

Summer 2010

# Whatcom County Adult Correction Facilities Environmental Impact Statement

Mark Biehl  
*Western Washington University*

Hans Harper  
*Western Washington University*

Bowei He  
*Western Washington University*

Sean Hendryx  
*Western Washington University*

Danielle Launders  
*Western Washington University*

*See next page for additional authors*

Follow this and additional works at: [https://cedar.wwu.edu/huxley\\_stupubs](https://cedar.wwu.edu/huxley_stupubs)



Part of the [Environmental Studies Commons](#)

---

## Recommended Citation

Biehl, Mark; Harper, Hans; He, Bowei; Hendryx, Sean; Launders, Danielle; Lennartz, Nicholas; and Schwab, Kayleigh, "Whatcom County Adult Correction Facilities Environmental Impact Statement" (2010). *Huxley College Graduate and Undergraduate Publications*. 5.

[https://cedar.wwu.edu/huxley\\_stupubs/5](https://cedar.wwu.edu/huxley_stupubs/5)

This Environmental Impact Assessment is brought to you for free and open access by the Huxley College of the Environment at Western CEDAR. It has been accepted for inclusion in Huxley College Graduate and Undergraduate Publications by an authorized administrator of Western CEDAR. For more information, please contact [westerncedar@wwu.edu](mailto:westerncedar@wwu.edu).

---

**Author**

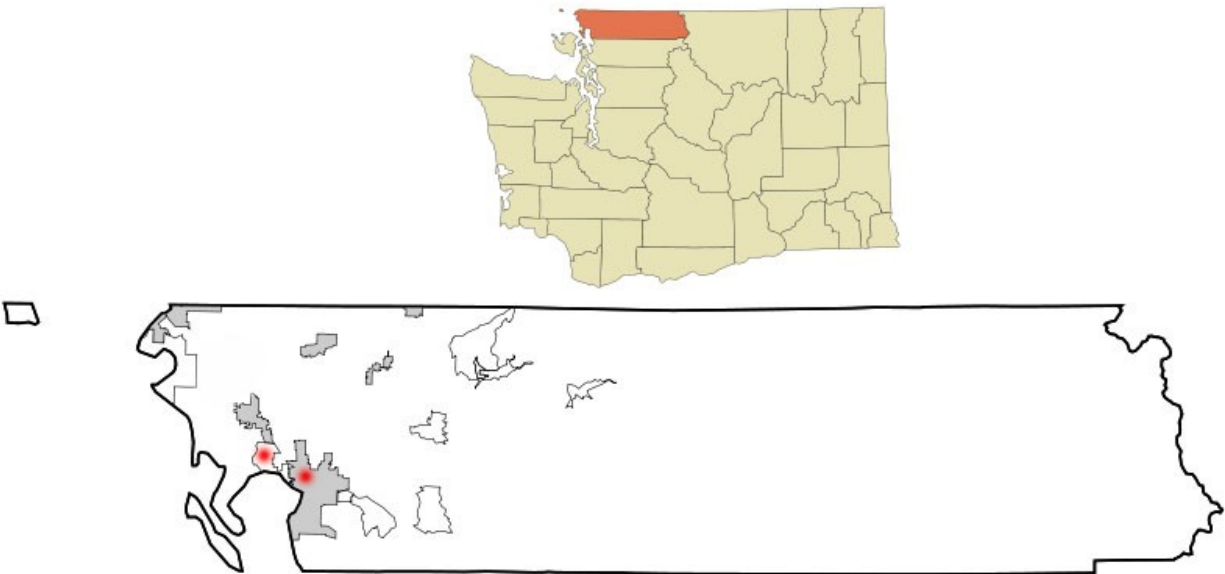
Mark Biehl, Hans Harper, Bowei He, Sean Hendryx, Danielle Lauenders, Nicholas Lennartz, and Kayleigh Schwab

# Whatcom County Adult Correction Facilities Environmental Impact Statement

---

ESTU 436, Summer 2010

Western Washington University



Dear Interested Party:

The current Whatcom County adult correction facility has been deemed inadequate for the current and future population of Whatcom County. Over 300 offenders regularly reside in the current facility with internal remodeling that is not in compliance with building codes.

Please review the environmental impacts associated with addressing Whatcom County's adult correction facility needs. This document is modeled after the requirements set forth by the State Environmental Policy Act (SEPA) and has been thoroughly administered with all pertinent and available information regarding the jail site selection process.

This EIS will examine the possible significant effects on the environment if the County is to choose to act in one of the following ways:

- Construction of New Facilities on Site 4, a property near Bellingham International Airport off of Kope Road, east of Rural Avenue and Wynn Road, south of Slater road, and north of Marietta Avenue.
- Construction of New Facilities on Site 5, a property near Bellingham International Airport off of Curtis Road, south of Marietta Avenue and north of Country Ln.
- Construction of New Downtown Facilities
- No Action

This EIS will examine the effects of the above actions on the following environmental concerns:

- Earth
- Water
- Energy and Natural Resources
- Land and Shoreline
- Aesthetics
- Recreation
- Transportation
- Air
- Plants and Animals
- Environmental Health
- Housing
- Light/Glare
- Historic/Cultural
- Public Service/Utilities

Thank you for your interest in the Whatcom County jail facilities affect on the environment.

Sincerely,

ESTU 436 Summer 2010 Environmental Impact Assessment Class

**Environmental Impact Assessment**

Huxley College of the Environment

I/we grant to Western Washington University the non-exclusive royalty-free right to archive, reproduce, distribute, and display this Environmental Impact Assessment document in any and all forms, including electronic format, via any digital library mechanisms maintained by WWU.

I/we represent and warrant this is original work, and does not infringe or violate any rights of others. I/we warrant that I/we have obtained written permissions from the owner of any third party copyrighted material included in this document.

I/we acknowledge that I/we retain ownership rights to the copyright of this work, including but not limited to the right to use all or part of this work in future works, such as articles or books.

Library users are granted permission for individual, research and non-commercial reproduction of this work for educational purposes only. Any further digital posting of this document requires specific permission from the author(s).

Any copying or publication of this document for commercial purposes, or for financial gain, is not allowed without my/our written permission.

Signature Danielle Launders Signature Hans Harper  
Danielle Launders Hans Harper

Signature Mark Biehl Signature Kayleigh Schwab  
Mark Biehl Kayleigh Schwab

Signature Nicolas Lennartz Signature Bowei He  
Nicolas Lennartz Bowei He

Signature Sean Hendryx Signature Jean Melious  
Sean Hendryx Faculty Advisor: Jean Melious

Date 7/28/10

# Whatcom County Adult Correction Facilities Environmental Impact Statement

---

Jean Melious, ESTU 436, Western Washington University

By:

Biehl, Mark

Harper, Hans

He, Bowei

Hendryx, Sean

Launders, Danielle

Lennartz, Nicolas

Schwab, Kayleigh

Disclaimer:

Please note that this is a class project that was carried out by students of Western Washington University, Huxley College of the Environment. It has not been undertaken at the request of any persons representing local governments or private individuals, nor does it necessarily represent the opinion or position of individuals from government or the private sector.

# Fact sheet:

---

## Title:

Whatcom County Adult Correctional Facilities  
Environmental Impact Statement

## Description of Project:

Whatcom County is concerned with the current poor conditions of its adult correctional facilities and has proposed to construct a new facility. The new facility is proposed to hold up to 2,450 beds by 2050. For operational purposes, a horizontally designed facility is preferred.

## Description of Location:

**Alternative 1: Site 4:** Near Bellingham Airport off of Kope Rd.

**Alternative 2: Site 5:** Near Bellingham Airport off of Curtis Rd.

**Alternative 3: Downtown Facility:** in a parking-lot adjacent to Whatcom county court house in downtown Bellingham.

**No action:** current location, adjacent to Whatcom county court house in downtown Bellingham off of Lottie Street.

## Proposer and Lead Agency:

Whatcom County Facilities Management

## Permits:

Pending site selection, potential permits include: grading permits, building permits, major project permits, storm-water permits and

Clean Water Act Section 404 permits.

Contributors: Kayleigh Schwab, Bowei He, Hans Harper, Mark Biehl, Nick Lennartz, Sean Hendryx and Danie Lauanders

## Distribution List:

Jean Melious

Wilson Library

Huxley Map Library

Washington University Huxley College of the Environment | 516 High Street | Bellingham, WA 98225 | 360.650.3520

Team Members: Kayleigh Schwab, Bowei He, Hans Harper, Mark Biehl, Nick Lennartz, Sean Hendryx and Danielle Lauanders

Cooperators: Washington State Department of Natural Resources, Chief Jones and Mike Russell, Rural Action Neighborhood Association (RANA)

## Acknowledgements:

Mike Russel, Wendy Jones, Jody Biermann

## Issue Date:

July 28, 2010

## Public presentation date:

July 28, 2010 in CF 229 at 11:00 AM





# Table of Contents

<b>Executive Summary</b> .....	<b>7</b>
<b>List of Figures and Tables</b> .....	<b>13</b>
<b>Glossary</b> .....	<b>14</b>
<b>Alternatives Being Analyzed</b> .....	<b>15</b>
<b>Environmental Analysis</b> .....	<b>18</b>
Water.....	19
Animals.....	27
Plants.....	33
Aesthetics.....	37
Earth.....	39
Utilities.....	42
Public Services.....	46
Environmental Health.....	48
Air.....	49
Energy and Natural Resources.....	52
Transportation.....	54
Light and Glare.....	58
Land and Shoreline.....	59
Cultural History and Recreation.....	62
Housing.....	63
Decision Matrix.....	64
Resources.....	65

# Executive Summary

## Background:

---

The current Whatcom County adult correction facilities have been deemed inadequate. There is overcrowding and a lack internal infrastructure to handle the current occupancy level in the facility. This has lead Whatcom County to consider alternatives to the current adult correction facility. The County has evaluated a number of possible alternatives, all of which include the construction of a new facility. The County has chosen three locations for the new facility, two locations which are referred to as Site 4 and Site 5 located near Bellingham International Airport, and a location referred to as the downtown site adjacent to the County Court House in downtown Bellingham.

When fully constructed in 2050, it is anticipated that the Whatcom County Adult Corrections Facilities and Sheriff’s Headquarters would support approximately 893 staff members (Omni 2008). The proposed number of inmate beds for the completed project would total 2,450 in 2050. The no action alternative would maintain the 350 staff and offenders at the current facilities as well as the 165 staff and offenders at the temporary site.

The Washington State Environmental Policy Act (SEPA) intends to provide the public and decision makers with valuable information on the environmental impacts of proposed actions or policies. In order to understand a complete spectrum of impacts, SEPA requires the investigation of the no-action alternative. The no action alternative represents the impacts on the environment if the status quo were to be continued.

## Environmental Analysis:

---

The following are possible environmental effects that may be incurred in an effort to provide adequate adult corrections facilities for Whatcom County.

### **SIGNIFICANT ENVIRONMENTAL IMPACTS ARE AS FOLLOWS:**

#### **Water:**

Site 4 contains only one unnamed stream, and the proposal includes no direct impact on surface flows. Construction would occur within the streams’ 200 foot boundary, and be a

potential hazard during construction, which would also increase runoff from dirt compaction and temporary removal of vegetation. Approximately 9.2 acres of wetland would be directly impacted.

Site 5 contains Lost Lake and lost Lake Creek, which would not be impacted by development which would be strategically located away from these particularly sensitive areas. However, 12.35 acres of wetlands would be directly impacted.

Extensive dredging and filling would occur in the first 3 alternatives, with the most significant occurring in the downtown proposal which involves removing approximately 6 stories worth of dirt. Dredging and filling on the first two alternatives are expected to balance and provide a low net impact. Waste materials have the opportunity to infiltrate the ground during construction primarily, with the parking structure being the most common area for non-point waste integration.

The no-action alternative would not alter existing water conditions on the site.

Mitigation methods for sites 4 & 5 include: 5 acres of detention ponds, storm-water treatment by use of filter strips to catch suspended particulates, storage of chemicals by uniform Building Code, uniform Fire Code and applicable state regulations, reducing the width of construction lanes, stabilizing soils and erosion control, inspection and monitoring system for water quality, reducing impervious surfaces to highest degree and restoration of wetlands. Wetlands should be the focus for mitigation, including the compensatory restoration/enhancement of upland wetlands to the developments.

Unavoidable impacts are completely based on the level of effectiveness of the proposed mitigation methods as well as other variables, including: ability of treatment facilities to remove particulates, ability of detention ponds to mimic pre-existing conditions, level of infiltration and groundwater discharge, surface water patterns and effectiveness of compensatory wetland restoration/enhancement. The bulk of the uncertainty for mitigated impacts on water comes from the ability of these measures to perform at the highest degree of precision, as well as the execution of the off-set wetland enhancement.

### **Animals:**

An unnamed stream on site 4 has been defined as Presumed Potential/Historic salmonid habitat. Fulfilling site 4 would have significant adverse environmental impact on possible salmonid habitat because of disturbance of landscape and vegetation near the stream. The greater portion of the 71.8-acre parcel of land has already been cleared of vegetation and

prepared for agricultural use. As result of 42-50 acres of land development, 9.2 acres of which are or were wetlands, the natural habitat for birds like hawk, heron, eagle and songbirds and mammals like deer and beaver would not be restored.

The Lost Lake Creek running through site 5 has been defined as Current Presumed salmonid habitat. Implementing the site 5 would have significant adverse environmental impacts on the possible salmonid habitat in the Lost Lake Creek because of disturbance of landscape and vegetation near the Lost Lake Creek. Although the mitigation measures – replanting the native vegetation, protection upland and reinforcing management, as result of 42-50 acres land clearing include 12.35 acres wetland, the natural habitat for currently present birds like hawk, heron, eagle and songbirds, and beaver would be impacted significantly.

No significant adverse environmental impacts on wildlife habitat exist in the downtown site due to currently developed land.

Leaving the jail in its current condition would have no significant impact on wild animals.

#### **Plants:**

Implementing site 4 would cause loss of original vegetation in site 4 due to 9.2 acres wetland loss and land clearing. There are no endangered or threatened species found on site 4. Possible mitigation measures are replanting and retaining snags to minimize the adverse impact. The 42-50 acres land disturbance would cause the loss of vegetation coverage.

Implementing site 5 would cause loss of original vegetation on site 5 due to 42-50 acres land clearing and disturbance including 12.35 acres wetland. No endangered, threatened species are found in site 5. With mitigation measures such as replanting, retaining snags to minimize the adverse impact on plants. Alternative 2 would still have significant adverse impact on plant diversity and decreasing plant coverage.

Fulfilling the downtown site would have non-significant adverse environmental impacts on current plant life because the site for downtown has been developed and there is no vegetation that needs to be protected within the downtown site.

Leaving the jail in its current condition would have no significant impact on plants.

#### **Aesthetics:**

Sites 4 and 5 are both currently rural and undeveloped. Putting buildings on the sites would cause significant changes to the environment and would cause visual changes in the environment. The buildings would be low and shielded as much as possible from the surrounding trees through foliage.

The downtown alternative would significantly change the horizon of the city, as a 30 story building would be the tallest building in the city and would be clearly visible from most of the downtown area.

The jail will cause a significant change in the visual appeal of any environment it is put in and should be designed to be aesthetically appealing as much as possible since it will be built somewhere and a set group of people will have to see it routinely. Some impact on the visual continuity of the countryside is inevitable but designs should attempt to minimize it as much as possible.

#### **Earth:**

The USDA has designated portions of soil on both Site 4 and Site 5 as prime agricultural soil. A portion of soil on Site 5 is designated as Farmland of Statewide Significance, and will be lost if a chosen as the site for the new adult correction facilities. There are no proposed mitigation methods to preserve the prime agricultural soil on Site 4 or Site 5.

There is a concern regarding the geographic stability of the current facilities. The current facilities are not up to code, and if the no action alternative is continued there is a significant risk associated with the current facilities.

#### **ENVIRONMENTAL IMPACTS OF LESS SIGNIFICANCE INCLUDE:**

##### **Utilities and Public Services:**

Site 4 and 5 are currently only supplied with telephone and electricity. Additional utilities, such as gas, water, sewage, and refuse service will be needed. The additional infrastructure could add increased environmental impacts. Most of the added infrastructure will be underground, and will pose little environmental impact. Some pump stations will need to be added, creating slight additional impervious surfaces, but should pose little significance. There will be increased need for public services, such as fire and could expect to see a higher demand for schools because of the anticipated 618 new employees. These issues can be mostly mitigated, and are unlikely to see any unavoidable significant impacts.

##### **Environmental Health:**

In this study it was found that the development of Site 4 or Site 5 would pose a significant risk of damage to the environmental health of the prospective sites due to the use of hazardous materials in development, construction and operation of the proposed Corrections Facilities. Wetlands are particularly sensitive to pollutants and therefore developing on Site 5, which has the greatest expanse of wetlands, poses the greatest risk of damage to environmental health.

Best management practices are recommended as a mitigation method; however there is no certainty on the success of best management practices in eliminating environmental health risks.

**Air:**

While there will be a temporary increase in air pollutants associated with construction, the increase in air pollution is not thought to be significant.

Best management practices are recommended as a mitigation method to lower the affects of the temporary increase in air pollution.

**Energy and Natural Resources:**

The use of energy and natural resources was found to be moderately significant for the development of any of the proposed sites. Development, construction and use of the respective sites would likely consume energy in the following order, from the greatest amount of energy consumed to the least: the new downtown facility, Site 5, Site 4, no action.

**ENVIRONMENTAL IMPACTS OF LEAST SIGNIFICANCE:**

**Traffic:**

Site 4 and 5 will require some road improvements, but increased traffic will have only a slight impact. The 3 options will require 825 parking stalls, which would increase impervious surfaces.

**Light/Glare:**

Some light pollution would be the result of the building on site 4 or 5 which is currently just woods and fields. This light would be shielded both by light shields and by a foliage belt that would help to keep as much of the ambient light as possible contained within the project areas. All lights would meet current Whatcom county building codes.

Downtown building site would cause less light pollution since there would be a parking lot built into the building and would be internally lit. Light from the building would leak out during the night, and street level lights would light the surrounding parking lots, but it wouldn't be any more light than any of the other buildings in the area.

**Shoreline/Land Use:** Both site 4 and 5 land has been classified as “environmentally sensitive” and would therefore need to meet compliance with the FWCA.

**Cultural:**

The land is currently not developed and has little cultural significance that has been preserved at the surface level, and if any were uncovered during the construction process consultants

would be called in to determine significance and further construction would be halted until a decision is made.

**Recreational:**

Little to no recreational use has been found on either property so minimal impact to any current recreational use is foreseen. The land is undeveloped with a few trails and would have little further use in its current state.

**Housing:** Housing supply will not change and although surrounding housing may lose value, the new facility is in compliance with zoning and the impact is not deemed significant.

# List of Figures and Tables

---

## Figures

Figure 1: Site 4 and Site 5 Locations

Figure 2: Site 4 Design Proposal

Figure 3: Site 4 Design Proposal

Figure 4: Downtown Design Proposal

Figure 5: Downtown Site and Current Facility

Figure 6: Water Resources Sites 4 & Site 5

Figure 7: Site 4 Wetland Coverage

Figure 8: Site 5 Wetland Coverage

Figure 9: Downtown Proposal

Figure 10: Fish Habitat Delineation

Figure 11: Current Image of Site 5 Property

Figure 12: Adjacent Roads at Site 4 and Site 5

Figure 13: Land Use Designations Site 4, Site 5, & Surrounding Area

## Tables

Table 1: Wetland delineation for site 4

Table 2: Wetland delineation for site 5

Table 3: Vegetation Species and Distribution in Site 4

Table 4: Vegetation species and distribution in site 5



# Glossary:

---

CAO: Whatcom County Critical Area Ordinance

EPF: Essential Public Facility

ESA: Endangered Species Act

ESU: Evolutionarily Significant Unit

DPS: Distinct Population Segment

FTE: Full Time Employee

GHG: Green House Gas

LOS: Level of Service

NAAQS: National Ambient Air Quality Standards

PHS: Priority Habitat and Species

RCW: Revised Code of Washington

SEPA: Washington State Environmental Policy Act

SPCC: Spill Prevention Code and Countermeasures

*SWNR: Washington State Department of Nature Resources*

TESC: Temporary Erosion and Sediment Control

UGA: Urban Growth Area

*UGAFIS: Whatcom County 10-Year Urban Growth Area Review Draft Environmental Impact Statement*

*USDA: United States Department of Agriculture*

*USFWS: U. S. Fish & Wildlife Service*

*WDFW: Washington Department of Fish and Wildlife*

*WDNR: Washington State Department of Natural Resources*

*WNHP: State of Washington Nature Heritage Program*

# Alternatives Being Analyzed

The following are possible courses of actions Whatcom County may take in an effort to provide adequate adult correction facilities, also referred to throughout this document as jail facilities.

## Construction of New Facilities on Site 4:

A new adult correction facility would be constructed on Site 4, a property near Bellingham International Airport off of Kope Road, east of Rural Avenue and Wynn Road, south of Slater road, and north of Marietta Avenue. It is desired to build this facility utilizing a horizontal design. This facility is proposed to hold over 2,450 beds by 2050 and would have a range of security levels, from minimum security to maximum security. Please refer to Figure 2 below for the proposed design of Site 4.

Figure 1: Site 4 and Site 5 Locations

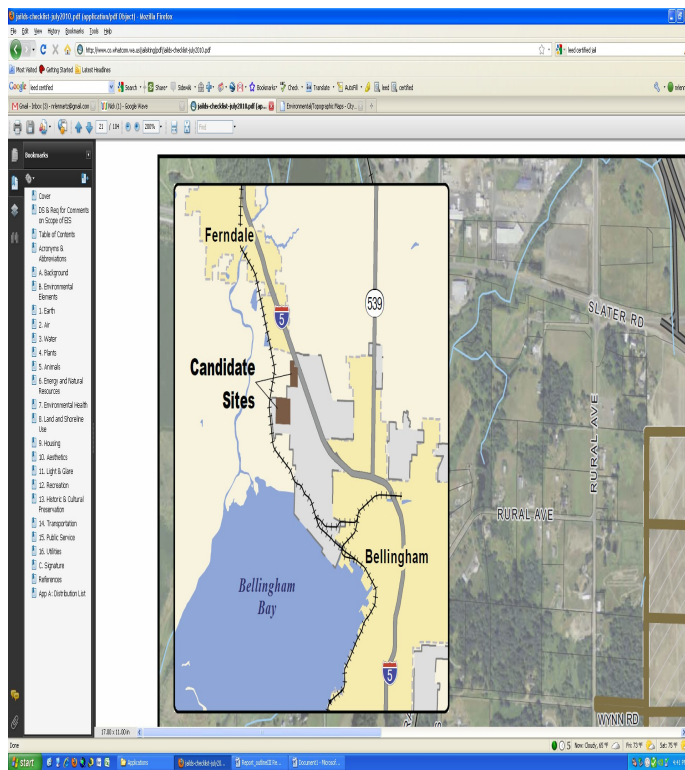
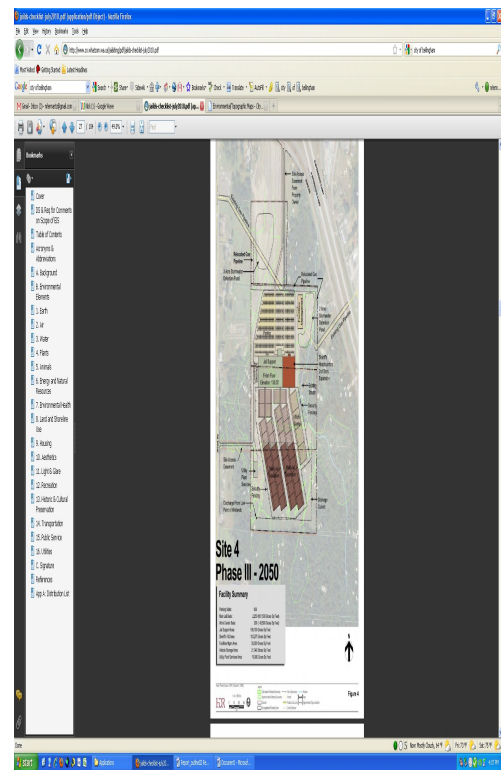


Figure 2: Site 4 Design Proposal

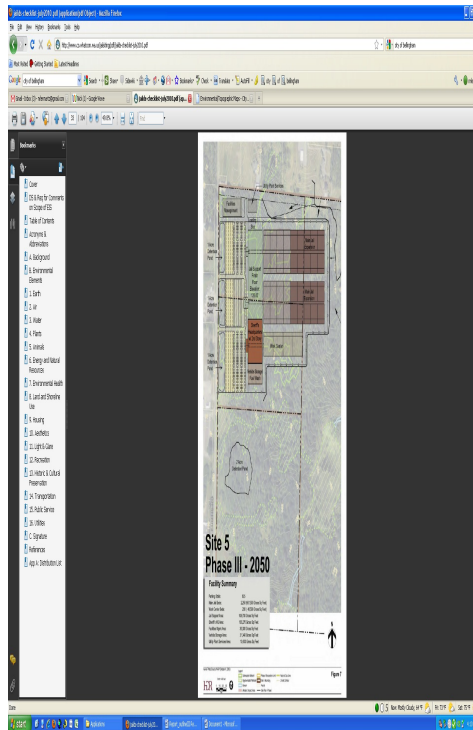


## Construction of New Facilities on Site 5:

A new adult correction facility would be constructed on Site 5, a property near Bellingham International Airport off of Curtis Road, north of Marietta Avenue and south of the right-of-way for Kraabol Road. It is proposed to build this facility utilizing a horizontal design. This facility is

proposed to hold over 2,450 beds by 2050 and would have a range of security levels, from minimum security to maximum security. Please refer to Figure 3 below for the proposed design of Site 5.

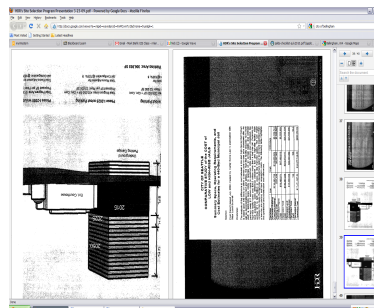
*Figure 3: Site 5 Design Proposal*



### **Construction of New Downtown Facilities:**

A new downtown adult corrections facility would be constructed in the parking-lot adjacent to the Whatcom County Court House in downtown Bellingham. It would be necessary to construct this facility vertically, reaching the height of 24 stories. This facility is proposed to hold over 2,450 beds by 2050 and would have a range of security levels, from minimum security to maximum security. Please refer to Figure 4 below for the proposed design of the new downtown facility.

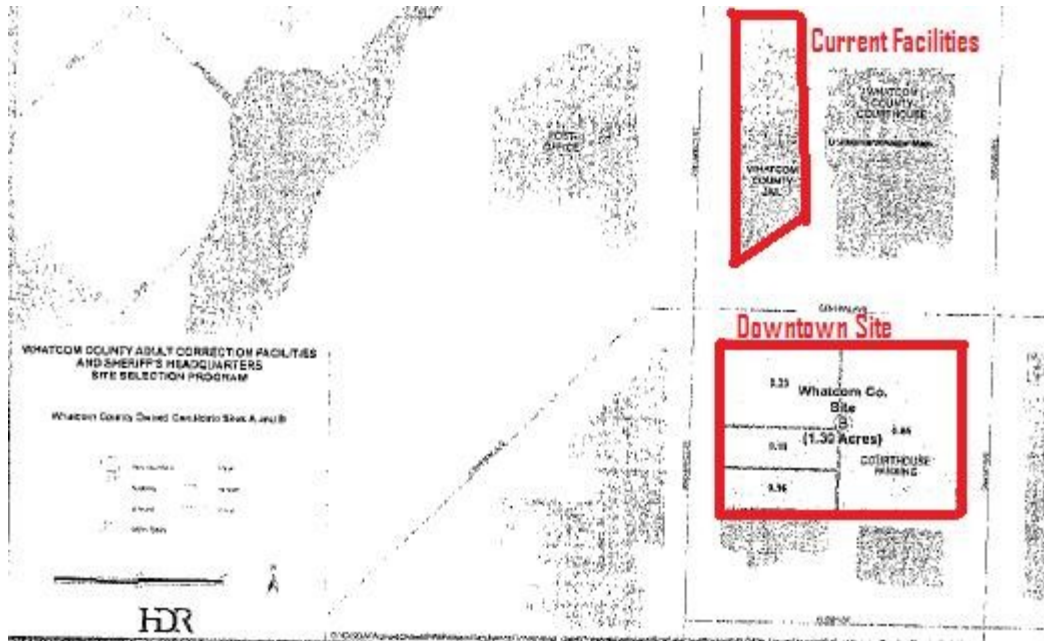
*Figure 4 : Downtown Design Proposal*



**No Action:**

The State Environmental Policy Act requires the analysis of the no action alternative. The no action alternative would result in neither relocating nor expanding the Whatcom County adult correction facility. In essence no action means not addressing the current inadequacy of the jail facilities. Please refer to Figure 5 below for the current location of the facility.

*Figure 5: Downtown Site and Current Facility*



# Environmental Analysis

---

The following are possible environmental effects that may be incurred in an effort to provide adequate adult correction facilities for Whatcom County.

## **Significant Environmental Impacts:**

Water

Animals

Plants

Aesthetics

Earth

## **Less Significant Environmental Impacts:**

Utilities

Environmental Health

Air

Energy and Natural Resources

## **Least Significant Environmental:**

Transportation

Light/Glare

Shoreline/Land Use

Cultural

Recreational

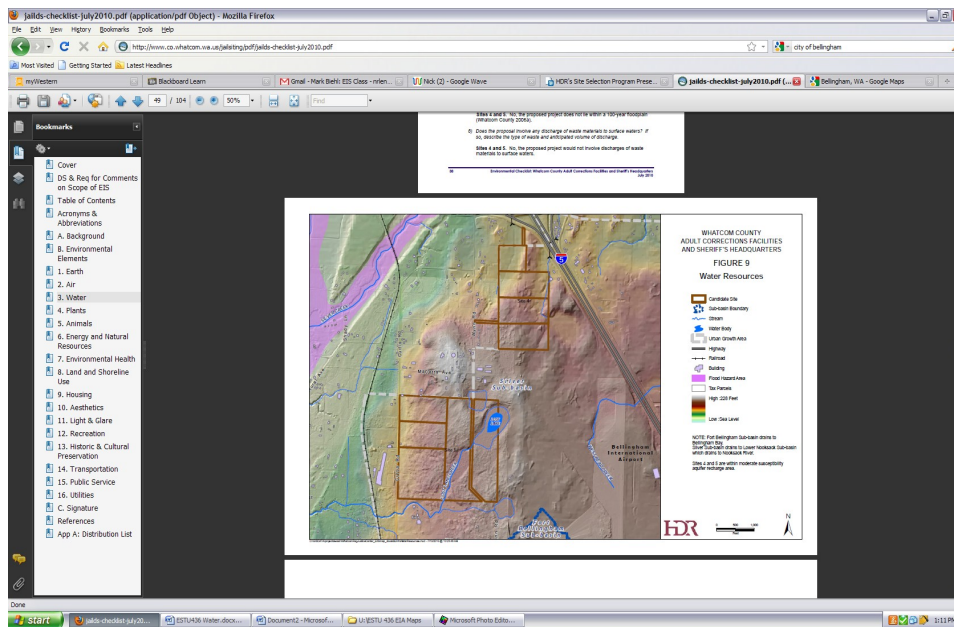
Housing

# Water

Water is a particularly important area in the proposal for sites 4 and 5 due to the nature of the land as a predominantly wetland area. While each site harbors wetlands, it is clear that site 5 holds much more sensitive wetland terrain, while site 4 has been essentially cleared for agricultural practices with no existing intentional vegetation. The downtown proposal, in comparison, is not a water sensitive area due to the existing facilities, as well as the proposed development occurring on land already covered by impervious surfaces. Whatcom Creek borders the northern property line, yet that portion of the site would not undergo any remarkable development changes in the proposed plan, and would only be a concern temporarily during construction.

Affected Environment:

Figure 6: Water Resource Sites 4 & 5



Site 4 exists within the Silver Creek watershed, which flows into the Nooksack River and promptly drains into the Ocean via Bellingham Bay. The location has one unnamed perennial stream traveling through the eastern portion, which originates from the southeast corner of the site. This creek eventually drains into Silver Creek, and is listed by the City of Bellingham CAO (Critical Areas Ordinance 2007) as potentially fish bearing, yet no evidence has been found of their use of the stream as a reproductive site.

Site 5 contains many more surface flows in comparison, including Lost Lake Creek and Lost Lake, which are essentially beaver havens. This creek travels from a wetland near the north property line, and travels through the center of the site before it exits the center of the southern boundary. The nature of the stream makes it such that no fish are capable of passing through due to the number of beaver dams.

Wetlands, as mentioned, are the bulk of the impact on the sites 4 & 5 in terms of water and water quality. These maps indicate the coverage of wetlands on the areas, and their respective level of sensitivity:

Figure 7: Site 4 Wetland Coverage

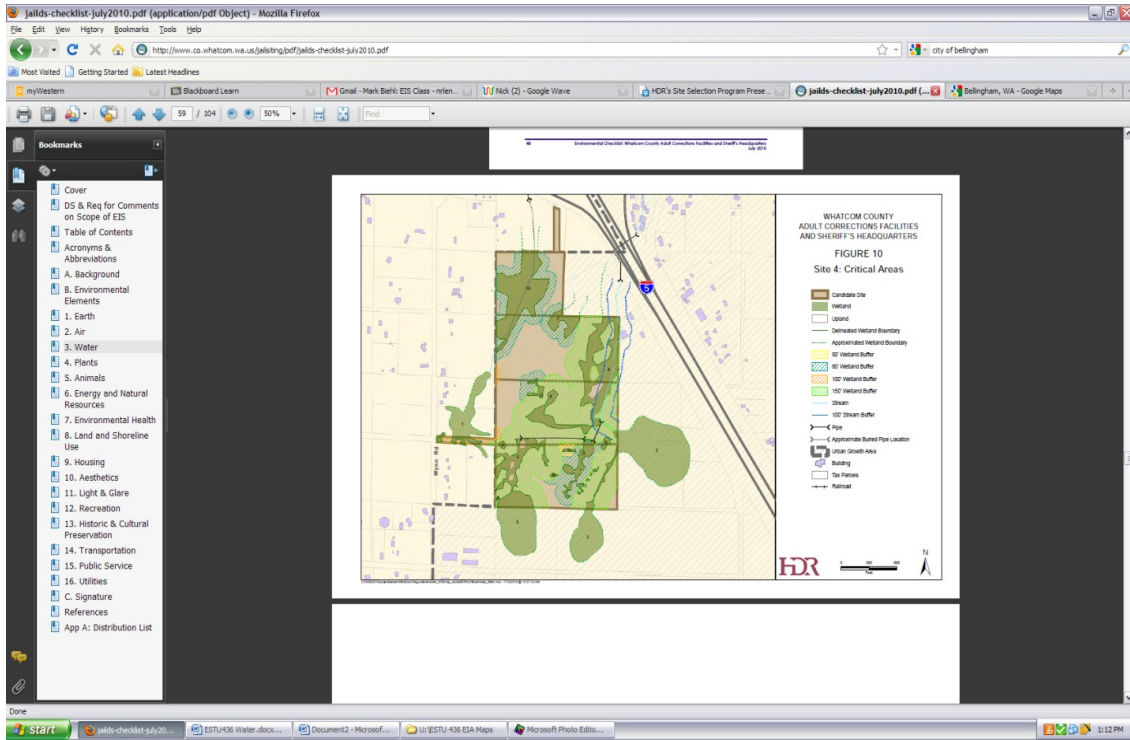


Table 1: Wetland Delineation Site 4

boundary class as shorelines under the Whatcom County Shoreline Master Program (Whatcom County 2006c). There are no flood hazard areas within the site boundaries (Whatcom County 2006c).

**Wetlands**

**Site 4.** A total of 15 wetlands have been identified on Site 4 (Figure 10). Table 5 provides a summary of their size, preliminary Washington State Department of Ecology (Hrubý 2004) wetland ratings, and Whatcom County buffer widths based on high-intensity land use.

**Table 5. Wetland Summary for Site 4**

Wetland	On-site Wetland Area (approx. acres)	Ecology Rating	Whatcom Co. Buffer Width (feet)
1	0.35	II	100
2	1.02	III	80
3	0.43	II	150
4	6.50	III	150
5	0.06	IV	50
6	3.26	II	150
7	0.09	IV	50
8	1.12	III	80
9	0.16	III	80
10	0.05	III	80
11 (mosaic)	0.13	III	80
13	0.28	III	80
14	6.03	III	80
15	0.06	IV	50
A	0.02	IV	50



Figure 8: Site 5 Wetland Coverage

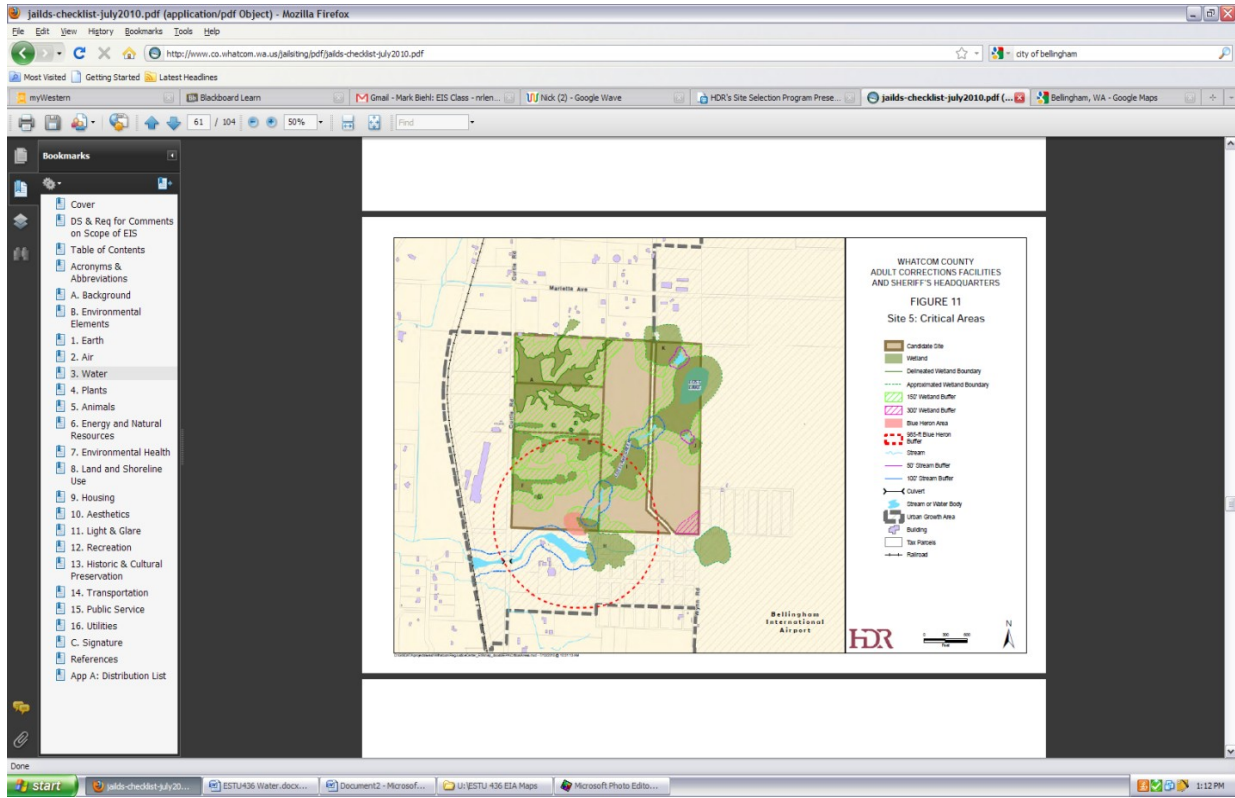
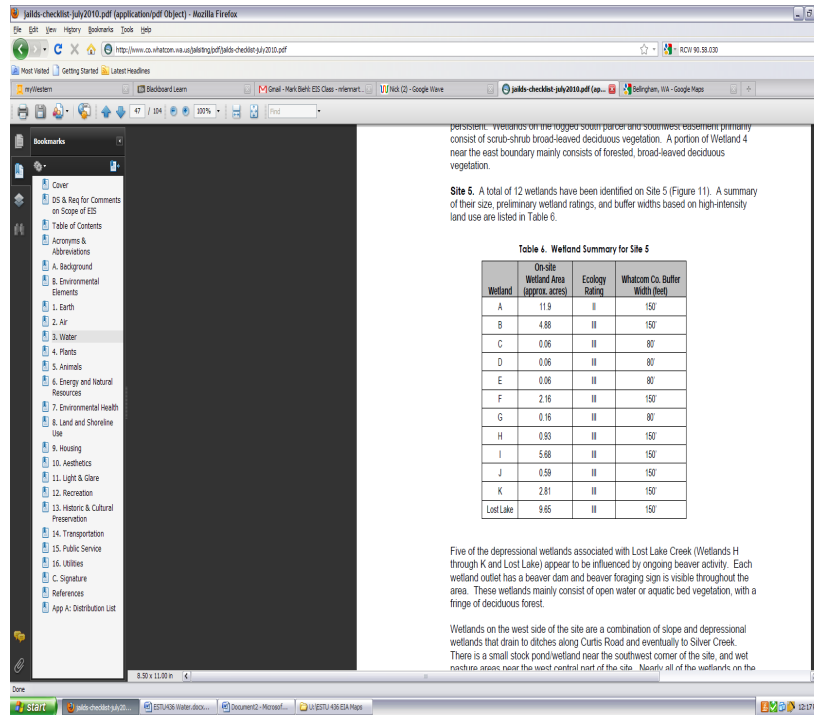


Table 2: Wetland Delineation Site 5

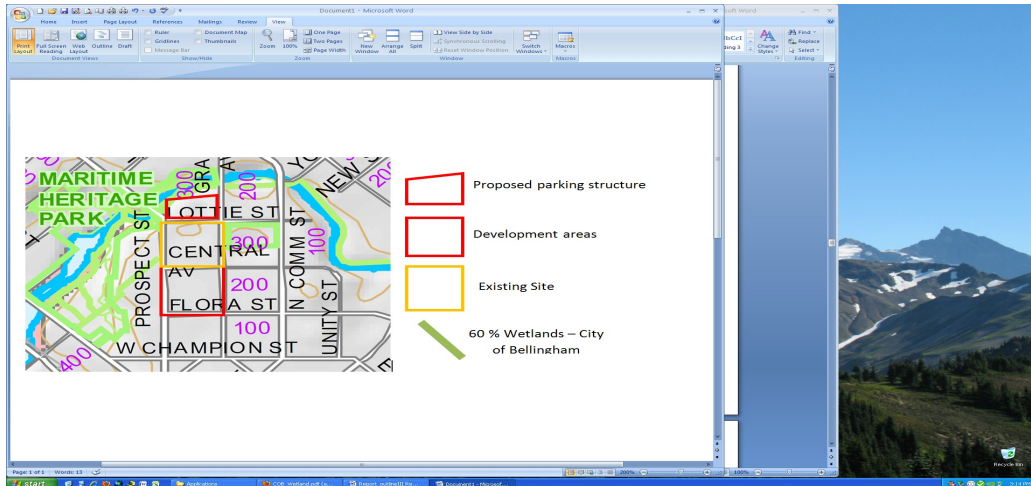


On Site 4, the wetlands are mostly groundwater discharge, subsurface interflow, and surface flow from off-site areas, which all drain to the north. The wetlands on the northern portion of the site have been scaled back in terms of vegetation, and the southern portion of the site contains previously logged areas of deciduous broad-leafed vegetation.

Site 5 wetlands H through K all have evidence of on-going beaver activity, with dams existing on the outlet of each of the respective areas. These areas consist mainly of open water or aquatic bed vegetation, bordered by a thin deciduous forest. The western portion of the site contains sloped wetlands that drain to ditches along Curtis Road and eventually into Silver Creek. A small pond exists neat the southwest corner of the site. Mostly all of the wetlands in the western portion of the site contain broad-leafed deciduous vegetation with the exception of wet-pasture areas near the center. An off-site wetland near the southeast corner of the site is likely a category I wetland, with the required 300-foot border extending onto site 5 (indicated by the red circle on the map).

The downtown proposal site does not contain any wetland areas, although the northern border of the site is bordered against Whatcom Creek. This creek and its immediate surroundings (within approximately 10-20 feet) are designated as 60% wetlands by the City of Bellingham.

*Figure 9: Downtown Proposal*



The no-action alternative would entail the continuance of the status-quo for water quality around the existing downtown jail facility.

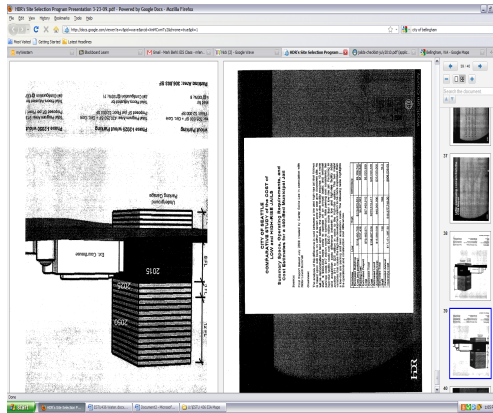
Impacts:

The proposed design layout for site 4 is strategically located to avoid waterways and undisturbed wetland areas, to which approximately 9.2 acres of wetlands would be directly impacted by development. With the only surface flow coming from the unnamed stream, there would be no impact on existing waterways, however construction would occur within its 200 foot boundary and be a potential hazard during the phasing process. Compaction of the dirt during construction could lead to increased surface runoff and erosion.

The proposed facilities on site 5 are strategically placed in the northwest corner to avoid the highest amount of sensitive wetlands and waterways, yet still approximately 12.35 acres of wetlands would be directly impacted by fully-phased construction. No direct impacts are proposed to the Lost Lake Creek or lands within its 200-foot buffer.

In order to make a stable base for the facilities to be constructed, extensive dredging and filling would occur in each of the proposals downtown, and sites 4 & 5. The downtown site would involve dredging out approximately 6 stories of space below the facilities, including space for a parking garage (as indicated on following photo). The proposal on sites 4 & 5 each include 64,500 and 250,000 cubic yards of removal respectively, yet these numbers are expected to balance with fill and utilized on site, ideally with a small overall impact.

*Figure 4: Downtown Design Proposal*



Runoff for the proposed sites 4 & 5 will be particularly significant, especially during the construction phase as machinery compacts dirt around the development increasing surface flow. Temporary and permanent loss of vegetation will occur due to the clearing and grading of the sites, leading to increased runoff as well. Impervious surfaces such as sidewalks, streets and the fully-phased development would increase runoff and erosion around the areas.

Waste materials have an opportunity to enter into the groundwater or surface flows during construction and after with the phased development completed. Storm-water runoff from construction sites can contain petroleum products such as fossil fuels, lubricants and solvents. Vehicles used at any time during operation and construction could leak into the site. Proposed projects on the downtown and sites 4 & 5 all include construction of a stand-by power plant and functional parking facility, with the stored materials and increased traffic being a potential hazard for increased non-point waste discharge.

The downtown development would have insignificant impacts on water quality, especially during operations. The same level of impervious surfaces would exist after the development is fully-phased, and create no additional concerns. Existing facilities to treat storm-water would receive the same level of flow, and no change would occur within the system. There is a potential for particulates to enter into the groundwater during construction, yet the vast majority of construction would occur on the portion of the site opposite of Whatcom Creek.

The no action alternative would have no significant impact on water or water quality due to the existing conditions of impervious surfaces, and existing water treatment facilities operated by the City of Bellingham.

#### Mitigation Methods:

Sites 4 & 5 both contain proposals for 5 acres of water detention facilities on-site bordering the development. Site 4 proposes one 3-acre and one 2-acre pond while site 5 proposes three 1-acre ponds and a 2-acre pond. Storm-water release from these facilities would match the pre-

development discharge rates and maintain the most natural subsurface and surface flow possible for the developments.

Runoff from the development would be channeled by control ditches and culverts, that then filter into the detention ponds.

Parking facilities will all be equipped to treat runoff and control non-point waste integration with filter strips which cause water to sheet flow; suspended particulates are then removed via the strip and disposed of safely. After filtering the water would enter the proposed ditches, underground pipes and culverts to be collected in the respective detention ponds. These detention ponds are the primary source of water quality control during facility operation which treat and release water at the closest rate to existing conditions.

Storage of chemicals in the proposed energy facility on site would be handled with comprehensive safety measures in conjunction with the Uniform Building Code, Uniform Fire Code and applicable state regulations.

Along with the aforementioned mitigation measures, the following may also be paramount in mitigating water quality effects on the proposed sites:

- Reducing the width of construction corridors to reduce temporary impact on surrounding vegetation and water runoff.
- During and immediately following construction, stabilizing surrounding soils with vegetative cover to reduce erosion.
- Erosion control Best Management Practices such as stockpiling.
- Implementing a Temporary Erosion and Sediment Control (TESC), including the installation of silt fences to slow down runoff and control erosion.
- Inspection and monitoring of erosion and water quality control measures to maintain the highest degree of efficacy throughout project operations.
- Implementing a Spill Prevention Code and Countermeasures (SPCC) plan to manage toxic chemicals that may be inadvertently discharged during construction and during site operations.
- Reduce the overall amount of impervious surface to the highest degree possible.
- Restoration of wetlands in the immediate vicinity of the site in order to offset any direct impact on wetlands.

Since the direct impact on wetlands will be the most significant aspect of the proposal for sites 4 & 5, the most comprehensive and aggressive mitigation methods must be utilized to control this hazard. The city of Bellingham CAO (2007) states that when adversely affecting wetlands, the most up-to-date science and methods must be used in order to avoid any long-term impacts to the system. In this case, mitigation on the directly impacted wetlands involves offsetting the impact by restoring, improving or creating wetlands upstream to the effected site (CAO 16.55.240; 16.55.350). These actions could entail re-establishment of previously existing

wetlands, enhancement of wetland functions and preservation of sensitive wetland areas. Mitigation for sites 4 & 5 must include a focus on the most local, sensitive and upland wetland regions, and contain a total acreage of 9.2 and 12.35 acres respectively.

#### Significant Unavoidable Adverse Impacts:

Increasing the amount of impervious surfaces will no doubt decrease water quality in the immediate area to a certain extent. The downtown and no action alternatives do not increase impervious surface levels, and the proposed sites 4 & 5 increase impervious surfaces greatly in comparison to existing conditions. Although mitigation measures would be effective to a degree, certain suspended particulates and non-point degradation would occur and decrease water quality in those proposed sites. The extent to which the mitigation measures would be effective depends on several factors, with these aspects being the focus of attention for increasing water quality:

- Ability of treatment measures to remove hazardous waste from runoff
- Ability of detention ponds to mimic pre-development conditions
- Level of infiltration and groundwater discharge to surface flows
- Surface water patterns
- Effectiveness of compensatory wetland restoration/enhancement upland

Construction would increase the amount of runoff and erosion temporarily as well as remove native vegetation, particularly on sites 4 & 5. However, since the bulk of the impacts will occur long-term during facilities operation, stressing the restoration of wetland to off-set direct impacts is the most significant unavoidable aspect of the proposals.

## Animals

---

This section reviews existing animal species and habitat conditions on and adjacent to the four alternatives of the Whatcom County Adult Correction Facility site selection process. This section is based on the Species Report facilitated through the U.S. Fish & Wildlife Service, State of Washington Nature Heritage Program and implemented by the Washington State Department of Nature Resources. Supplemental information has been acquired through the Whatcom County Critical Area Ordinance (CAO) and the Whatcom County 10-Year Urban Growth Area Review Draft Environmental Impact Statement (UGAEIS) prepared by Whatcom County.

### Fish

The UGAEIS assesses the occurrence of fish species that need to be preserved within the Whatcom County urban growth area. Three fish species occur in the County that are protected under the federal Endangered Species Act (ESA): Chinook salmon of the Puget Sound Evolutionarily Significant Unit (ESU), bull trout of the Coastal/Puget Sound Distinct Population Segment (DPS), and Steelhead of the Puget Sound DPS. The Puget Sound/Strait of Georgia ESU of Coho salmon is a federal species of concern. All of these species are known to occur in county streams.

Salmonids are actively known to occur in the following water bodies: Chuckanut Creek, Padden Creek, Whatcom Creek, Squalicum Creek, Silver Creek. Salmonids also occur in some rural area streams including: Nooksack River (Lower, Middle, North Fork, South Fork), California Creek, Dakota Creek, Sumas River, Bertrand Creek, Squalicum Creek, Fourmile Creek, Fishtrap Creek, Terrell Creek, Red River, Kendall Creek, Samish River, Silver Creek, Anderson Creek, Pepin Creek, Breckenridge Creek and many other streams located in the eastern portion of the County.

Under the CAO, the following places are priority places for conservation of habitats:

- Kelp and eelgrass beds that may contain Herring, Smelt and Sand Lance spawning areas
- Naturally occurring ponds under twenty acres
- Lakes, ponds, streams and rivers planted with game fish by a Governmental entity
- State natural area preserves and natural resource conservation areas
- All marine influenced pocket estuaries including: the North end of Chuckanut Bay, Bayside Rd./Fieldston Rd. Lagoon, Edgemoor Lagoon, Post Point Lagoon, Padden Creek Mouth, Whatcom Creek Mouth and Aqualicum Creek Mouth

Affected Environment:

Site 4:

There is unnamed stream at the east portion of site 4. Whatcom County (2005) identifies the unnamed stream as having potential use by anadromous or resident fish species and is, thus, categorized as a fish-bearing stream per the Whatcom County (2008a) CAO. According to the checklists posted by Whatcom County, Currently there is no priority species in the stream.

Site 5:

The Lost Lake is located in the eastern corner of site 5. A perennial stream, locally known as Lost Lake Creek, flows from the north to the south through the eastern half of this site. The aquatic species present in this lake and stream are primarily amphibians. According to the Checklist, no fish species that need to be protected has been spotted in both Lost Lake and Lost Lake creek. Lost Lake Creek is considered a Current Presumed distribution, which labels the area as a presumed Salmonid habitat.

Downtown Facility:

The downtown alternative is located at a parking-lot adjacent to the Whatcom County Courthouse in downtown Bellingham, south of current location. There is no watershed existing in this site.

No-action:

No watershed exists within the current site.

Impacts:

Site 4:

As the proposed design layout reveals, the buildings would mainly be located at west portion of site 4. The storm-water detention pond and work center will be built along the stream. Thus, the bank of the stream will be disturbed during the period of construction, land clearing and grading. There will be adverse impacts on aquatic habitat due to degradation of water quality. The impacts are from the following causes.

- Disturbance of land near the stream, changing the composition of vegetation on the banks of the stream
- Soil waste runoff and waste water from construction machines
- Stream bank slide
- Increased sedimentation of stream

The alternation of water quality can heavily influence a fish's spawning habits, upstream migration and out stream migration. As a result, any existing fish population in that stream may decrease.

Site 5:

The processes that create adverse environmental impacts on the Lost Lake Creek are land clearing, grading and construction. The effects of these human activities are the alternation of water environment and hydrology due to stormwater runoff, increased sediment and disturbed soil and vegetation composition. As a result, these alternations will impact on any existing Salmonid habitat.

Downtown facility:

There will be no adverse environmental impact on fish.

No-action:

Implementation of the no-action alternative would not have adverse environmental impacts on the fish.

Mitigation Methods:

Due to a lacking adverse impact on fish in the downtown alternative as well as no-action, mitigations are suggested for sites 4 & 5 to minimize the adverse environmental impact on fish habitat.

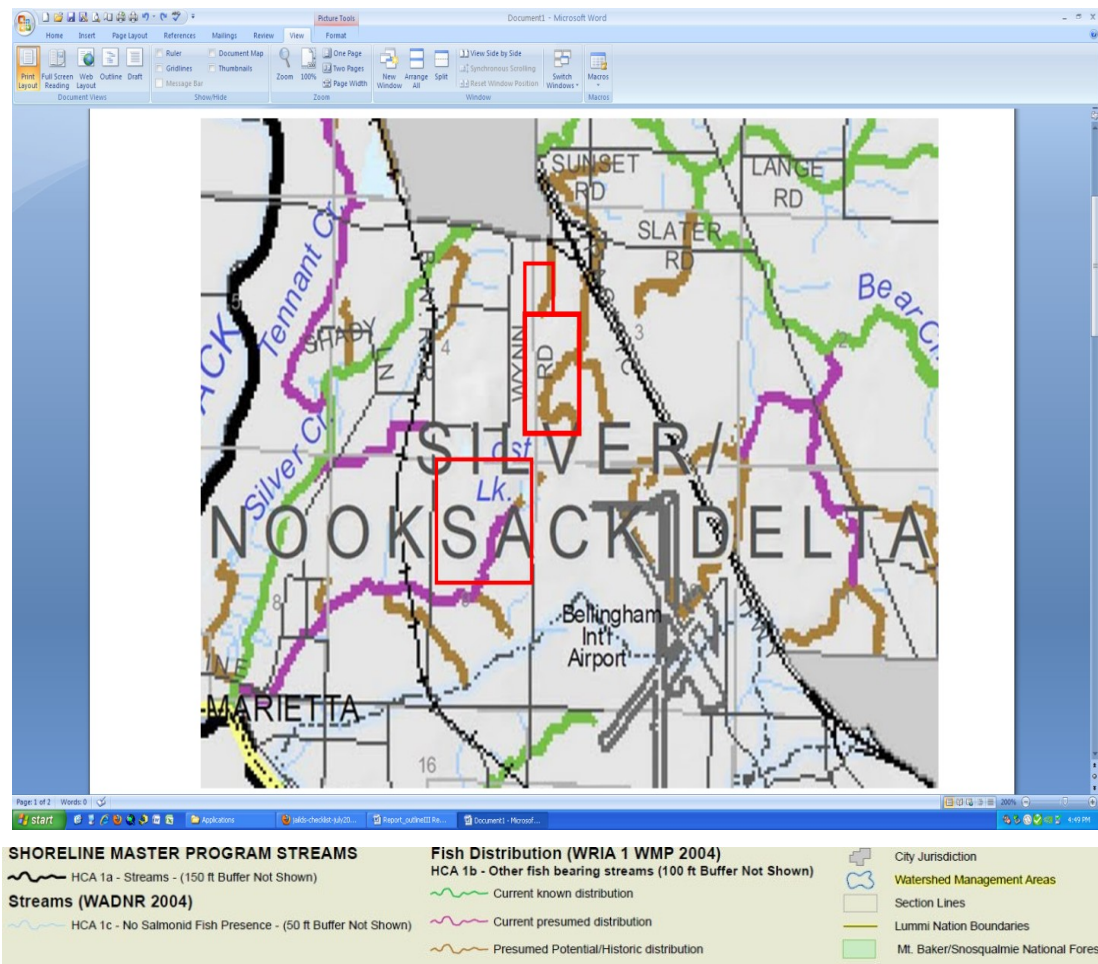


- Hydro-seeding and planting native species in disturbed areas
- Protecting additional upland forest for habitat use
- Retaining snags within stands of trees
- Reinforce the management of construction machines, avoiding the pollution caused by neglectful management
- Building temporary wall for mound during the construction avoiding soil running off

Significant Unavoidable Adverse Impacts:

Even though with some mitigation measures, the unavoidable earth disturbance caused the alternation of water environment and hydrology. However, the building location on site 5 is far from the Lost Lake creek, thus, the impacts caused by construction and land disturbance on the creek on site 5 would be relatively lower than that of site 4.

*Figure 10: Fish Habitat Delineation*



## Wildlife

According to UGAEIS, there are five federally listed wildlife species with the potential to occur within the County: the Gray Wolf (*Canis lupus*) which is listed as endangered, the Northern Spotted Owl (*Strix occidentalis caurina*), Marbled Murrelet (*Brachyramphus marmoratus*), Canadian Lynx (*Lynx canadensis*) and the Grizzly Bear (*Ursus arctos*) all of which are listed as threatened (USFWS 2009). These species are expected to occur primarily outside of the County Planning Area, defined as the western third of the County, and would be more likely to occur in the eastern two-thirds of the County, in the Mount Baker-Snoqualmie National Forest and North Cascades National Park. There are two documented Northern Spotted Owl nests and several Marbled Murrelet detections in the eastern portion of the County Planning Area; however, they are not located in or near any of the UGA boundaries or the Suitability Analysis Area, but are in more remote, forested portions of the County (WDFW 2009b). The Gray Wolf, Canadian Lynx and Grizzly Bear are rare and would be expected to be restricted to the more remote wilderness areas of the eastern portion of the County.

## Affected Environment:

### Site 4:

There are five main species of bird and two species of mammals assumed to be present in site 4:

- Birds: Hawk, Heron, Eagle, Songbirds
- Other: Waterfowl
- Mammals: Deer and Beaver

Wetlands on Site 4 provide amphibian, waterfowl, heron and beaver habitat. Beaver activity was observed along the east side of the site, near the outlet to Wetland 3 (See Figure 7). Depression wetlands in the logged portion of the site attract Wilson's snipe and Great blue heron. No Great blue heron nesting sites were observed on or near Site 4. Managed agricultural areas provide some habitat for small mammals including voles and mice, and foraging areas for birds of prey such as red-tailed hawks and northern harriers. Brush piles in the logged portion of the site provide refuge for multiple songbird, amphibian and small mammal species. Because Site 4 adjoins larger tracts of undeveloped land to the south, it is likely that larger mammals also utilize the site. One red-tailed hawk nest was observed in a tree off-site to the north of Wetland 3. Nesting activity could not be confirmed; however, red-tailed hawks were observed perching near the nest in spring of 2010. There are no threatened or endangered species known to be on or near the site 4.

### Site 5:

There are five main species of bird and one species mammal present in site 5:

- Birds: Hawk, Heron, Eagle, Songbirds
- Other: Waterfowl
- Mammals: Beaver

Wetlands located on the site provide important amphibious habitat and habitat for songbirds, some waterfowl and beaver. Beaver lodges and beaver activity were observed at the site. An active Great Blue Heron nesting colony was identified in March of 2008. The colony had approximately 15 active nests, and was not identified in the PHS database. It is likely that the Great Blue Herons that nest at the site rely on food resources associated with the Nooksack River delta area. Some foraging by Great Blue Herons may take place at the site; however, regular flights of adult Blue Herons to and from the west indicate an important habitat link. The site plan shows a 985-foot-wide Great Blue Heron buffer zone. This buffer reflects WDFW's management recommendations for Great Blue Heron nesting colonies as part of the agency's PHS program (WDFW 2008). It is likely that any development at this site would need to address the Great Blue Heron nesting colony and develop a habitat management plan designed to preserve this natural resource.

Forest canopy habitat is available on the site to nesting and migratory songbirds, as well as to larger birds such as hawks, owls and vultures. No large nests were observed during the site

visits in 2008, and no adult territorial birds were observed. There is no threatened or endangered species known to be on or near site 5.

Downtown facility:

This area has been developed and no endangered or threatened wildlife species exist on that area.

Alternative 4—No-action

There is no affected wildlife existing in this area.

Impacts:

Site 4:

Loss of 9.2 acres of wetlands causes loss of wild habitat for the present and future animals on the site. In addition, the new 2-acre storm-water detention pond on the northeast portion of the site may cause an increasing population of waterfowl. Their general flight patterns may adversely impact the ability of the airport to function at full capacity to some extent.

Site 5:

Loss of 12.35 acres of wetland causes loss of wild animal habitat for the present and future animals.

Downtown facility:

There will be no adverse environmental impact on animals.

No-action:

Implementation of the no-action alternative would not have adverse environmental impacts on the current animals.

Mitigation Methods:

Due to no adverse impact on wildlife in the downtown and no-action proposal, mitigations are suggested for sites 4 & 5 to minimize the adverse environmental impact on wildlife, including:

- Hydro-seeding and planting native species in disturbed areas
- Protecting additional upland forest for habitat use
- Retaining snags within stands of trees

The attraction of more birds to the detention ponds on site 4 could be mitigated by a mesh netting that covers the water bodies, redirecting their presence to other surrounding wetlands.

On Site 5, The bird's nesting colony would require special protection. A habitat management plan would be developed that discusses in detail how construction and operation of the facility would affect the seasonal Heron presence at the site. The plan would also identify design

conservation measures to limit the effect of disturbance and propose mitigation measures that could preserve the bird's use of the site in the future.

#### Significant Unavoidable Adverse Impacts:

Design proposals for sites 4 & 5 will replace, respectively, 9.2 acres and 12.35 acres of wetlands. This habitat would be lost regardless of the effectiveness of any mitigation efforts. In terms of wetland loss, Site 5 has higher significant impacts on wildlife habitat.

## Plants

---

This section reviews existing plant species and habitat conditions on and adjacent to the four potential avenues of the Whatcom County Adult Correction Facility site selection process. This section is based on the Species Report facilitated through the U.S. Fish & Wildlife Service, State of Washington Nature Heritage Program and implemented by the Washington State Department of Nature Resources. Supplemental information has been acquired through the Whatcom County Critical Area Ordinance (CAO) and the Whatcom County 10-Year Urban Growth Area Review Draft Environmental Impact Statement (UGAEIS) prepared by Whatcom County.

U.S. Fish & Wildlife Service published listings and occurrences for Washington, listing 10 plant species including 7 threatened species and 4 endangered species which occur in this state. Endangered or threatened plant species are protected by the ESA and Washington State laws (Revised Code of Washington [RCW] 79.70.030(6) and RCW 79A.05.305(5)). There are no federally listed plant species currently known to occur in the County (USFWS 2009).

#### Affected Environment:

##### Site 4:

The types of vegetation found on the site are deciduous trees (Alder, Maple, Aspen, and other), Evergreen trees (Fir), Shrubs, grass and wet soil plants (skunk cabbage and others). A majority of Site 4 consists of actively managed agricultural land that is dominated by wheat. Wetlands located in the managed areas consist mainly of Foxtail and Kentucky Bluegrass. The logged parcel in the south portion of the site is dominated by regenerating shrubs and saplings such as snowberry, vine maple, big-leaf maple, and black cottonwood. Wetlands in the logged portion of the site are dominated by regenerating quaking aspen, American brooklime, Siberian miner's lettuce, and skunk cabbage. Undisturbed wetlands and riparian areas on the east-central portion of the site are dominated by Red Alder and Douglas fir trees, with salmonberry being the dominant understory shrub species. Generally, no threatened, endangered or sensitive plant species are known to be on or near the site 4. The vegetation species are listed below.

Table 3: Vegetation Species and Distribution in Site 4

Species	Location	Species status <sup>1</sup>
quaking aspen	Wetland (South portion of site 4)	none
Alder		none
shortawn foxtail	Wetland (North portion of site 4)	none
Kentucky bluegrass	Wetland (North portion of site 4)	none
Snowberry	South portion of the site	none
Vine Maple		none
Bigleaf Maple		none
Black Cottonwood		none
American brooklime	Wetland (South portion of site 4)	none
Siberian miner's lettuce		none
skunk cabbage		none
Wheat	Agricultural land in site 4	none

Species status is State Status of plant species is determined by the Washington Natural Heritage Program.

Factors considered include abundance, occurrence patterns, vulnerability, threats, existing protection, and taxonomic distinctness. Values include:

E = Endangered. In danger of becoming extinct or extirpated from Washington.

T = Threatened. Likely to become Endangered in Washington.

S = Sensitive. Vulnerable or declining and could become Endangered or Threatened in the state.

X = Possibly extinct or Extirpated from Washington.

R1 = Review group 1. Of potential concern but needs more field work to assign another rank.

R2 = Review group 2. Of potential concern but with unresolved taxonomic questions

None= None of these categories above. (Sources from

<http://www1.dnr.wa.gov/nhp/refdesk/lists/plantsxco/whatcom.html>)

#### Site 5:

Deciduous trees (Alder, Maple and other), Evergreen trees (Fir), Shrubs, Grass and Wetland plants (Cattail, buttercup, bulrush, skunk cabbage) and other types of vegetation exist on site.

Site 5 contains a mixture of native and non-native plants. The entire site was logged within the past 80 years. The majority of the western half of the site was an active farm until the 1980s, and continues to recover from the disturbance associated with farming activities. It contains mostly pioneer species of plants such as grasses and young red alder saplings, as well as weedy shrub species such as Himalayan blackberry. The eastern half of the site contains a mostly deciduous forest. Big-leaf Maple and Red Alder are the most common trees, and numerous shrub and groundcover species are distributed over site 5. Shrubs on the site include snowberry, salmonberry, spiraea, and Indian plum. Groundcover is dominated by sword fern, false lily-of-the-valley, and bleeding heart. Wetland ponds are dominated by scrub-shrub vegetation such as willows, spiraea, black twinberry, and emergent species such as cattail and soft rush. Disturbed wetlands near the western part of the site are dominated by reed canary grass and soft rush. There is no threatened or endangered plant species known to be on or near the site 5. The vegetation species are listed below.

Table 4: Vegetation species and distribution in site 5

Species	Location	Species status <sup>1</sup>
<i>Young red alder saplings</i>	<i>Site 5</i>	<i>ncne</i>
<i>Bigleaf maple</i>	<i>Eastern half of the site</i>	<i>ncne</i>
<i>Red alder</i>	<i>Eastern half of the site</i>	<i>ncne</i>
<i>Himalayan blackberry</i>	<i>Site 5</i>	<i>ncne</i>
<i>snowberry</i>	<i>Site 5</i>	<i>ncne</i>
<i>salmonberry</i>	<i>Site 5</i>	<i>ncne</i>
<i>spiraea</i>	<i>Site 5</i>	<i>ncne</i>
<i>Indian plum</i>	<i>Site 5</i>	<i>ncne</i>
<i>sword fern</i>	<i>Site 5</i>	<i>ncne</i>
<i>False hily-of-the-valley</i>	<i>Site 5</i>	<i>ncne</i>
<i>Bleeding hear</i>	<i>Site 5</i>	<i>ncne</i>
<i>wilsews</i>	<i>W<sup>o</sup>etland in site 5</i>	<i>ncne</i>
<i>spiraea</i>	<i>W<sup>o</sup>etland in site 5</i>	<i>ncne</i>
<i>black twinberry</i>	<i>W<sup>o</sup>etland in site 5</i>	<i>ncne</i>
<i>cattail</i>	<i>W<sup>o</sup>etland in site 5</i>	<i>ncne</i>
<i>soft rush</i>	<i>W<sup>o</sup>etland in site 5</i>	<i>ncne</i>
<i>reed canary grass</i>	<i>W<sup>o</sup>estern half of site</i>	<i>ncne</i>
<i>soft rush</i>	<i>W<sup>o</sup>estern half of site</i>	<i>ncne</i>

1: Species status is State Status of plant species is determined by the Washington Natural Heritage Program. Factors considered include abundance, occurrence patterns, vulnerability, threats, existing protection, and taxonomic distinctness. Values include:  
E = Endangered. In danger of becoming extinct or extirpated from Washington.  
T = Threatened. Likely to become Endangered in Washington.  
S = Sensitive. Vulnerable or declining and could become Endangered or Threatened in the state.  
X = Possibly extinct or Extirpated from Washington.  
R1 = Review group 1. Of potential concern but needs more field work to assign another rank.  
R2 = Review group 2. Of potential concern but with unresolved taxonomic questions  
None= None of these above. (Retrieved from <http://www1.dnr.wa.gov/nhp/refdesk/lists/plantsxco/whatcom.html>)

**Downtown Facility:**

This area has been developed and no at-risk vegetation exists on that area.

**No-action:**

No at-risk vegetative species exist in the current site.

**Impacts:**

**Site 4:**

The agricultural work that has recently been undertaken at the site has impacted grass and emergent species in the formerly managed areas. Approximately 32 acres of cropland and 10 acres of shrub-land would be removed after full build-out of the site, and 9.2 acres of wetland will be replaced. Construction in site 4 will have adverse significant impact on plants diversity and decreasing plant coverage.

#### Site 5:

The portion of the site that the project would disturb is the same portion formerly occupied by the farming operation. Plants that could be affected in this area include sapling alders, black cottonwood, maple trees and grasses. Overall it is anticipated that development on site 5 would result in the removal of approximately 50 acres of this type of vegetation, and a loss of 12.35 acres of wetland. Construction in site 5 will have adverse impacts on plant diversity and decreasing plant coverage.

#### Downtown facility:

There will be no adverse environmental impact on plants.

#### No-action:

Implementation of the no-action alternative would not have adverse environmental impacts on the current plant life.

#### Mitigation Methods:

Mitigations are suggested for sites 4 and 5 to minimize the adverse environmental impact on plants, repairing the loss of vegetation:

- Leaving land areas of both site 4 and site 5 to the north, east, and south in open space, and retaining the current vegetation communities and forested setting
- Hydro-seeding and planting native species in disturbed areas after building construction
- Retaining snags within stands of trees on site 5.
- Strategic designing of construction to decrease the disturbed areas

#### **Significant Unavoidable Adverse Impacts:**

In both sites 4 & 5, because of no protected species distributing over those two sites, the adverse impacts on site 4 and site 5 can be minimized by restoring the vegetation coverage. The unavoidable earth occupation for site construction will still cause the loss of existing vegetative species. In terms of wetland area loss, the adverse impacts on site 5 would be more significant than that on site 4.



# Aesthetics

---

## Affected Environment:

The current land on site 4 is a rural large grassy field with some brambles at the edges and wetlands throughout making up a nice country scenery. Site 5 has grassy fields, forested areas, and lakes and streams that have active beaver dams and trees surrounding. Both of these sites are attractive and natural and feel like they fit well with the surrounding rural countryside. The lands around sites 4 and 5 will all be impacted visibly by having a building, mostly made of concrete, which will drastically change the view of the countryside. The facilities will include 24 hour lights, parking lots, fences, and retention ponds in addition to the buildings themselves. These are impacts that will be in place no matter where the facility is located.

*Figure 11: Current Image of Site 5 Property*



For the downtown location, the new proposed project would be, at full build out, the tallest building in the downtown area. It would be visible from the whole town and would stand out from the surrounding buildings. Though the building could be made to look appealing, it would

still be one of the most prominent buildings in the town. For a possible image on what it could look like see the figure 4.

The no action plan will not cause any changes to the aesthetics of the city.

#### Impacts:

Some property values may be affected as well as the personal preference for the way a county should look for site 4 and 5, though since they are only to be single and double story structures, the visible distance can be hidden somewhat. However, it will be an imposition on the surrounding areas and change the feel of the land around it. This will be true no matter where the jail is placed and some personal preferences are most likely to occur wherever the final site is chosen. These unavoidable impacts should not stop the jail project, but should be taken into account and be built to have as little visual impact on the surroundings as possible.

#### Mitigation Methods:

The facility, no matter where it is built, should be designed to be as aesthetically pleasing as possible. This should include a design to make the buildings themselves mesh with the surrounding lands and stand out as little as possible. For sites 4 and 5 this can include a green buffer and landscaping to isolate the building from the surrounding properties. All attempts to keep as much of the existing greenery or replace it with something comparable should be made.

#### Significant Unavoidable Adverse Impacts:

The jail needs to be built and there will be an impacted aesthetic impact no matter where it is put. If site 4 or 5 is used, there are fewer people that will be impacted than if the facility is built downtown where everyone in the town will be impacted.

# Earth

---

The geographic features of locations offer valuable insight into the possible hazards on a site as well as possible land uses. The following will discuss environmental impacts on Soil, Erosion, Filling, and Geographic Stability. This portion of the analysis uses information from: the Whatcom County SEPA Checklist, the Whatcom County Critical Area Ordinance Map, and the Web Soil Survey which is available online at <http://websoilsurvey.nrcs.usda.gov/> and was accessed July/19/2010.

## Soil

### Affected Environment:

The current soil conditions for Site 4 include Whatcom Silt Loam, a prime agricultural soil as defined by the USDA Natural Resource Conservation Service, and Whatcom-LaBounty Silt Loam, a prime agricultural soil if drained.

The current soil conditions for Site 5 also include Whatcom Silt Loam, a small portion of which is designated by the USDA Natural Resource Conservation Service as Farmland of Statewide Significance. The remaining portion of Whatcom Silt Loam on the site is considered prime agricultural soil. Other soils present on Site 5 include, Hallenton Silt Loam, Histosols, and Whatcom- Labounty Silty Loam, all of which would be considered prime agricultural soil if drained.

The proposed downtown facility would be constructed on urban land. Urban land is also the soil type for the no action alterative.

### Impacts:

See: Significant Unavoidable Adverse Impacts

### Mitigation Methods:

There are no currently proposed mitigation measures to conserve prime agricultural soil for agricultural use.

### Significant Unavoidable Adverse Impacts:

By constructing a new facility on either Site 4 or Site 5 access to prime agricultural soils will be lost. If the facility is built on Site 5 soil designated as Farmland of Statewide Significance will be lost. While it might be argued that the current zoning for both Site 4 and Site 5 is Light Industrial and at full build out access to prime agricultural soils would be lost, the fact is the

current state of both Site 4 and Site 5 preserve the prime agricultural soil for future use.

## Erosion

Affected Environment:

During the construction process for the new facility either downtown, on Site 4, or on Site 5, erosion is probable.

Impacts:

An increase in wind erosion can create haze and dust in the surrounding areas, while erosion in the form of surface water runoff can put a strain on water treatment facilities and degrade water quality.

The soil on Site 4 and Site 5 has been determined to contain prime agricultural soil and the erosion of such soil, as discussed in the Soil section, would be a significant loss.

Mitigation Methods:

If best management practices are implemented, some erosion will be mitigated. Best management practices include:

- limited clearing to solely area needed to construct project
- use temporary and permanent cover measures to protect disturbed areas
- limit length of time soils would be allowed to remain protected
- installation of barriers to prevent runoff
- stabilize unsurfaced roads, site entrances and parking areas use for construction traffic with rock pads
- construction of ditches and/or dikes to intercept surface water runoff
- implement preventive measures as needed to minimize wind transport of soils
- designate practices to be used for disposal of unsuitable soils or other materials that cannot be reused at the construction site
- restoration of construction area with seeding, plants, or mulch as soon as possible after grading
- monitor on-site erosion and sediment control measures every 6 to 8 calendar days during wet season, and monthly reviews during the dry season, with

additional reviews within 24 hours of any storm event greater than 0.5 inches of rain fall in a 24 hour period

- perform maintenance as soon as problem is discovered

Significant Unavoidable Adverse Impacts:

It is unknown to what degree the proposed mitigation measures will be successful. However, it is thought that the proposed mitigation methods will be sufficient in mitigating the impacts of erosion.

### **Filling**

Affected Environment:

On Site 4 it is proposed that 64,500 cubic yards of earth will be cut-and-filled.

On Site 5 the proposed earthwork volumes of cut-and-fill would total around 250,000 cubic yards.

On the downtown site is currently a parking-lot and therefore there is an assumption that it is currently level. However, the downtown facility would require underground construction and this would require the removal of earth.

Impacts:

See: Significant Unavoidable Adverse Impacts

Mitigation Methods:

There are currently no proposed mitigation methods to reduce the needed earthwork.

Significant Unavoidable Adverse Impacts:

The removal of prime agricultural soil is an unavoidable impact in building a new facility on Site 4 or Site 5.

### **Geologic Stability**

Affected Environment:

Site 4 and Site 5, while not classified in Whatcom County Critical Area Ordinance as being a Geologically Hazardous Area, is located near the Boulder Creek fault.

Both the new downtown facility and the current facility are not classified in the Whatcom County Critical Area Ordinance as being Geologically Hazardous Areas.

Impacts:

See: Significant Unavoidable Adverse Impacts

Mitigation Methods:

If the new facility is built in compliance with the International Building Code and local building codes with seismic design standards, the proximity of Site 4 and Site 5 to the Boulder Creek fault would be considered sufficiently mitigated.

Significant Unavoidable Adverse Impacts:

The no action alternative does not include remodeling the current facility to be in compliance with current building code standards. This puts those working in the current facility, as well as the offenders residing in the current facility at risk.

## Utilities

---

This section discusses the current state of utilities and what will need to be added to the rural sites. Information was obtained from the 2010 Whatcom County jails environmental checklist.

Affected Environment and Impacts:

Site 4 & 5.

Both sites have electricity and telephone service, but need natural gas, refuse service, and sewer service.

Downtown.

Downtown has electricity, natural gas, water, refuse service, telephone, and sanitary sewer, and will not require additional utilities to be supplied.

No-Action.

The current site has electricity, natural gas, water, refuse service, telephone, and sanitary sewer, and will not require additional utilities to be supplied.

Impacts:

Site 4.

**Water Supply:** Water supply improvements to the site would originate from the Marietta water storage reservoir, which has a 2,500,000-gallon total storage capacity. The reservoir is located southwest of the site off Marietta Avenue. The total required storage for the new facilities would be approximately 1,200,000 gallons based on the ultimate population and based on a fire flow requirement of 2,500 gallons per minute for 3 hours, as established by the Bellingham Municipal Code. To provide water supply to the site, approximately 2,000 feet of 12-inch-diameter pipeline would be needed. The proposed improvements would be installed within the street rights-of-way along Marietta Avenue and Wynn Road. To serve the site, a connection would be made to the 12-inch-diameter line, and a water meter, vault, and backflow assembly would be installed.

**Sanitary Sewer:** It is anticipated that wastewater collected from the facilities would be sent into the City of Bellingham wastewater system. The topography would require construction of a pump station at the site to pump the wastewater to a location where the flows could be conveyed by gravity to Bellingham's infrastructure. The alignment for a sewer force main would travel east from the site along a utility easement until it reached the right-of-way for I-5. It would then follow I-5 south until it reached Bakerview Road, where it would connect to a 12-inch-diameter gravity sewer line owned by the City. The off-site infrastructure improvements would also include 11,000 linear feet of 8-inch-diameter sewer force main.

**Natural Gas:** Natural gas improvements to the site would require a new regulator station and a service line.

**Electric Power:** Electric power would be supplied by Puget Sound Energy via the 3-phase power line that is currently located along Slater Road.

On-site utility improvements to serve the project facilities would consist of storm drainage, sanitary sewer, potable water, fire suppression, power, and natural gas. On-site utilities would be designed to meet or exceed the City of Bellingham Municipal Code requirements.

An area of up to 5 acres of detention ponds could be constructed to address water quality and detention requirements. Additional on-site features would include the following:

- Service lines connected to facilities
- Wastewater screening system
- Sanitary sewer force main and pump station consisting of two 30 to 35-horsepower submersible pumps
  - Wastewater metering vault
  - Standby generator and fuel supply

Electrical power improvements would include service from Puget Sound Energy. Underground distribution lines would be connected to proposed facilities. Telephone service to the sites would be provided by Verizon and the solid waste provider would be the Sanitary Service Company, Incorporated. Comcast provides television cable and dedicated server line technology to the project area and could provide service to the sites.

All utilities would require on-site trenching for pipe or conduit installation and connection to underground utilities in adjacent rights-of-way.

Site 5.

**Water Supply:** Water supply improvements to the site would originate from the City of Bellingham's Marietta water storage reservoir north of the site. The total required storage for the new facilities would be approximately 1,200,000 gallons based on the ultimate population and based on a fire flow requirement of 2,500 gallons per minute for 3 hours, as established by the Bellingham Municipal Code.

To provide water supply to the northwest corner of the site, approximately 2,500 linear feet of 12-inch-diameter pipeline would be required. The proposed improvements would be installed within the street rights-of-way along Marietta Avenue and Curtis Road. To serve the site, a connection would be made to the 12-inch-diameter line and a water meter, vault, and backflow assembly would be installed.

**Sanitary Sewer:** It is anticipated that wastewater collected from the facilities would be conveyed by force and gravity mains into the City of Bellingham wastewater system. The topography would require construction of a pump station at the site to pump the wastewater to a location where the flows could be conveyed by gravity to the Bellingham's infrastructure. The alignment for a sewer force main would travel south along Curtis Road, County Lane, Wynn Road, and Mariner Way until it reached the intersection of Mariner Way and Williamson, where it would connect to an 18-inch-diameter gravity sewer line owned by Bellingham. The off-site infrastructure improvements would also include 15,500 linear feet of 8-inch-diameter sewer force main.

**Natural Gas:** Natural gas improvements to the site would consist of approximately 6,300 linear feet of 6-inch-diameter line to Rural Road and one regulator station.

**Electric Power:** Electric power would be supplied by Puget Sound Energy via the 3-phase power line that is currently located along the east side of Curtis Road.



On-site utility improvements to serve the project facilities would consist of storm drainage, sanitary sewer, potable water, fire suppression, power, and natural gas. On-site utilities would be designed to meet or exceed the City of Bellingham Municipal Code requirements.

An area of up to 5 acres of detention ponds could be constructed to address water quality and detention requirements. Additional on-site features would include the following:

- Service lines connected to facilities
- Wastewater screening system
- Sanitary sewer force main and pump station consisting of two 30 to 35-horsepower submersible pumps
  - Wastewater metering vault
  - Standby generator and fuel supply

Electrical power improvements would include service from Puget Sound Energy. Underground distribution lines would be connected to proposed facilities. Telephone service to the sites would be provided by Verizon and the solid waste provider would be the Sanitary Service Company, Incorporated. Comcast provides television cable and dedicated server line technology to the project area and could provide service to the sites.

All utilities would require on-site trenching for pipe or conduit installation and connection to underground utilities in adjacent rights-of-way.

Mitigation Methods:

Site 4 and Site 5.

Most site utilities will be underground to lessen the impact of the surrounding environment. Trenches will need to be dug up in order to place piping, but can be restored after construction. The detention ponds will need netting or another alternative to keep large numbers of birds out of the ponds as that is a hazard to air traffic in the vicinity.

Downtown and No-Action.

Both sites are located downtown and already have needed utilities

Significant Unavoidable Adverse Impacts:

Site 4 and Site 5.

Both sites will require additional utilities and connections, and can be expected to have a minor impact on the surrounding ecosystem. The detention ponds could pose a challenge for wildlife in the area. Ponds can attract large numbers of birds, so they will need to be netted so birds don't congregate near the airport.

# Public Services

---

This section discusses the current and increased needs of public services for the proposed sites. Information is from the 2010 Whatcom County jails environmental checklist.

Affected Environment and Impacts:

Site 4. and 5.

Because construction activities could temporarily disrupt access and existing transportation and circulation patterns, it could impact response times for fire and police emergencies in the vicinity by disrupting traffic flows and street operations and by reducing travel lanes.

During operation, the facility would provide its own law enforcement resources. No short-term or long-term impacts would be anticipated on these resources.

When fully constructed in 2050, the Whatcom County Adult Corrections Facilities and Sheriff's Headquarters complex would provide space for up to 2,450 male and female inmates. This could place additional demand on health care facilities. However, based on the Whatcom County Code and Title 1.28, Standards for Corrections Facilities, the proposed facility must have a designated health authority with responsibility for health care services pursuant to a written agreement, contract, or job description. As a result, the proposed facility would provide its own health care resources. In addition, availability of emergency medical and dental care would be required at the proposed facility on a 24-hour basis in accordance with a written plan (Whatcom County 2008b).

For fire protection, the proposed facility would be designed to comply with the Uniform Building Code and the International Fire Code. In addition, the projected water demand for fire flow was prepared assuming a requirement of 2,500 gallons per day for 3 hours, as established by the City of Bellingham Municipal Code and the 2006 International Fire Code.

Upon completion of Phase III in 2050, the project would support approximately 893 staff members (Omni 2008). In 2008, the Adult Corrections Facility in downtown Bellingham had approximately 275 budgeted staff positions (Omni 2008). Thus, it would be necessary to hire approximately 618 new FTEs to operate the proposed facility. A percentage of these new FTEs would be expected to bring dependents if they relocated, and this could slightly increase demand on public schools.

The sites are served by the Bellingham School District within its northwest boundary. District enrollment from kindergarten through 12th grade increased slightly from 10,272 students in

2000–2001 to 10,577 students in 2006–2007 (Bellingham Public Schools 2006). In 2006, the district’s voters approved a bond to fund construction of two new elementary schools and modernization of Shuksan Middle School (Bellingham Public Schools 2006). These improvements were proposed to help reduce future overcrowding and to accommodate growth in the southwest section of the district.

Because the project would be phased over time, the new FTEs would be added incrementally, not all at once. Project phasing would help distribute the potential demand on public schools and allow student increases resulting from the project to be programmed into the school district’s capital facilities plan. The proposed project would construct an EPF, not a new residential development; thus, the project’s demand on public schools would be lower than that of a residential development.

#### Downtown B.

Because construction activities could temporarily disrupt access and existing transportation and circulation patterns, it could impact response times for fire and police emergencies in the vicinity by disrupting traffic flows and street operations and by reducing travel lanes.

During operation, the facility would provide its own law enforcement resources. No short-term or long-term impacts would be anticipated on these resources.

When fully constructed in 2050, the Whatcom County Adult Corrections Facilities and Sheriff’s Headquarters complex would provide space for up to 2,450 male and female inmates. This could place additional demand on health care facilities. However, based on the Whatcom County Code and Title 1.28, Standards for Corrections Facilities, the proposed facility must have a designated health authority with responsibility for health care services pursuant to a written agreement, contract, or job description. As a result, the proposed facility would provide its own health care resources. In addition, availability of emergency medical and dental care would be required at the proposed facility on a 24-hour basis in accordance with a written plan (Whatcom County 2008b).

#### No-Action.

The current site would not see any need for increased public services.

#### Mitigation Methods:

Sites 4, Site 5, & Downtown.

Mitigation measures to reduce construction and operation impacts on public services could include the following:

- Conducting all traffic control in accordance with the Whatcom County requirements, as determined by the Department of Public Works.
  - Notifying community transit, school districts, law enforcement, and fire/emergency service providers of construction dates in advance, and providing project schedule updates throughout the construction period.
  - Posting construction schedules on local roads, and/or providing notification to area residents, where appropriate.
  - Constructing the public utility (i.e., water/sewer) and street improvements to meet the City of Bellingham Municipal Code and Engineering Design Standards.
  - Constructing the proposed street improvements to Rural Avenue to meet the Whatcom County Municipal Code and Engineering Design Standards.
1. Coordinating the phased improvements with the Bellingham School District to incorporate the student increases resulting from the project into its capital facilities plan.

Significant Unavoidable Adverse Impacts:

There are no impacts likely to be unavoidable.

## Environmental Health

---

### Hazardous Materials

Affected Environment and Significant Impacts:

The risk of damage to environmental health due to the use of Hazardous Materials has been deemed to be significant.

Developing and construction on sites 4 and 5 will require the use of heavy machinery posing the risk of spills/leakage of petroleum products such as fossil fuels, lubricants, and solvents.

Though the risk of spills/leakage would not be greater than the risk normally associated with this type of construction, wetlands are particularly sensitive to toxicants due to their low flush rates and nutrient recycling. Toxicants are known to bioaccumulate in wetland systems. Once the Corrections Facilities became operational the power plant building and the vehicle storage area would also pose risk of spills/ leakage of petroleum products. The risk of environmental damage due to spills and/or leaks would be higher on sites 4 and 5 than for the new downtown Corrections Facilities or in the no-action plan. Furthermore, construction on site 5 will pose the greatest risk of environmental damage due to the greatest presence of wetlands and water bodies.

Mitigation Methods:

During Construction, Best Management Practices should be implemented to minimize the risk of spills or leaks.

## Stormwater

Affected Environment and Significant Impacts

The risk of stormwater pollution is present both during and after construction. Once again, sites 4 and 5, particularly site 5 will be more sensitive to stormwater pollution due to the presence of wetlands.

Mitigation Methods:

A Stormwater Pollution Prevention Plan (SWPP) and Best Management Practices should be implemented at all sites.

## Noise

Affected Environment and Significant Impacts

It should be noted that the noise of the construction process could potentially scare away resident fauna on sites 4 and 5.

Mitigation Methods:

There are no proposed mitigation methods to reduce the impact of construction noise on resident fauna.

# Air

---

Air quality can significantly affect the health of a population. Whatcom County is currently in attainment for all six National Ambient Air Quality Standards (NAAQS), which include Carbon Monoxide, Sulfur Dioxide, Lead, Ozone, and Particulate Matter. There is also a qualitative Greenhouse Gas emission examination. This portion of the analysis uses information from: the Whatcom County SEPA Checklist and assumptions made based on conversations with project contacts.

Affected Environment:

Site 4 and Site 5 would see an additional 1,325 total vehicle trips per day, which would impact Carbon Dioxide (CO<sub>2</sub>) emissions. The current downtown facility and the proposed new downtown facility would not see such a significant increase in vehicle trips per day. This is

partially due to the assumption that offenders at a downtown facility would not need to be driven to Court appearances.

Any new construction would increase the particulate air pollution, therefore the areas surrounding Site 4, Site 5, and the downtown site would see an increase in air pollution, particularly haze and dust.

Impacts:

A temporary increase in air pollution specifically: particulate matter, carbon monoxide emissions, and nitrogen oxides emissions.

Mitigation Methods:

Although the emissions associated with new construction is not thought to be significant enough to change Whatcom County's attainment of the NAAQS, best management practices could additionally lower emissions associated with new construction. It is recommended that the following actions are implemented:

- covering loads of excavated material transported from site
- spraying exposed soil and storage areas with water during dry periods
- sweeping and/or washing dirt and mud from vehicles before leaving the construction
- Installing and maintaining rock pads at construction area entrances and exits
- Removing soil and mud deposited on public roads

Further measures to reduce air quality impacts include:

- requiring contractors to use best available emission control technologies
- limiting the queuing time by use of flaggers
- promoting public transit, carpooling, and healthy commuting practices
- implement a program that would allow for Court appearances to be made via telecommunication

### Significant Unavoidable Adverse Impacts:

Due to the temporary nature of the increased air pollution and the fact that the construction of a new facility would not affect Whatcom County's attainment of NAAQS there are not thought to be any significant unavoidable adverse impacts on air quality at this time.

## Greenhouse Gas Emissions

Available information is inadequate to accurately quantify greenhouse gas emissions for each of the prospective sites. In order to accurately quantify emissions, an extensive range of parameters must be considered: everything from comprehensive facility design to building materials to HVAC systems to duct design to insulation to generator efficiency to created vehicular fuel consumption to electricity use. The majority of the information necessary for GHG emissions calculation is not available and depends on actual facility design. For the purposes of this study, individual site emissions will be assessed qualitatively and comparatively. It is hypothesized that constructing the new Corrections Facilities downtown would produce the most GHG emissions, site 5 would produce the second most, site 4 would produce the third most, and the no action plan would produce the least.

Emissions can be assessed using the same framework as used in the Energy and Natural Resources section: **Construction, Operation and Transportation**

### Construction

#### Affected Environment and Significant Impacts

Given the ubiquitous use of fossil fuels for construction, energy use can be used as a proxy for GHG emissions. Also given that the facility designs on sites 4 and 5 would be very similar, constructing on Site 4 would likely emit less GHGs because development of the site require less energetic work, as outlined in the Construction subsection of Energy and Natural Resources.

The new downtown Corrections Facilities would produce the most GHGs during construction due to its energetically consumptive 30 floor design.

The existing jail will not require construction, though is in dire need of repair.

#### Mitigation

Best Management Practices and efficient construction techniques should be utilized. This includes but is not limited to: efficient, local, and/or recycled building materials use; efficient use of heavy machinery; and vehicular and machinery vehicular idling reduction. Furthermore, GHG credits could be purchased to offset emissions during construction.

## Operation

### Affected Environment and Significant Impacts

The overall energetic efficiency of the facility is the largest determination of GHG emissions during facilities operation. The facility designs for sites 4 and 5 are likely to be very similar and therefore GHG emissions will accordingly be on par.

Given the proposed vertical design of the new downtown Corrections Facilities, the energetic consumption of utilities would be less than the horizontally designed facilities on sites 4 and 5, though the higher level of staffing required by a vertical design entails greater GHG emissions, in support of the staff (e.g. staff transportation and utility use).

The existing downtown jail has been cited as outdated and inefficient. Therefore, the existing facility operates more inefficiently and produces more GHGs than a new facility would per capita.

### Mitigation

The new facilities are planned to include a number of energy conservation measures, such as being LEED silver certified. For further conservation measures, see Mitigation Methods in Energy and Natural Resources.

## Transportation

### Affected Environment, Significant Impacts, and Mitigation Methods

Once again, given our fossil-fuel-based transportation system, the energy consumption of transportation can be used as a proxy for GHG emissions. The GHG emissions produced from the transportation to and from each site are difficult to determine. Data is insufficient to deduce which site would produce the greatest amount of GHGs during transportation. See Transportation in Energy and Natural Resources for further details and mitigation measures.

# Energy and Natural Resources

---

Energy and Natural Resource Use has been deemed to be a moderately significant impact on the environment. The potential energy and natural resource use of all prospective sites can be divided into three categories: Energy and natural resources consumed during **Construction**, those consumed on site during **Operation**, and those consumed in **Transportation** to the given site.



## Construction

### Affected Environment and Significant Impacts:

Constructing on Site 4 should consume less energy and natural resources than Site 5 and produce less greenhouse gas (GHG) emissions because of the following:

- Developing Site 4 would require earthwork cut-and-fill of approximately 64,500 cubic yards compared to 250,000 cubic yards of cut-and-fill for Site 5.
- Site 4 would require the development of 9.2 acres of wetlands compared to 12.35 acres for Site 5
- Site 4 would require the development of 32 acres of cropland and 10 acres of shrubland compared to 50 acres of first succession deciduous forest for Site 5.

Constructing the Corrections Facility downtown would require the most energetic input. As displayed in the City of Seattle Comparative Study of the Cost of Low and High-Rise Jails, a 30 story high rise building (six of those stories being underground) would cost more to construct than a spread out one to two story jail of the same capacity. The higher cost of construction can be used as a proxy to predict higher energy consumption during construction. This proxy is relatively reliable due to the energetically intensive construction process of building vertically. The current downtown Bellingham jail would require no energy for construction, though it is in dire need of repair.

### Mitigation Methods:

Best Management Practices should ensure the efficient use of energy and natural resources during construction on any site.

## Operation

### Affected Environment and Significant Impacts:

Electricity for equipment and light, natural gas for heating, and an onsite diesel generator for emergencies would provide energy for the proposed Whatcom County Adult Corrections Facilities and Sheriff's Headquarters on sites 4 and 5. Electric utilities are already available for both sites. A natural gas pipeline exists on site 4 which would have to be relocated and could be tapped into. No natural gas pipelines exist as of yet on site 5 and a line-in extension would need to be connected to the closest natural gas utility. Energy at the current downtown Bellingham jail is provided by electricity and natural gas with a standby diesel generator for emergencies. According to Mike Russel, the current jail is outdated and inefficient. Energy for the new Corrections Facilities downtown could be supplied in the same way as the current jail is supported, though the new facility would be more efficient.

The standby diesel generator for the new corrections facilities would be operated on average 7 days a year for short periods during power outages. The generator would also be tested once monthly for approximately an hour.

#### Mitigation Methods:

The plans for the proposed Corrections Facilities include a number of energy conservation features. The project would "(a) comply with current building codes that incorporate energy conservation guidelines and requirements, (b) incorporate sustainable design techniques to preserve environmental quality of the site and the surrounding area, and (c) reaffirm the County's conservation climate protection and requirements for new facility design and construction. The sustainability design goal for the project is "LEED Silver" [1]. The new facilities should purchase Green Energy from Puget Sound Energy, the resident energy provider. Furthermore, Renewable Energy Credits should be purchased to offset energy use not provided from Green Energy programs, such as that produced from the diesel generator.

## Transportation

#### Affected Environment and Significant Impacts:

Sites 4 and 5 have the advantage of being located closer to the center of Whatcom County than the current downtown Bellingham jail. For the purposes of simplicity, it could be assumed that this central location will decrease the amount of transportation fuel consumed and GHGs emitted in the process of transporting people to the Corrections Facility.

If supplies, such as food, linens, cleaning supplies, etc, are transported from downtown, this would require the consumption of more fuel and the emissions of more GHGs than the transportation of supplies to Corrections Facilities located downtown.

#### Mitigation Methods:

Efficient supply sourcing and transportation regimes should be developed in order to reduce fuel consumption. Carpooling and public transportation should be utilized whenever possible to reduce natural resource use and GHG emissions.

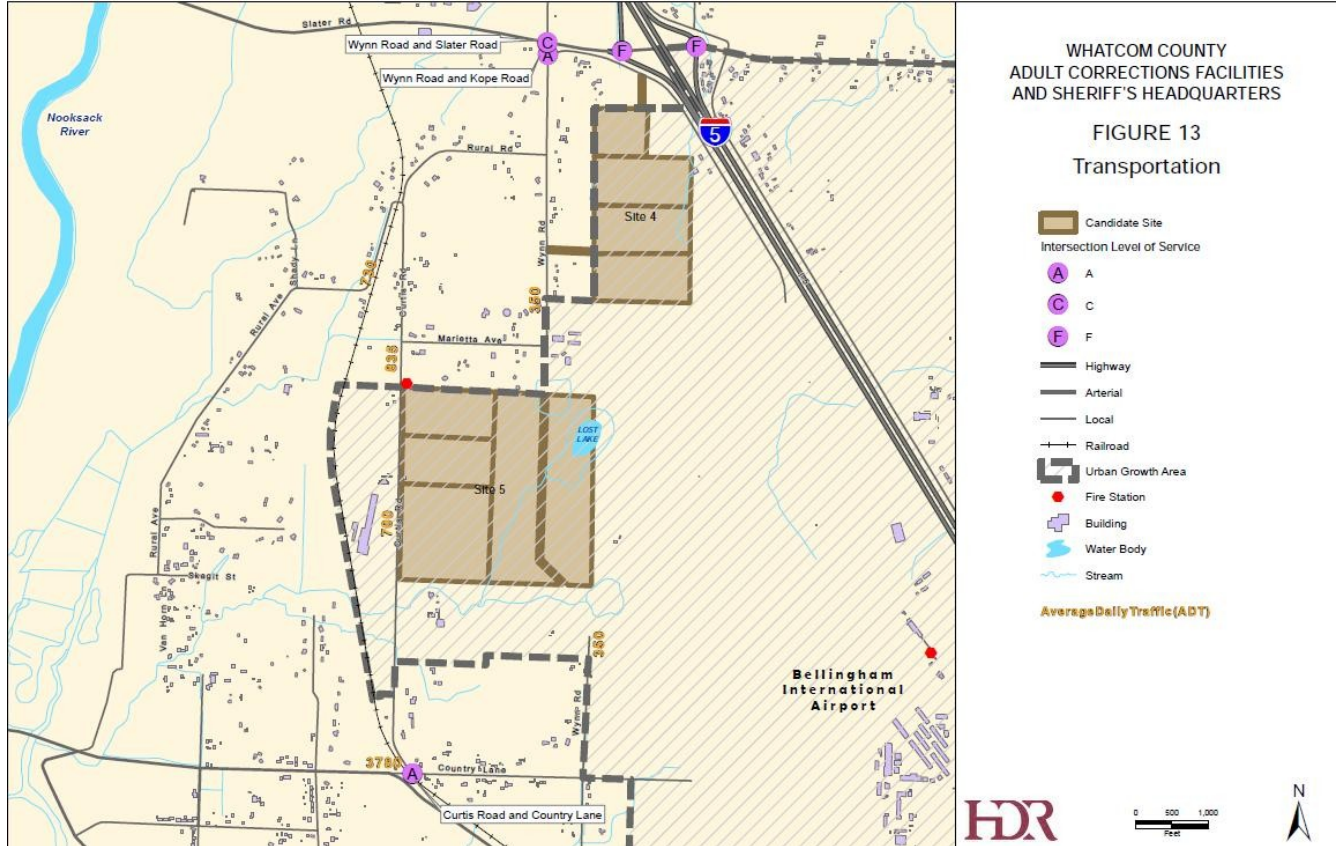
1. Whatcom County Adult Corrections Facilities and Sheriff's Headquarter Determination of Significance and Request for Comments on Scope of Environmental Impact Statement and Environmental Checklist

# Transportation

---

This section discusses the current and proposed changes to transportation on the four sites. Information was sourced from the 2010 Whatcom County jails environmental checklist. Figure 12 shows the local streets, arterials, and highways that serve the site.

Figure 12: Adjacent Roads at Site 4 and Site 5



Affected Environment:

Site 4.

The site is located east of Wynn Road and south of Kope Road. Access would be provided via two proposed driveways. Adjacent public streets and highways serving the site include I-5, Slater Road, Rural Avenue, Kope Road, and Wynn Road. Important to note that the nearest Transit bus stop is 1.8 miles southwest of the site.

Site 5.

The site is located on Curtis Road, and access would be provided via three proposed driveways. Adjacent public streets and highways serving the site include I-5, Slater Road, Rural Avenue, Marine Drive, Country Lane, and Wynn Road. Important to note that the nearest Transit bus stop is 1 mile southwest of the site.

Downtown B.

Site is located in downtown between Prospect St., Central Ave., Grand Ave, and Flora St. Access would be provided via adjacent public streets. I-5 services this area.

No-Action.

Site is located in between Prospect St., Central Ave., Grand Ave, and Lottie St. Access would be provided via adjacent public streets. I-5 services this area.

Impacts:

Site 4 & 5.

The project would require frontage improvements. Area roads, including Curtis Road, Wynn Road, Kope Road, and Rural Avenue, currently have no shoulders, and roadway sections do not meet the Whatcom County Road Standards.

Frontage improvements designed in accordance with the City of Bellingham Urban Minor Arterial standards would be required, as the site is anticipated to be annexed by the City of Bellingham at the time the facility will open. For Site 5, the frontage improvements would consist of (1) constructing approximately 5,345 linear feet of three-quarter street frontage improvements based on a 22-foot-wide road section (two 11-foot-wide travel lanes), and (2) adding 5-footwide sidewalks on one side of the roadway along the length of the site.

Frontage improvements, designed in accordance with Whatcom County Urban Local Access standards, would also be required for Wynn Road and Rural Avenue. From the intersection of Slater Road, approximately 4,000 linear feet of frontage improvements would be constructed based on a 22-foot-wide road section (two 11-foot-wide travel lanes), and 5-foot-wide sidewalks would be added on both sides of Wynn Road and Rural Avenue.

Phases I, II, and III, when completed, would provide a cumulative total of 390, 492, and 825 parking stalls, respectively. The project would not eliminate parking spaces because there are no existing parking spaces.

During the PM peak hour, the project would create an additional 170 trips per day in 2015, and result in a total of 200 additional trips per day in 2025. The facility would be expected to generate approximately 1,325 total trips per day in 2015, entering and leaving the facility. Other than the two I-5 ramp intersections, intersections within the study area would operate at a LOS C or better during the PM peak hour after the project was completed. Queuing at the I-5 ramps is a current issue and would continue to be an issue in the future with or without the project. This project would not add a significant number of trips to the area road network, and the required frontage improvements to Curtis Road and Rural Avenue would maintain traffic flow and minimize potential traffic delays.

The change in vehicular trips from the existing Adult Corrections Facility in downtown Bellingham and the proposed site in the Bellingham UGA could generate additional demand on fuel consumption in the future. For example, in 2008, the Adult Corrections Facility in downtown Bellingham had approximately 275 budgeted staff positions, and vehicular trips from these positions would be redistributed to the proposed site in or about 2015 (project opening). However, the LOS provides a qualitative measure for determining operating conditions of intersections in terms of average stopped delay per passenger car, fuel consumption, and/or lost travel time. As noted above, intersections within the study area would operate at LOS C or better during the PM peak hour after the project was completed. As a result, the average stopped delay per passenger car, fuel consumption, and lost travel time would be low.

Downtown B.

This site would require 825 parking stalls, and would be built on a current parking lot eliminating around 200 parking stalls. Site is located downtown, and will not need any additional road improvements.

Vehicle traffic would be similar to the current situation, but could have increased levels due to the facility housing a larger number of inmates.

No-Action.

There will be no increased impacts from transportation than what is already occurring in the downtown jail.

Mitigation Methods:

Site 4, Site 5, Downtown B.

Transportation impact mitigation could include the following measures during project construction:

- Signs, steel plates, barricades, warning lights, and/or traffic cones would be used at all openings, obstructions, detours, or other hazards on the roadway, as necessary, to ensure the safety of pedestrians, bicyclists, and vehicles.
- Flaggers would direct traffic around and through the construction area so that traffic moved smoothly.
  - All traffic control would be conducted in accordance with Whatcom County requirements, as determined by the Department of Public Works.
    - Intersections/roadways of concern would be identified and project impacts would be addressed in a traffic control plan.

For operations, frontage road improvements would help maintain traffic flow and minimize potential traffic delays and meet the City of Bellingham and Whatcom County Transportation Concurrency Requirements. Waste water due to impervious surfaces can be directed to detention ponds.

Other supplemental traffic control measures for operations could include developing a ride sharing or carpooling plan for employees.

No-Action.

No mitigation is needed for the current jail site.

Significant Unavoidable Adverse Impacts:

All site impacts due to transportation can be mitigated as shown above, but there will be increased impervious services due the need for 825 parking stalls.

---

## Light and Glare

---

Affected Environment:

The current light in the area is essentially none, as there are really only trees and grass and animals on it. It is however situated right next to the airport which gives off some light pollution at night. Both sites 4 and 5 would have minor impacts. They would use directed overhead lights to attain a night time light level that would be contained as much as possible through the use of light shields and vegetation to help mitigate the light pollution. As much care as possible will be taken to direct light away from the adjoining properties through the use of light shields and foliage to obscure the parking lot lights no minimize the amount of ambient light.

Since there is no spacious parking lot associated with the downtown plan, the lighting needs are much less. Most of the created light would be contained within the building itself, with the exception of street lights and surrounding sidewalk lights. The building would not create more light pollution than the existing parking lot lights.

The current facility is surrounded by street lights and has no more light pollution than any other building in the downtown area. No future larger impacts are seen as potentially having significant impact.

Impacts:

Some light pollution would be the result of any of the buildings at all locations.

Mitigation Methods:

**Though shielding and efficient use of green belts, the light reaching the adjacent properties can be reduced to low levels which meet the** Whatcom County Municipal Code and the Supplementary Requirements for Lighting, Chapter 20.80.523, and Heat, Light or Glare, Chapter 20.66.702, which includes:

*Any parking area which is intended to be used primarily during non daylight hours shall be properly illuminated to avoid accidents. Any lights used to illuminate a parking lot shall be so arranged as to direct the light away from the adjoining property and the public road (Whatcom County 2008b).*

*All operations and facilities producing heat, light or glare, including exterior lighting, shall be so constructed, screened or used as to not unreasonably infringe upon the use and enjoyment of property beyond the boundaries of the district (Whatcom County 2008)..*

Significant Unavoidable Adverse Impacts:

Light is a byproduct of any building that will be constructed and cannot be avoided for the safety of the public and can only be minimized.

## Land and Shoreline

---

Affected Environment:

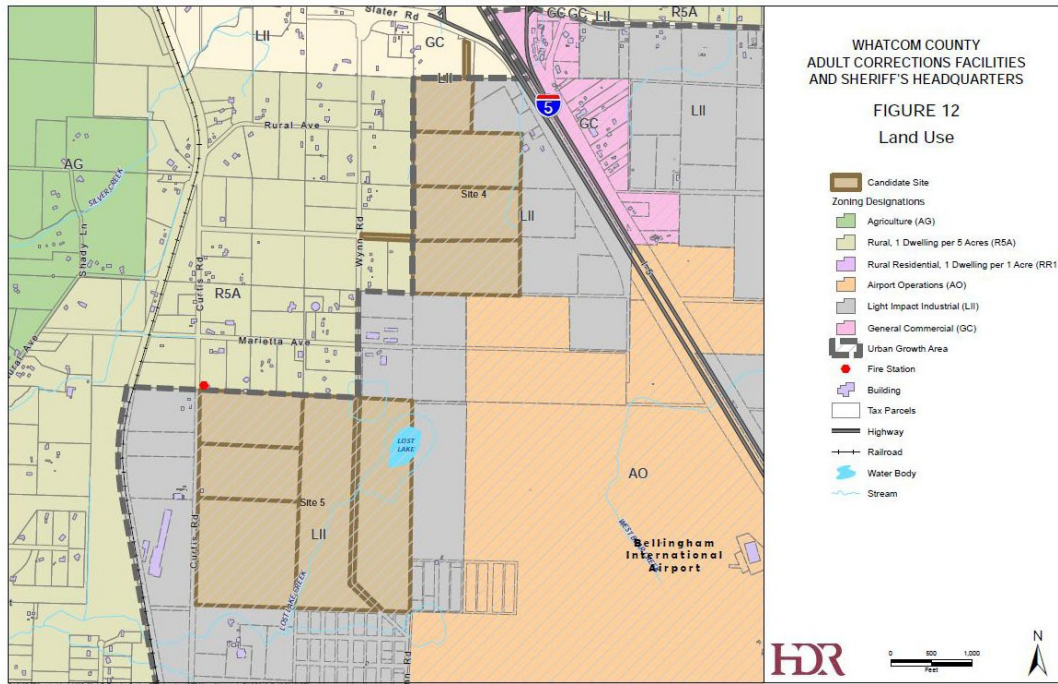
Currently site 4 is used for agricultural purposes and has surrounding rural residences, agriculture, airport operations and open land. A review of historical aerial photos from 1951 documents this site for previous agricultural purposes where dairy barns were located in the northwest corner of the site. Currently there are no structures on site.

Site 5 has a wetland and is covered by wooded tracks and several open meadows also surrounded by rural residences, agriculture, airport operations, and light impact industries. A review of historical aerial photos dating from 1951 through 1995 show a farmstead on the site for agriculture, although currently the site is undeveloped by Washington State Department of Natural Resources (WDNR) and has no structures left. These two sites are within the boundaries of Bellingham's UGA. The underlying zoning is Light Impact Industrial (LII) as specified by Whatcom County Code. Existing County zoning applies in the City's UGA until such



time that an annexation is processed. See Figure 13 for land use designations on and in the surrounding area.

Figure 13: Land Use Designations Site 4, Site 5 and Surrounding Area



As previously mentioned, the proposed use of the sites is classified as an Essential Public Facility (EPF) under Washington state law. EPFs include those facilities that are typically difficult to site, such as airports, state education facilities, and state or regional transportation facilities as defined in RCW 47.06.140, state and local correctional facilities, solid waste handling facilities, and in-patient facilities including substance abuse facilities, mental health facilities, group homes, and secure community transition facilities as defined in RCW 71.09.020.

The proposed Whatcom County Adult Corrections Facilities and Sheriff's Headquarters would be allowed as a conditional use within the LII zone, subject to compliance with the applicable code criteria listed in the Whatcom County Municipal Code. Whatcom County could also require a Major Project Permit in certain situations if the project qualified. The Major Project Permit is a quasi-judicial or legislative decision made by the Whatcom County Council. At project opening in or about 2015, it is anticipated that the selected site would be annexed into the City of Bellingham. The future zoning and land use regulations for the selected site would be established by the City of Bellingham as part of the annexation agreement.



When fully constructed in 2050, it is anticipated that the Whatcom County Adult Corrections Facilities and Sheriff's Headquarters would support approximately 893 staff members (Omni 2008). The proposed number of inmate beds for the completed project would total 2,450 in 2050.

The downtown and no action sites are currently used for the county jail and are surrounded by urban buildings and streets. The downtown site has a court house, jail, parking lots, and other buildings on site while the no action would maintain the current court house, jail, and parking lots. In order to expand the previous jail, a few smaller buildings and a parking lot would need to be demolished to begin construction for the downtown site. Both downtown and the no action are under public land use for zoning as specified by the Whatcom County code. Since there is a jail already on site, they meet the requirements for the zoning laws.

Neither site 4 or 5 is within a designated shoreline, but the downtown and no action sites are within a shoreline although the expansion or lack of action would not change the master program designation of these sites.

Impacts:

Site 4 has been classified as "environmentally sensitive" and includes features identified by Whatcom County as Wetlands and Fish, Wildlife, and Habitat Conservation Areas (FWCAs). The following areas fit this category:

- One unnamed stream (see Section 3a1)
- Wetlands (see Section 3a1)

Site 5 has been classified as "environmentally sensitive" and includes features identified by Whatcom County as FWCAs. The following areas fit this category:

- Lost Lake and Lost Lake Creek (see Section 3a1)
- Wetlands (see Section 3a1)
- Great blue heron colony (see Section 5a)

The downtown site would displace a few small businesses and buildings.

Mitigation Methods:

For sites 4 and 5, several strategies would be employed to make the facility compatible with existing and projected land use plans. The project design would comply with the Whatcom County Municipal Code and Chapter 20.66.708, Appearance, which states:

*New facilities developed in the Bellingham Urban Fringe Subarea shall be designed, constructed, operated, and maintained so as to be harmonious and appropriate in appearance with the existing or intended character of the general vicinity, and such uses shall not change the essential character of the same area (Whatcom County 2008b).*

The project would be designed and permitted in accordance with the *Interlocal Agreement between the City of Bellingham and Whatcom County Concerning Annexation and Development within the City of Bellingham UGA* (City of Bellingham and Whatcom County 1997). Section 2 of the agreement addresses annexations and Section 6 addresses the processing of development applications within the UGA.

Purchasing of land and compensation to move businesses to a new site is a method to reduce displacement impacts from expanding the downtown facilities.

## Cultural History

---

### Affected Environment:

The current property is rural and has been left undeveloped in the recent history. A historic review and it has been determined that little cultural loss would be caused by construction at either site 4 or 5 since the property has been left to nature for so long. The future downtown site has already been excavated and paved over so any culturally significant findings at the surface level have already been disrupted. However any findings would be treated the same as listed above for site 4 and 5.

If no action is taken, there would be no further culture disrupted.

### Impacts:

There are no known significant culturally related places or objects on either property at the surface level.

### Mitigation Methods:

If excavation were to reveal subsurface artifacts, the findings would be assessed by an archaeological team at the time of the discovery and work would halt until the find could be reviewed for significance.

### Significant Unavoidable Adverse Impacts:

None are foreseen at this time.

## Recreation

---

### Affected Environment:

The current sites are rural fields and forest and can offer some hiking and nature viewing areas, though they have no development and are both privately owned so permission is required. The land could be used for recreational purposes, however there has been no development so far that would be considered recreational. Therefore no significant impacts on recreation are foreseen by projected land use at site 4.

On site 5 there has been some mild use such as some hiking trails on the property for recreational purposes that would be disrupted by the proposed buildings.

A downtown parking lot can be a playground for local youth, however, with other available parking lots abundant, no significant impact on recreation purposes is foreseen at the downtown proposed site.

No significant impacts on recreation would come from a result of no action.

Impacts:

Since the proposed land use only uses 42% of the 154.7 acre property at site 5, it is not seen as a significant impact to recreational users. Downtown and on site 4 there are no significant impacts on current recreational use.

Mitigation Methods:

Possible use of the leftover land to create a substitute recreation area, while preserving and maintaining the current environment could be a replacement for the recreational lands lost if the project is located on site 5.

Significant Unavoidable Adverse Impacts:

None are foreseen at any of the proposed sites.

## Housing

---

There are no housing units provided nor eliminated by any of the proposed alternatives for this project. At sites 4 and 5 the surrounding housing is located on land zoned for rural dwellings and the house values will potentially be lowered but the new facility. The correctional facility is in compliance with designated zoning therefore, there are no significant impacts or mitigation measures.



# Decision Matrix

Environmental Elements	Degree of Environmental Impacts			
	Alternative 1 (Site 4)	Alternative 2 (Site 5)	Alternative 3 (Downtown Site)	No-action
Water	High I	High II	Low	Low
Plants	High I	High II	Low	Low
Animals	High I	High II	Low	Low
Aesthetic	High	High	High	Low
Earth	Medium I	Medium II	Medium	Low I
Utilities	Medium	Medium	Medium	Medium
Environment health	Medium	Medium I	Medium	Low
Air	Medium	Medium	Medium	Low
Energy	Medium	Medium	High	Low II
Traffic	Low	Low	Low	Low
Housing	Low	Low	Low	Low
Light/Glare	Low	Low	Low	Low
Historic and Cultural preservation	Low	Low	Low	Low
Recreation	Low	Low	Low	Low
Shoreline/Land	Low	Low	Low	Low

Key:

Within each category of significance High, Medium, Low there are subcategories to reflect the degree of each impact.

High	Significant Impact
High I	Higher Impact
High II	Highest Impact
Medium	Less Significant Impact
Medium I	Higher Impact
Medium II	Highest Impact
Low	Least Significant Impact
Low I	Higher Impact
Low II	Highest Impact

# Resources

---

"Bellingham Municipal Code Chapter 16.55: Critical Areas" Web. 12 July 2010  
<<http://www.cob.org/documents/planning/comprehensive-plan-code-amendments/critical-area-ordinance/2005-12-06-final-cao.pdf>>

"Critical Areas Ordinance Maps." *Whatcom County Government*. Web. 22 July 2010.  
<<http://www.whatcomcounty.us/pds/planning/gis/gismaps/cao.jsp>>.

HDR (HDR Engineering, Inc.). 2010. *Site Evaluation Report for the Whatcom County Adult Corrections Facilities and Sheriff's Headquarters*. July 2010. Bellevue, Washington.

Jones, Wendy, Whatcom County Jail Chief; Personal Interview ; July 14, 2010

"Listings and Occurrences for Washington." *Listing and Occurrences for Washington*. US Fish and Wildlife Service. Web. 22 July 2010.  
<[http://ecos.fws.gov/tess\\_public/pub/stateListingAndOccurrenceIndividual.jsp?state=WA&s8fid=112761032792&s8fid=112762573902&s8fid=24012794915222](http://ecos.fws.gov/tess_public/pub/stateListingAndOccurrenceIndividual.jsp?state=WA&s8fid=112761032792&s8fid=112762573902&s8fid=24012794915222)>.

"Map Gallery - City of Bellingham, WA." *Official Website - City of Bellingham, WA*. Web. 22 July 2010. <<http://www.cob.org/services/maps/maps/index.aspx>>.

Omni (Omni-Group, Inc.). 2008. *Requirements Analysis, Adult Corrections Facilities and Sheriff's Headquarters Master Plan*. June 25, 2008.

Russel, Mike, Whatcom County Facilities Management, Project Manager; Personal Interview July 14, 2010

*Washington Natural Heritage Information System List of Known Occurrences of Rare Plants in Washington February 2009 Whatcom County*. Washington State Department of Natural Resources. Web. 22 July 2010.  
<<http://www1.dnr.wa.gov/nhp/refdesk/lists/plantsxco/whatcom.html>>.

"WDFW -- Species of Concern: State Endangered Species." *Washington Department of Fish and Wildlife*. Web. 22 July 2010. <<http://www.wdfw.wa.gov/wlm/diversty/soc/soc.htm>>.  
"Whatcom County - Jail Siting Information." *Whatcom County Government*. Web. 22 July 2010. <<http://www.co.whatcom.wa.us/jailsiting/index.jsp>>.

Web Soil Survey which is available online at <http://websoilsurvey.nrcs.usda.gov/> and was accessed July/19/2010.

"Whatcom County Adult Corrections Facilities and Sheriff's Headquarters Determination of Significance and Request for Comments on Scope of Environmental Impact Statement and Environmental Checklist." *Whatcom County Government*. Whatcom County Administrative Services Department, Facilities Management, July 2010. Web. 22 July 2010. <<http://www.co.whatcom.wa.us/jailsiting/pdf/jails-checklist-july2010.pdf>>.

"Whatcom County (County) 10-Year Urban Growth Area (UGA) Review." *Whatcom County Government*. Whatcom County Planning and Development Services, 8 May 2009. Web. 22 July 2010. <<http://www.co.whatcom.wa.us/pds/2031/index.jsp>>