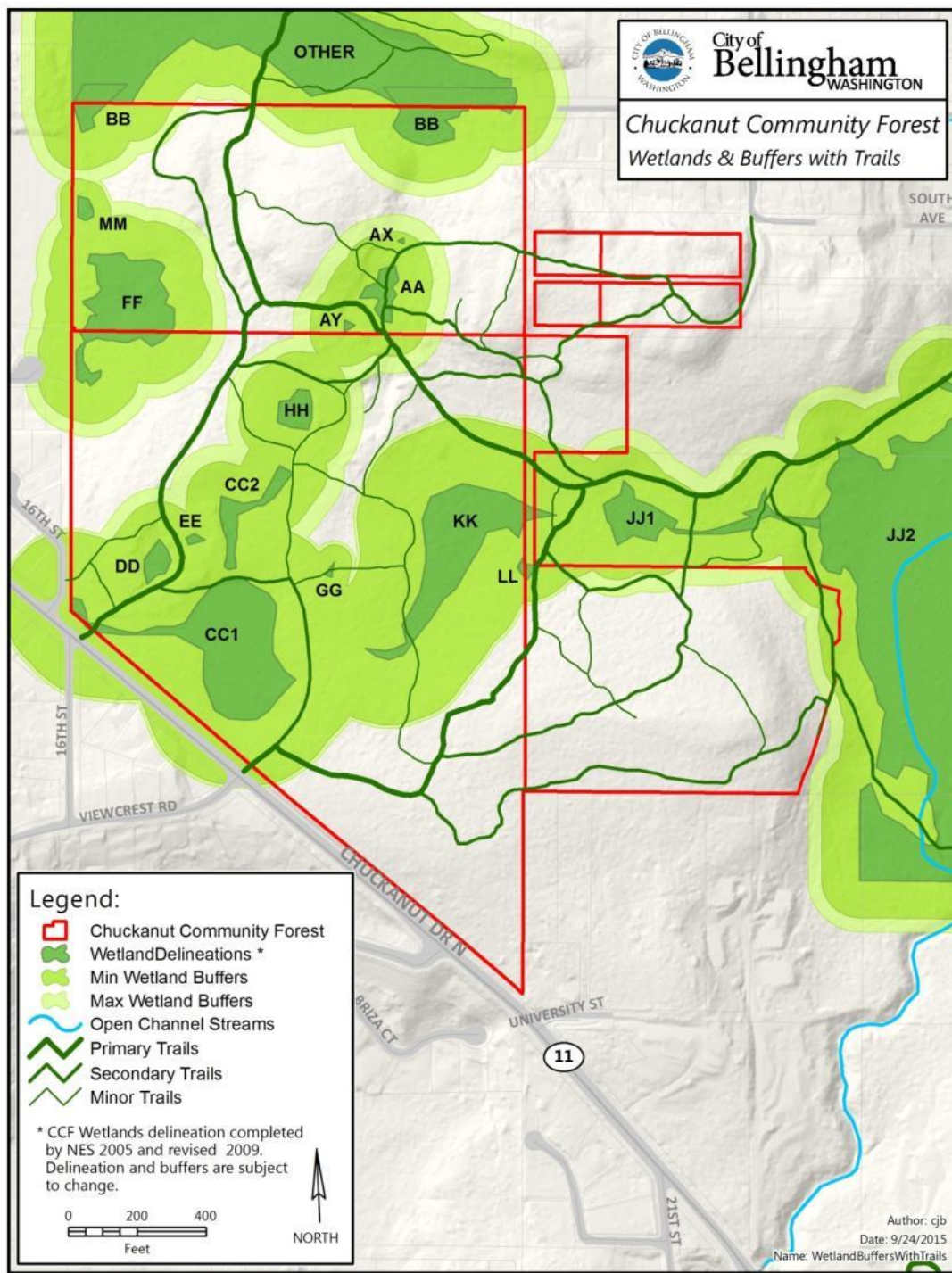
Certain regulations governing wetland delineation methodology, classification and/or rating have changed. As of January 1, 2015, the DOE has instituted a new wetlands rating system, and the City of Bellingham has updated its Critical Areas Ordinance. There are also changes expected to the Federal wetlands regulations that may or may not affect the previous wetlands ratings on this site.

The City of Bellingham Critical Areas Ordinance (CAO) states that wetland delineation reports are only valid for 5 years. Any wetland delineation update would involve a review of existing information to comply with current regulations, and field truthing to ensure conditions have not changed. Any actions that would infringe on wetlands or their buffers will require review and compliance with the City's CAO.

The following Map 19 provides an overlay of current trails on wetlands and buffers. Buffer areas may include sensitive plant and wildlife habitats requiring site evaluation prior to management or maintenance actions.

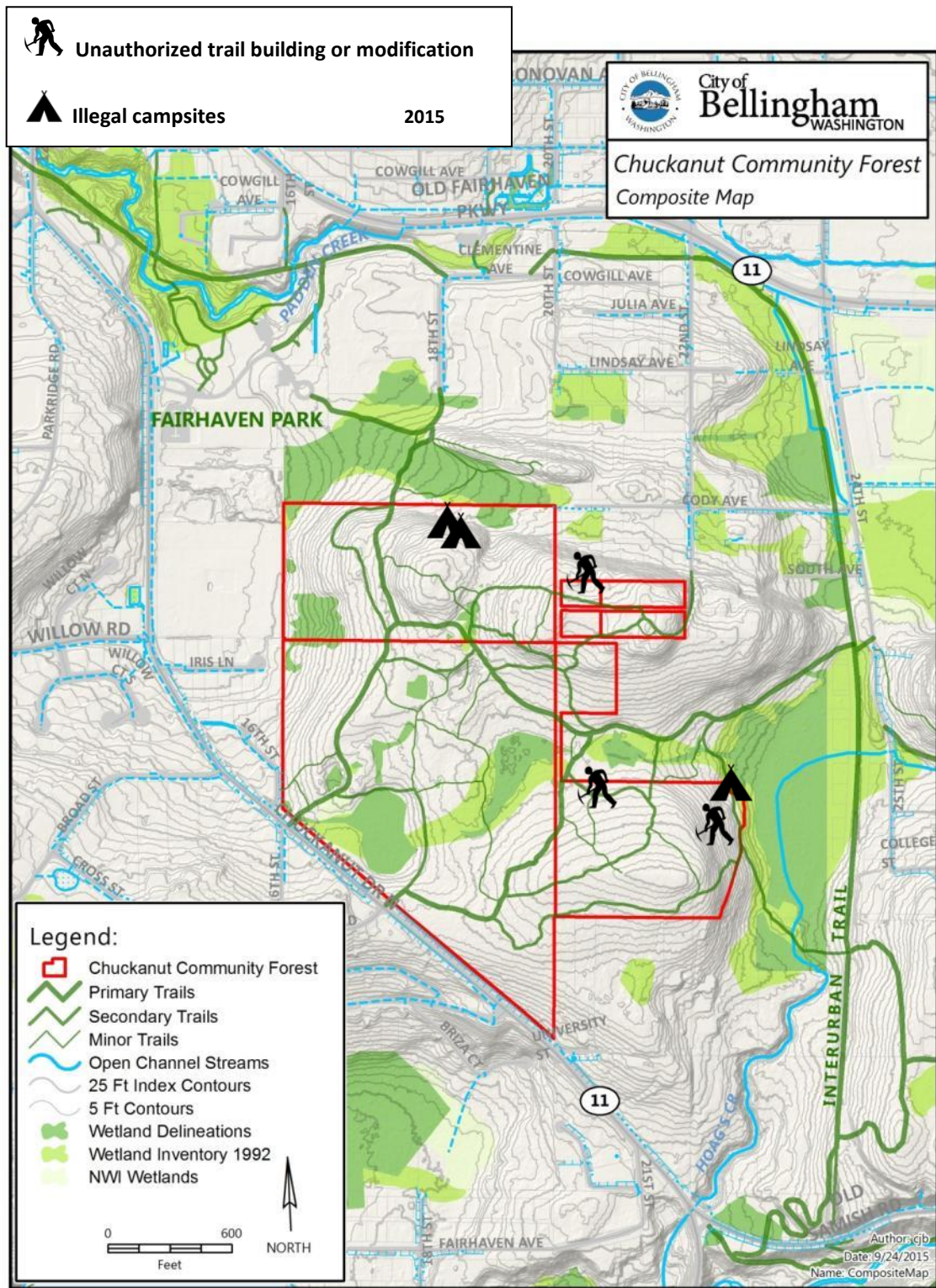


Map 19: Trails and Wetland Buffers



## 7. Site Disturbances and Planning

Map 20: Disturbances





## 7.1. Temporary Disturbances and Impacts

During the on-site review for this baseline report in March and April 2015, several areas of disturbance were encountered. They include:

1. one well developed camp site with 3-4 tents and misc items located near the north center edge of Parcel A off trail;
2. one single tent site near the larger camp (1);
3. one single tent tucked alongside a large tree on the edge of Wetland JJ – near Corner 11, possibly off site;
4. an area of vegetation removal and trail building, with a pick and rake found near Corner 4;
5. areas where trails have been torn up, holes dug and woody debris moved, possibly for a mountain bike course; this area is immediately east and south east of Wetland LL in a heavily used trail complex;
6. a trail that skirts the east side of Parcel C, along Wetland JJ has had soil banked up in areas for biking;
7. dogs running off leash;
8. several areas of disturbance due to hikers and bikers moving through wetland areas or fringes.

A map of locations of camping and trail modifications was prepared with photos, Map 20. Notification was sent to CCFPD with details and map of disturbances 6/30/2015.

Similar reports were included in previous reports by NES 2008: “Numerous foot trails are located on-site, which have compact bare soils due to frequent use. Vegetation along the sides of trails is typical of adjacent plant communities. Many of the old road grades have become partially re-vegetated; smaller foot trails remain. Disturbance to habitat on the east side of Wetland KK results from mountain biking trails, jumps and associated excavations. This area contains compact soils, un-vegetated areas, and areas with overturned soil from digging.”

Photographs of disturbances are provided below and on the next two pages.







The temporary disturbances described impact the ecology of the CCF. In particular, some foot paths are in sensitive areas around and through wetlands and the trail system infringes on habitat areas. Walking, and in particular biking through wetland areas has impacts to soils, hydrology and wildlife. These areas are breeding grounds for amphibians and if egg masses or larvae are present they would be impacted or destroyed.

Unauthorized trail building, vegetation clearing, digging and moving of soils, and removing of large woody debris have direct impact to the CCF. These actions may directly impact small mammals, amphibians, reptiles and destroy their habitat. The moving of large woody debris is of particular concern since terrestrial amphibians live and reproduce under logs and woody debris and these actions could reduce the population. In addition, trails in parallel with wetlands create a potential “road-kill” zone, where slow moving animals may be killed en masse, particularly amphibians, when crossing to and from wetlands to access upland habitats on a seasonal basis.

People living in temporary camps or shelters in the CCF are of great concern due to numerous direct impacts to the property, water quality, vegetation and wildlife.



Due to seasonal dry conditions, fire is the number one threat to the CCF currently, and people are the primary source of fire in the Puget lowlands. A fire in this urban forest would be devastating and would cause long-term damage.



Dog owners frequently walk their dogs in the CCF and enjoy the open space and trails. However, dogs can impact natural areas. City ordinance requires dogs be on lease in the CCF. Dogs off leash are a potential threat to wildlife and other users. Many dogs are well behaved and follow voice command. However, some dogs off leash may bolt after and chase wildlife, dig out wildlife burrows or dens, disturb foraging wildlife, disturb or destroy ground nesting birds, and enter wetland waters causing disturbance and damage to aquatic ecosystems. In addition, dogs may carry diseases that can be transmitted to wildlife and seeds of non-native invasive plants that can be dropped in the CCF.

These impacts could be reduced by educating users of the importance of leash laws.

Areas of on-trail and off-trail disturbances are widespread. Additional identification and mapping of current disturbed areas would be useful. In order to address disturbances in the CCF, a community-based task force could facilitate a process of restoration and stewardship. This group may include: trail builder/designer, neighbor representatives, user representatives, professional biologist/ecologist, City Park representative, and CCFPD representative with knowledge of trail planning, and maintenance.

Active stewardship would help protect the ecology and natural features of this property. The City Parks rules are posted at the trail entrance.

## **7.2. Master Planning**

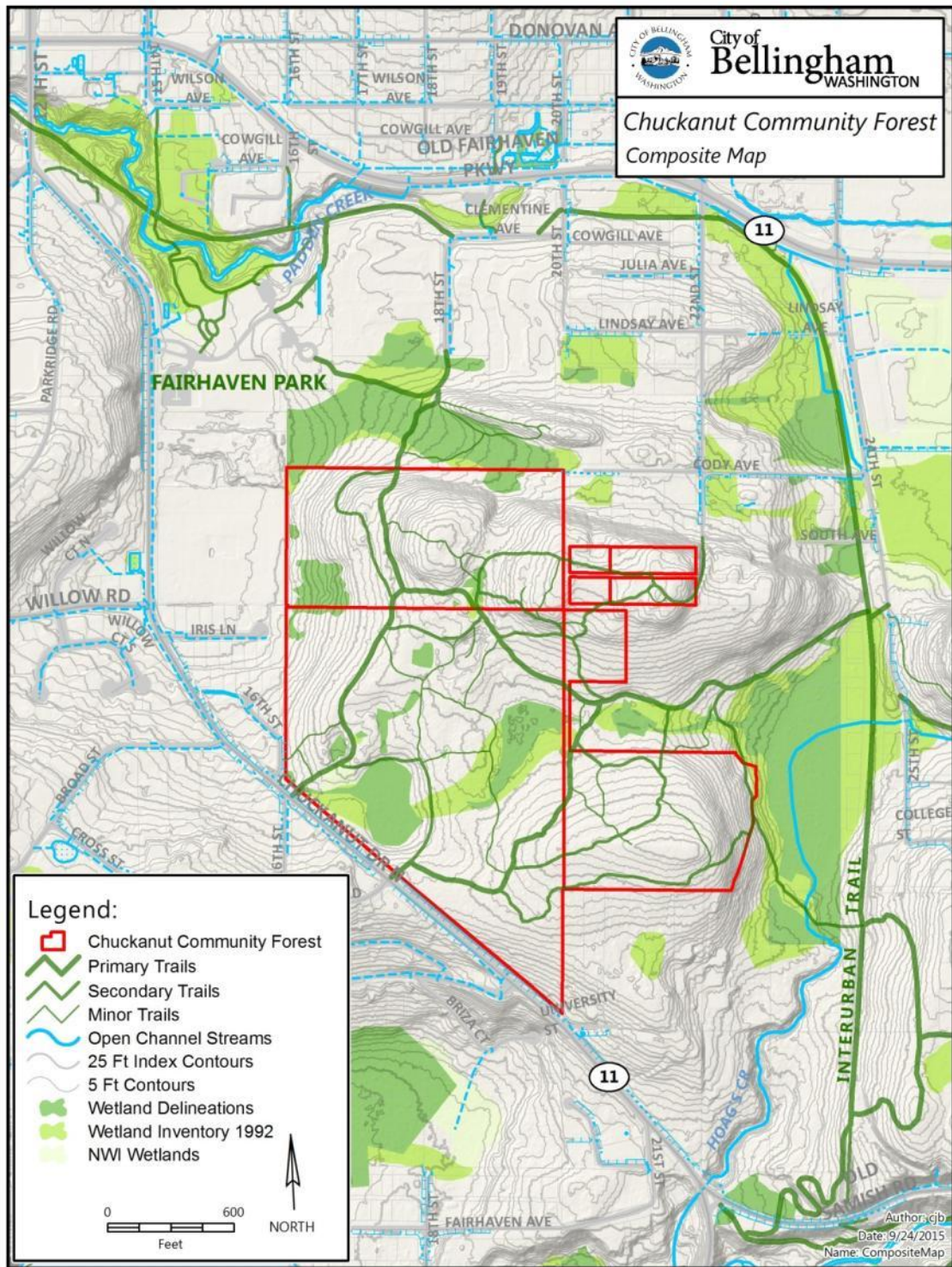
In accordance with the 2014 Interlocal Agreement between the City of Bellingham and the Chuckanut Community Forest Park District, the City agreed to complete a park master plan for the CCF consistent with the intent of the Conservation Easement. Prior to the adoption of a park master plan for the CCF, a baseline data report is required. This Baseline Documentation Report will be used to establish the conditions of the property as of the date of the Easement and document off site references made for comparison. It may also provide the basis for further evaluation of the property and defining of sensitive areas.

Based on visits to the CCF property, and review of existing records, the CCF exhibits habitats of high quality and diversity necessary to support a species rich and diverse wildlife community, yet certain biological groups have not been fully assessed or mapped. There are also known species of special status on the property currently and in the near past; however, the empirical data to fully document species present and effectively map related sensitive areas is lacking.

A wildlife and habitat assessment on the CCF to provide the current status of wildlife and habitats would be useful prior to the park Master Plan or any action or activity that may alter, impact, or remove habitat, or impact wildlife of this property.



Map 21: Composite Map



## 8. Conservation Easement Responsible Parties and Contact Information

**Grantor:** City of Bellingham

**Grantor Representative:** Kelli Linville, Mayor  
Office of Mayor  
210 Lottie Street  
Bellingham WA 98225  
360-778-8100  
[mayorsoffice@cob.org](mailto:mayorsoffice@cob.org)

Leslie Bryson, Director  
Department of Parks and Recreation  
3424 Meridian Street  
Bellingham, WA 98225  
Ph 360-778-7000  
[parks@cob.org](mailto:parks@cob.org)

**Grantee:** Chuckanut Community Forest Park District  
PO Box 4283  
Bellingham, WA 98227

**Grantee Representative:** Vincute Biciunas, President  
Chuckanut Community Forest Park District  
P.O. Box 4283  
Bellingham WA 98227  
[vbici.ccfpd@gmail.com](mailto:vbici.ccfpd@gmail.com)

## 9. Preparer Qualifications and Contact Information

### Preparer of the Chuckanut Community Forest Baseline Documentation Report:

Ann Eissinger, Owner/Wildlife Biologist  
Common Futures LLC  
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ph. 541-753-4670

### Qualifications:

Ann is a professional Wildlife Biologist and Natural Resource Consultant, with 25-years experience working throughout Puget Sound. During this time, she has conducted numerous assessments and prepared baseline and background documents, and related reports for public, tribal and private entities, including Land Trusts. She has served as past Executive Director of the Whatcom Land Trust and continues to work with regional Land Trusts in an advisory capacity, so she is intimately familiar with conservation easements and easement land stewardship. Ann is also very familiar with the Chuckanut Community Forest (Hundred Acre Wood), through her city-wide wildlife and habitat assessment work in 1995 and 2003.



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## **11. Appendices**

### **11.1      Comparable Examples of Selected Uses per Conservation Easement Part IV**

### **11.2      Species Lists**

### **11.3      Legal Information**

#### **11.3.1 Conservation Easement**

#### **11.3.2 Interlocal Agreement**

#### **11.3.3 Title Documents**

### 11.1. Comparable Examples of Selected Uses per Conservation Easement Part IV

As part of the Background Documentation Report, a comparable feature section has been specified by the Chuckanut Community Forest Parks District. Based on references in the Conservation Easement (Section IV) to existing structures and/or facilities within the City of Bellingham, five off-site features are to be described. Each description will contain size, dimension, present use, and photos of each feature.

These descriptions are for information only, and in no way are to be used to advocate for a feature or use as described. All uses of, and improvements made to the Chuckanut Community Forest must first be evaluated for compliance with the purpose of the Conservation Easement, the City's Critical Area Ordinance and be subject to public review. Further any man-made structures or features planned for the CCF must be designed, placed and managed in such a way as to avoid adverse impact to the ecologic function and value of the property.

The five comparable features listed in Section IV of the Conservation Easement are listed as follows, starting with the subparagraph reference;

H) "Tree House" Forest Canopy View Station similar to Sehome Arboretum Tower;

J) Outdoor mature forest wetlands "Touch Tank" similar to indoor tank at the Marine Life Center;

M) "5K Cross Country Running Course" – similar to the unpaved Lake Padden trail, and small portable concession stand for school/fundraising use possible on portion of parking area;

P) "Small Multi-Purpose Outdoor Seating Area" similar to the one at Sehome Arboretum (Outdoor Learning Center);

Q) "Forested Picnic Area (all ages)" with recycle station similar to Boulevard Park.

Each of the five features is identified on a map (Map 22) indicating their current location in Bellingham.

Photographs of each feature follow the text description.

Map 22: Off-Site Features - Examples





The following provides a description of the features as listed above.

## H “Tree House” Forest Canopy View Station similar to Sehome Arboretum Tower

**Location:** On Sehome Hill, north end high point, adjacent to Western Washington University

**Size:** The Sehome Arboretum is 180 acres – designated natural area

**Dimension:** The tower is 41 feet high, 20 feet wide and 25 feet deep. The floor of the viewing platform 30 feet from the ground.

**Present Use:** public viewing of Bellingham to the north and northwest, however views are limited by tree growth and must be maintained. The tower appeared rustic, but in good condition. Sleeping bags and paraphernalia at site indicate use by homeless or vagrant individuals.

**Supporting Infrastructure:** pedestrian access only via paved trail, no immediate lighting or vehicle access. A parking lot is located 800 feet to the south.

**Description:** The Sehome Arboretum Tower is an open, three tiered, post and beam wooden structure, built on a concrete slab, with four large vertical Douglas fir support posts and cross beams. The viewing platform is covered with a western red cedar shake roof. Access to the covered viewing area is by a 4 foot wide stairway, 6 flights of stairs, 9 stairs per flight. The tower was built in 1982 and painted by students.



## J “Touch Tank”

Outdoor mature forest wetlands “Touch Tank” similar to indoor tank at the Marine Life Center;

**Location:** Marine Life Center at the Harbor Center Building – Squalicum Harbor, Roeder Ave. Bellingham.

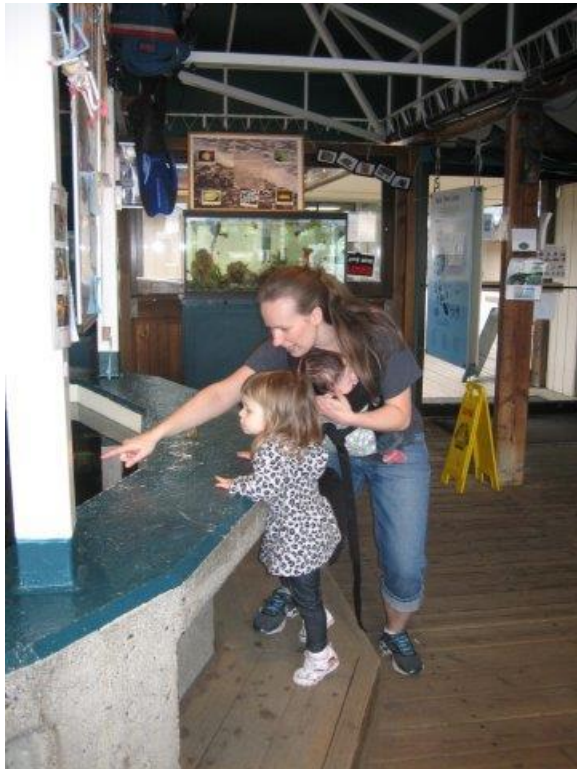
**Size:** The Marine Life Center is 400 square feet.

**Dimension:** The Touch Tank is about 4 foot square, 15-18 inches deep and stands about 30 inches high, with a small step-platform for children to stand on.

**Present Use:** The Marine Life Center provides a small aquarium experience for the general public and is open daily.

**Supporting Infrastructure:** Fully developed location, within a building complex with universal access and security. Facility has electricity and water, including infrastructure for pumping seawater through aquarium. Daily maintenance is required, fully staffed at 8 hours/day, 7 days per week to monitor animal health, water quality and maintain system. The estimated monthly operation cost for the Touch Tank is \$2,800, plus employee staffing approximately \$2,400 per month, plus facility overhead costs.

**Description:** The Marine Life Center is operated by the Marine Discover Project, a non-profit organization with primary funding and facility support provided by the Port of Bellingham. The staff are paid and volunteer. The organisms are all from local waters of Puget Sound and displayed in one large central tank and a few smaller tanks situated around the perimeter of the room. Less fragile animals are in the smaller touch pool.



**M “5K Cross Country Running Course”** – similar to the unpaved Lake Padden trail, and small portable concession stand for school/fundraising use possible on portion of parking area;

**Location:** Lake Padden Park, Bellingham WA

**Size:** The Lake Padden Park area is about 900 acres including a 147 acre lake. The park includes a large network of trails as well as other facilities.

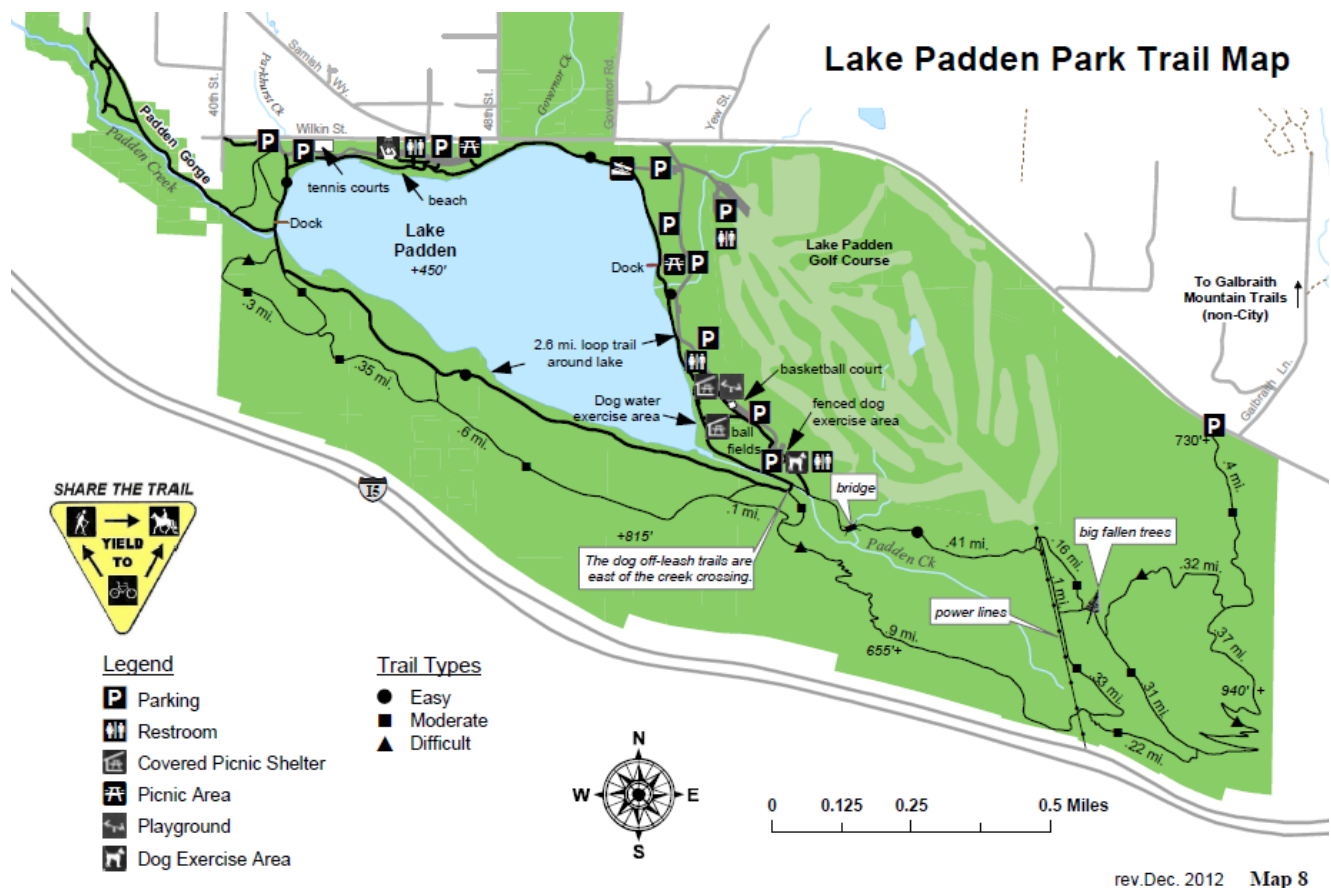
**Dimension:** the main loop trail is about 8 feet wide with cleared shoulders and is 2.6 miles (4.18km) there is also 5.1miles (8.21km) of multipurpose trails south and east of the lake.

**Present Use:** general public recreation, walking, dog walking, running, mountain biking, horseback riding, multi-use site.

**Supporting Infrastructure:** this is a fully developed park, with electricity and running water, restroom facilities, picnic areas, tennis courts, playgrounds, swimming area, trails, fishing dock, boat ramp, fenced dog park, and a full-service 18-hole golfcourse. Parking lots are paved and lighted, daily maintenance required, and the facility is fully staffed.

**Description:** The main trail loops around the lake is both flat and gently rolling through forest with some open areas. The trail surface is crushed gravel in high use areas. Secondary trails are narrower and some are natural dirt surface.

NOTE: There are no designated 5k trails, however, a course can be defined by a race organizer given the miles of existing trails. No permanent concession areas were found at the park or in associated information, but portable concession stands may be allowed.





## 5K Cross County Running Course (continued)





**P “Small Multi-Purpose Outdoor Seating Area”** similar to the one at Sehome Arboretum (Outdoor Learning Center)

**Location:** Sehome Arboretum is located on the Huntoon trail adjacent to WWU and directly east and upslope of the Steam Plant building.

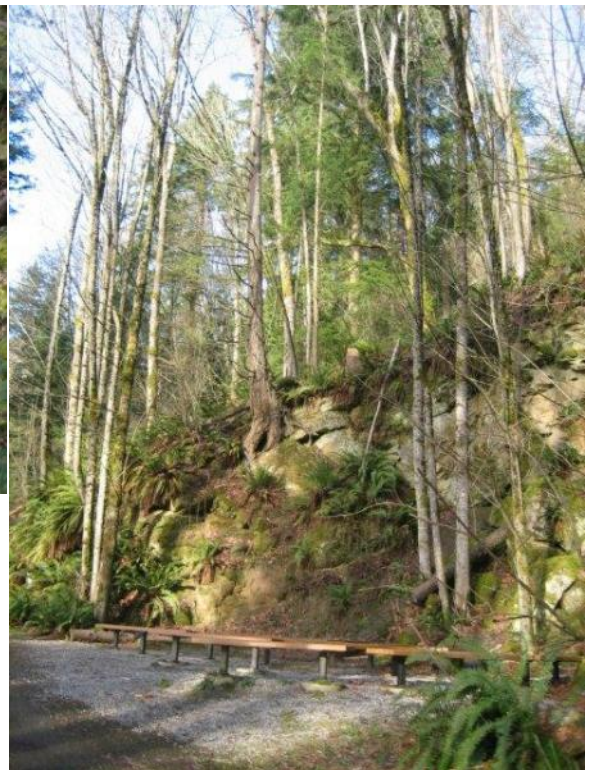
**Size:** seating capacity approximately 36-40

**Dimension:** the seating area is about 40 feet by 22 feet, with 4 rows of 3 benches each.

**Present Use:** current use is unconfirmed, but assumed to be primarily college groups, small classes and students.

**Supporting Infrastructure:** adjacent to WWU, but site is primitive - no lighting, electricity, or water, access is by foot trail only.

**Description:** This outdoor seating area is situated along a forested trail immediately east of the WWU campus. The site is flanked by steep slopes and an exposed sandstone cliff face.





**Q “Forested Picnic Area (all ages)”** with recycle station similar to Boulevard Park.

**Location:** Boulevard Park on Bellingham Bay shoreline near Fairhaven

**Size:** undefined

**Dimension:** single unit picnic benches and tables approximately 4’x4’, mounted on a concrete pad. The recycle bins are fully enclosed in a wooden structure 8’9” wide, 4’ deep and 6’ high, divided into three bays with openings for specified items (see photo below)

**Present Use:** high-use waterfront public park

**Supporting Infrastructure:** Fully developed park, with nearby parking, water, lighting, paved trails, restroom facilities, children’s play area, and adjacent to a full service coffee shop.

**Description:** this forested picnic area is interspersed with lawn, walkways, benches and other facilities in a fully developed shoreline park. Views from this site are of the parking lot (east), or Bellingham Bay (west), this site is very busy, heavily used and highly maintained.





## 11.2. Species Lists – Fungi, Plants, Birds, Mammals

### Preliminary species list of fungi and slime molds in the Chuckanut Community Forest - 12/07/2015

The following list was provided to the CCFPD in 2015, by Fred Rhodes PhD Mycologist and Western Washington University Professor, for inclusion in the Baseline Documentation Report. This list is based on collections made during a spring foray by the Northwest Mushroomers Association to Fairhaven Park and Chuckanut Community Forest on April 13, 2013. A few of these may have been collected in Fairhaven Park outside the CC forest but likely also occur within the forest boundary. Added to this list are other species recognized on walks in the area by Fred Rhoades, Christine Roberts and Buck McAdoo. Fred Rhodes also provided an Excel spreadsheet (stored at the CCFPD) containing details of each record, including a few common names.

Basidiomycota - Gilled mushrooms 75sps  
Agaricus augustus Fr.  
Agaricus diminutivus group  
Chlorophyllum olivieri (Barla) Vellinga  
Chrysomphalina aurantiaca (Peck) Redhead  
Clitocybe deceptiva H.E. Bigelow  
Clitocybe cf. leptoloma (Peck) Peck  
Coprionellus micaceus (Bull.: Fr.) Vilgalys, Hopple & Jacq. Johnson  
Coprionopsis lagopus group  
Coprinus comatus (O.F. Muell.: Fr.) Pers.  
Crepidotus mollis (Fr.) Staude  
Gymnopus peronatus (Bolton: Fr.) Antonin, Halling, & Noordel.  
Hebeloma praeolidum A.H. Sm., V.S. Evenson, & Mitchel  
Hemimycena albidula  
Hemimycena delicatella (Peck) Singer  
Hemimycena gracilis (Quel.) Singer  
Hygrocybe flavescens (Kauffman) Singer  
Hygrocybe punicea (Fr.) P. Kumm.  
Hypholoma capnoides (Fr.) P. Kumm.  
Hypholoma fasciculare (Huds. ex Fr.) P. Kumm.  
Inocybe agglutinata Peck  
Inocybe albodisca Peck  
Inocybe dulcamara (Pers.) P. Kumm.  
Inocybe flocculosa Sacc.  
Inocybe fuscodisca (Peck) Massee  
Inocybe geophylla (Fr.) P. Kumm.  
Inocybe lilacina (Boud.) Kauffman  
Inocybe praecox Kropp, Matheny et Nanagyulyan  
Inocybe rimosa (Bull.: Fr.) P. Kumm.  
Inocybe sororia Kauffman  
Inocybe whitei (Berk. & Broome) Sacc.  
Laccaria amethysteo-occidentalis G.M. Muell.  
Laccaria laccata (Scop.) Fr.  
Lactarius alnicola A.H. Smith  
Lactarius glyciosmus (Fr.) Fr.

*Lactarius luculentus* var. *luculentus* Burl.  
*Lactarius obscuratus* (Lasch) Fr.  
*Lactarius pallescens* Hesler & A.H. Smith  
*Lactarius pseudomucidus* Hesler & A.H. Smith  
*Lepista nuda* (Bull.: Fr.) Cooke  
*Leucoagaricus rubrotinctoides* Murrill  
*Lichenomphalia umbellifera* (L.) Redhead, Lutzoni, Moncalvo & Vilgalys  
*Marasmius oreades* (Bolton: Fr.) Fr.  
*Mycena alnicola* A.H. Smith  
*Mycena filopes* (Bull.: Fr.) P. Kumm.  
*Mycena fragillima* A.H. Smith  
*Mycena laevigata* (Lasch) Quel.  
*Mycena leptcephala* (Fr.) Gillet  
*Mycena pura* (Pers.: Fr.) P. Kumm.  
*Mycena pusilla* A.H. Smith  
*Mycena robusta* (A.H. Sm.) Maas Geest.  
*Mycena stipata* Maas Geest. & Schwoebel  
*Mycena subcana* A.H. Smith  
*Nolanea hirtipes* (Schumach.: Fr.) P. Kumm.  
*Nolanea sericea* (Bull.) P.D. Orton  
*Panus conchatus* (Bull.: Fr.) Fr.  
*Pholiota aurivella* group  
*Pluteus cervinus* (Fr.) P. Kumm  
*Pluteus palidus* Homola  
*Psathyrella ocellata* (Romagn.) M.M. Moser  
*Russula adusta* Fr.  
*Russula brevipes* Peck  
*Russula cerolens* group  
*Russula cessans* A. Pearson  
*Russula densifolia* (Secr.) Gillet  
*Russula dissimulans* Shaffer  
*Russula fragilis* (Pers. ex Fr.) Fr.  
*Russula mordax* Burl.  
*Russula placita* Burl.  
*Russula silvicola* Shaffer  
*Russula versicolor* Jul. Schaeff.  
*Russula xerampelina* (Secr.) Fr.  
*Strobilurus trullisatus* (Murrill) Lennox  
*Tricholoma terreum* group  
*Tricholomopsis decora* (Fr.) Singer  
*Xeromphalina fulvipipes* (Murrill) A.H. Sm.

Basidiomycota - Non-gilled 18 sps  
*Bovista plumbea* Pers.: Pers.  
*Boletopsis leucomelaena* group  
*Cantharellus formosus* Corner  
*Fomitopsis pinicola* (Sw.: Fr.) P. Karst.  
*Fomes fomentarius* (L.: Fr.) J.J. Kickx  
*Geastrum saccatum* Fr.

Helvella compressa (Snyder) N.S. Weber  
Helvella elastica Bull.: Fr.  
Laetiporus conifericola Burdsall & Banik  
Phlebia radiata Fr.  
Polyporus badius (Pers.: Gray) Schwein.  
Stereum complicatum (Fr.) Fr.  
Stereum hirsutum (Willd.: Fr.) Gray  
Suillus caerulescens A.H. Sm. and Thiers  
Trametes versicolor (L.: Fr.) Pilat  
Piptoporus betulinus (Bull.: Fr.) P. Karst.  
Phaeolus schweinitzii (Fr.) Pat.  
Xerocomellus chrysenteron (Bull.) Šutara

Ascomycota Sac fungi 8 sps  
Annulohypoxyton multiforme (Fr.) Y.M. Ju, J.D. Rogers & H.M. Hsieh  
Eutypella prunastri (Pers.) Sacc.  
Morchella importuna M.Kuo, O'Donnell & T.J.Volk.  
Oridea onotica (Pers.) Fuckel  
Peziza 'repanda' Pers.  
Plectania melastoma (Sowerby ex Fr.) Fuckel  
Rhytisma punctatum (Pers.: Fr.) Fr.  
Xylaria hypoxylon (L.) Grev.

Slime molds 5 sps  
Ceratiomyxa fruticulosa (O.F. Müll.) T. Macbr.  
Fuligo septica (L.) F.H. Wigg.  
Lycogala epidendrum (J.C. Buxb. ex L.) Fr.  
Physarum polycephalum Schwein.  
Trichia varia (Pers.) Pers.

For questions or comments, email Fred Rhoades ([fmrhoades@comcast.net](mailto:fmrhoades@comcast.net) )



## Chuckanut Community Forest - Recorded Plant Species List

The plant species list represents those species recorded within the Chuckanut Community Forest property, a total of 98 species. The sources for this information include the following.

- **S&A** - Shapiro and Associates Inc., 1992. Jurisdictional Wetland Determination for Chuckanut Ridge Planned Development for Gacek and Associates, Bellingham WA.
- **ATS** - Aqua-Terr Systems. 1994. Chuckanut Ridge Flora and Fauna Assessment. For Gacek and Associates, Bellingham. WA.
- **NES** - Northwest Ecological Services (NES). 2007. Flora and Fauna Assessment for the Fairhaven Highlands. Greenbriar Northwest Associates, LLC, Langabeer and Tull, Bellingham WA.

Note: there has not been a comprehensive plant or animal inventory or mapping of biotic communities for the CCF. The species included in this list are a result of various field methods and timing. This list is not in taxonomic order.

**X = species recorded for CCF**

Common Name	Genus Species	S&A 1990/92	ATS 1994	NES 2006/07	
<b>TREES (18 species)</b>					
Douglas fir	<i>Pseudotsuga menziesii</i>	x	x	x	
western hemlock	<i>Tsuga heterophylla</i>	x	x	x	
grand fir	<i>Abies grandis</i>	x		x	
Sitka spruce	<i>Picea sitchensis</i>		x		
western red cedar	<i>Thuja plicata</i>	x	x	x	
western yew	<i>Taxus breifolia</i>			x	
big-leaf maple	<i>Acer macrophyllum</i>	x	x	x	
red alder	<i>Alnus rubra</i>	x	x	x	
black cottonwood	<i>Populus balsamifera</i>	x	x	x	
trembling aspen	<i>Populus tremuloides</i>		x		
western paper birch	<i>Betula papyrifera</i>		x	x	
bitter cherry	<i>Prunus emarginata</i>		x		
Scouler's willow	<i>Salix scouleriana</i>	x	x		
Pacific willow	<i>Salix lasiandra</i>		x	x	
vine maple	<i>Acer circinatum</i>	x	x	x	
mountain ash	<i>Sorbus stichensis</i>		x		
black hawthorn	<i>Crataegus douglasii</i>	x			
Pacific ninebark	<i>Physocarpus opulifolius</i>	x			
<b>SHRUBS (16 species)</b>					
red-osier dogwood	<i>Cornus stolonifera</i>	x		x	
Indian plum	<i>Oemleria cerasiformis</i>	x	x	x	
salmonberry	<i>Rubus spectabilis</i>	x	x	x	
red elderberry	<i>Sambucus racemosa</i>		x	x	
black twinberry	<i>Lonicera involucrata</i>		x	x	
thimbleberry	<i>Rubus parviflorus</i>			x	

Common Name	Genus Species	S&A 1990/92	ATS 1994	NES 2006/07	
gooseberry	Ribes sp./lascustre	x		x	
spiraea (hardhack)	Spiraea douglasii	x	x	x	
service berry	Aelanchier alnifolia		x		
snowberry	Symphoricarpos albus	x	x	x	
oceanspray	Holodiscus discolor	x	x	x	
Oregon grape - low	Mahonia nervosa	x	x	x	
Oregon grape - tall	Mahonia aquifolium			x	
salal	Gaultheria shallon		x	x	
red huckleberry	Vaccinium parvifolium		x	x	
devils club	Oplopanax horridus			x	
<b>HERBACIOUS PLANTS</b> (44 species)					
orange honeysuckle	Lonicera ciliosa			x	
sword fern	Polystichum munitum	x	x	x	
spiny wood fern	Dryopteris expansa			x	
lady fern	Athyrium filix-femina	x	x	x	
deer fern	Blechnum spicant				
bracken fern	Pteridium aquilinum				
licorice fern	Polypodium glycyrrhiza			x	
fringecup	Tellima grandiflora		x	x	
western trillium	Trillium ovatum			x	
large-leaf avens	Geum macrophyllum		x	x	
Pacific waterleaf	Hydrophyllum tenuipes	x		x	
false lily of the valley	Maianthemum dilatatum	x	x	x	
vanilla leaf	Achlys triphylla			x	
bleeding heart	Dicentra formosa			x	
piggy-back-plant	Tolmiea menziesii	x	x	x	
western starflower	Trientalis arctica		x	x	
foam flower	Tiarella trifoliata		x		
Creeping buttercup	Ranunculus repens	x	x	x	
tall buttercup	Ranunculus acris			x	
woodland strawberry	Fragaria vesca			x	
Watson's willowherb	Epilobium watsonii	x			
stinging nettle	Urtica dioica	x		x	
cut-leaf blackberry	Rubus laciniatus			x	
trailing blackberry	Rubus ursinus	x	x	x	
cow parsnip	Heracleum lanatum		x	x	
cinquefoil	Potentilla spp.	x			
spearmint	Mentha spicata	x			
American brooklime	Veronica beccabunga americana	x		x	
horsetail	Equisetum sp.	x		x	
tall horsetail	Equisetum arvense				
Indian pipe	Monotropa uniflora		x		
rattlesnake plantain	Goodyera oblongifolia		x	x	
western coralroot	Corallorhiza mackulata		x		

Common Name	Genus Species	S&A 1990/92	ATS 1994	NES 2006/07	
striped coralroot	Corallorhiza striata		x		
Dewey's sedge	Carex deweyana			x	
Henderson's sedge	Carex hendersonii			x	
slough sedge	Carax obnupta	x	x	x	
managrass	Glyceria elata		x	x	
soft rush	Juncus effusus		x	x	
slender rush	Juncus tenuis			x	
common duckweed	Lemna minor		x		
water parsley	Oenanthe sarmentosa	x	x	x	
skunk cabbage	Lysichitum americanum	x	x	x	
bent grass	Agrostis sp.	x			
<b>NON-NATIVES (20 species)</b>					
English hawthorn	Crataegus monogyna			x	
Scott's broom	Cytisus scoparius			x	
reed canary grass	Phalaris arundinacea		x	x	
velvet grass	Holcus tanatus		x	x	
orchard grass	Dactylis glomerata		x	x	
sweet vernalgrass	Anthoxanthum odoratum			x	
tall fescue	Festuca arundinacea			x	
red-top	Agrostia alba		x		
red clover	Trifolium pratense			x	
English plantain	Plantago major		x		
Herb-Robert (stinky bob)	Geranium robertianum			x	
hairy cats-ear	Hypochaeris radicata			x	
common tansy	Tanacetum vulgare			x	
Canadian thistle	Cirsium arvense			x	
cleavers	Galium aparine	x			
periwinkle	Vinca spp.				
Himalayan blackberry	Rubus discolor	x	x	x	
Evergreen blackberry	Rubus laniniatus	x	x		
bloody British ivy	Herera sp.			x	
bloody British holly	Ilex sp.			x	



## Chuckanut Community Forest - Bird Species List

The following bird species list represents those species recorded within the Chuckanut Community Forest property, a total of 51 species. The master list is based on the most recent American Birding Association list of North American Birds, and has been edited down to those species that occur in the general area and are associated with habitats similar to CCF.

The sources for this information include the following.

- **S&A** - Rector, Mark, 1992. Wildlife Studies for the Proposed Chuckanut Ridge Planned Development Project, Shapiro and Associates, Settle WA. Prepared for Gacek and Associates, Bellingham WA.
- **ATS** - Aqua-Terr Systems. 1994. Chuckanut Ridge Flora and Fauna Assessment. For Gacek and Associates, Bellingham. WA.
- **NES** - Northwest Ecological Services. 2007. Flora and Fauna Assessment for the Fairhaven Highlands. Greenbriar Northwest Associates, LLC, Langabeer and Tull, Bellingham WA.
- **AE** – Ann Eissinger, March-April 2015. Incidental observations during 2015 preparation of CCF Baseline Documentation Report.

The dates listed on the table below represent the actual year(s) of data collection, while the references above represent the date of publication.

Note: there has been no comprehensive plant or animal inventory or mapping of biotic communities for the CCF. The species included in this list are a result of various field methods and timing. This list is organized in taxonomic order.

**X = species recorded for CCF**

**\* = species that are likely to occur on the CCF, depending on season and conditions**

Common Name	Genus Species	S&A 1992	ATS 1993-4	NES 2006	AE 2015
Canada Goose	<i>Branta canadensis</i>				
Wood Duck*	<i>Aix sponsa</i>				
Mallard*	<i>Anas platyrhynchos</i>				
Blue-winged Teal	<i>Anas discors</i>				
Cinnamon Teal	<i>Anas cyanoptera</i>				
Northern Shoveler	<i>Anas clypeata</i>				
Northern Pintail	<i>Anas acuta</i>				
Green-winged Teal*	<i>Anas crecca</i>				
Canvasback	<i>Aythya valisineria</i>				
Redhead	<i>Aythya americana</i>				

Common Name	Genus Species	S&A 1992	ATS 1993-4	NES 2006	AE 2015
Ring-necked Duck	Aythya collaris				
Greater Scaup	Aythya marila				
Lesser Scaup	Aythya affinis				
Bufflehead*	Bucephala albeola				
Hooded Merganser*	Lophodytes cucullatus				
California Quail	Callipepla californica				
Ruffed Grouse*	Bonasa umbellus	x			
Pied-billed Grebe	Podilymbus podiceps				
Great Blue Heron*	Ardea herodias				x KK
Green Heron	Butorides virescens				
Black-crowned Night-Heron	Nycticorax nycticorax				
Turkey Vulture	Cathartes aura				
Osprey	Pandion haliaetus				
Bald Eagle*	Haliaeetus leucocephalus				x f/o
Northern Harrier	Circus cyaneus				
Sharp-shinned Hawk*	Accipiter striatus				
Cooper's Hawk*	Accipiter cooperii				
Northern Goshawk	Accipiter gentilis				
Red-tailed Hawk*	Buteo jamaicensis	x			
Rough-legged Hawk	Buteo lagopus				
Virginia Rail	Rallus limicola				
Sora	Porzana carolina				
Killdeer*	Charadrius vociferus	x			
Greater Yellowlegs	Tringa melanoleuca				
Lesser Yellowlegs	Tringa flavipes				
Common Snipe*	Gallinago gallinago				
Band-tailed Pigeon*	Patagioenas fasciata				
Mourning Dove*	Zenaida macroura				
Flammulated Owl	Psiloscops flammeolus				
Western Screech-Owl*	Megascops kennicottii				
Great Horned Owl*	Bubo virginianus				
Northern Pygmy-Owl*	Glaucidium gnoma				
Barred Owl*	Strix varia	x		x	x
Long-eared Owl	Asio otus				
Northern Saw-whet Owl*	Aegolius acadicus				
Common Nighthawk	Chordeiles minor				

Common Name	Genus Species	S&A 1992	ATS 1993-4	NES 2006	AE 2015
Vaux's Swift*	Chaetura vauxi				
Anna's Hummingbird*	Calypete anna				x
Rufous Hummingbird*	Selasphorus rufus		x	x	
Allen's Hummingbird*	Selasphorus sasin				
Calliope Hummingbird	Selasphorus calliope				
Belted Kingfisher*	Megaceryle alcyon	x			
Yellow-bellied Sapsucker*	Sphyrapicus varius				
Red-naped Sapsucker*	Sphyrapicus nuchalis				x
Ladder-backed Woodpecker	Picoides scalaris				
Downy Woodpecker*	Picoides pubescens		x	x	x
Hairy Woodpecker*	Picoides villosus	x	x	x	
American Three-toed Woodpecker	Picoides dorsalis				
Black-backed Woodpecker	Picoides arcticus				
Northern Flicker*	Colaptes auratus	x	x	x	
Pileated Woodpecker*	Dryocopus pileatus	x		x	x
American Kestrel	Falco sparverius				
Merlin*	Falco columbarius				
Peregrine Falcon*	Falco peregrinus				
Olive-sided Flycatcher*	Contopus cooperi				
Western Wood-Pewee*	Contopus sordidulus				
Alder Flycatcher*	Empidonax alnorum				
Willow Flycatcher*	Empidonax traillii				x
Least Flycatcher	Empidonax minimus				
Hammond's Flycatcher*	Empidonax hammondi				
Dusky Flycatcher	Empidonax oberholseri				
Pacific-slope Flycatcher*	Empidonax difficilis		x	x	x
Cassin's Vireo*	Vireo cassinii				
Hutton's Vireo*	Vireo huttoni	x			
Warbling Vireo	Vireo gilvus				
Red-eyed Vireo*	Vireo olivaceus				
Steller's Jay*	Cyanocitta stelleri	x	x		
American Crow*	Corvus brachyrhynchos	x	x	x	
Northwestern Crow*	Corvus caurinus				
Common Raven*	Corvus corax			x	x
Tree Swallow*	Tachycineta bicolor				
Violet-green Swallow*	Tachycineta thalassina				



Common Name	Genus Species	S&A 1992	ATS 1993-4	NES 2006	AE 2015
Northern Rough-winged Swallow*	Stelgidopteryx serripennis				
Cliff Swallow	Petrochelidon pyrrhonota				
Barn Swallow*	Hirundo rustica		x		
Black-capped Chickadee*	Poecile atricapillus	x	x	x	x
Chestnut-backed Chickadee*	Poecile rufescens		x	x	
Bushtit*	Psaltiriparus minimus			x	
Red-breasted Nuthatch*	Sitta canadensis	x	x	x	x
Brown Creeper*	Certhia americana		x		x
House Wren	Troglodytes aedon				
Pacific Wren*	Troglodytes pacificus				
Winter Wren*	Troglodytes hiemalis	x	x	x	x
Marsh Wren	Cistothorus palustris				
Bewick's Wren*	Thryomanes bewickii		x		x
Golden-crowned Kinglet*	Regulus satrapa	x	x		
Ruby-crowned Kinglet*	Regulus calendula				x
Townsend's Solitaire	Myadestes townsendi				
Veery	Catharus fuscescens				
Swainson's Thrush*	Catharus ustulatus	x	x	x	
Hermit Thrush*	Catharus guttatus				
American Robin*	Turdus migratorius	x	x	x	
Varied Thrush*	Ixoreus naevius		x		x
European Starling*	Sturnus vulgaris		x		
American Pipit	Anthus rubescens				
Cedar Waxwing*	Bombycilla cedrorum		x		
Northern Waterthrush	Parkesia noveboracensis				
Orange-crowned Warbler*	Oreothlypis celata			x	x
MacGillivray's Warbler*	Geothlypis tolmiei				
Common Yellowthroat*	Geothlypis trichas				
Yellow Warbler*	Setophaga petechia				
Yellow-rumped Warbler*	Setophaga coronata				x
Black-throated Gray Warbler*	Setophaga nigrescens			x	x
Townsend's Warbler*	Setophaga townsendi				
Hermit Warbler	Setophaga occidentalis				
Wilson's Warbler*	Cardellina pusilla		x	x	
Yellow-breasted Chat	Icteria virens				
Spotted Towhee*	Pipilo maculatus	x	x	x	x

Common Name	Genus Species	S&A 1992	ATS 1993-4	NES 2006	AE 2015
American Tree Sparrow	Spizella arborea				
Chipping Sparrow	Spizella passerina				
Vesper Sparrow	Pooecetes gramineus				
Savannah Sparrow	Passerculus sandwichensis				
Fox Sparrow*	Passerella iliaca				
Song Sparrow*	Melospiza melodia	x	x	x	x
Lincoln's Sparrow	Melospiza lincolnii				
White-crowned Sparrow*	Zonotrichia leucophrys				
Golden-crowned Sparrow*	Zonotrichia atricapilla				
Dark-eyed Junco*	Junco hyemalis	x	x	x	x
Western Tanager*	Piranga ludoviciana		x	x	
Black-headed Grosbeak*	Pheucticus melanocephalus			x	
Lazuli Bunting	Passerina amoena				
Red-winged Blackbird*	Agelaius phoeniceus				
Yellow-headed Blackbird	Xanthocephalus xanthocephalus				
Brewer's Blackbird*	Euphagus cyanocephalus				
Brown-headed Cowbird*	Molothrus ater		x	x	
Bullock's Oriole*	Icterus bullockii				
Pine Grosbeak	Pinicola enucleator				
Common Rosefinch	Carpodacus erythrinus				
House Finch*	Haemorhous mexicanus				x
Purple Finch*	Haemorhous purpureus	x			x
Cassin's Finch*	Haemorhous cassinii				
Red Crossbill*	Loxia curvirostra				x
Pine Siskin*	Spinus pinus	x	x		
American Goldfinch*	Spinus tristis			x	
Evening Grosbeak*	Coccothraustes vespertinus		x		
House Sparrow*	Passer domesticus				
Total species by source		24	27	26	25

f/o = flyover

KK=KK wetland location

Overall total 51 species recorded for the CCF.

## Chuckanut Community Forest – Recorded and Possible Mammals

Between the early 1990's and mid-2000's The Chuckanut Community Forest land was subject to review for flora and fauna. However, there has been no comprehensive plant or animal inventory or mapping of biotic communities for the CCF. In particular, the mammalian species of the CCF have lacked systematic survey and accounting.

The following list is extracted from the Mammals of Washington (2006) and represents 51 species that may occur in the CCF, based on habitat and regional preferences. The list also includes those species observed and recorded on the CCF – 10 species total. This list is organized in taxonomic order.

### **X = species recorded for CCF**

Order DIDELPHIMORPHIA (New World opossums) 1 species

DIDELPHIDAE (New World opossums)

**X** *Didelphis virginiana*, Virginia Opossum. Wooded habitats. Widespread in W lowlands, very local E; introduced from E U.S.

Order INSECTIVORA (insectivores) 8 species

SORICIDAE (shrews)

*Sorex cinereus*, Masked Shrew. Moist forested habitats. Olympic Peninsula, Cascades, and NE corner.

*Sorex vagrans*, Vagrant Shrew. Marshes, meadows, and moist forest.

*Sorex monticolus*, Montane Shrew. Forests. Cascades to coast, NE corner, and Blue Mountains.

**X** *Sorex bendirii*, Pacific Water Shrew. Marshes and stream banks. W of Cascades.

*Sorex trowbridgii*, Trowbridge's Shrew. Forests. Cascades to coast.

TALPIDAE (moles)

*Neurotrichus gibbsii*, Shrew-mole. Moist forests. Cascades to coast.

*Scapanus townsendii*, Townsend's Mole. Meadows. W lowlands.

**X** *Scapanus orarius*, Coast Mole. Most habitats. W lowlands, central E Cascades slopes, and Blue Mountains foothills.

Order CHIROPTERA (bats) 10 species

VESPERTILIONIDAE (vespertilionid bats)

*Myotis lucifugus*, Little Brown Myotis. Roosts in buildings and caves.

*Myotis yumanensis*, Yuma Myotis. All habitats near water, roosting in trees, buildings, and caves.

*Myotis keenii*, Keen's Myotis. Forests, roosting in tree cavities and cliff crevices. Olympic Peninsula.

*Myotis evotis*, Long-eared Myotis. Conifer forests, roosting in tree cavities, caves and buildings; also watercourses in arid regions.

*Myotis volans*, Long-legged Myotis. Coniferous forests, also along watercourses in arid areas, roosting under tree bark and in rock crevices and buildings.

*Myotis californicus*, California Myotis. Most lowland habitats (near water in arid zones), roosting in buildings, rock crevices and snags.

*Lasiurus cinereus*, Hoary Bat. Forested areas, roosting among tree foliage. Might be found anywhere in migration.

*Lasionycter noctivagans*, Silver-haired Bat. Forested areas, roosting under bark.

*Eptesicus fuscus*, Big Brown Bat. All habitats, roosting in tree cavities, buildings, and rock crevices.

*Plecotus townsendii*, Western Big-eared Bat. All habitats, roosting in caves and mine shafts.



Order LAGOMORPHA (lagomorphs) 2 species

LEPORIDAE (hares and rabbits)

**X** *Sylvilagus floridanus*, Eastern Cottontail. Meadows and open woodlands. Local in lowlands; introduced from E U.S.

*Lepus americanus*, Snowshoe Hare. Forests. Throughout except Columbia Basin.

Order RODENTIA (rodents) 19 species

APLODONTIDAE (mountain beaver)

*Apodonta rufa*, Mountain Beaver. Forests and clearings. Cascades to coast.

SCIURIDAE (squirrels)

**X** *Tamias townsendii*, Townsend's Chipmunk. Wet forests from E slope of Cascades to coast.

**X** *Sciurus carolinensis*, Eastern Gray Squirrel. Cities and towns. Puget Trough, Yakima valley, and Spokane; introduced from E U.S.

*Sciurus niger*, Eastern Fox Squirrel. Cities and towns. Introduced from E North America and established in a few places in E lowlands; other introductions have not persisted.

**X** *Tamiasciurus douglasii*, Douglas' Squirrel. Conifer forests. Cascades to coast.

*Glaucomys sabrinus*, Northern Flying Squirrel. Forests. Throughout except Columbia Basin.

CASTORIDAE (beavers) historical account immediately off-site

*Castor canadensis*, Beaver. Wetlands.

MURIDAE (rats and mice)

*Peromyscus maniculatus*, Deer Mouse. All habitats but much less common in wet forests inhabited by next species.

*Peromyscus keeni*, Forest Deer Mouse. Wet forests. Cascades to coast (but not Puget Sound islands), often with preceding species. Formerly *Peromyscus oreas*, Columbia Mouse.

*Clethrionomys gapperi*, Gapper's Red-backed Vole. Forests. Throughout except Columbia Basin.

*Microtus townsendii*, Townsend's Vole. Marshes, wet meadows, and riparian woodlands. W lowlands.

*Microtus longicaudus*, Long-tailed Vole. Moist habitats, lowlands and mountains. Throughout except Columbia Basin.

*Microtus oregoni*, Creeping Vole. Moist habitats. Cascades to coast.

*Ondatra zibethicus*, Muskrat. Wetlands.

*Rattus rattus*, Black Rat. Most habitats, especially near habitations. Mostly W lowlands; introduced from Europe.

*Rattus norvegicus*, Norway Rat. Usually associated with humans. Introduced from Europe.

*Mus musculus*, House Mouse. Most habitats, especially near habitations. Introduced from Europe.

DIPODIDAE (jumping mice)

*Zapus trinotatus*, Pacific Jumping Mouse. Forest clearings and meadows. Cascades to coast.

ERETHIZONTIDAE (New World porcupines)

*Erethizon dorsatum*, Porcupine. Open forest to shrub steppe.

Order CARNIVORA (carnivores) 10 species

Suborder FISSIPEDIA

CANIDAE (canids)

**X** *Canis latrans*, Coyote. All habitats.

*Vulpes vulpes*, Red Fox. Forests and woodlands. Mountains (native populations) and lowlands

URSIDAE (bears) - unlikely

*Ursus americanus*, Black Bear. Forested and semiopen areas. Throughout except Columbia Basin.

PROCYONIDAE (procyonids)

X *Procyon lotor*, Raccoon. Wooded areas. W lowlands and along Columbia/Snake river systems.

MUSTELIDAE (mustelids)

*Mustela frenata*, Long-tailed Weasel. All habitats.

*Mustela vison*, Mink. Wetlands. Throughout but rare in Columbia Basin.

*Spilogale gracilis*, Western Spotted Skunk. Woodlands and thickets. W lowlands and Blue Mountains foothills.

*Mephitis mephitis*, Striped Skunk. All habitats except sagebrush, more in open areas than proceeding species.

FELIDAE (cats)

*Felis concolor*, Mountain Lion. All habitats. Throughout except Columbia Basin.

*Lynx rufus*, Bobcat. All habitats.

Order ARTIODACTYLA (even-toed ungulates) 1 species

CERVIDAE (deer)

X *Odocoileus hemionus*, Mule Deer. All habitats. Subspecies W of Cascades called "Blacktail Deer."

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**Mammals of Washington**

Information about land mammals from Terrestrial Mammals of Washington State, Location Data and Predicted Distributions, Washington State Gap Analysis Project Final Report, Vol. 3, by R. E. Johnson & K. M. Cassidy, 1997. Compiled by Dennis R. Paulson, last updated April 2006.

### 11.3. Legal Information



### 11.3.1. Copy of Conservation Easement

 2140100259  
Page: 1 of 15  
1/06/2014 10:23 AM  
EASE \$86.00  
Whatcom County, WA  
Request of: ZENDER THURSTON P.S.

After Recording Return To:

Robert A. Carmichael  
1700 D Street  
Bellingham, WA 98229

DOCUMENT TITLE:  
**CHUCKANUT COMMUNITY FOREST CONSERVATION EASEMENT**

GRANTOR:  
**CITY OF BELLINGHAM**

GRANTEE:  
**CHUCKANUT COMMUNITY FOREST PARK DISTRICT**

ABBREVIATED LEGAL DESCRIPTION:  
Ptn of S  $\frac{1}{2}$  SW  $\frac{1}{4}$  Sec 12 TWP 37 N Rge 3 E  
Lot B, as delineated on Chuckanut Trust Lot Line Adjustment  
Lots 1-24, Block 1, Map of Diffenbachers Addition to Fairhaven  
Full legal description at page 14

ASSESSOR'S TAX PARCEL NUMBERS:  
370212 359328 0000  
370212 364207 0000  
370212 478165 0000  
370212 447323 0000  
370212 477313 0000

## **CHUCKANUT COMMUNITY FOREST CONSERVATION EASEMENT**

### **I. PARTIES.**

This Grant of a Conservation Easement ("Conservation Easement" or "Easement") is made by the City of Bellingham, a municipal corporation organized under the laws of the State of Washington ("Grantor" or "City"), to the Chuckanut Community Forest Park District, a municipal corporation organized under the laws of the state of Washington ("Grantee" or "Park District").

### **II. FACTS, OBJECTIVES AND PURPOSES.**

Grantor owns real property in Whatcom County, Washington, referred to hereafter as the "Property", the legal description of which is attached as Exhibit A. A sketch map of the Property is attached as Exhibit B.

The Grantee is a metropolitan park district organized pursuant to RCW 35.61 by public vote to ensure that the Property's ecological, recreational, and educational functions are protected in perpetuity.

The City purchased the Property from Washington Federal Savings Bank for \$8.2 million using greenways funds, park impact fees, and a Greenways Endowment Fund Loan ("Loan") of \$3,232,021.60. The City's grant of the Conservation Easement to the Park District is in consideration for: (1) the Park District paying off the Loan and accrued interest on the Loan; and (2) the Park District formally dissolving in accordance with RCW 35.61.310 effective no later than one year from the date the City petitions the Park District to dissolve. The City will file a petition for dissolution of the Park District pursuant to RCW 35.61.310 after the Loan is paid off, but not before that time, subject to the terms in the "Interlocal Agreement." The City and the Park District have entered into an "Interlocal Agreement" specifying the terms for the Park District's payment of the Loan.

The approximately eighty-two (82) acre Property is located on the south side of the City of Bellingham and is locally known as Chuckanut Ridge or the Hundred Acre Wood. The Property is mostly forested and contains wetlands, steep slopes, and a variety of plant species. The Property also provides wildlife habitat and habitat corridors for a number of species and was listed as one of the City's "significant habitats" in the City of Bellingham Wildlife and Habitat Assessment and Wildlife Habitat Plan, December 1995.

The intent of the Grantor and Grantee and the purpose of this Conservation Easement are to assure that the natural features, functions and values of the Property are protected in perpetuity including the existing wetlands, forest, wildlife habitat, wildlife habitat corridors, and other features of ecological significance; while also allowing for the

recreational, educational, and scientific uses named in Section IV. The uses allowed pursuant to Section IV shall be sited, designed, maintained, and operated so as to minimize the impact to the natural attributes of the Property.

### **III. GRANT OF CONSERVATION EASEMENT.**

Grantor hereby conveys to Grantee, its successors and assigns, in perpetuity, a Conservation Easement ("Easement") pursuant to Revised Code of Washington RCW 84.34.210, over the Property. The Easement consists of mutual rights and obligations and is subject to the reservation of rights set forth below. Rights, obligations and reservations all operate as covenants running with the land in perpetuity.

### **IV. PERMITTED USES, PRACTICES AND RIGHTS RESERVED BY GRANTOR.**

The Grantor shall have the right to do or permit the following on the Property:

1. Allow nature oriented, non-motorized public recreational, scientific, and educational uses and construction of appropriate facilities to enhance the nature oriented public recreational or educational/research uses such as:
  - a. facilities for motor vehicle parking on the Property located, if possible, near perimeter boundaries;
  - b. facilities and access for on-site education or research related to objectives and purposes of the Easement;
  - c. trails (including, but not limited to, walking, mountain bike, forest overlook/view, natural wildlife/habitat interpretive, birdwatcher, and disabled-accessible trails), boardwalks, and bridges;
  - d. benches;
  - e. plaques for recognition, memorial, or educational purposes;
  - f. restrooms, pavilions, and educational/interpretive buildings;
  - g. directional, informational, or educational signs;
  - h. "Tree House" forest canopy viewing stations similar to the Sehome Arboretum tower;
  - i. Kid-friendly wildlife/habitat observation "Blinds";



- j. Outdoor mature forested wetlands "Touch Tank" similar to the indoor tank at the Marine Life Center;
- k. Mid-successional forest and wetlands "Native Flora/Fauna Gardens";
- l. Dual-purpose "Eco Pod" and "Yurt" forest campsites/field research labs (safety-approved fire pits/grills possible);
- m. 5k cross country running course similar to the unpaved Lake Padden trail (small portable concession stand for school/fundraising use possible on portion of parking area);
- n. Off-leash dog trails with centralized, forested obstacle/exercise area;
- o. An Urban Forested Wetlands Ecology Center;
- p. Small multi-purpose outdoor seating arena similar to the one in Sehome Arboretum;
- q. All-ages forested picnic areas with recycle station similar to the one at Boulevard Park;
- r. Hike-in uplands "View Pavilion" (covered structure); and
- s. Steep-slope hazard area education site designed with kid-friendly "Mud Slide" and other hands-on learning activity exhibits.

Provided that, such uses and facilities do not adversely impact the critical areas on the Property as defined by the City's Critical Areas Ordinance (Bellingham Municipal Code Chapter 16.55, "Critical Areas Ordinance") without adequate mitigation. Mitigation of any adverse impact to a critical area on the Property shall take place on the Property or on adjacent property if a qualified wetland biologist determines that offsite mitigation is environmentally preferable and if such off-site mitigation is allowed and approved under the Critical Areas Ordinance.

- 2. With reasonable prior written notice to Grantee, remove trees that are invasive, diseased or present a safety hazard to people or property. However, the Grantor may remove trees without prior notice to Grantee if the trees present an immediate safety hazard.

3. Make modest clearings to create viewpoints.
4. Plant native trees and vegetation and conduct other activity to enhance and protect water quality, critical areas, and wildlife habitat.
5. Control invasive, non-native species by means that do not harm water quality, critical areas or wildlife habitat.
6. Operate motor vehicles for the maintenance and development of the Property consistent with the permitted uses listed herein.
7. Maintain, repair, expand, improve, decommission, or retain trails on Property, consistent with the intent of this Easement and future City master plan.
8. Undertake other activities necessary to protect public health or safety on the Property, or that are actively required by any governmental agency with authority. Any such activity shall be conducted so that interference with the ecological values of the Property is avoided, or if avoidance is not possible, minimized to the maximum extent possible.

**V. RESTRICTIONS ON USE.**

Grantor may prohibit uses on the Property independent of this Easement. **Except as provided above,** the Grantor shall not on the Property do or permit any of the following:

1. Harvest, cut or remove trees or other vegetation except as allowed pursuant to Section IV, consistent with the purposes identified in this Conservation Easement.
2. Build or place roads or buildings of any type.
3. Explore for or extract minerals, hydrocarbons or other materials, except as expressly authorized pursuant to mineral, oil, or gas reservations or leases recorded prior to and continuing in existence on the date of this Easement.
4. Trapping or hunting of animals except to deal with a local public health emergency.
5. Excavate or grade the Property or otherwise materially alter the landscape or topography except as necessary for one of the permitted uses, practices and rights identified in Section IV above.

6. Subdivide the Property in any manner.
7. Make residential, commercial, or industrial use of the Property other than an apartment for a residential caretaker and de minimus use of the Property for commercial recreation.
8. Operate motor vehicles, except as is necessary for the development and management of the Property as allowed in Section IV; provided further that, an existing driveway serving a single family residence on an adjoining parcel pursuant to a License Agreement recorded at Whatcom County Auditor File No.893239 which may encroach on the southerly tip of Parcel C on Exhibit B and may continue so long as its use remains limited to providing ingress and egress to said single family residence only and so long as its width and length are not expanded.
9. Store derelict vehicles or waste of any kind.
10. Building or maintaining of fires except for purposes identified in this Conservation Easement.
11. Allow overnight camping except for purposes identified in this Conservation Easement.
12. Provide athletic facilities or ball fields of any kind.
13. Widen existing trails for bicycle use or build new trails for bicycle use except pursuant to an adopted master plan.
14. Grant other easements except for trails including those easements obtained through eminent domain.
15. Use or apply pesticides or herbicides on the Property including for activities allowed under Section IV; except if such use is the only reasonably feasible means to control invasive, non-native species and then only if such use can be accomplished without harming water quality or critical areas. Before any pesticide or herbicide use is allowed, the necessary risks from use shall be evaluated using best available science to determine if such use will cause adverse impacts to water quality or critical areas. Should the results of the evaluation reveal adverse impact, said use shall be minimized.
16. Use of the Property contrary to the purposes of this Easement.

## **VI. RIGHTS AND RESPONSIBILITIES OF GRANTEE.**

Grantor grants and Grantee accepts the right and shared responsibility to preserve and protect in perpetuity the natural features, functions and values of the Property including the existing wetlands, forest, and wildlife habitat consistent with the terms of this Easement. In connection with such rights and responsibilities:

1. Grantor grants to Grantee the right to enter the Property, to observe and monitor compliance with the terms of this Easement.
2. Should Grantor, its successors or assigns, undertake any activity on the Property in violation of this Easement, or should Grantor permit an activity on the Property in violation of this Easement, Grantee shall have the right to enjoin and abate any such activity. In addition, Grantee shall have the right to recover damages from Grantor or to compel the restoration by Grantor of that portion of the Property affected by such activity to the condition that existed prior to the undertaking of such unauthorized activity. In the event Grantee commences a legal action against the Grantor or otherwise seeks to enforce the terms of this Easement against the Grantor, the prevailing party in any such matter shall be entitled to an award of damages, including, if applicable, costs of restoration, expenses and costs of suit, including attorneys' fees and expert witness fees.
3. Any forbearance by Grantor or Grantee to exercise any rights under this Easement in the event of a breach shall not be deemed to be a waiver of Grantor's or Grantee's rights hereunder.
4. Grantee shall indemnify, appear and defend, and hold harmless Grantor from all claims, lawsuits and liabilities of any kind, including attorney's fees and costs, arising from any negligent act or omission by Grantee in connection with its performance under this Agreement; except to the extent such claim, lawsuit, or liability arises from the negligence of the Grantor.

## **VII. BASELINE DATA.**

In order to establish the present condition of the Property so as to be able to properly monitor future uses of the Property and assure compliance with the terms of this Agreement, Grantor and Grantee shall, prior to the adoption of the park master plan, prepare or cause to be prepared by a mutually agreed upon qualified person(s) with relevant scientific education, training, and experience, an inventory of the Property's relevant features and conditions, known as baseline data. The baseline data shall be used to establish the condition of the Property as of the date of this Easement and document



off-site references made for comparison in Section V. The Park District will pay up to \$10,000 for gathering the baseline data.

#### **VIII. GRANTOR'S RESPONSIBILITIES.**

1. Grantor agrees to bear all costs of ownership, operation, improvements, administration, upkeep, management and maintenance of the Property and shall indemnify, appear and defend, and hold harmless the Grantee from all claims, lawsuits and liabilities of any kind, including attorney's fees and costs, arising from any act or omission of Grantor in connection with its ownership, management, maintenance, or administration of the Property, or in connection with public use of the Property, or for any negligent act or omission in connection with its performance of this Agreement; except to the extent such claim, lawsuit, or liability arises from the negligence of the Grantee.
2. Grantor shall pay all real property taxes and assessments levied on the Property.
3. Before construction of new facilities or upgrades of existing facilities that go beyond maintenance can occur, the Grantor shall adopt a master plan for the Property.
4. Facilities which are built and maintained on the Property shall be located, designed and constructed so as to avoid and where necessary minimize impact on critical areas and wildlife habitat.
5. Trail details such as decommissioning or upgrading existing trails, creating new trails, and maintaining trails will be determined in the master plan process.
6. Grantor shall take reasonable steps to direct and confine public access to defined and maintained trail surfaces and designated areas and to prevent damage to ground cover, understory vegetation and disturbance of wildlife from off-trail public use.
7. If dogs are allowed on the Property, Grantor shall require compliance with the City of Bellingham's animal leash laws except as provided in the park master plan and laws requiring immediate removal of animal waste on the Property.

#### **IX. ASSIGNMENT OF GRANTEE'S INTERESTS.**

The Grantee may assign its interests in this Easement to a "qualified" organization within the meaning of Section 170(h) of the Internal Revenue Code of 1954, as amended, and RCW 64.04.130 and RCW 84.34.250. Should the Grantee cease to exist, this Easement would be assigned to such an organization. Grantee shall give the Grantor 30-days

advance written notice of its intent to assign its interests in this Easement to a "qualified" organization, including the name of the organization.

#### **X. TERM OF CONSERVATION EASEMENT.**

This Easement shall run with the Property in perpetuity and shall bind the Grantor and Grantee, their successors and assigns forever. However, the City may elect to terminate the Easement if: (1) following a notice of deficiency, the Park District remains delinquent on its payments on the Loan for two consecutive years as provided in the Interlocal Agreement; (2) the Park District incurs long-term debt ("long-term debt" shall mean debt not repaid in one year or less; it shall not mean the Loan defined in the Interlocal Agreement) through acquisition of an interest in or leasing of any real property, funding a capital project, or entering into an employment agreement, without advance City approval; or (3) the Park District has not formally dissolved in accordance with RCW 35.61.310 within one year of the date the City's files a petition for dissolution of the Park District. If any of the three conditions is met, upon receiving notice to terminate the Conservation Easement from the City, the Park District shall timely execute and record an appropriate deed reconveying the Conservation Easement to the City. If the Park District fails to take such action after notice from the City, the City may file a quiet title action in Whatcom County Superior Court to establish that the Conservation Easement is terminated under the terms of the Conservation Easement and Interlocal Agreement. The prevailing party in any such quiet title action shall be entitled to an award of reasonable attorneys' fees and costs.

#### **XI. PROPERTY INTEREST.**

Grantor and Grantee agree that this Easement gives rise to a property right immediately vested in the Grantee, which right has a fair market value that is equal to the proportionate value that the Easement bears to the value of the Property as a whole, upon the date of the execution of the Easement.

If all the purposes of this Easement become impossible to accomplish because of a change of circumstances, this Easement can be extinguished only by judicial proceedings, and on subsequent disposal of the Property, the Grantee is entitled to a portion of the proceeds equal to the proportionate value of the Conservation Easement. In the event of condemnation of the Property in whole or in part, Grantee shall be entitled to compensation proportionate to the loss of conservation values caused by the condemnation.

## **XII. MISCELLANEOUS.**

1. The terms Grantor and Grantee, wherever used in this Easement, shall include the above-named Grantor and its successors and assigns, and the above-named Grantee and its successors and assigns.
2. In the event that any of the provisions contained in this Easement are declared invalid or unenforceable in the future, all remaining provisions shall remain in effect.
3. Notice to Grantee shall be to the Clerk of Grantee, who until further notice shall be:

Vince Biciunas, Clerk  
P.O. Box 4283  
Bellingham, WA 98227

Copy to: Attorney for Park District  
1700 "D" Street  
Bellingham, WA 98225

Notice to Grantor shall be to the Director of Parks for Grantor, who until further notice shall be:

Bellingham Parks Director  
3424 Meridian St.  
Bellingham, WA 98225

Copy to: City Attorney  
210 Lottie St.  
Bellingham, WA 98225

4. This Easement, along with the Interlocal Agreement entered into between the parties of same date herewith, sets forth the entire agreement of the parties and supersedes all prior discussions, negotiations, understandings, or agreements relating to the Property. No alteration or variation of this instrument shall be valid or binding unless it is in writing and properly executed and acknowledged by both parties. The interpretation and the performance of this Easement shall be governed by the laws of the State of Washington.
5. This Easement shall be liberally construed in favor of the grant to effectuate the objectives and purposes of this Easement particularly as set forth in Section II and the policy and purpose of RCW 64.04.130 and Chapter 84.34 RCW. If any provision in this instrument is found to be ambiguous, an interpretation consistent

with the objectives and purposes of this Easement that would render the provision valid should be favored over any interpretation that would render it invalid.


IN WITNESS WHEREOF, Grantor and Grantee have executed this Conservation Easement this 3rd day of January, 2018.

**GRANTOR: THE CITY**


CITY OF BELLINGHAM

  
Kelli Linville  
Mayor


Department Approval:

  
James King  
Department of Parks and Recreation

Approved As To Form:

  
Alan Marriner  
Office of City Attorney

Attest:

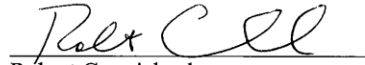
  
Brian Henshaw  
Interim Finance Director

**GRANTEE: THE DISTRICT**

PARK DISTRICT

  
John Hymas  
President

Approved as to Form:

  
Robert Carmichael  
Attorney for Park District



STATE OF WASHINGTON           )  
                                                  ) ss:  
COUNTY OF WHATCOM        )

I certify that I know or have satisfactory evidence that Kelli Linville is the person who appeared before me, and said person acknowledged that she signed this instrument, on oath stated that she was authorized to execute the instrument, and acknowledged it as the Mayor of the City of Bellingham to be the free and voluntary act of such party for the uses and purposes mentioned in the instrument.

DATE: 12/27/13



Tracy Lewis  
NOTARY PUBLIC  
Printed Name: Tracy Lewis  
My Commission Expires: 10/20/14

STATE OF WASHINGTON           )  
                                                  ) ss:  
COUNTY OF WHATCOM        )

I certify that I know or have satisfactory evidence that Brian Henshaw is the person who appeared before me, and said person acknowledged that he signed this instrument, on oath stated that he was authorized to execute the instrument, and acknowledged it as the Interim Finance Director of the City of Bellingham to be the free and voluntary act of such party for the uses and purposes mentioned in the instrument.

DATE: 12/30/2013




Linda D. Anderson  
NOTARY PUBLIC  
Printed Name: LINDA D. ANDERSON  
My Commission Expires: 9/29/2014

STATE OF WASHINGTON            )  
                                                  ) ss.  
COUNTY OF WHATCOM         )

I certify that I know or have satisfactory evidence that John Hymas is the person who appeared before me, and said person acknowledged that he signed this instrument, on oath stated that he was authorized to execute the instrument, and acknowledged it as the President of the CHUCKANUT COMMUNITY FOREST PARK DISTRICT to be the free and voluntary act of such party for the uses and purposes mentioned in the instrument.

DATE: 1/3/2014



  
NOTARY PUBLIC  
Print Name: Sabrina L. England  
My Commission Expires: 8/22/14

## **EXHIBIT A**

### PARCEL A (370212 359328 0000):

The south half of the southwest quarter of the northeast quarter of Section 12, Township 37 North, Range 2 East of W.M., except that right-of-way lying along the easterly line thereof, commonly referred to as 20<sup>th</sup> Street.

### PARCEL B (370212 364207 0000):

That part of the northwest quarter of the southeast quarter, and that part of the southwest quarter of the southeast quarter of Section 12, Township 37 North, Range 2 East of W.M., lying northerly of Chuckanut Drive.

### PARCEL C (370212 478165 0000):

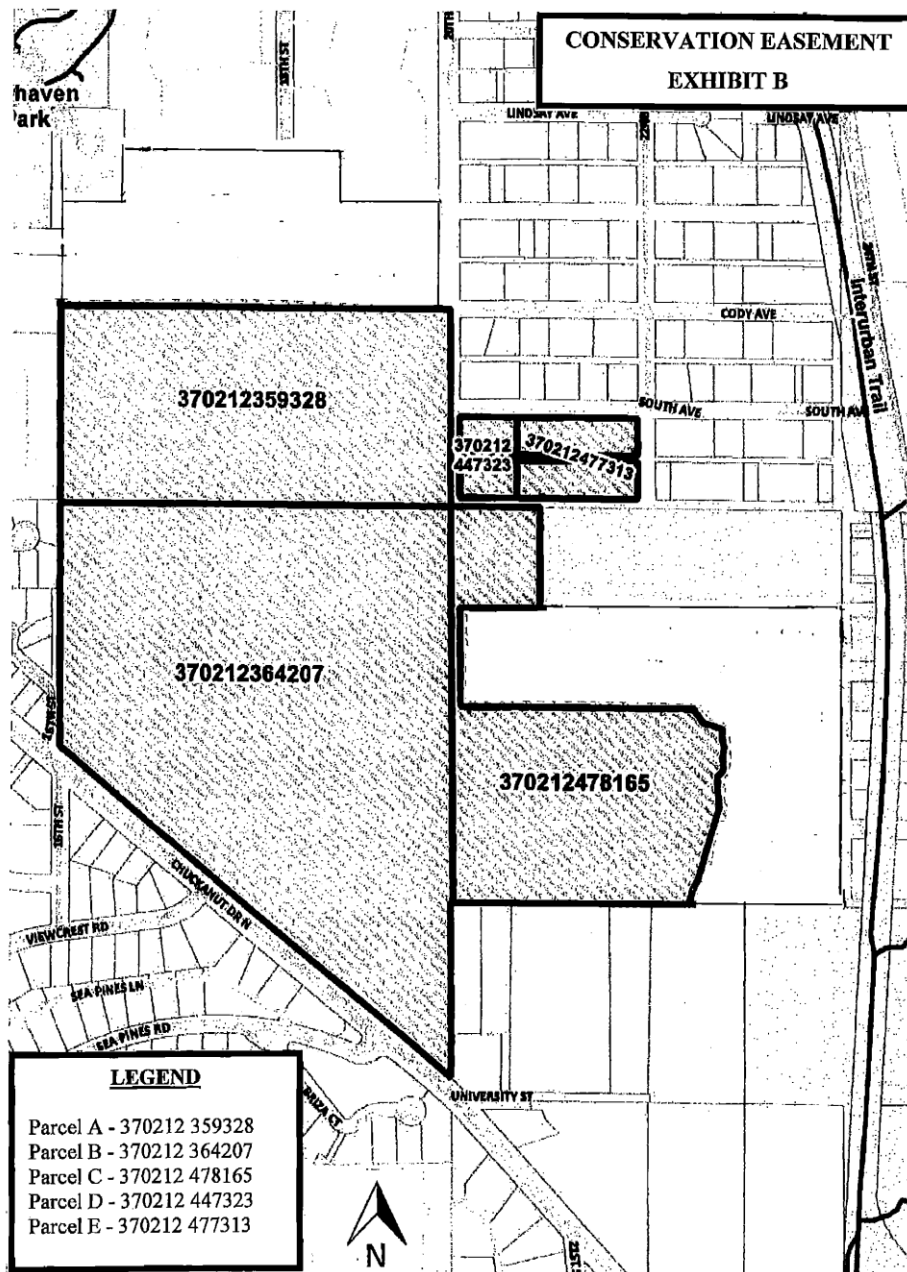
Lot B, as delineated on Chuckanut Trust Lot Line Adjustment, according to the plat thereof, recorded under Auditor's File No. 961219101, records of Whatcom County, Washington.

### PARCEL D (370212 447323 0000):

Lots 1 through 4 and Lots 21 through 24, inclusive, Block 1, Map of Diffenbachers Addition to Fairhaven, now a part of the consolidated City of Bellingham, Whatcom County, Washington, according to the plat thereof, recorded in Volume 1 of Plats, Page 51, records of Whatcom County, Washington.

### PARCEL E (370212 477313 0000):

Lots 5 through 20, inclusive, Block 1, Map of Diffenbachers Addition to Fairhaven, now a part of the consolidated City of Bellingham, Whatcom County, Washington, according to the plat thereof, recorded in Volume 1 of Plats, Page 51, records of Whatcom County, Washington.





### 11.3.2. Interlocal Agreement

#### **INTERLOCAL AGREEMENT BETWEEN THE CITY OF BELLINGHAM AND THE CHUCKANUT COMMUNITY FOREST PARK DISTRICT FOR REPAYMENT OF THE GREENWAYS ENDOWMENT FUND LOAN USED TO PURCHASE THE CHUCKANUT COMMUNITY FOREST**

**THIS INTERLOCAL AGREEMENT** (the "Agreement") between the City of Bellingham ("City"), a municipal corporation, and the Chuckanut Community Forest Park District ("Park District"), a metropolitan park district, is entered into pursuant to the Interlocal Cooperation Act, RCW 39.34.

**WHEREAS**, in August 2011, the City purchased the 82-acre Chuckanut Community Forest, also known as Chuckanut Ridge, Fairhaven Highlands, and the Hundred Acre Wood ("Property"); and

**WHEREAS**, the City purchased the Property from Washington Federal for \$8.2 million using greenways funds, park impact fees, and a Greenways Endowment Fund Loan ("Loan") of \$3,232,021.60; and

**WHEREAS**, interest generated by the Greenways Endowment Fund is used to pay for park maintenance; and

**WHEREAS**, when City Council approved the financing plan to purchase the Property, members agreed to explore a variety of options for paying back the Loan from the Greenways Endowment Fund; and

**WHEREAS**, on February 12, 2013, voters in a southern portion of the City approved a ballot measure to create the Chuckanut Community Forest Park District ("Park District") that will tax property owners within the Park District to repay the Loan from the Greenways Endowment Fund; and

**WHEREAS**, an election of Commissioners for the new Park District took place simultaneously with the ballot measure to create the Park District; and

**WHEREAS**, the mission of the Park District is to ensure the entirety of the Property is protected in perpetuity in public ownership, with respect for its ecological, recreational and educational functions, and to serve as a fiscal mechanism through which the District, via a tax levy, will repay the City's Greenways Endowment Fund Loan; and

**WHEREAS**, on July 15, 2013, the Bellingham City Council voted to docket a legislative rezone of the Property from Residential Multi, Planned to Public, Open Space as part of its 2014 Comprehensive Plan amendment docket; and

**WHEREAS**, in addition to the 82-acre Chuckanut Community Forest Property, this proposed legislative rezone also includes an additional 29 acres ("Additional Acreage") owned by the City adjacent to the Property for a total rezone area of 111 acres; and

**WHEREAS**, the City and the Park District desire to enter into this Agreement to define the terms and conditions under which the Park District will repay the City's Greenways Endowment Fund Loan in exchange for a conservation easement; and

**WHEREAS**, both the City Council and the Park District Commission have reviewed and approved this Agreement;

**NOW THEREFORE**, the City and the Park District agree as follows:

1. **Loan Repayment** – The Park District shall begin making payments to the City to pay off the Loan of \$3,232,021.60, accrued interest on the Loan through June 30, 2014 of \$100,334.56, and future interest on the Loan after June 30, 2014 as set forth in Section 1.b herein.

**a. Loan Payments.** The Park District shall make payment(s) to the City from receipt of tax revenues pursuant to an annual District levy, beginning not later than July 1, 2014. The Park District shall make its best effort to levy an amount equal to \$.28 per \$1,000 of assessed value so long as such rate is necessary to repay the Loan within ten (10) years or more from the date of this Agreement; provided further that said levy may be lower if sufficient to repay the Loan within one (1) year. Payment from the Park District to the City in Year 1 (July 1, 2014-June 30, 2015) shall be in an amount equivalent to fifty percent (50%) or more of the total amount of revenue collected from the Park District's tax levy during Year 1. Payment from the Park District to the City in Year 2 (July 1, 2015-June 30, 2016) shall be in an amount equivalent to eighty percent (80%) or more of the total amount of revenue collected from Park District's tax levy during Year 2. Thereafter, payment from the Park District to the City shall be in an amount equivalent to ninety percent (90%) or more of the total amount of revenue collected from the Park District's tax levy for each successive July 1- June 30 time period, until the debt hereunder is extinguished. The parties intend that if reasonably feasible, with the cooperation of the County Treasurer, said Loan payments shall be made directly from the Park District's account maintained by the County Treasurer to the City. The Park District shall execute reasonably necessary authorization required by the County Treasurer to allow for such direct payment to the City. The Park District will make its best effort to repay the Loan as soon as possible. There shall be no penalty for prepayment of the Loan and the Park District has the right to make payments at any time before they are due. The City shall apply all above-referenced proceeds received from the Park District to the Loan and interest thereon. The City shall calculate the Loan repayment schedule each year to reflect the principal and interest received from the Park District for the prior 12 months and shall provide same to the Park District. The City shall provide said repayment schedule to the Park District more frequently if required by law or recommended by the State Auditor's Office.

**b. Future Interest.** Future interest on the Loan shall begin to accrue on July 1, 2014 at an annual interest rate of 1%. Each year thereafter the annual interest rate on the Loan shall be reset on July 1 during the term of this Agreement at the current interfund loan rate established by the City at that time (currently approximately 1%); except that, said annual interest rate shall be capped at the following maximum rate during the term of this Agreement:

- |      |                     |      |
|------|---------------------|------|
| i.   | Year 1 (2014-15)    | 1%   |
| ii.  | Year 2 (2015-16)    | 2%   |
| iii. | Any year thereafter | 3.0% |

**c. Payment Destination.** Payments shall be received by the City's Finance Department located at 210 Lottie Street, Bellingham, WA 98225.

- 2. Property Rezone** - The City shall consider a rezone of the Property and the Additional Acreage from Residential Multi, Planned to Public, Open Space as part of its 2014 Comprehensive Plan amendment docket. Nothing in this Agreement is intended to circumscribe or limit the legislative discretion of the City Council or interfere with the City's obligation to engage in the requisite public process in considering this rezone.

**3. Conservation Easement**

**a. Conservation Easement Grant and Park District Dissolution.** The City shall grant the Park District a Conservation Easement on the Property in the form as shown in Exhibit A ("Conservation Easement") upon execution of this Interlocal Agreement. The City's grant of the Conservation Easement to the Park District is in consideration for: (1) the Park District paying off the Loan, accrued interest on the Loan and future interest; and (2) the Park District formally dissolving in accordance with RCW 35.61.310 after the Loan, accrued interest and future interest are paid off by the Park District (date of completion of Loan and interest repayment hereafter referred to as "Payoff Date"). The City shall file a petition for dissolution of the Park District pursuant to RCW 35.61.310 after the Payoff Date, subject to Section 4 herein. In no event shall the City file a petition for dissolution of the Park District before the Payoff Date or before completion of a park master plan as described in Section 4. When the City files a petition for dissolution of the Park District after the Payoff Date pursuant to RCW 35.61.310 (date the City files a petition for dissolution of the Park District after the Payoff Date hereafter referred to as "Petition Date") and the Park District dissolves pursuant to said petition, the City shall be entitled to assume all assets and liabilities of the District pursuant to RCW 35.61.310(1).

**b. Potential Conservation Easement Termination.** Subject to all terms of this Agreement, the City may elect to terminate the Conservation Easement following written notice if: (1) the Park District breaches the Interlocal Agreement by a failure to make its minimum payments as set forth in Section 1.a. herein and remains delinquent thereon for two consecutive years following a notice of deficiency in payment sent from the City to the Park District; (2) the Park District incurs long-term debt ("long-term debt" shall mean debt not repaid in one year or less; it shall not mean the Loan) through acquisition of an

interest in or leasing of any real property, funding a capital project, or entering into an employment agreement, without advance City approval; or (3) the Park District has not formally dissolved in accordance with RCW 35.61.310 within one year of the Petition Date. If any of the three conditions is met, upon receiving notice to terminate the Conservation Easement from the City, the Park District shall timely execute and record an appropriate deed reconveying the Conservation Easement to the City. If the Park District fails to take such action after notice from the City, the City may file an action in Whatcom County Superior Court to obtain a court order terminating the Conservation Easement, or in the alternative, requiring the Park District to dissolve in accordance with RCW 35.61.310. The provisions of this section shall be enforceable by the City by the remedy of specific performance. The prevailing party in any such action shall be entitled to an award of reasonable attorneys' fees and costs. If the City terminates the Conservation Easement in accordance with this paragraph, the Park District shall waive all interest in the payments made by the Park District on the Loan and accrued interest and shall not be entitled to a refund of such payments.

c. **Conservation Easement Assignment.** The Park District shall assign all its interest in the Conservation Easement to a "qualified" organization within the meaning of Section 170(h) of the Internal Revenue Code of 1954, as amended, and RCW 64.04.130 and RCW 84.34.250. The Park District shall meet with the City at least 30 days prior to executing and recording the assignment to inform the City of its intention to assign the Conservation Easement to a qualified third party.

4. **Control and Ownership of the Property** - The City shall retain control and ownership of the Property, subject to the Conservation Easement. Should the City rezone the Property and the Additional Acreage as described in Section 2, the City agrees to initiate the requisite public process for establishment of a park on the Property and complete a park master plan on the Property consistent with the intent of the Conservation Easement within ten years from the date of this Agreement. Before construction of new facilities or upgrades of existing facilities that go beyond maintenance can occur, the Grantor shall adopt a master plan for the Property. The City shall not file a petition for dissolution of the Park District pursuant to RCW 35.61.310 before said park master plan is completed. Any development of the Property as a park shall be in accordance City policy and procedures and a master plan adopted by City Council following a public process and recommendation of the Parks and Recreation Advisory Board. The Park District may participate in any master planning process that the City conducts for a future park on the Property.
5. **Indemnification**. The City shall indemnify, appear and defend, and hold harmless the Park District from all claims, lawsuits and liabilities of any kind, including attorney's fees and costs, arising from any act or omission of the City in connection with its ownership, management, maintenance, or administration of the Property, or in connection with public use of the Property, or for any negligent act or omission in connection with its performance under this Agreement; except to the extent such claim, lawsuit, or liability arises from the negligence of the Park District.



The Park District shall indemnify, appear and defend, and hold harmless the City from all claims, lawsuits and liabilities of any kind, including attorney's fees and costs, arising from any negligent act or omission of the Park District in connection with its performance under this Agreement; except to the extent such claim, lawsuit, or liability arises from the negligence of the City.

6. **Administrator.** This Agreement shall be administrated jointly by the City Parks Director and a Commissioner of the Park District Board appointed by the Board for such purpose.
7. **Modifications to this Agreement.** This Agreement shall not be modified or amended except in writing signed by the City and the Park District.
8. **Term of Agreement.** The term of this Agreement shall commence on the effective date listed below and expire one year after the dissolution of the Park District.
9. **Applicable Law.** This Agreement shall be governed by and be interpreted in accordance with the laws of the State of Washington.
10. **Severability.** If any provision of this Agreement is determined to be unenforceable or invalid by a court of law, then this Agreement shall thereafter be modified to implement the intent of the City and Park District to the maximum extent allowable under law. If this Agreement for any reason is determined to be invalid, the City shall refund the payments made by the Park District on the Loan and accrued interest, and the City and Park District shall terminate the Conservation Easement.
11. **Further Good Faith Cooperation.** The City and the Park District shall cooperate with the other in good faith to achieve the objectives of this Agreement. The parties shall not unreasonably withhold, condition or delay requests for information, approvals or consents provided for, or implicit, in this Agreement.
12. **Force Majeure.** Neither Party shall be liable for any failure to perform any part of this Agreement due to circumstances beyond a Party's reasonable control, including, but not limited to, acts of God, flood, fire, quarantine, war, sabotage, act of a public foreign or domestic enemy, earthquake, volcanic eruption, civil disturbance, and restraint by court order or other governmental authority. The obligations of a Party claiming force majeure condition(s) under this Agreement shall be suspended to such a degree and for such a period as is reasonable under the circumstances; provided that the Party asserting force majeure condition(s) works in good faith to remedy the condition(s) with all reasonable dispatch, to the extent within its control.
13. **No Presumption Against Drafter.** This Agreement has been reviewed and revised by legal counsel for both the City and the Park District and no presumption or rule that an ambiguity shall be construed against the party drafting the clause shall apply to the interpretation or enforcement of this Agreement.

14. **Notices.** All communications, notices, and demands of any kind which either the City or the Park District under this Agreement is required, or desires to give the other party, shall be in writing and be either (1) delivered personally, (2) sent by facsimile transmission with an additional copy mailed first class, or (3) deposited in the U.S. mail, postage prepaid, and addressed as follows:

City: City of Bellingham  
Mayor of Bellingham  
210 Lottie Street  
Bellingham, WA 98225

Park District: Chuckanut Community Forest District  
Clerk of Chuckanut Community Forest District  
P.O. Box 4283  
Bellingham, WA 98227

Notice by hand delivery or facsimile shall be effective upon receipt. If deposited in the mail, notice shall be deemed received 48 hours after deposit. Any party at any time by notice to the other party may designate a different address or person to which such notice shall be given.

15. **Waiver.** No failure by either the City or the Park District to insist upon the strict performance of any covenant, duty, agreement, or condition of this Agreement or to exercise any right or remedy consequent upon a breach thereof shall constitute a waiver of any such breach or any other covenant, agreement, term or condition. Either the City or the Park District, by notice, and only by notice as provided herein may, but shall be under no obligation to, waive any of its rights or any conditions to its obligations hereunder, or any duty, obligation or covenant of any other party hereto. No waiver shall affect or alter this Agreement, and each and every covenant, agreement, term and condition of this Agreement shall continue in full force and effect with respect to any other then existing or subsequent breach thereof.

16. **Dispute Resolution.** In the event of any dispute as to the interpretation or application of the terms or conditions of this Agreement, the City and the Park District, through their respective representatives, shall meet within ten (10) days after the receipt of a written request from the other party to make a good faith attempt to resolve the dispute. Such a meeting may be continued by mutual agreement to a date certain to include other persons or parties, or to obtain additional information. Representatives for either the City or the Park District may declare an impasse. Thereafter, the following procedure shall be utilized:

- a. **Elevation to City Mayor and Park District Commission Chairperson.** The Mayor and the Park District Commission Chairperson shall meet and resolve the dispute. If either the Mayor or the Park District Commission Chairperson declares an impasse then:

b. **Mediation.** In the event of a Mayor/Park District Commission Chairperson impasse, and prior to commencing any litigation, except for a request for a temporary restraining order and preliminary injunction, the City and the Park District shall first attempt to mediate the dispute. The parties shall mutually agree upon a mediator to assist them in resolving their differences. If the parties are unable to agree upon a mediator, the parties shall request from the Seattle office of JAMS a list of mediators experienced in matters pertaining to this Agreement. Each party may strike one name from the list until one name remains. A flip of a coin shall determine which party strikes the first name. Any expenses of the mediator shall be borne equally by the parties. However, each side shall bear its own costs and attorney fees arising from participation in the mediation.

c. **Waiver of Jury Trial and Jurisdiction.** Both the City and the Park District waive any right to a trial by jury in any action or proceeding to enforce or defend any rights under or relating to this Agreement or any amendment, instrument or other document delivered in connection with this Agreement.

d. **No Third Party Beneficiaries.** There are no third party beneficiaries of this Agreement.

e. **Award of Reasonable Attorneys' Fees and Costs.** If either the City or Park District files a lawsuit to enforce the terms of this Agreement, the prevailing party shall be entitled to an award of reasonable attorneys' fees and costs.

17. **Entire Agreement.** This Agreement, including the recitals, definitions, and exhibits, represents the entire agreement of the City and the Park District with respect to the subject matter hereof. There are no other agreements, oral or written, except as expressly set forth herein. This Agreement supersedes all previous understandings or agreements between the City and the Park District concerning the subject matter of this Agreement.

IN WITNESS WHEREOF, the parties have signed this agreement, effective the 3 day of January, ~~2013~~ 2014

CITY OF BELLINGHAM

By:   
Kelli Linville, Mayor

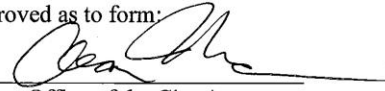
Date: December 19, 2013

CHUCKANUT COMMUNITY FOREST  
PARK DISTRICT

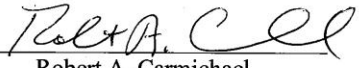
By:   
Commission Chair

Date: 1-3-2014

Approved as to form:

By:   
Office of the City Attorney

Approved as to form:

By:   
Robert A. Carmichael  
Attorney for Chuckanut Community  
Forest Park District

Attest:

By:   
City Finance Director



### 11.3.3. Title Documents

#### Title Policy: Schedule A and B

Standard Coverage

**WHATCOM LAND TITLE COMPANY, INC.**  
**Agent for**  
**OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY**

**SCHEDULE A**

Order No.:	<b>W-107256</b>	Premium:	<b>\$ 8,824.00</b>
Policy No.:	<b>OX-8430718</b>		
Date of Policy:	<b>October 11, 2011</b>	Amount of	
	<b>at 11:29AM</b>	Insurance:	<b>\$ 8,230,000.00</b>

1. Name of Insured:  
**CITY OF BELLINGHAM, a Washington Municipal Corporation**
2. The estate or interest in the land described herein and which is covered by this policy is:  
**FEE SIMPLE**
3. The estate or interest referred to herein is at Date of Policy vested in:  
**THE NAMED INSURED**
4. The land referred to in this policy is in the State of Washington, County of Whatcom and is described as follows:  
**SEE EXHIBIT "A" ATTACHED AND THEREBY MADE A PART HERETO.**

... END OF SCHEDULE A ...

Standard Coverage

**EXHIBIT "A"**  
**LEGAL DESCRIPTION**

Order No.: **W-107256**  
Policy No.: **OX-8430718**

**PARCEL A:**

THE SOUTH HALF OF THE SOUTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 12, TOWNSHIP 37 NORTH, RANGE 2 EAST OF W.M., EXCEPT THAT RIGHT-OF-WAY LYING ALONG THE EASTERLY LINE THEREOF, COMMONLY REFERRED TO AS 20<sup>TH</sup> STREET.

ALSO, THAT PART OF THE NORTHWEST QUARTER OF THE SOUTHEAST QUARTER, AND THAT PART OF THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER OF SAID SECTION 12, LYING NORTHERLY OF CHUCKANUT DRIVE.

SITUATE IN WHATCOM COUNTY, WASHINGTON.

**PARCEL B:**

LOT B, AS DELINEATED ON CHUCKANUT TRUST LOT LINE ADJUSTMENT, ACCORDING TO THE PLAT THEREOF, RECORDED UNDER AUDITOR'S FILE NO. 961219101, RECORDS OF WHATCOM COUNTY, WASHINGTON.

SITUATE IN WHATCOM COUNTY, WASHINGTON.

**PARCEL C:**

LOTS 1 THROUGH 24, INCLUSIVE, BLOCK 1, MAP OF DIFFENBACHERS ADDITION TO FAIRHAVEN, NOW A PART OF THE CONSOLIDATED CITY OF BELLINGHAM, WHATCOM COUNTY, WASHINGTON, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 1 OF PLATS, PAGE 51, RECORDS OF WHATCOM COUNTY, WASHINGTON.

SITUATE IN WHATCOM COUNTY, WASHINGTON.

... END OF EXHIBIT "A" ...

Standard Coverage

**OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY**

**SCHEDULE B**

Order No.: **W-107256**  
Policy No.: **OX-8430718**

This policy does not insure against loss or damage by reason of the following:

**GENERAL EXCEPTIONS:**

1. Rights or claims of parties in possession not shown by the public records.
2. Any encroachment, encumbrance, violation, variation, or adverse circumstances affecting the Title that would be disclosed by an accurate and complete land survey of the Land, and that is not shown by the Public Records.
3. Easements or claims of easements not shown by the public records.
4. Any lien, or right to lien, for contributions to employee benefit funds, or for state workers' compensation, or for services, labor, or material heretofore or hereafter furnished, all as imposed by law, and not shown by the public records.
5. Taxes or special assessments which are not shown as existing liens by the public records.
6. Any service, installation, connection, maintenance, tap, capacity or construction charges for sewer, water, electricity, other utilities, or garbage collection and disposal.
7. Reservations or exceptions in patents or in Acts authorizing the issuance thereof; Indian tribal codes or regulations, Indian treaty or aboriginal rights, including easements or equitable servitudes.
8. Water rights, claims, or title to water.

**SPECIAL EXCEPTIONS:**

**AS ON SCHEDULE "B" ATTACHED.**

Continued on next page

Standard Coverage

Schedule B - continued

Order No.: **W-107256**

Policy No.: **OX-8430718**

1. Exceptions and reservations as contained in instrument;  
From: MABEL H. GATES, FRANCES GATES MCCORD,  
ELIZABETH GATES BROOKS and CYRUS K. GATES  
Recorded: March 6, 1953  
Recording No.: 751299  
Records of: Whatcom County, Washington  
As follows: Reservation to the grantors of 51% of oil and mineral rights  
upon said premises  
Affects: Parcel B and other property
2. Agreement, including its terms, covenants and provisions;  
Executed by: GERALDINE L. BRADY; and VIRGIL S. WALSTON  
and HELEN P. WALSTON, husband and wife  
Recorded: May 18, 1960  
Recording No.: 893239  
For: Agreement for License  
Affects: Portion of Parcel A
3. Terms and conditions of Real Estate Contract;  
Executed by: C. ROGER SAHLIN, 50% interest; F.D. SMITH, 25%  
interest; and RALPH E. HEMINGWAY, 25% interest  
Recorded: October 16, 1979  
Recording No.: 1338841  
Affects: Parcel B
4. Chuckanut Trust Lot Line Adjustment, including the terms and conditions thereof;  
Recorded: December 19, 1996  
Recording No.: 961219101  
Affects: Parcel B
5. Terms and conditions of Abstract of Oil and Gas Leases;  
Executed by: JORDAN EXPLORATION COMPANY, L.L.C.  
Recorded: May 30, 2001  
Recording No.: 2010504705  
Affects: Parcel B and other property

Continued on next page



Standard Coverage

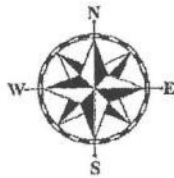
Schedule B, continued

Order No.: **W-107256**

Policy No.: **OX-8430718**

6. Terms and conditions of Perpetual Conservation Restriction and Covenant;  
Executed by: C. ROGER SAHLIN, GERRYANNE SAHLIN, RALPH E. HEMINGWAY, KAY A. HEMINGWAY and F.D. SMITH; and CITY OF BELLINGHAM  
Recorded: July 1, 2002  
Recording No.: 2020700109  
Affects: Said premises
7. Terms and conditions of Perpetual Conservation Restriction and Covenant;  
Executed by: C. ROGER SAHLIN, GERRYANNE SAHLIN, RALPH E. HEMINGWAY, KAY A. HEMINGWAY and F.D. SMITH; and CITY OF BELLINGHAM  
Recorded: January 8, 2003  
Recording No.: 2030101161  
Affects: Said premises
8. Easement including the terms, covenants and provisions thereof, as granted by instrument;  
Recorded: October 11, 2004  
Recording No.: 2041001706  
Records of: Whatcom County, Washington  
In favor of: Owners of said premises  
For: Temporary emergency vehicle ingress and egress, and for construction and subsequent maintenance and operation of utilities as well as access for the same.  
Affects: Said premises
9. Matters disclosed by a Survey of said premises;  
Recorded: February 16, 2010  
Recording No.: 2100201600  
Records of: Whatcom County, Washington

... END OF SCHEDULE B ...

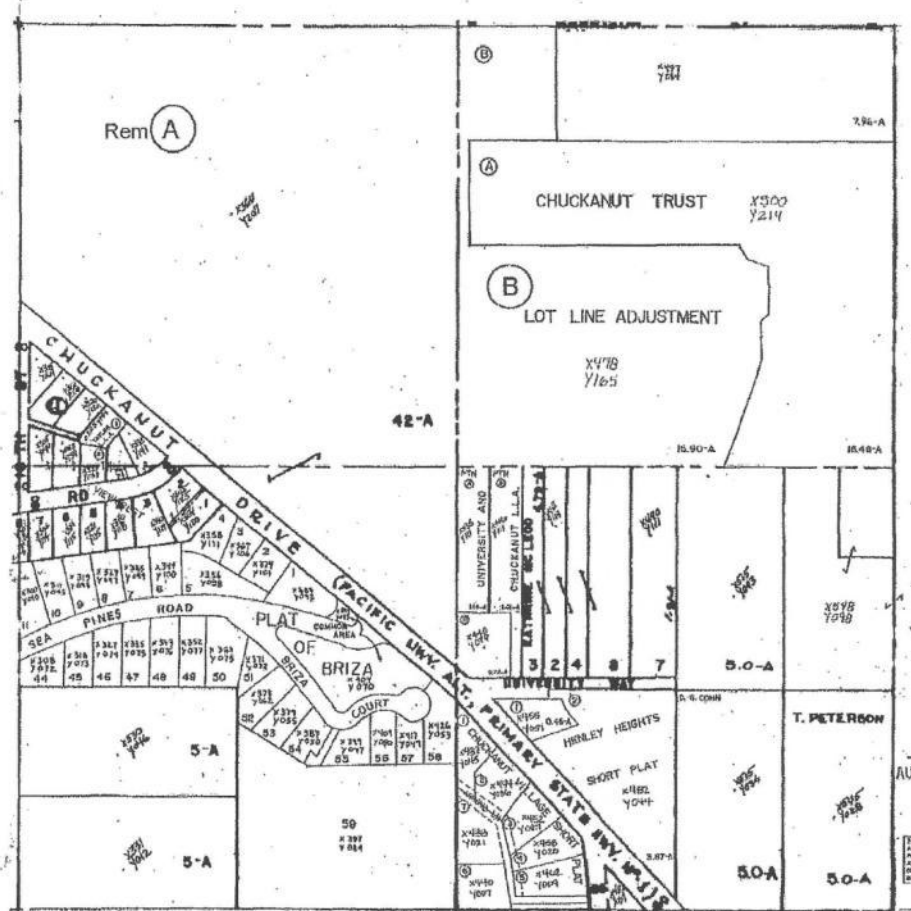


# **Whatcom Land Title Company, Inc.**

2011 Young Street  
 Bellingham, Washington 98225  
 Phone (360) 676-8484 Toll Free 1-800-334-6314  
 Fax (360) 671-0982  
 Website www.whatcomtitle.com

W-107256

*"Locally Owned and Operated since 1982"*

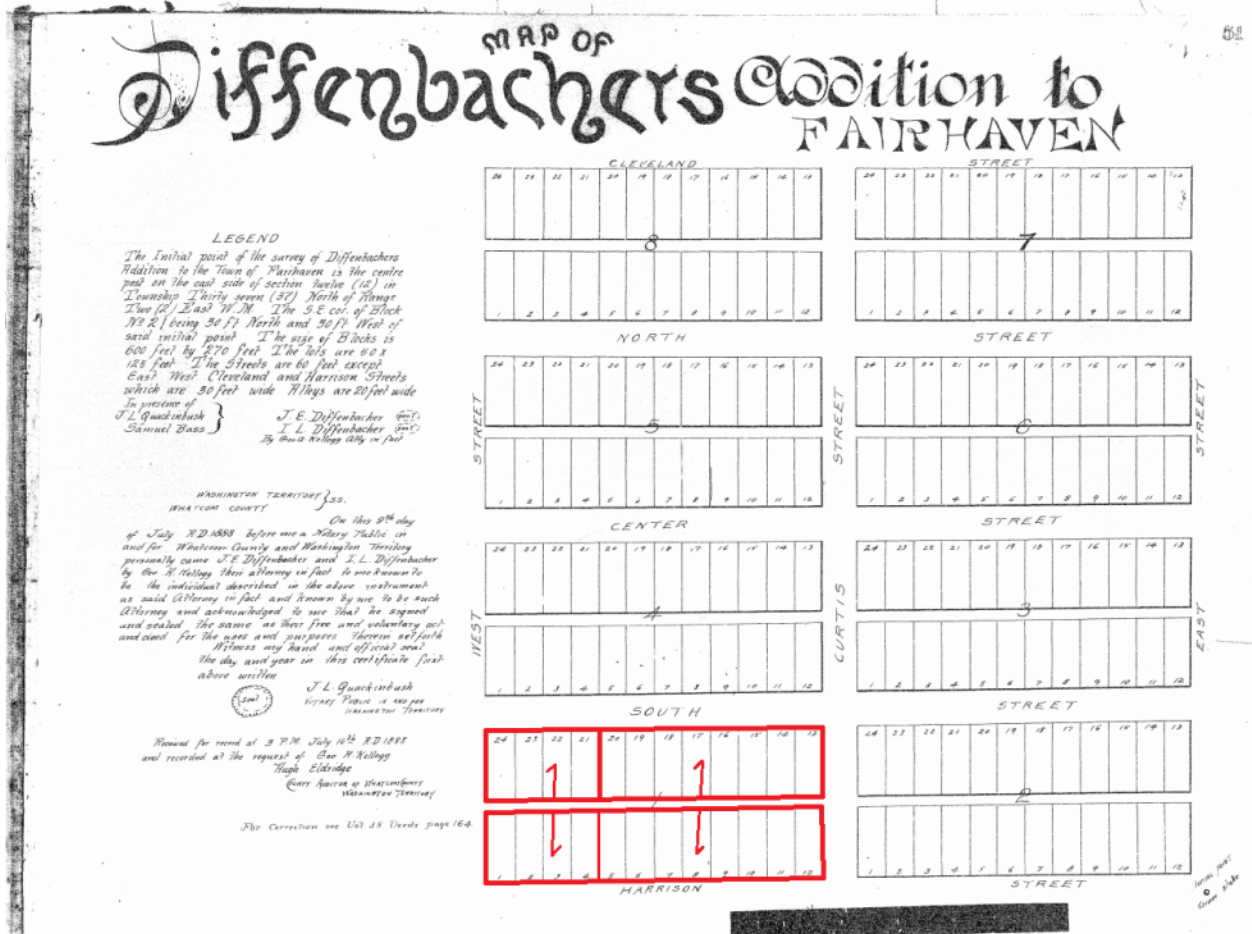


**THIS SKETCH IS FURNISHED FOR INFORMATION PURPOSES ONLY.**

IT DOES NOT PURPORT TO SHOW ALL HIGHWAYS, ROADS, OR EASEMENTS AFFECTING THIS PROPERTY. NO LIABILITY IS ASSUMED FOR VARIATIONS IN DIMENSIONS AND LOCATIONS. THIS SKETCH IS NOT GUARANTEED AS TO ACCURACY AND THE COMPANY ASSUMES NO LIABILITY FOR ANY LOSS OCCURRING BY REASON OF RELIANCE THEREON.



# Parcel D and E: Diffenbachers Addition Map – Street Rights-of-Way





Parcel B: Driveway Easement

893239 18 1960 Gen

893239

AGREEMENT FOR LICENSE

THIS AGREEMENT made and entered into this 18th day of 1960, by and between GERALDINE L. BRADY, hereinafter called First Party, and VIRGIL S. WALSTON and HELEN P. WALSTON, husband and wife, hereinafter called Second Party,

WITNESSETH:

(1) Whereas, First Party is the owner of lands in Whatcom County, State of Washington, described as:

of the Southeast  
That part of the southwest quarter  
of Section 12, Township 37 North,  
Range 2 East of W.M., lying northerly  
of Chuckanut Drive.

(2) Whereas, Second Party is owner of lands lying easterly of and adjacent to the above-described tract, in said County of Whatcom, State of Washington, described as:

The westerly one acre of the northwest  
quarter of the southeast quarter of the  
southeast quarter of Section 12, Town-  
ship 37 North, Range 2 East of W.M

(3) Whereas, both of said tracts front on Chuckanut Drive, a public highway, but their side lines intersect said highway at an acute angle, and

(4) Whereas, there has been for several years and there is now a private driveway leading from said Chuckanut Drive across the tip of the southwest corner of the land of First Party to and over the land of Second Party, over which Second Party has passed and repassed in going to and from his lands and the public highway, and

(5) Whereas, said private driveway is presently useful and convenient to First Party as a means for traveling from Chuckanut Drive to other portions of the lands of the First Party.

(6) NOW, THEREFORE, in consideration of their mutual promises the parties agree that each may continue to use said driveway over

1.

MAY 18 1960 893239



MAY 18 1960

893239

GEORGE J. A.

and across the land of the other.

(7) The parties mutually agree that this agreement or the use of said driveway in the past or future, gives to each party a personal right, or license only, and shall not prejudice the right of either in his own property.

IN WITNESS WHEREOF the parties have hereunto set their hands in duplicate the day and year first above written.

FIRST PARTY

Geraldine L. Brady

SECOND PARTY

Virgil S. Walston  
Helen P. Walston

STATE OF WASHINGTON )  
COUNTY OF WHATCOM ) ss.

On this day personally appeared before me GERALDINE L. BRADY; VIRGIL S. WALSTON and HELEN P. WALSTON, to me known to be the individuals described in and who executed the within and foregoing instrument, and acknowledged that they signed the same as their free and voluntary act and deed, for the uses and purposes therein mentioned.

GIVEN under my hand and seal this 18<sup>th</sup> day of May.

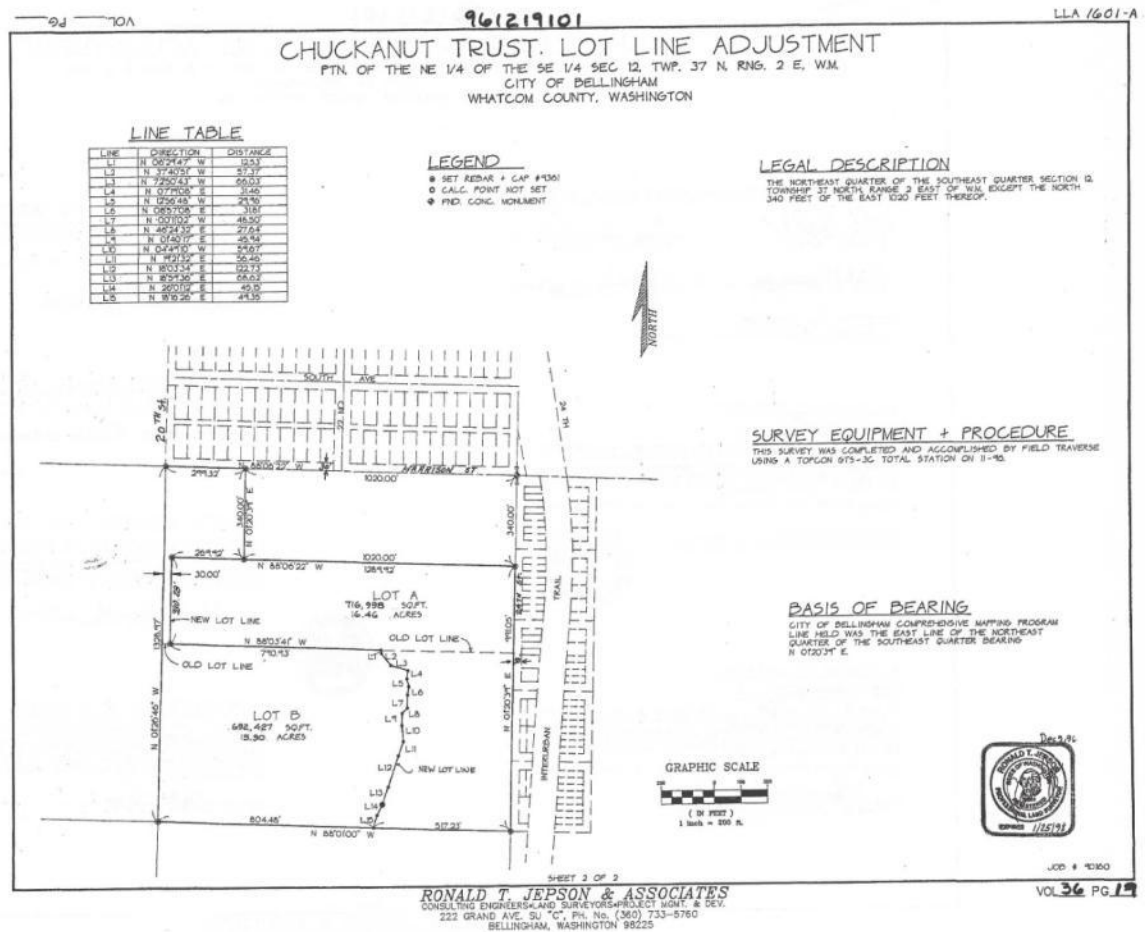


Geraldine L. Brady  
Notary Public in and for the State of  
Washington, residing at Bellingham.

893239

MAY 18 1960

# Parcel C: Lot Line Adjustment



961219101

LLA 1601-A

# CHUCKANUT TRUST LOT LINE ADJUSTMENT

PTN. OF THE NE 1/4 OF THE SE 1/4 SEC. 12, TWP. 37 N. RING. 2 E. WM.  
CITY OF BELLINGHAM  
WHATCOM COUNTY, WASHINGTON

## DECLARATION

WE, THE UNDERSIGNED PARTIES, HEREBY DECLARE THIS LOT LINE ADJUSTMENT WAS MADE WITH OUR FREE CONSENT AND IN ACCORDANCE WITH OUR WISHES.

C. Edgar Shalin  
C. EDGAR SHALIN

GERMANE SHALIN  
GERMANE SHALIN

ERICK E. HEMINGWAY  
ERICK E. HEMINGWAY

WILLIAM A. HEMINGWAY  
WILLIAM A. HEMINGWAY

F.D. SMITH  
F.D. SMITH

## ACKNOWLEDGEMENT

STATE OF Washington

ON THIS 4 DAY OF December, 1996, BEFORE ME, THE UNDERSIGNED, A NOTARY PUBLIC, PERSONALLY APPEARED GERMANE SHALIN, TO BE KNOWN TO BE THE INDIVIDUALS DESCRIBED IN AND WHO EXECUTED THE FOREGOING INSTRUMENT, AND ACKNOWLEDGED THAT THEY WERE AND SEALED THE FOREGOING INSTRUMENT VOLUNTARILY AND DEED FOR THE USES AND PURPOSES THEREIN MENTIONED.

WITNESS MY HAND AND OFFICIAL SEAL THE DAY AND YEAR FIRST ABOVE WRITTEN.

Sharon K. Vasey  
NOTARY PUBLIC FOR THE STATE OF  
WASHINGTON, RESIDING AT Bellingham



## ACKNOWLEDGEMENT

STATE OF Washington

ON THIS 4 DAY OF December, 1996, BEFORE ME, THE UNDERSIGNED, A NOTARY PUBLIC, PERSONALLY APPEARED GERMANE SHALIN, TO BE KNOWN TO BE THE INDIVIDUALS DESCRIBED IN AND WHO EXECUTED THE FOREGOING INSTRUMENT, AND ACKNOWLEDGED THAT THEY WERE AND SEALED THE FOREGOING INSTRUMENT VOLUNTARILY AND DEED FOR THE USES AND PURPOSES THEREIN MENTIONED.

WITNESS MY HAND AND OFFICIAL SEAL THE DAY AND YEAR FIRST ABOVE WRITTEN.

Sharon K. Vasey  
NOTARY PUBLIC FOR THE STATE OF  
WASHINGTON, RESIDING AT Bellingham

## ACKNOWLEDGEMENT

STATE OF Washington

ON THIS 4 DAY OF December, 1996, BEFORE ME, THE UNDERSIGNED, A NOTARY PUBLIC, PERSONALLY APPEARED F.D. SMITH, TO BE KNOWN TO BE THE INDIVIDUALS DESCRIBED IN AND WHO EXECUTED THE FOREGOING INSTRUMENT, AND ACKNOWLEDGED THAT THEY WERE AND SEALED THE FOREGOING INSTRUMENT VOLUNTARILY AND DEED FOR THE USES AND PURPOSES THEREIN MENTIONED.

WITNESS MY HAND AND OFFICIAL SEAL THE DAY AND YEAR FIRST ABOVE WRITTEN.

Sharon K. Vasey  
NOTARY PUBLIC FOR THE STATE OF  
WASHINGTON, RESIDING AT Bellingham

## CITY OF BELLINGHAM APPROVALS

EXAMINED AND APPROVED BY THE CITY OF BELLINGHAM DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT, THIS 12 DAY OF December, 1996.

Sharon K. Vasey  
DIRECTOR OF PLANNING & COMMUNITY DEVELOPMENT

## COUNTY AUDITOR'S OFFICE

I HEREBY CERTIFY THAT THIS LOT LINE ADJUSTMENT PLAT WAS FILED FOR RECORD IN THE OFFICE OF THE AUDITOR OF WHATCOM COUNTY, WASHINGTON, AT THE REQUEST OF C. Edgar Shalin, Germane Shalin, Erick E. Hemingway, AND William A. Hemingway, ON THIS 19 DAY OF December, 1996, AT 11 MINUTES PAST 11 O'CLOCK, AND IS RECORDED IN BOOK 36 OF SHORT PLATS, PAGES 18 & 19 OF THE RECORDS OF WHATCOM COUNTY, WASHINGTON.

Sharon K. Vasey  
AUDITOR, WHATCOM COUNTY, WASHINGTON



## SURVEYOR'S CERTIFICATE

I, RONALD T. JEPSON, DO HEREBY CERTIFY THAT THIS LLA, TITLED "CHUCKANUT TRUST LOT LINE ADJUSTMENT" IS BASED UPON A SURVEY MADE IN ACCORDANCE WITH THE REQUIREMENTS OF STATE LAW THAT ALL DISTANCES, COUSERS AND ANGLES ARE CORRECTLY SHOWN HEREON, THAT ALL MONUMENTS, CORNER PROPERTY CORNERS HAVE BEEN ACCURATELY PLACED ON THE GROUND, OR PLACED UPON COMPLETION OF CONSTRUCTION.

Ronald T. Jepson  
RONALD T. JEPSON, FLS 1000



SHEET 1 OF 2  
RONALD T. JEPSON & ASSOCIATES  
CONSULTING ENGINEERS/LAND SURVEYORS/PROJECT MGMT. & DEV.  
222 GRAND AVE. SU. "C", PH. No. (360) 733-5780  
BELLINGHAM, WA 98201

JOB # 10100  
VOL. 36 PG. 18



Parcel C: Oil and Gas Lease

754990 Statutory Warranty Deed VOL 387 PAGE 618 751200

IF THIS MICROFILMED DOCUMENT IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE ORIGINAL DOCUMENT.

Statutory Warranty Deed

THE GRANTORS MABEL H. GATES, FRANCES GATES McCORD, ELIZABETH GATES BROOKS and CYRUS K. GATES

for and in consideration of -----Ten and no/100 -----

in hand paid, conveys and warrants to S. C. JOHNSON, a bachelor P.F.D. 5 Box 206

the following described real estate, situated in the County of Whatcom Bellingham, State of Washington:

The N.E. 1/4 of the S.E. 1/4, Section 12, Township 37, North Range 2 East of W.M. Less roads.

SUBJECT to reservation to the grantors of Fifty-one percent (51%) of oil and mineral rights upon said premises.

PAID AMT. \$5.00 REAL ESTATE EXCH. TAX 15-3

Dated this 20th day of May 1952

STATE OF WASHINGTON, County of King

On this day personally appeared before me Mabel H. Gates, Frances Gates McCord and Cyrus K. Gates to me known to be the individuals described in and who executed the within and foregoing instrument, and acknowledged that they signed the same as their free and voluntary act and deed, for the purposes therein mentioned.

Witness my hand and official seal this 20th day of May, 1952

Notary Public for the State of Washington

170

44-38700-619

STATE OF OKLAHOMA

COUNTY OF OKMULGEE

On this day personally appeared before me ELIZABETH GATES BROOKS, to me known to be the individual described in and who executed the within and foregoing instrument, and acknowledged that she signed the same as her free and voluntary act and deed, for the uses and purposes therein mentioned.

GIVEN under my hand and official seal this 21st day of May, 1952.

M. P. Parker  
Notary Public in and for the State of  
Oklahoma, residing at Oklahoma City, Oklahoma

My Comm. Expires:  
Sept. 2, 1953





AFTER RECORDING PLEASE MAIL TO:

JORDAN EXPLORATION COMPANY, L.L.C.  
1503 Garfield Road North  
Traverse City, Michigan 49686



2010504705  
Page: 1 of 5  
5/30/2001 4:30 PM  
ABOG \$12.00  
Whatcom County, WA  
Request of: JORDAN EXPLORATION CO

### ABSTRACT OF OIL AND GAS LEASES

This is an Abstract of Oil and Gas Leases, whereas various Lessors have granted, leased and let unto:

Jordan Exploration Company, L.L.C.  
1503 Garfield Road North  
Traverse City, MI 49686

herein called Lessee, its successors and assigns, certain mineral interests, located in the County of Whatcom, State of Washington, described as follows:

Lease #	Lessor	Property ID #	Lease Date	Twp./Rng./Sec./ Description
46-073-0486	Crabtree, Virginia M.	400224/431484	04/30/01	T40N-R2E-Sec. 24: West 14 acres of NE/4 NE/4, less road

See Page 1 of the attached Exhibit "A" for remaining Oil and Gas Leases

The Leases referenced herein grant Lessee, among other rights, the exclusive right to explore for, produce and market oil, gas and other hydrocarbons from the leased premises or from lands pooled or unitized with the leased premises during the term of the Leases. In instances where surface development is not restricted on the leased premises, Lessee is also granted the rights to drill, construct and maintain for its use and operations such facilities as are provided for in the Lease, and the right of ingress and egress on and over the lands.

This Abstract of Oil and Gas Leases is being placed of record in the county in which the lands are located for the purpose of placing all persons on notice of the existence of the Leases. The Oil and Gas Leases set forth on the attached Exhibit "A" are unrecorded at this time.

Dated this 23<sup>rd</sup> day of May, 2001.

#### WITNESSES:

Kathy J. Rosinski

Benjamin S. Brower

JORDAN EXPLORATION  
COMPANY, L.L.C.

By:   
Robert M. Boeve  
Its: Manager

#### ACKNOWLEDGEMENT

STATE OF MICHIGAN )  
COUNTY OF GRAND TRAVERSE ) SS

The foregoing instrument was acknowledged before me this 23<sup>rd</sup> day of May, 2001, by Robert M. Boeve, Manager of Jordan Exploration Company, L.L.C., a Michigan limited liability company, on behalf of the company: ROSINSKI

My Commission Expires:

March 19, 2005

Land/wa/forms/abstract of leases



Kathy J. Rosinski, Notary Public in and for  
Grand Traverse County, Michigan

# EXHIBIT "A"

Attached to and made a part of that certain Abstract of Oil and Gas Leases dated May 23, 2001

R:\LAND\Washington CBM\Exhibits\Exhibit to Abstract of Leases - 8.xls(Sheet1)

Lease #	Lessor	Lease Date	Twp.	Rng.	Sec.	Property ID #	Description
46-073-0500	LBC Properties, L.P. - CONTINUED	05/11/01	39N	4E	11	390311/323300, 374455, 194459, 184410	NW/4 NE/4 except the West 880 feet of the North 990 feet and except the East 170 feet of the North 18 rods thereof and beginning at the 1/4 corner between Section 11 and 12, thence North 549.8 feet, thence South 69° 45' West 368 feet, thence West 1304.4 feet, thence South 422.4 feet, thence East 1650 feet to beginning and the West 30 acres of SW/4 NE/4 and the North 20 feet of the SE/4 NE/4 and Northerly 625 feet of the Southerly 925 feet of the NE/4 NW/4 Except W/2 W/2 NE/4 NW/4 and Except the East 471 feet of NE/4 NW/4 and South 300 feet of NE/4 NW/4 Except East 471 feet and Except W/2 W/2 thereof and Except the South 300 feet thereof, less roads.
46-073-0501	Thomas, Marcia M. & Gordon T.	05/08/01	37N	1E	9	370109/507358	NewPort West 16 feet of Lots 6 and 7 of Block 5
			37N	2E	12	370212/478165	NE/4 SE/4, less roads
			37N	3E	1	370301/321432	N/2 SW/4 and SE/4 SW/4
			37N	3E	9	370309/344102, 413238	Great Northern Terminal Addn. to Fairhaven Blocks 1 through 20; Lots 1, 2, 3, 4 of Block 1 and Lots 1, 2, 3, 4 of Block 8, both of Fairhaven Subdivision
			37N	3E	14	370314/199330	N/2 SE/4; W/2 NW/4 SW/4; NE/4 SW/4; N/2 SE/4; S/2 SE/4; E/2 NW/4 SW/4
			37N	3E	19	370319/395265	Lots 2 and 5, 6, 7, 8 of Allison Subdivision
			37N	3E	23	370323/335211	NE/4 SW/4 and South 35 rods of SE/4 NW/4 lying easterly of Old Samish Road and in the South 35 rods of SW/4 NE/4
			37N	4E	21	370421/400018	West 40 feet of that part of SE/4 SE/4 lying Southerly of road
			37N	4E	28	370428/198190	NE/4
			37N	4E	30	370430/193332	Gov't Lots 1 and 2 and E/2 as reserved at Vol 42 D 422
			38N	1E	2	380102/066107	South 22.41 acres of Gov't Lot 12 and all of Gov't Lots 13, 16, 18
			38N	1E	3	380102/066107	Gov't Lot 7
			38N	1E	4	380104/524125	SE/4 SE/4
			38N	1E	10	380110/070485	SW/4 SW/4
			38N	1E	24	380124/458068	S/2 SE/4, less road
			38N	1E	26	380126/128426	SE/4 NW/4, less road

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Page: 4 of 5  
5/28/2001 4:30 PM  
ABOS \$12.00  
Shelton County, WA  
Request of: JORDAN EXPLORATION CO