Fall 2018

Skagit County Centennial Trail Extension Environmental Impact Statement

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Skagit County Centennial Trail Extension
Environmental Impact Statement

ENVS 493 Environmental Impact Assessment
Fall Quarter 2018
Huxley College of the Environment
Western Washington University

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Concerned Citizen Letter

Dear Concerned Citizen:

Skagit County Parks & Recreation proposes the construction of the Skagit County Centennial Trail. This project will be a two and a half mile Americans with Disabilities Act (ADA) compliant compacted gravel pedestrian trail. The trail will be an extension of the current Centennial Trail, starting from Snohomish County and extending northward into Skagit County. The Skagit extension of the trail is for recreational use, with expected completion in 2020. Trail development will closely follow the replacement of the subsurface Judy Reservoir Water Transmission Pipeline, which is a separately managed project under Skagit Public Utilities District. By completing these projects in tandem, both agencies will minimize the construction-phase environmental impacts. The following document is a full review of all environmental impacts associated with the trail proposal. Please see the rest of this document for compliance with the Washington State Environmental Policy Act checklist and chapter 197-11 of the Washington Administrative Code.

This environmental impact assessment has been completed by a team of Western Washington University students enrolled in an environmental impact statement (EIS) course for college credit and practical application. Instructor Tamara Laninga, PhD, AICP, provided students with assistance and guidance throughout the process. Regular communication with the lead agency, Skagit County Park & Recreation, occurred throughout assessment.

The goal for this proposed action is to provide a recreational opportunity in Central Skagit Valley, which is experiencing continued population growth. Although the proposed action offers expanded recreation opportunities for the community, there may be unavoidable environmental impacts associated with constructing the Centennial Trail. Please see the attached EIS for all identified impacts.

Through evaluation, the proposed action will offer mitigation measures. Two alternative options -- one of which requires no action-- are also detailed throughout, along with their own mitigation measures.

As a citizen in the area your voice matters. We welcome your comments throughout the public involvement and comment period. Thank you in advance for your cooperation.

Sincerely,
The Skagit County Centennial Trail Extension Student Team
Jennifer Shore, Vance Frenzel, Kelley Crider, Sam Kaiser & Avery Barbera

Environmental Impact Assessment
Huxley College of the Environment

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Signature _____
Avery Barbera

Signature _____
Sam Kaiser

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Kelley Crider

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Jennifer Shore

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Vance Frenzel

Date 12/5/18

Skagit County Centennial Trail Extension Environmental Impact Statement

Avery Barbera | Kelley Crider | Vance Frenzel | Sam Kaiser | Jennifer Shore

Prepared for ENVS 493 Fall 2018
Dr. Tamara Laninga
Huxley College of the Environment | Western Washington University

Fact Sheet

Title
Skagit County Centennial Trail Extension

Description of Project
2.5 mile ADA pedestrian trail overlaying a portion of the Judy Reservoir Transmission Pipeline project (phase 2)

Location
Skagit County Washington -- Big Rock to Clear Lake along State Route 9 (S14,11,12 & 1 T34N R4E off the Willamette meridian; Lat-Long of trailhead 48°26'03.54N, 122°15'52.42W)

Project Proponent
Skagit County Parks and Recreation Department

Lead Agency
Skagit County Planning & Development Services

Permits and Approvals
Washington State Department of Ecology

1. Wetlands Permit
2. Construction Stormwater General Permit (NPDES)
3. Floodplain Development Permit
4. Joint Aquatic Resources Permit Application (JARPA)
5. Forest Practices Permit

Skagit County

6. Shoreline Conditional Use Permit/ Shoreline Exemption/ Shoreline Variance, Shoreline Substantial Development Permit
7. Hydraulic Project Approval (HPA)
8. 05-05 Compliance
9. Section 401 Water Quality Certification

U.S. Army Corps of Engineers

10. Bridge Permit for Navigable Water

Contributors
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Acknowledgments
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Distribution List
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Environmental Impact Statement Issue Date
December 7, 2018

Public Presentation
10:30 AM December 5, 2018

Western Washington University
516 High Street
Bellingham WA 98225
Environmental Science Building
Room 534

Table of Contents

Section 1: List of Figures and Tables

Figures

Tables

Section 2: Glossary of Technical Terms, Acronyms, and Abbreviations

Terms

- **Americans with Disabilities Act (ADA)**: Federal civil rights law which "prohibits discrimination against people with disabilities in several areas, including employment, transportation, public accommodations, communications and access to state and local government programs and services" (U.S. Department of Labor, ADA compliance).

- **Critical Areas:** Chapter 36.70A RCW defines critical areas as "...any of the following areas or ecosystems: aquifer recharge areas, fish and wildlife habitat conservation areas, frequently flooded areas, geologically hazardous areas, and wetlands."

- **Ecology:** Washington State Department of Ecology.

- **Fecal coliform bacteria:** A specific type of bacteria commonly tested for in water bodies whose presence indicates the waters have been contaminated by animal feces.

- **Hydric soil:** Soils that are subject to saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part of the soil profile (USDA, 2006).

- **Impervious pavement:** A substance that *does not allow* any fluid to pass through its surface.

- **Pervious pavement**: A substance that *does allow* fluid and particles to pass through its surface.

- **Preservation:** Maintenance and extension of utility for prior investments.

- **Remediation:** The action of remedying something, in particular of reversing or stopping environmental damage.

- **Sedimentation:** Pollution of a water source by particulate terrestrial clastic matter.

- **Substrate:** Deposited or conglomerate material that covers the surface of the ground.

- **Succession (primary, secondary):** The process by which the structure of a biological community evolves over time. Characterized by different distributions of species at different ages.

- **Turbidity:** A measure of suspended particulate matter in the water column.

- **Total Maximum Daily Limit (TMDL):** A plan for improvement of the quality of a body of water which defines the maximum daily limit of pollutants the water body can have while still complying with U.S. Clean Water Act regulations.

Abbreviations and Acronyms

- Americans with Disabilities Act (ADA)
- Environmental Impact Statement (EIS)
- Geographic Information Science (GIS)
- Judy Reservoir Water Transmission Pipeline (the water pipeline)
- Public Utility District (PUD)
- Revised Code of Washington (RCW)
- Skagit County Parks & Recreation (P&R)
- Skagit Land Trust (SLT)
- State Route 9 (SR-9)
- Total Maximum Daily Load (TMDL)
- Washington State Department of Fish and Wildlife (WDFW)
- Washington State Department of Transportation (WSDOT)
- Washington Information System for Architectural & Archaeological Records Data (WISAARD)

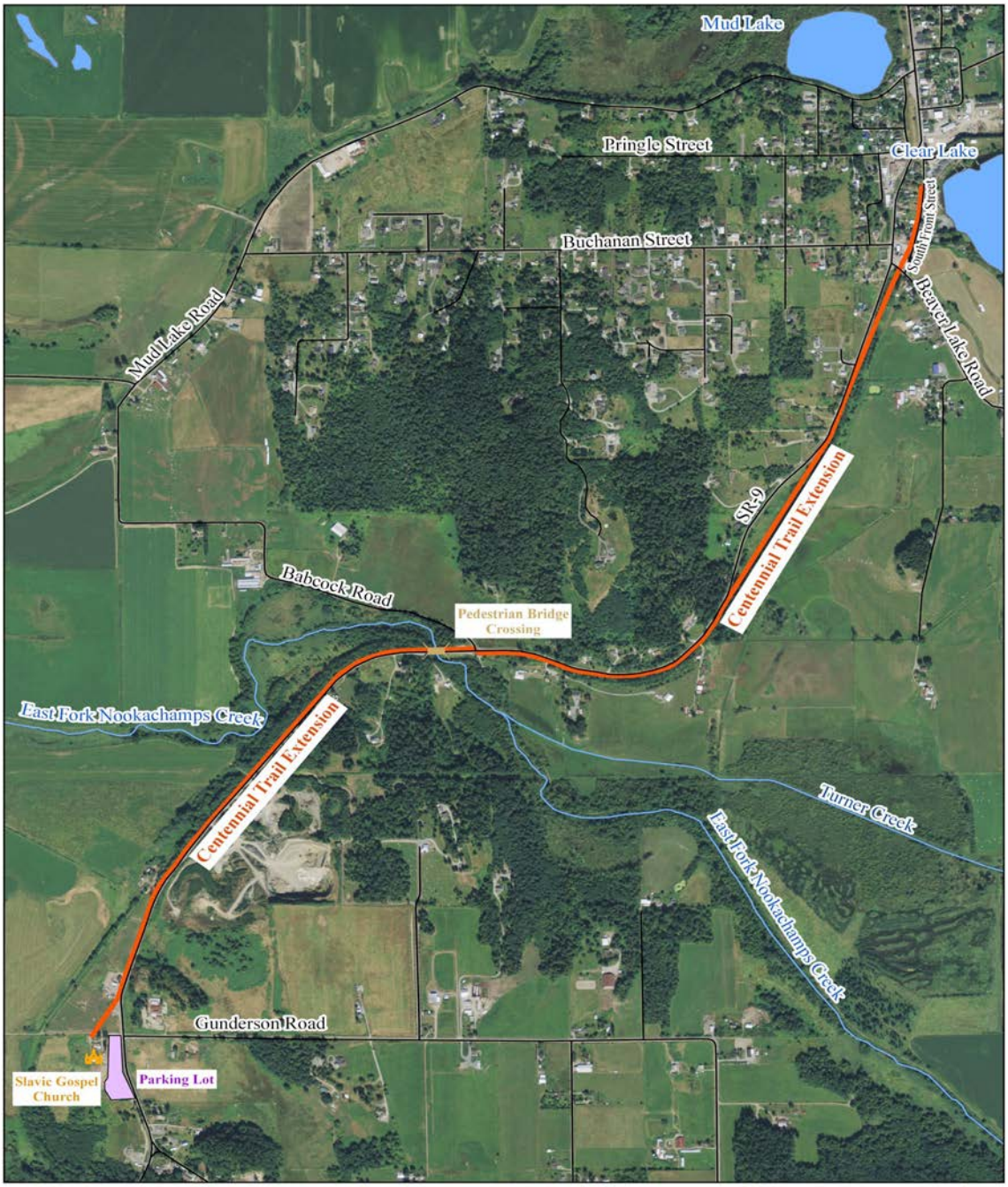

Figure 1. Overview of Centennial Trail Extension Project Area, Skagit County, WA.

Data Sources: Sam Kaiser & WWU 2018.

Executive Summary of Project

Objective

The purpose of the Skagit County Centennial Trail Extension is to increase recreational opportunities, while minimizing environmental impacts by working within an existing easement for the Judy Reservoir Water Transmission Pipeline.

Overview

Skagit County Parks and Recreation Department has acquired 255 acres of land with the help of Skagit Land Trust and private donors for the purpose of extending the Centennial Trail system, which is currently located throughout Snohomish County. The purpose of the acquisition of these land parcels is to 1) install a new water transmission pipeline from Judy Reservoir (a project done by Skagit Public Utility District) and 2) install a 2.5 mile walking trail on top of the pipeline extending from Clear Lake to Big Rock. This document serves as an analysis of the environmental impacts of the trail installation.

Proposed Action and Alternatives

The proposed project action is designed to be an Americans with Disabilities Act accessible trail with a compacted crushed gravel surface constructed shortly after pipeline installation. The trail will run on the north side of SR-9 for the east half of the route, cross SR-9 at the mid-way point, and continue on the south side of SR-9 for the remainder of the trail. There will be a bridge crossing at the East Fork Nookachamps Creek, as well as a suspended walkway with the pipeline perched underneath it which will cross over a sensitive wetland habitat. Impact mitigation measures include working during the summer to avoid disturbing migratory birds, using metal grating or wood planks for elevated surface portions, and continuous monitoring of mitigation measures to assure efficacy.

For the alternative action, everything would be the same as the proposed action except for the trail substrate material. Instead of compacted gravel, the trail surface would be concrete. As for mitigation measures, these would be the same as the proposed action with the addition of using water permeable concrete to reduce runoff.

A third option of no action is also possible, which would leave the Public Utility District to revegetate the land disturbed by the pipeline installation. The impacts of this choice would be the loss of opportunity cultural and historic preservation, i.e. interpretive information and cultural awareness sites for the community, and the loss of opportunity to expand recreation to an underserved area.

Major Impacts:

Both the proposed and alternative actions will impact similar elements of the environment. The no action alternative will have fewer impacts to elements of the environment than both the proposed and alternative actions.

Elements of the environment determined to incur a significant impact are:

- Earth
- Water
- Plants
- Animals
- Land and Shoreline Use
- Housing
- Recreation
- Historic and Cultural Preservation
- Transportation

Table ES.1 provides a more detailed description of how these elements of the environment would be affected by the proposed action, alternative action, and no action alternatives.

Elements of the environment that were determined to have no major impacts:

- Environmental Health
- Light and Glare
- Aesthetics
- Public Services
- Air
- Energy and Natural Resources

Table ES.1. Major impacts to affected elements of the environment.

Elements of the Environment	Proposed Action	Alternative Action	No Action
Earth	Moderate soil erosion	High soil erosion	No impact
Water	Moderate water contamination via sediment, bacteria, and high temperature runoff	High water contamination via sediment, bacteria, and high temperature runoff	No impact
Plants	Soil stabilization	Soil stabilization	No impact
Animals	Human-animal interaction	Human-animal Interaction	No impact
Land & Shoreline Use	Increased pollution	Increased pollution	No impact
Housing	Limited driveway access	Limited driveway access	No impact
Recreation	Expanded recreation, increased littering	Greatly expanded recreation, increased littering	Loss of recreation opportunity
Historic & Cultural Preservation	Increased preservation	Increased preservation	No preservation
Transportation	Expanded pedestrian transportation	Greatly expanded recreation	Loss of transportation opportunity

Mitigation Measures:

Proposed Action

Build trail shortly following backfill of each completed section of the water pipeline installation, reusing existing erosion control infrastructure and methodology implemented by the water pipeline construction team, including but not limited to:

- Work during the summer predominantly to limit the length of time soils are impacted by precipitation and migratory birds have exposure to the worksite
- Use metal grating or wood planks for elevated crossings
- Continuously monitoring the effectiveness of management strategies and alter them when deemed necessary.

Alternative Action

Build trail shortly following backfill of each section of the pipe, reusing existing erosion control infrastructure and methodology implemented by the water pipeline construction team, including but not limited to:

- Work during the summer predominantly to limit time soils are impacted by precipitation and to limit contact with migratory birds
- Use metal grating or wood planks for elevated crossings
- Continuously monitoring the effectiveness of management strategies and alter them when deemed necessary.

In addition to the above mitigation measures, installing *permeable pavement* as an alternative to a traditional smooth pavement surface would greatly reduce or eliminate side-of-trail erosion.

Controversy and Uncertainty:

Proposed Action

Despite some significant impacts this proposal creates, the overall certainty of effects is fairly high.

Alternative Action

Same as for proposed action above.

No Action

The overall certainty of the effects of the no action alternative is fairly high. The water pipeline easement does not currently have a pathway for a trail, remediating the easement to its original state does not present any significant adverse effects.

Decision Matrix

The following decision matrix (Table ES.2) summarizes the impact of the proposed, alternative, alternative with mitigation and no action scenarios on each of the elements of the environment determined to sustain significant impacts. The alternative action with mitigation is included because mitigation led to significant increase in positive effects. The decision matrix can be used to quickly visualize pros and cons of each of the actions and to determine the action with least possible impact. Positive total number indicates a positive overall effect.

Table ES.2. Decision matrix for impacts on each environmental factor for all possible decisions.

Element of Environment	Proposed Action	Alternative Action	Alternative Action with Mitigation	No Action
Earth	-1	-1	0	0
Water	-1	-1	0	0
Plants	-1	-1	-1	0
Animals	-1	-1	-1	0
Land & Shoreline Use	-1	-1	+1	0
Housing	-1	-1	0	0
Recreation	+1	+1	+1	0
Historic & Cultural Preservation	+1	+1	+1	-1
Transportation	+1	+1	+1	0
Total	**-3**	**-3**	**+2**	**-1**

Decision Matrix Key		
Negative Impact = (-1)	Neutral Impact = (0)	Positive Impact = (+1)

Section 3: Project Overview

Objective

The purpose of the Skagit County Centennial Trail Extension is to increase recreational opportunities while minimizing environmental impacts by working within an existing easement for the Judy Reservoir Water Transmission Pipeline.

Overview

Skagit County Parks and Recreation Department (P&R) has acquired 255 acres of land with the help of Skagit Land Trust (SLT) and private donors for the purpose of extending the Centennial Trail system. Currently the Centennial Trail is a Snohomish County pedestrian trail located on former North-South Burlington Northern Railway routes. The proposed addition in Skagit County will be a 2.5 mile East-West pedestrian trail between the Big Rock area, near the City of Burlington at the Gunderson Road and State Route 9 (SR-9) crossing, to Clear Lake. The project will overlay the Judy Reservoir Water Transmission Pipeline (water pipeline), a public works project anticipated to be completed in 2020.

Proposal and Alternatives

Proposed Action

The proposed action is designed to be an Americans with Disabilities Act (ADA) accessible trail with a compacted crushed gravel surface. Trail installation will begin shortly after sections of the water pipeline are completed, which will lessen the severity and extent of soil erosion and other potential impacts to the natural and built environment. The trail will run on the north side of SR-9 for the east half of the route, cross SR-9 at the mid-way point, and continue on the south side of SR-9 for the remainder of the trail. There will be a bridge crossing at the East Fork Nookachamps Creek. The trail walkway will be located directly over the water pipeline, and overlay the pipeline where it crosses the East Fork Nookachamps Creek and intersecting wetland areas. Trail substrate materials are to be determined for the wetland, highway and creek crossings. Disturbed land on both sides of the Centennial Trail Extension will be replanted with native vegetation and soil, suitable to the region, to decrease side-of-trail erosion potential. The trailhead will be located in the parking lot of the Slavic Gospel Church (14464 WA-9, Mt Vernon, WA 98273), which has agreed to provide space for ADA-accessible parking and portable restroom facilities on their property.

Gravels trails are often considered more natural looking than other trail surface options (Seattle Parks and Recreation, 2017). Gravel washout, migration and on-trail puddles may impact the year-round ADA accessibility of the proposed action, especially after storm events in the fall and winter (Saitta & Snyder, n.d.).

Alternative Action

The alternative action is designed to be an ADA-accessible trail with a smooth pavement surface. Sectional installation of the trail will begin shortly after sections of the water pipeline are completed to lessen the severity and extent of soil erosion and other potential impacts to the natural and built environment. The trail will run on the north side of SR-9 for the east half of the

route, cross SR-9 at the midway point, and continue on the south side of SR-9 for the remainder. There will be a bridge crossing at the East Fork Nookachamps Creek. The trail walkway will be located directly over the water pipeline, overlaying the pipeline where it crosses the East Fork Nookachamps Creek and the intersecting wetland areas. Trail substrate materials are to be determined for the wetland, highway and creek crossings. The trailhead will be located at 14464 WA-9, Mt Vernon, WA 98273, the location of the Slavic Gospel Church which is partnering with Skagit County Parks and Recreation to provide space for ADA-accessible parking and portable restroom facilities on their property.

Paved trails have fewer instances of washout after storm events, which can impede trail accessibility, and retain accessibility during the fall and winter months when soils are saturated with water and puddles tend to form (Saitta & Snyder, n.d.).

No Action

In the event that P&R does not develop the Centennial Trail Extension, Skagit County Public Utilities District (PUD) will remediate the site without the P&R input or involvement. The pipeline corridor will still be a disturbed area with a covered, perched pipeline over wetland areas. Land acquired for this project will not be returned to selling parties, but instead kept under Skagit P&R and SLT control. Tax-based incentives will provide land easements for the corridor to ensure there are no future development proposals.

Major Impacts:

Elements of the environment that will be affected by the proposed action are the same as which will be affected by the alternative action. The no action alternative will have fewer impacts to elements of the environment than the proposed and alternative actions.

Elements of the environment determined to incur a significant impact are:

- Earth
- Water
- Plants
- Animals
- Land and Shoreline Use
- Housing
- Recreation
- Historic and Cultural Preservation
- Transportation

Table 1 shows a more detailed description for how these elements of the environment would be affected by the proposed, alternative and no action alternatives.

Elements of the environment that were determined to have no major impacts:

- Environmental Health
- Light and Glare
- Aesthetics
- Public Services
- Air
- Energy and Natural Resources

Elements deemed as non-significant were not considered and are not included in Section 4: Impact to Elements of the Environment.

Table 1. Major impacts to affected elements of the environment.

Elements of the Environment	Proposed Action	Alternative Action	No Action
Earth	Moderate soil erosion	High soil erosion	No impact
Water	Moderate water contamination via sediment, bacteria, and high temperature runoff	High water contamination via sediment, bacteria, and high temperature runoff	No impact
Plants	Soil stabilization	Soil stabilization	No impact
Animals	Human-animal interaction	Human-animal Interaction	No impact
Land & Shoreline Use	Increased pollution	Increased pollution	No impact
Housing	Limited driveway access	Limited driveway access	No impact
Recreation	Expanded recreation, increased littering	Greatly expanded recreation, increased littering	Loss of recreation opportunity
Historic & Cultural Preservation	Increased preservation	Increased preservation	No preservation
Transportation	Expanded pedestrian transportation	Greatly expanded recreation	Loss of transportation opportunity

Section 4: Impact to Elements of the Environment

Notice to Reader

Many of the potential impacts associated with this project may be initiated during the Judy Reservoir Transmission Pipeline Expansion, which will precede development of the proposed Centennial Trail Extension. This EIS focuses on impacts directly associated with the Centennial Trail Extension. Additional impacts from the pipeline project can be found through the Skagit County PUD (https://www.skagitpud.org/).

The environmental elements of this analysis include: earth, water, plants, animals, environmental health, land and shoreline use, housing, recreation, historic and cultural preservation, and transportation. Other elements that do not appear within this environmental review were omitted if no significant environmental concerns were found. See Section 4.10 for a full list of omitted elements.

For all sections there are no provided 'No Action' mitigation measures. Choosing to not develop a trail will not require any means of environmental mitigation, and therefore, will have no adverse effect(s) on the landscape.

4.1 Earth

Existing Conditions

The 2.5-mile impact area of this project is flat to rolling with an average slope of 3.1% -3.3% and a maximum slope of 34.1% -36.5% occurring at the pedestrian bridge over the Nookachamps Creek crossing (Figure 2). Soils are variations of silt and gravelly loam with 9 distinct soil types in direct proximity to the project site (Figure 3, Table 2). Most soils are noted as being poorly drained and are classified as hydric, indicating the presence of wetland (Element Solutions, 2016). The impact on hydric soils and wetlands will be discussed in the following Water section (4.2). There are no available records of large-scale land surface instability in the impact area.

Impacts

Proposed Action

Potential significant impacts associated with the erosion of surface material are a major concern for the proposed action. Fill material from the water pipeline installation and surrounding soil may be loosened during the trail construction process. This impact may be significant in or near zones containing the following soils: dystric xerochrepts (45-70% slopes), hoogdal silt loam (8-15% slopes) and tokul gravelly medial loam (15-30% slopes) (Figure 3).

Crushed gravel material from the trail surface may release particulates during the staging, application and compaction processes of trail installation. This may result in an increase in turbidity (decreased water clarity). The impacts of increased water turbidity due to sediment contamination are discussed in section 4.2.The loss of surface material during erosion may destabilize some near-trail areas, increasing future potential for erosion. This impact may be significant in areas with an elevated soil erosion potential (Table 2).

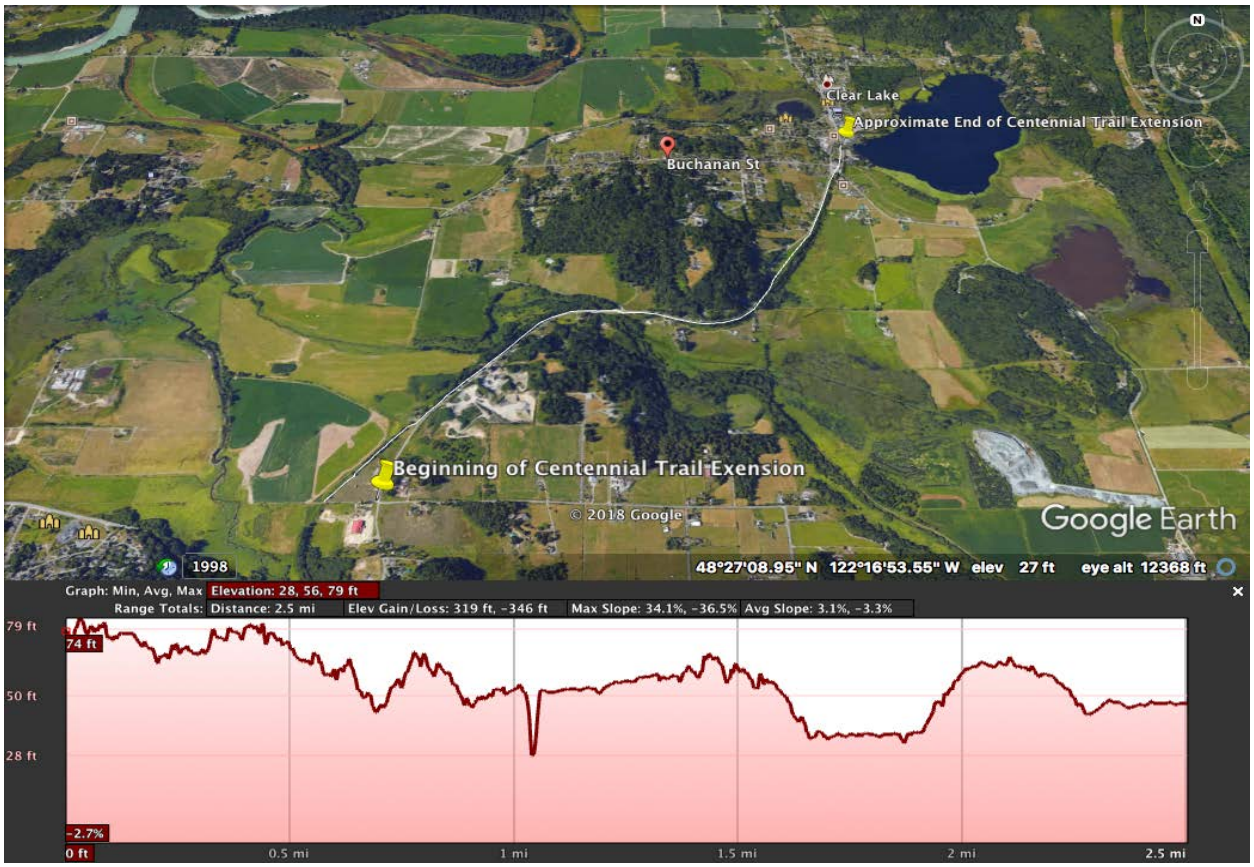

Figure 2. Elevation profile of the Centennial Trail Extension project proposed route. (Source: Google Earth Pro)

Alternative Action

The alternative action proposes using an impervious paved surface. Impervious pavement surfaces have been attributed to increased rates of overland flow resulting in increased surface erosion (Booth, D.B., Hartley, D. & Jackson, R., 2002). Additional implications of the impervious surface alternative are discussed in following sections. During construction heavy machinery may loosen existing surface material resulting in small amounts of erosion and/or reduced surface stability.

Table 3. Soil identification and erosion hazard potential for the nine distinct soil types identified in the impact area. Data sourced from Skagit County Wetland Delineation, Critical Areas Report, USDA NRCS Web Soil Survey.

Map Unit Symbol	Map Unit Name	Erosion Hazard
11	Bellingham mucky silt loam	slight
16	Bow gravelly loam 0-3% slopes	slight
46	Dystric xerochrepts 45-70% slopes	severe
56	Field silt loam	slight
67	Hoogdal silt loam 8-15% slopes	severe
101	Nookachamps silt loam	slight
124	Skipopa silt loam 0-3% slopes	slight
136	Sumas silt loam	slight
148	Tokul gravelly medial loam 15-30% slopes	severe

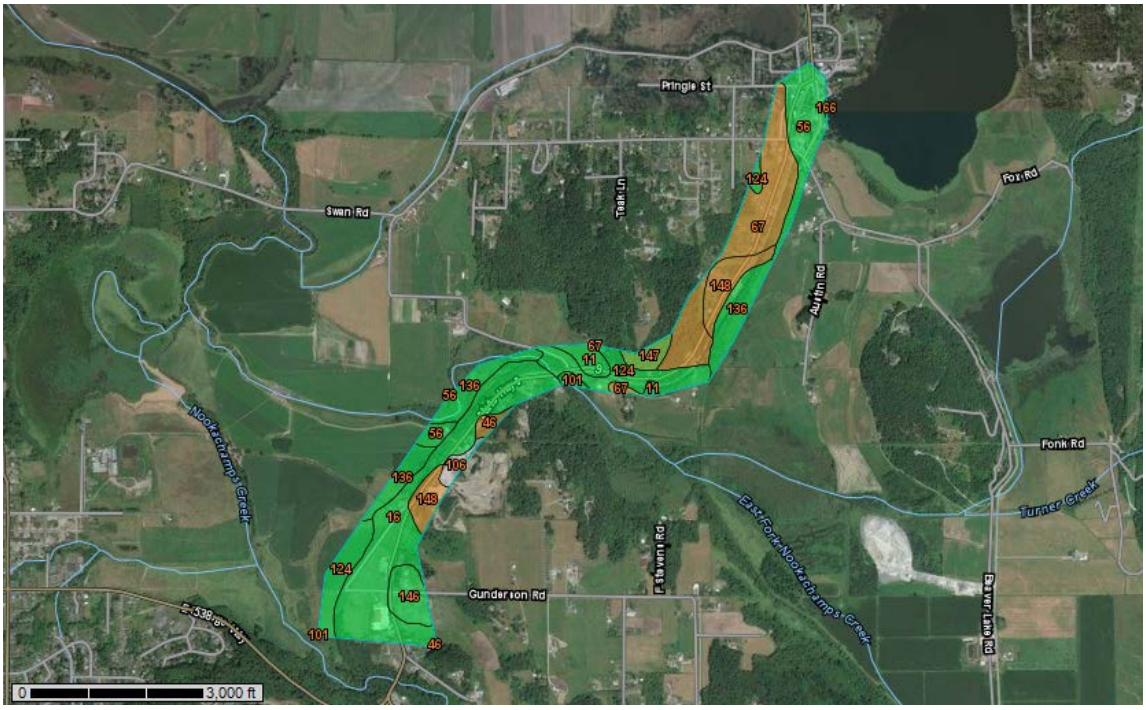

Figure 3. Soil types in the impact area of the Centennial Trail Expansion project. Soil types are color coded to convey differences in erodibility (orange areas represent increased erodibility) based on the USGS NRCS Web Soil Survey data. Numbers correspond to different soil types which are identified and described in Table 2.

No Action

The no-action alternative requires no development and therefore will have a very minimal negative impact on the earth environment. Revegetation of the project area by the Skagit County PUD may increase soil stability and suitable habitat for some organisms.

Mitigation

Proposed Action

Erosion control measures during the construction process will lessen the impact of sediment erosion into water bodies. Some of these measures include:

1. Limiting plant clearing and land disturbance to the smallest area possible
2. Applying temporary cover (mulch) to restrict the time soil is exposed to precipitation
3. Installing barriers to limit downhill runoff
4. Installing temporary ditches to divert surface runoff to catchment pools
5. Wetting soil during dry months to limit wind transport
6. Develop and employ an Erosion Management Plan
7. Frequently analyzing success of management strategies and altering strategies when necessary (Skagit PUD, 2018).

Alternative Action

In addition to the above mitigation measures, the recommended smooth surface for the Centennial Extension Trail should be constructed with permeable concrete, also known as "thirsty" concrete. Pervious concrete reduces or eliminates erosion of soil by allowing water to pass through pores in the concrete matrix at rates as high as 10mm/s (Zhang, et al. 2017). The installation of pervious concrete would not significantly affect pedestrian interaction with the trail.

4.2 Water

Existing Conditions

There are 26 wetland types within a single area identified on or near the land acquired by Skagit County P&R for this project (Element Solutions, 2016). This area lies within the East Fork Nookachamps Creek watershed. The East Fork Nookachamps Creek are listed on the Department of Ecology 303(d) Water Quality Assessment list. The 303(d) list indicates which bodies of water which have human use are impaired by pollutants. The East Fork Nookachamps Creek is impaired by temperature and fecal coliform (Butkus, Pater, & Pickett, 2000; Lawrence, 2008; Lawrence, 2007).

Impacts

Proposed Action

There will be three separate water crossings in the proposed action (Figure 4).

1. East Fork Nookachamps Creek: The perched water pipeline will be covered by a 252 foot long pedestrian bridge. No grading is required for the bridge placement.

2. Wetland I: About 0.48 acres of wetland will be filled and either a 6 or 4 foot wall constructed around the perched water transmission pipe. A walkway will be constructed on top of the transmission pipeline, obscuring it from vision. Wetlands to the north of the trail, i.e. between the trail and SR-9, will be filled in and wetlands to the south will be left as is.

3. Parcels 24535 and 24692: Proposed trail will be located over a box culvert located near parcels 24535 and 24692.

Municipalities consider compacted gravel to be an impervious surface (Saitta and Snyder, n.d.; Seattle Parks and Recreation, 2017). Runoff from both the impervious compacted gravel trail and the plant zone on either side of the trail is a concern because precipitation sheeting off impervious surfaces carries sediments into water bodies such as the East Fork Nookachamps Creek, leading to increased water temperature and possible fecal coliform bacteria contamination from pet waste.

Alternative Action

Water crossings for the alternative action are the same as the proposed action. Concerns regarding runoff, fecal coliform, and erosion risks for the alternative action are similar to those associated with the proposed action.

No Action

If no action is taken, Skagit County PUD will replant vegetation the water pipeline construction will remove. No impacts to water are associated with not building the trail.

Mitigation

Proposed Action

Mitigation measures to decrease water temperature and erosion include following an appropriate Erosion Management Plan during and after construction. After the trail and bridge are constructed, the riparian zones and trail edges should be re-vegetated with woody native flora, whose roots decrease erosion and increase soil retention. Planting should follow the guidelines found in the Washington State Department of Transportation (WSDOT) Roadside Manual Chapter 800 - Vegetation (Washington Department of Transportation, 2018).

The Lower Skagit Tributaries Temperature Total Maximum Daily Loads (TMDL) report provides guidelines for temperature mitigation methods, including:

- Riparian zone management, allows vegetation to mature and promotes restoration activities that increase groundwater discharge to the streams, i.e., increased opportunities for water to penetrate down into the aquifer.

- Runoff volume reduction, grated bridge and perched walkway surfaces allow precipitation to come in contact with soils in an unobstructed manner.

Risk of increased fecal coliform levels may be mitigated by providing pet owners with waste bags and a trash container at the trailhead. Regular trail maintenance including animal waste disposal reduces fecal coliform risks.

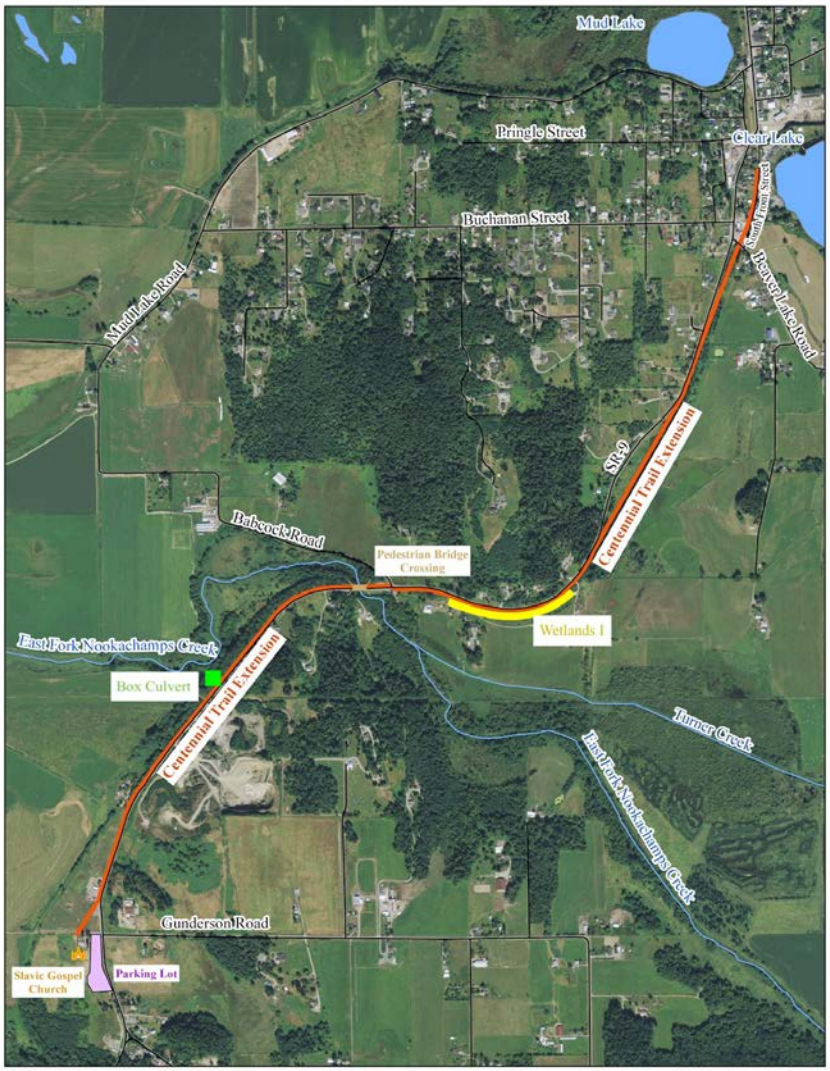

Figure 4. Intersection of the Centennial Trail extension and adjacent water bodies. The three water crossings are depicted as follows: Wetlands I (yellow), East Fork Nookachamps Creek (tan pedestrian bridge), and the box culvert (green). Data sources: Sam Kaiser and WWU 2018.

Alternative Action

In addition to the mitigation measures for the proposed action, stormwater runoff could be allowed more natural contact with soil by replacing the trail surface with a water permeable concrete surface.

4.3 Plants

Existing Conditions

The water pipeline easement is presently vegetated with deciduous trees (alder, maple), evergreen trees (cedar) and wetland plants (cattail, buttercup, reed canarygrass) (Skagit PUD, 2018). Installation of the water pipeline expansion will remove all vegetation and existing soils within a 50 ft trench and an additional 25 foot of buffer (12.5 ft on either side of trench) to provide working space for installation of the transmission pipeline (Skagit PUD, 2018).

Because the Centennial Trail Extension is planned to be installed shortly after the water pipeline, for the purpose of this EIS existing conditions are bare native and non-native soils for a 75 ft width spanning the length of the trail corridor, except over water, undrained wetland crossings and in the minimal portion near Clear Lake that the trail does not follow the water pipeline.

Impacts

Proposed Action

The 19.5 ft wide track of disturbed soil on either side of the proposed trail will be revegetated will native, soil-stabilizing plants that will be either seeded or container-planted during appropriate times of the year according to WSDOT side of road replanting standards (WSDOT, 2003). In wetland areas that are disturbed care will be taken to replant wetland species that do not alter the natural ecosystem of the wetland. Because the replanting area will be within a necessary no-tree zone no tree species will be planted and tree species that establish in this zone will need to be removed in lieu of routine water pipeline maintenance (Skagit PUD, 2018).

Plant restoration focuses on restoring a natural range of plant species for the site ecoregion and microhabitat (WSDOT, 2003). Introduction of native herbaceous pioneer species will be necessary to manage soil erosion while complying with the necessary no-tree zone.

Alternative Action

Same as for the proposed action described above.

No Action

If no action is taken, Skagit PUD will take measures to remediate the disturbed area after installation of the pipeline. Measures for remediation include restoring topsoil, restoration and enhancement of affected riparian buffers and replanting roadside vegetation with appropriate native species. Skagit PUD will also maintain a 20-ft wide tree-free zone to protect the pipeline. Details can be found on the Just to Mt Vernon Pipeline (Phase 2) SEPA document (Skagit PUD, 2018).

Mitigation

Proposed Action

To assist plant establishment and speed the restoration of disturbed soils, imported topsoils and soil amendments such as compost may be incorporated into the planting zone. These steps will help ensure that native plants establish healthy vegetative communities that stabilize soils and maintain a natural appearance.

Accelerated climax community development is a more rapid restoration method than managed succession associated with a higher cost and labor input (WSDOT, 2013). A more rapid restoration plan will minimize soil erosion and promote the development of shrubs and herbaceous plants that will require little to no maintenance in the future (WSDOT, 2018).

To ensure that species being planted are appropriate for soils and microclimate, seeds and cuttings can be taken from on-site plants and matured into planting stock for remediation (WSDOT, 2013).

Alternative Action

Same as the proposed action described above.

4.4 Animals

Existing Conditions

Urbanization in Central Skagit County have altered the overall numbers and specific types of wildlife present in the project area (WDFW, n.d). Numerous freshwater emergent wetlands and forested/shrub wetlands exist as critical habitat border the proposed action site (WDFW, n.d). Wildlife known to be on or near the proposed action site include various species of hawk, heron, eagle, songbird, deer, horse, cattle, salmon, and trout (WDFW, n.d). Of special concern are Canada geese and trumpeter swans, whose migratory path brings them through the project area during winter months.

Numerous threatened and endangered species have ranges and habitat requirements that theoretically allow them to be present in the project area. These species include (WDFW, n.d, Skagit PUD, 2018):

- Bull Trout (*Salvelinus confluentus*),
- Chinook Salmon (*Oncorhynchus tshawytscha*),
- Steelhead Trout (*Oncorhynchus mykiss*),
- Marbled Murrelet (*Brachyramphus marmoratus*),
- Streaked Horned Larks (*Eremophila alpestris strigata*),
- Yellow-billed Cuckoos (*Coccyzus americanus*),
- Oregon Spotted Frogs (*Rana pretiosa*)
- Grey Wolves (*Canis lupus*)

The existence of these species in the project area *has not been directly verified*. Instead, their range suggests that they may be found on the proposed action site.

Impacts

Proposed Action

The construction process may directly impact species that are present on site through direct contact with construction tools and interaction with construction workers. Ground dwelling organisms such as amphibians, invertebrates and small mammals may be destroyed or forced to relocate due to construction and increased human presence. Nocturnal animals may be negatively impacted by use of flood lamps on active construction sites after dark.

Once open, animals may have contact with community members using the trail, especially during periods of animal migration, such as in the late fall and winter when Trumpeter Swans and Canada Geese migrate through the Skagit Valley. Additionally, the presence of a non-vegetated trail may result in habitat fragmentation for some organisms.

During both the construction and use phase stormwater runoff carrying silt may increase turbidity (clarity) and temperature of water bodies, including the East Fork Nookachamps Creek. An increase in turbidity alters the water environment and raises water temperature, which inhibits physical function of aquatic organisms, especially fish.

Pet waste and garbage on the trail may impact animals in several ways, including providing easy food sources, contaminating local waterways with bacteria and littering habitat areas with garbage.

Alternative Action

The alternative action has many of the same impacts mentioned above. Direct human-animal and machine-animal interaction are similar except increased machinery is necessary for the construction of the impervious trail surface, which may result in increased impact to animals.

Higher erosion of substrate is associated with impervious surfaces. Erosive materials collecting in waterways will increase the temperature and turbidity of adjacent water, creating a less habitable environment for aquatic and riparian animals.

No Action

The no-action alternative has no significant impacts on local animal populations. Revegetation with native plants carried out by Skagit PUD will function to remediate the habitat, resulting in no additional long-term negative impacts on animals.

Mitigation

Proposed Action

Strategies to reduce potential impact on animal populations include: limiting erosion through the methods described in section 2.1, working during summer months when migratory animals are not present and working during daylight windows when most animals are less active. Additionally, replanting vegetation to match current on-site vegetation will ensure that animals will have access to customary habitat and food sources (WSDOT, 2013).

To reduce light pollution during construction, regular flood lamp bulbs can be replaced with bulbs that emit light of longer wavelengths ("red light").

Once trail construction is complete, providing garbage and recycling bins at frequent intervals along the trail will reduce impacts to wildlife.

Alternative Action

Same as for the proposed action described above.

4.5 Land and Shoreline Use

Existing Conditions

The East Fork Nookachamps Creek is a section of the lower Skagit tributary system that feeds into the Skagit River. Streams with a mean flow greater than 20 cubic feet per second are under the jurisdiction of the Shoreline Management Act (Ecology, 2017). The East Fork Nookachamps Creek has an annual mean flow of 74.6 cubic feet per second, subjecting it to the Shoreline Management Act (Ecology, n.d.). The East Fork Nookachamps was contaminated by fecal coliform and temperature pollution according to TMDL reports published in the early 2000s (Lawrence, 2008 Lawrence, 2007).The associated wetlands in the proposed action site are also subject to the shoreline management act (Ecology, 2017). These sites are currently vegetated with riparian and wetland vegetation.

Impacts

Proposed Action

Installing the centennial trail will reduce the vegetated area along the East Fork Nookachamps Creek and associated wetland areas. It will also be necessary to remove trees and their associated root structures from the easement in order to comply with the no-tree zone needed for water pipeline maintenance (Skagit PUD, 2018).

It is unknown whether installing a trail will increase fecal coliform formation, posing significant impact(s) to the East Fork Nookachamps Creek or associated wetlands. Fecal coliform contamination is likely a result of improper dairy management, outdated municipal and/or private sewage infrastructure and other non-point sources (Lawrence, 2007).

Alternative Action

All above impacts. Additionally, the impervious surface of pavement may lead to increased erosion on either side of the trail, suspending more sediment in the East Fork Nookachamps Creek. An increase of dark sediment in a waterway increases solar radiation absorption and raises temperature.

Mitigation

Proposed Action

Effective planting of shade-producing vegetation with soil-stabilizing root systems will lessen the impact of temperature in the East Fork Nookachamps (Lawrence, 2008). Installing and regularly serviced pet waste stations will lessen the chance that fecal coliform is carried from the trail corridor into the East Fork Nookachamps Creek from discarded side-of-trail pet waste. Additional trail maintenance, including trash and pet waste pick-up, may also be necessary.

Mitigated Action

Same as for the proposed action described above.

4.6 Housing

Existing Conditions

There are several houses located on property where permits were acquired for the Centennial Trail extension project. No houses will be significantly affected with proposed or alternative trail options or with pedestrian use. Direction of trail will in no way affect current or future housing units.

Impacts

Proposed Action

There are houses located adjacent to SR-9 and the proposed action site. Due to the close proximity of private residences at certain parts of the trail, residents may experience minor disturbances such as increased pedestrian traffic and noise, limited driveway access, and potential loss of privacy due to the Centennial Trail. Homeowners were notified of this potential disturbance when land permits were required. Land owners who contributed land to the project were compensated for their contributions.

Although impacts might appear significant to property owners, proximity to a greenway or trail corridor is considered economically positive; access to the Centennial Trail Skagit Extension is expected to increase the property value and resale potential for residents on and near the proposed action site.

Alternative Action

The alternative action will have similar effects on housing as the proposed action. The alternative action proposes concrete substrate, which may slightly affect traffic congestion, noise, and air quality only during construction period.

No Action

Not creating a trail will have no effect on housing in the area. Disruption from the water pipeline, which is a separate project, will be the only action to affect nearby properties and their residents. However, if the trail is not built, residents will also not receive the positive benefits of being adjacent to a walking trail.

Mitigation

Proposed Action

To minimize pedestrian interaction with adjacent properties, informative signage can be placed to encourage trail users to stay on the designated path. For a stronger measure, Skagit County P&R and homeowners may pursue fencing or vegetating planting between trail and private property. Planting or placing a barrier may have the added impact of minimizing noise from trail users. To mitigate inappropriate use of the trail Skagit P&R and Skagit County can communicate to property owners and trail users their reporting options, such as calling a non-emergency hotline for illegal activity.

Alternative Action

Same as for the proposed action described above.

4.7 Recreation

Existing Conditions

The 255-acre trail corridor currently functions as an easement for a 26-inch water transmission pipeline and is not accessible to the general public. There are no current designated recreation areas or activities along the pipeline easement. Currently, the closest designated recreation areas are Clear Lake Beach and Mud Lake Conservation Area, both located north of the proposed trail. As the Skagit County population increases, demand for recreation space will also increase (Skagit P&R, 2012).

Impacts

Proposed Action

The proposed project will increase recreation opportunities in the Central Skagit area. In the Skagit County Comprehensive Parks and recreation Plan, Skagit P&R states a five year goal to develop a variety of recreation opportunities throughout the county (2012). This goal is especially important because as the Skagit County population grows at a 2% rate, much higher

than the statewide rate of 1.05%, more land will need to be set aside for increased recreation demand (Skagit P&R, 2012). Communities with many designated recreation areas, such as parks and trails, are shown to have healthier economies, lower rates of heart disease, lower health insurance costs and fewer crimes. (Skagit P&R, 2012). Installing an ADA trail on the water pipeline easement provides the opportunity for residents with a range of mobility conditions an opportunity to enjoy outdoor recreation in their home communities, as well as works towards the Skagit County Parks and Recreation Comprehensive Plan (Skagit P&R, 2012).

Alternative Action

Same as above, but with the expanded recreation opportunities provided by concrete. A concrete will provide improved stroller, bicycle, rollerblade and other wheeled-activities access to the Centennial Trail.

No Action

If no action is taken, the easement will continue to be inaccessible to the public. No recreation opportunities will be provided.

Mitigation

Proposed Action

Providing regularly serviced trash receptacles at the trailhead and at regular intervals on the trail will help mitigate littering. Pet waste stations with bags and trash cans may mitigate pet waste issues. These stations can be combined for easy maintenance. Regular service should include litter and pet waste clean up for items that are not properly disposed of. Signs will be posted to discourage the public from straying off the trail and onto private property. Skagit P&R will work closely with land owners to address further concerns about this if needed.

Alternative Action

Same as for the proposed action described above.

4.8 Historical and Cultural Preservation

Existing Conditions

Skagit County consists of nearly 90,000 acres of land designated for agriculture, which could include livestock, crops, and dairy products (McMoran, 2012). As its number one industry, agriculture embodies the important cultural and historical identity of the county. Skagit County has many established farmland protection programs, that recognize and preserve the county's three main farmland zones—Agriculture Natural Resource Land, Rural Reserve, and Rural Resource. Major programs (listed below), tax incentives, and levies, such as the Conservation Futures Tax (CFT), which "acquires interests or rights in real property for the preservation of farm, agricultural land, and critical areas and incentives promote the preservation of agricultural farmland", ensure that the county protects and preserves its agricultural identity (Skagit County Code, 2018) (American Farmland Trust, 2012).

Please refer to the following documents, also found in References, for more information about what qualifies these lands as agricultural, open space, or rural lands;

1. Skagit County Comprehensive Plan 2016-2036: The Natural Resource Lands Element
2. Purchase of Development Rights (PDR) program
3. Skagit County Farmland Legacy Program (FLP)
4. GIS database development for natural resource lands
5. Skagit County Agriculture Advisory Board
6. Skagit County Land Trust
7. Envision Skagit 2060

Impacts

Proposed Action

The proposed action has no significant impact on the agricultural identity and rural character of the area. Skagit Land Trust and Skagit P&R obtained land use permits to comply with the Skagit County ordinances for agricultural preservation and protection. These permits ensure that land uses promotes tourism, recreation and land preservation when land use does not interfere with "long-term commercial significance of natural resources and critical areas or rural lifestyles" (Skagit County CC, 2016-2036). In addition, there will be no significant impacts to historic or cultural buildings on or near the proposed action site. The proposed action site intersects agriculture and rural land use zones (Figure. 5). However, as a three-foot-wide trail, near SR-9, and with close proximity to the water pipeline, it is unlikely that the proposed action site will be returned to agricultural use in the future.

Assessment of permit compliance was completed with aid from the Washington Information System for Architectural & Archaeological Records Data (WISAARD) database and public GIS data. Data analysis also informed that there were no registered historical structures or affected Native American lands. Although, there is still some uncertainty surrounding possible sacred tribal lands or smaller tokens of historic and cultural significance that GIS data cannot provide.

Alternative Action

Using a concrete or hard impervious substrate may affect the agricultural identity of the area. The compaction of the underlying soil may compromise the land's ability to return to farmland in the future. Should the trail be removed, the soil will return to its normal composition and be able to grow crops, with time. Effects of this alternative action will be reversible.

The alternative action has no significant impact on the agricultural identity and rural character of the area. Because the trail corridor is also a water pipeline easement it is unlikely that the 255 acres of land acquired for the trail will return to agricultural use in the future.

No Action

The no action alternative will have no significant impact the agricultural identity and rural character of the area.

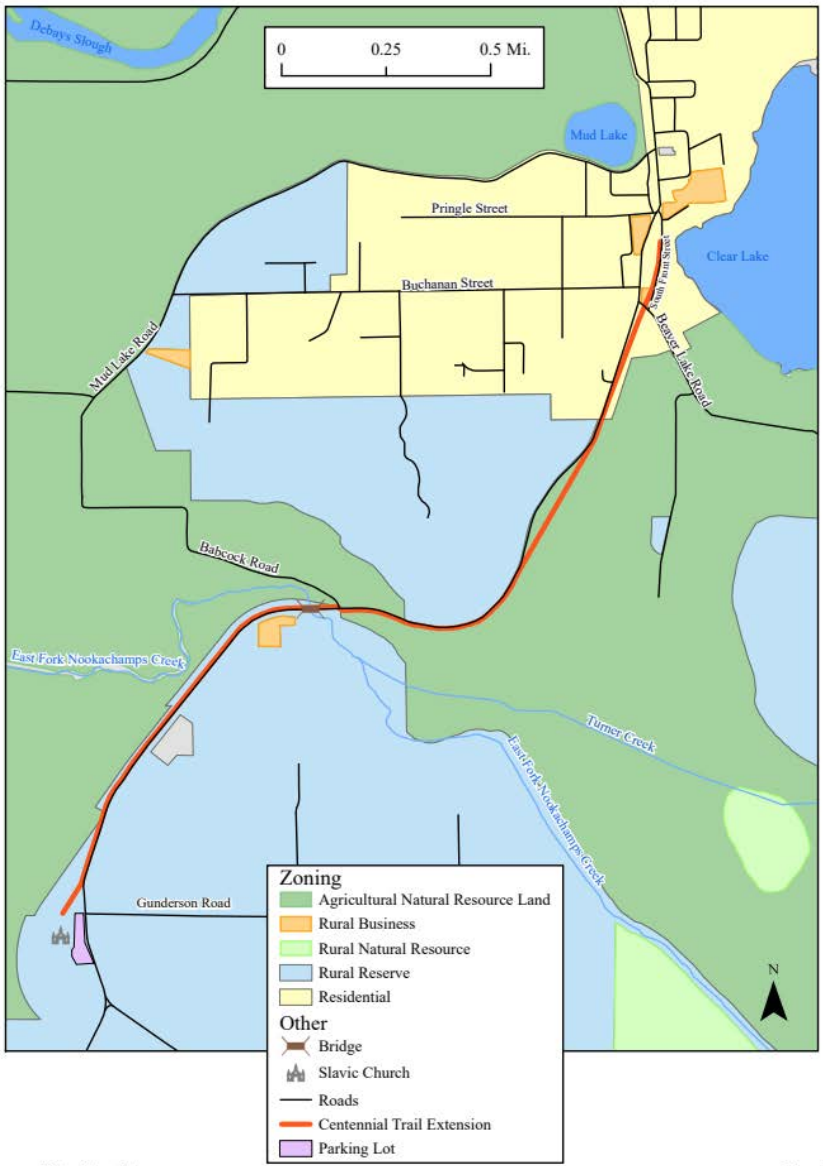

Figure 5. Land classification zones along the extent of the Centennial Trail Extension project in Skagit County, WA. Data were either acquired from the Skagit County online GIS database or manually digitized by Sam Kaiser.

Mitigation

Proposed Action

To maintain and promote the agricultural identity of the area educational signage could be installed along the trail to highlight Skagit County's historic and current agriculture pursuits. There are already many agricultural programs preserving the area's rural character. Increased cooperation between agencies and citizens will also preserve the land's agricultural identity.

Alternative Action

Same as for the proposed action described above.

4.9 Transportation

Existing Conditions

The trail will run along a two and a half mile stretch of SR-9. The two-and-a-half-mile portion of the trail begins at the intersection of Gunderson Road and SR-9, ending near South Front Street. SR-9 has a Federal Function classification of a major collector, meaning it has a low driveway density, a higher speed limit, and a high annual traffic volume (Skagit County, 2016). The current speed limit of the section of SR-9 that the trail follows is 55 mph. Currently, there are no designated pedestrian crossings on the two-and-a-half-mile portion of the road. Skagit Transit Route 305 serves this area, operating approximately every hour. There is a bus stop located about one mile from the trailhead and another stop located about two-tenths of a mile from the trail end. SR-9 has heavy traffic volume, averaging about 1,300 vehicles per day, with about 610,000 to 2.8 million tons of freight transported annually (Skagit Council on Governments, 2016).

Impacts

Proposed Action

No new roads or driveways will need to be constructed as a result of this project. A section of the trail crosses SR 9, occurring near the intersection of Babcock Road and SR 9. At the crossing a pedestrian crosswalk is required. SR-9 is a popular cycling route, the proposed trail can act as a separation between high speed vehicles and pedestrians/cyclists (Skagit Council on Governments, 2016). The speed limit of SR-9 is 55 mph, which presents a higher risk of pedestrians being struck when crossing the street. Additional transit stops do not need to be added for transportation access to the trail. No parking spaces or lots need to be added, parking for the trail will be shared with the already constructed Slavic Gospel Church. Construction of the trail and adding a pedestrian crosswalk may temporarily disrupt or cause traffic to become congested in this area. This impact will be limited and only occur during the duration of construction. Road use may increase due to people driving to gain access to the trailhead.

Alternative Action

Same as for the proposed action described above.

Mitigation

Proposed Action

To allow for safe road crossing, signage or lights at or near the crosswalk can warn drivers of upcoming pedestrians or cyclists. Signage or lights can help drivers indicate when to stop or slow down. A reduced speed limit on this section of SR 9 could also reduce risk to pedestrians and cyclists. Traffic congestion will be limited to the construction phase of the trail, to mitigate this impact, construction hours will be limited and not during popular transport times or weekends. Proper traffic control will be in place during construction hours to minimize delays.

Alternative Action

Same as for the proposed action described above.

4.10 Non-Significant Elements

The following elements were not found to have any significant environmental impacts

- Energy and Natural Resources
- Public Services and Utilities
- Light and Glare
- Air
- Aesthetics
- Environmental Health

Section 5: Decision Matrix

The following decision matrix summarizes the impact of the proposed, alternative, alternative with mitigation and no action scenarios for the nine analyzed environmental factors. The alternative action with mitigation is included because mitigation led to significant increases in positive effects. The decision matrix can be used to quickly visualize pros and cons of each of the actions and to determine the action with least possible impact. Positive total number indicates a positive overall effect.

Table 3. Decision matrix of determined impacts on each environmental factor for all possible decisions.

Element of Environment	Proposed Action	Alternative Action	Alternative Action with Mitigation	No Action
Earth	-1	-1	0	0
Water	-1	-1	0	0
Plants	-1	-1	-1	0
Animals	-1	-1	-1	0
Land & Shoreline Use	-1	-1	+1	0
Housing	-1	-1	0	0
Recreation	+1	+1	+1	0
Historic & Cultural Preservation	+1	+1	+1	-1
Transportation	+1	+1	+1	0
Total	**-3**	**-3**	**+2**	**-1**

Decision Matrix Key		
Negative Impact = (-1)	Neutral Impact = (0)	Positive Impact = (+1)

The recommendation for this proposal is that Skagit P&R follow the alternative action with mitigation scenario; installing a 36-inch wide recreational pedestrian trail with a pervious concrete surface is the action with the least overall environmental impact.

Section 6: References

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Section 7: Appendix

SEPA checklist

SEPA ENVIRONMENTAL CHECKLIST

Purpose of checklist:

Governmental agencies use this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

***Instructions for applicants*:**

This environmental checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully, to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions. You may use "not applicable" or "does not apply" only when you can explain why it does not apply and not when the answer is unknown. You may also attach or incorporate by reference additional studies reports. Complete and accurate answers to these questions often avoid delays with the SEPA process as well as later in the decision-making process.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Instructions for Lead Agencies:
Please adjust the format of this template as needed. Additional information may be necessary to evaluate the existing environment, all interrelated aspects of the proposal and an analysis of adverse impacts. The checklist is considered the first but not necessarily the only source of information needed to make an adequate threshold determination. Once a threshold determination is made, the lead agency is responsible for the completeness and accuracy of the checklist and other supporting documents.

Use of checklist for non-project proposals:

For non-project proposals (such as ordinances, regulations, plans and programs), complete the applicable parts of sections A and B plus the SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS (part D). Please completely answer all questions that apply and note that the words "project,"

"applicant," and "property or site" should be read as "proposal," "proponent," and "affected geographic area," respectively. The lead agency may exclude (for non-projects) questions in Part B - Environmental Elements –that do not contribute meaningfully to the analysis of the proposal.

A. Background

1. **Name of proposed project, if applicable:**
   Skagit County Centennial Trail
   Skagit County Washington -- Big Rock to Clear Lake along State Route 9
   (S14,11,12 & 1 T34N R4E off the Willamette meridian; Lat-Long of trailhead 48°26'03.54N, 122°15'52.42W)

2. **Name of applicant:**
   Skagit County Park and Recreation Department

3. **Address and phone number of applicant and contact person:**
   Brian Adams, Director
   Department Administration Office
   1730 Continental Place,
   Mount Vernon, WA 98273
   (360) 416-1350

4. **Date checklist prepared:**
   Checklist completed on October 15, 2018

5. **Agency requesting checklist:**
   Skagit County Parks & Recreation and Skagit Planning & Development Services

6. **Proposed timing or schedule (including phasing, if applicable):**
   The proposed time frame for this project is dependent upon the Judy Reservoir to Mount Vernon Transmission Line Project - Phase 2 project time frame. Based on expected construction dates for this project, roughly 2019-2020, the Skagit County Centennial Trail will be started and completed in 2020, with potential extension into 2021, dependent on the month construction for the pipeline ends.

7. **Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.**
   No.

8. **List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.**
   Existing information pertaining to this project is as follows:

   - Vegetation types located on project site

   The following reports will be prepared for the project:

- Soil survey and mapping using GIS
- Trail slope mapping using GIS

9. **Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.**

The Skagit County Centennial Trail permitting is dependent on the Judy Reservoir to Mount Vernon Transmission Line Project - Phase 2. All shared permits have been applied for. Permits exclusive to the Centennial Trail have not been applied for.

10. **List any government approvals or permits that will be needed for your proposal, if known.**

1. Wetlands Permit
2. Construction Stormwater General Permit - NPDES
3. Floodplain Development Permit
4. Joint Aquatic Resources Permit Application (JARPA)
5. Forest Practices Permit
6. Shoreline Conditional Use Permit/ Shoreline Exemption/ Shoreline Variance, Shoreline Substantial Development Permit
7. Hydraulic Project Approval (HPA)
8. 05-05 Compliance
9. Section 401 Water Quality Certification

11. **Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description)**

The Centennial Trail is a 31-mile pedestrian pathway extending northward from Snohomish County. Skagit County Land Trust, Parks & Recreation Department, and local donors worked together to acquire 255 acres of land to extend the Skagit County portion of the Centennial Trail. This new portion will overlay the subsurface Judy Reservoir Transmission Pipeline, anticipated completion in 2020.

The proposed action is to make a compacted gravel trail that is compliant with the Americans with Disabilities Act (ADA). Effects of this trail include, but are not limited to, changes in land use, soil erosion, water runoff, and wetland delineation and water quality of the East Fork Nookachamps Creek. Based on these impacts, our team will complete a SEPA checklist assessing all viable alternatives and mitigation measures.

12. **Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably**

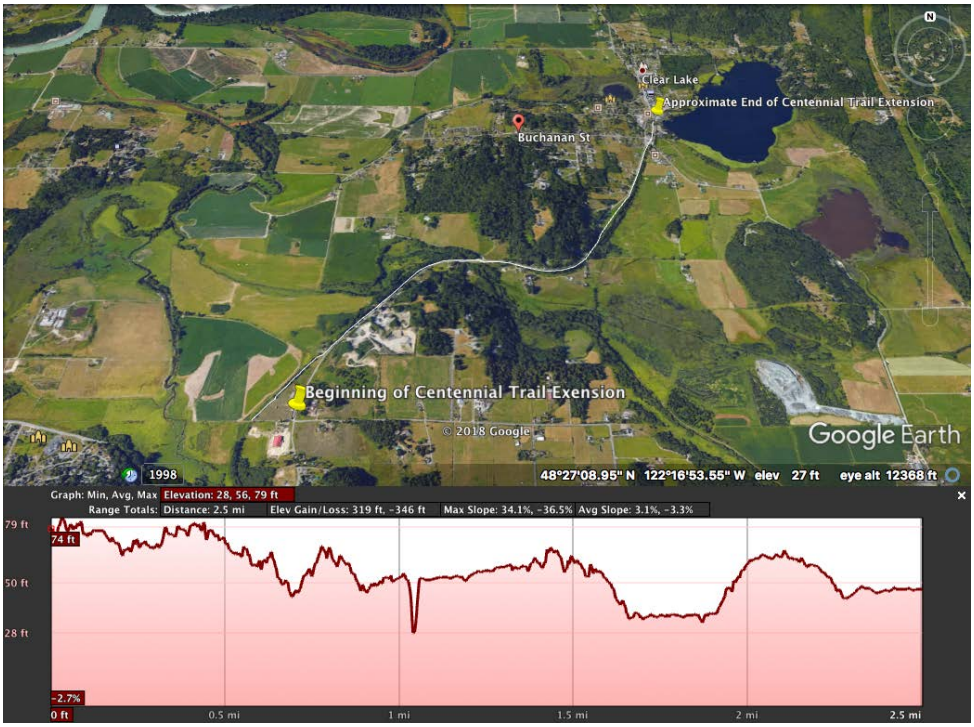
available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

The trail will span approximately 2.5 miles from the Big Rock area, near Burlington, to Clear Lake. Trailhead will be located at and share parking with the Slavic Gospel Church located at 14464 WA-9, Mt Vernon, WA 98273 (Lat-Long of trailhead: 48°26'03.54N, 122°15'52.42W). The trail will run on the north side of SR-9 for the east half of the route, will cross SR-9 near its mid way point, and continue on the south side of SR-9 for the west half.

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site:
(underline one): Flat, rolling, hilly, steep slopes, mountainous, other



b. What is the steepest slope on the site (approximate percent slope)?
Steepest slope approximately -36.5 degrees

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat,
muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.
Gravel, silty loam

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so,
describe.

No known history of unstable soils

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill.

Addition of crushed gravel/binder on surface of entire trail. Surface will be applied to area which has already been filled by the Judy Transmission Pipeline, using backfill of predominantly native soils. Surface will be compacted upon completion.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

Yes erosion most definitely will occur as surface layer is deposited and compacted. Additional erosion is likely to occur during the lifetime of the trail due to slight degradation over time.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

Because crushed compact gravel surfaces are considered impervious surfaces, approximately 10% of the proposal site will be impervious. This 10% will consist of the 36-inch trail. The trail head, which will be located on jointly operated private property, is not included in this estimate.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

Compaction of surface material to eliminate gravel drift
Construction during dry months with limited precipitation
Minimize unnecessary deposition of material, especially near creek crossing
Restore area of impact using native vegetation.

2. Air

a. **What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known**.

Air quality impacts will be limited. During the construction phase, dust and emissions from construction equipment and other activities will not significantly impact air quality of the area.

b. **Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.**

None

c. **Proposed measures to reduce or control emissions or other impacts to air, if any:**

Spray loose and exposed soil with soil to limit air-born drift

Cover exposed soil and other materials for trail building while not in use
Remediate with revegetation as quickly as possible

3. Water

a. *Surface Water:*

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

Wetlands in the project area have no official county name. For the purpose of surveying, wetlands were given the following names corresponding to the wetland schematic in the Wetland Delineation report.

A. 9 wetlands: Nookachamps OHWM, Aa, Ab, Ac, Ad, Ae, B, C, D, E. Sections B, C, D, and E extend offsite.
B. 10 wetlands: Unnamed stream (tributary to East Fork Nookachamps), Nookachamps OHWM, F, Fa, Fb, Fc, Fd, Fe, Ff, Fg, G, H. Sections F and G extend offsite and H is completely offsite.
C. 4 wetlands: I, J, Jb, K. Sections I, J, and K extend offsite.
D. 3 wetlands: J, Ja, Jc. Section J extends offsite. The northern half of segment D was not evaluated for wetlands because it is intensely developed.

Any other wetlands/seasonal streams/ponds not marked on the map?
No.

2) **Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.**

Yes. Raised walkways will be built over appropriate wetlands and the State Road 9 bridge over the East Fork Nookachamps Creek will be extended to accommodate a walkway. Detailed plans are not yet available.

3) **Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.**
Dependent on the Judy Reservoir Pipeline Phase 2, details not available at this time.

4) **Will the proposal require surface water withdrawals or diversions? Give general**
description, purpose, and approximate quantities if known.
Details not available yet.

5) **Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.**
About ⅔ of the trail, section from Clear Lake to Gunderson Road.

6) **Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.**
No.

b. *Ground Water:*

1) **Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.**

No.

2) **Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals. . . ; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.**
NO.

c. *Water runoff (including stormwater)*:

1) **Describe the source of runoff (including stormwater) and method of collection**
and disposal, if any (include quantities, if known). Where will this water flow?
Will this water flow into other waters? If so, describe.
Only during construction. The surface of the trail should be somewhat water permeable. Runoff may flow into gulleys or nearby wetlands or creeks.

2) **Could waste materials enter ground or surface waters? If so, generally describe**.
Gravel silt may enter the ground or adjacent surface waters during construction if carried with precipitation. Gravel may enter surface water during construction or significant storm events during use phase.

3) **Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.**
Unlikely. The trail will run alongside State Road 9 and over old rail tracks, where the existing topography will be followed.

d. **Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any:**

We suggest eventually paving the trail with permeable concrete. Habitat restoration along the side of the trail with plants native to the area will reduce runoff.

4. Plants

a. Check the types of vegetation found on the site:

_X_deciduous tree: alder, maple, aspen, other
_X_evergreen tree: fir, cedar, pine, other
_X_shrubs
____grass
____pasture
____crop or grain
____ Orchards, vineyards or other permanent crops.
_X_ wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
____water plants: water lily, eelgrass, milfoil, other
____other types of vegetation

b. **What kind and amount of vegetation will be removed or altered?**

Vegetation will be removed during the Judy Reservoil Transmission Pipeline Phase 2 project. No vegetation will be removed or altered for the Centennial Trail Extension project.

c. **List threatened and endangered species known to be on or near the site**.

There are no known threatened or endangered species known to be on or near the site.

d. **Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:**

In heavily disturbed areas landscaping on either side of the trail will consist of native vegetation suited to stabilizing soils. Taking cuttings and collecting seeds from on-site plants, cultivation in a nursery and replanting is the suggested method of preserving the vegetation community.

e. **List all noxious weeds and invasive species known to be on or near the site.**

There are no known noxious weeds on or near this site.

5. Animals

a. **List any birds and other animals which have been observed on or near the site or are known to be on or near the site.**

Grey wolf, cutthroat, rainbow, summer steelhead, winter steelhead, fall chinook, fall chum, chinook, coho, pink, lamprey, trumpeter swan, dolly varden, bull trout, resident coastal cutthroat.

b. **List any threatened and endangered species known to be on or near the site**.

While no threatened or endangered species are known to be the site, the proposed site is in the range of the following species:

- Bull Trout (*Salvelinus confluentus*),
- Chinook Salmon (*Oncorhynchus tshawytscha*),
- Steelhead Trout (*Oncorhynchus mykiss*),
- Marbled Murrelet (*Brachyrampus marmoratus*),
- Streaked Horned Larks (*Eremophila alpestris strigata*),
- Yellow-billed Cuckoos (*Coccyzus americanus*),
- Oregon Spotted Frogs (*Rana pretiosa*)
- Grey Wolves (*Canis lupus*) .

c. **Is the site part of a migration route? If so, explain.**

During the fall months, Snow Geese and Trumpeter Swans migrate from Southern Canada and Alaska to Skagit and Whatcom counties. Portions of this trail, particularly wetlands, will house these migratory species during their annual stay.

d. **Proposed measures to preserve or enhance wildlife, if any:**

Limit erosion into waterways, work during months that are not going to interfere with swan migration, adequately restore native riparian vegetation, store materials for construction in a containment area.

e. **List any invasive animal species known to be on or near the site**.

No known invasive animal species on or near the site

6. Energy and Natural Resources

a. **What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.**

No energy needed for trail creation. Possible opportunity for future construction of restroom facilities, with solar or electric powering capabilities.

b. **Would your project affect the potential use of solar energy by adjacent properties?**
If so, generally describe.

No.

c. **What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:**

During construction of the proposed bridge over wetlands and gravel overlay, reduced vehicle emissions during the construction phase will minimize energy consumption. Long term energy conservation efforts are not applicable for trail maintenance.

7. Environmental Health

a. **Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.**

None

1) **Describe any known, possible contamination at the site from present or past uses.**

None

2) **Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the**

vicinity.

None

3) **Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.**

Toxic or hazardous chemicals that may be stored and used during the duration of the trail construction include synthetic binders for gravel.

4) **Describe special emergency services that might be required**.

None

5) **Proposed measures to reduce or control environmental health hazards, if any**:

None

b. Noise

1) **What types of noise exist in the area which may affect your project (for example:**
traffic, equipment, operation, other)?

SR-9 is adjacent to the trail along the majority of the trail length, traffic noise may affect the use phase of the trail.

2) **What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site**.

Noise from construction crew and heavy equipment operation may be present during normal workday hours (8am-5pm) during construction. Longer evening hours may be necessary to complete work quickly to limit bare soil exposure.

3) **Proposed measures to reduce or control noise impacts, if any:**

Prefabricated construction of bridges and raised walkway over SR-9
Construction during regular business hours in a typical business week.

8. Land and Shoreline Use

a. **What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe**.

The portion of the project to the East of the State Route 9 crossing, approximately 1.3 miles, is an easement for the Skagit Public Utilities District and houses a water pipeline that requires periodic, non-invasive maintenance. Adjacent land use is primarily farm land with some residential houses. Installation of this project is not expected to alter adjacent land use.

b. **Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to non-farm or non-forest use?**

Proposed project site is a combination of formerly railroad, farmland and private use and utility easement. Not currently being used and will not displace agriculture, forest or commercial use.

1) **Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how:**

During construction there is expected to be some construction-associated dust and traffic that may affect surrounding farmland.

c. **Describe any structures on the site**.

A bridge will be constructed over stretch of the trail that extends over wetland area.

d. **Will any structures be demolished? If so, what?**

No.

e. **What is the current zoning classification of the site?**

There are three zoning classifications for this site: Rural Village Residential, Rural Reserve and Agricultural- Natural Reserve Land

f. **What is the current comprehensive plan designation of the site?**

For Rural Village zones the plan is to preserve the residential character rural villages while allowing limited non-residential use. Parks are a permitted use of this zone. The Rural Reserve district plan is to allow minimal development of rural areas that provides some jobs and housing opportunities while also promoting the preservation of open spaces. Parks are a permitted use of this zone. The purpose of the Agriculture-Natural Reserve Lands is reserve land for agriculture. Parks are permitted when they promote Skagit agriculture through tourism in this zone.

g. **If applicable, what is the current shoreline master program designation of the site?**

Not applicable

h. **Has any part of the site been classified as a critical area by the city or county? If so, specify.**

Not spplicable

i. **Approximately how many people would reside or work in the completed project?**

There will be no residences in the completed project. Project will be services by trail maintenance and sanitation crew on a schedule to be determined.

j. **Approximately how many people would the completed project displace?**

No individuals will be displaced

k. **Proposed measures to avoid or reduce displacement impacts, if any**:

Not applicable

L. **Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any**:

Recreational parks are permitted in both the Rural Village and Rural Reserve zones. Recreational parks are permitted within the Agriculture-Natural Reserve Lands zone when they promote agriculture in some way. Because the Centennial Trail will wind through agriculture lands it provides the opportunity for the Central Skagit and Burlington communities to interact with agriculture in their County.

m. **Proposed measures to ensure the proposal is compatible with nearby agricultural and forest lands of long-term commercial significance, if any:**

Restroom facilities at the head of the trail, trash and dog waste bag dispensers throughout the trail will be installed to minimize trash and pet waste

9. Housing

a. **Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.**

No housing units would be provided.

b. **Approximately how many units, if any, would be eliminated? Indicate whether high,**
middle, or low-income housing.

No housing units would be eliminated

c. **Proposed measures to reduce or control housing impacts, if any**:

Trail will intersect with residential parcels. Signage on the trail will mitigate driveway blockages and hedge fencing will eliminate trespassing.

10. Aesthetics

a. **What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?**

The bridge over the East Fork Nookachamp should not be any higher than the already existing State Road 9. Portable restroom facilities are proposed at major trail access points, with a height of 86.5 inches.

b. **What views in the immediate vicinity would be altered or obstructed?**
None.

b. **Proposed measures to reduce or control aesthetic impacts, if any:**
Aesthetic impacts as a result of grading or other construction processes along the trail will be mitigated by replanting of vegetation.

11. Light and Glare

a. **What type of light or glare will the proposal produce? What time of day would it mainly occur?**
Only during construction during daytime hours. Lighting may be installed at major access points for safety improvement later.

b. **Could light or glare from the finished project be a safety hazard or interfere with views?**
No.

c. **What existing off-site sources of light or glare may affect your proposal?**
None.

d. **Proposed measures to reduce or control light and glare impacts, if any:**
None.

12. Recreation

a. **What designated and informal recreational opportunities are in the immediate vicinity?**
Mud Lake conservation area and Clear Lake Beach.

b. **Would the proposed project displace any existing recreational uses? If so, describe.**
No.

c. **Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:**
The project will increase pedestrian and non-motorized recreation. No motorized vehicles will be permitted on the trail. The impact of pet waste on the trail can be mitigated by providing a trash container and complimentary bags at the trailhead.

13. Historic and cultural preservation

a. **Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers located on or near the site? If so, specifically describe.**

No.

b. **Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.**

According to the Northwest Portland Area Indian Health Board (NPAIHB), there is roughly 84 acres of Native American Reservation land in the encompassing area. The Upper Skagit Indian Reservation consists of three parcels located within western Skagit County, near Sedro-Woolley and Burlington. No known material evidence or artifacts have been documented in any of the three regions.

c. **Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.**

None

d. **Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.**

Disturbances to vegetation and soils will be incurred through the completion of the Judy Reservoir transmission Pipeline Phase 2 project. Centennial Trail Extension will remediate these disturbances.

14. Transportation

a. **Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any**.

The trail will be constructed along WA State Route 9. The trail requires a pedestrian crossing across State Route 9 at the Nookachamps Creek crossing near Babcock Road.

b. **Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?**

WA SR-9 is served by Skagit Transit route 305. The nearest transit stop is approximately 1 mile away.

c. **How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate?**

Need more information.

d. **Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).**

None.

e. **Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe**.

None.

f. **How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and non passenger vehicles). What data or transportation models were used to make these estimates?**

None.

g. **Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe**.

The proposal may interfere with the movement of agricultural products on roads and streets in the area during construction phase.

h. **Proposed measures to reduce or control transportation impacts, if any:**

Working with local agriculture businesses will help the contractor and lead agency to develop a construction plan suitable for all parties.

15. Public Services

a. **Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe**.

Not likely.

b. **Proposed measures to reduce or control direct impacts on public services, if any**.

Not Applicable

16. Utilities

a. **Underline utilities currently available at the site:**
electricity, natural gas, <u>water</u>, refuse service, telephone, sanitary sewer, septic system, other _____

Water, sewer, communication, electricity, refuse service are utilities available at the proposed trail head located at 14464 WA-9, Mt Vernon, WA 98273

b. **Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.**

No permanent utility fixtures are proposed at this time. Refuse containers, to be picked up by waste management services, and portable toilets, to be serviced by a private contractor, are planned to provide basic sanitation.

C. Signature

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature:_____

Name of signee ___Jennifer Shore, Centennial Trail Extension Student Team Lead___

Position and Agency/Organization _Western Washington University_____

Date Submitted: _____October 15th 2018_____

Public Presentation Flyer

Prepared by Sam Kaiser

SKAGIT COUNTY CENTENNIAL TRAIL EXTENSION
ENVIRONMENTAL IMPACT ASSESSMENT PRESENTATION

- A team of WWU students will present their environmental impact analysis of Skagit County Park and Recreation's Centennial Trail Extension project.
- They will discuss the environmental impacts and mitigation strategies associated with the proposed project, alternative and no action scenarios.

WEDNESDAY DECEMBER 5TH @ 10AM

WESTERN WASHINGTON UNIVERSITY

WWU ES BUILDING, ROOM 534

HUXLEY COLLEGE OF THE ENVIRONMENT