

# Chehalis Basin Strategy

Draft Programmatic EIS



Reducing Flood Damage and  
Restoring Aquatic Species Habitat



September 29, 2016

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STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

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September 29, 2016

Dear Interested Parties, Jurisdictions, Tribes and Agencies:

Enclosed for your review and comment is the Draft Programmatic Environmental Impact Statement (EIS) for the Chehalis Basin Strategy, prepared by the Washington State Department of Ecology (Ecology) under the State Environmental Policy Act (SEPA). The Chehalis Basin Strategy is being evaluated at the request of the Governor's Chehalis Basin Work Group (Work Group), tasked by the Governor to develop recommendations for near-term and long-term actions to reduce flood damage and restore aquatic species habitat.

The Draft EIS evaluates a series of actions to address these key flooding and habitat challenges in the Chehalis Basin. This environmental review provides a formal process to evaluate how a suite of actions works together to reduce flood threats and improve aquatic habitat and other alternative actions. The process helps decision makers and the public understand the effectiveness of specific actions and how they would affect people and the environment.

The Draft EIS includes four action alternatives, which combine flood damage reduction actions and aquatic species habitat actions. All action alternatives include the same Local-scale Flood Damage Reduction actions (i.e., Floodproofing, Local Projects, Land Use Management, and Flood Warning System Improvements) and Aquatic Species Habitat actions (both low and high scenarios). The action alternatives differ by which Large-scale Flood Damage Reduction actions (i.e., Flood Retention Facility, Airport Levee Improvements, I-5 Projects, Aberdeen/Hoquiam North Shore Levee, and Restorative Flood Protection) are included.

In addition to the four action alternatives, a No Action Alternative is included, which is intended to represent the most likely future expected in the absence of implementing an action alternative. Under the No Action Alternative, actions to reduce flood damage and improve aquatic habitat conditions would continue to a lesser extent than in the action alternatives, and in a piecemeal fashion.

Public comments are requested September 29 through October 31, 2016. All comments on the Draft EIS received during the public comment period will be addressed in the Final EIS, planned for issuance in 2017.

Comments on the Draft EIS can be submitted in several ways:

**Online**

[http://chehalisbasinstrategy.com/  
comment-form/](http://chehalisbasinstrategy.com/comment-form/)

**In person**

October 18, 2016, 6:00 p.m.  
Veterans Memorial Museum  
100 S.W. Veterans Way  
Chehalis, Washington 98532

**By mail**

Chehalis Basin Strategy EIS  
c/o Anchor QEA  
720 Olive Way, Suite 1900  
Seattle, WA 98101

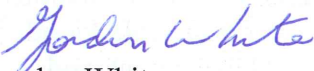
October 27, 2016, 6:00 p.m.  
Montesano City Hall  
112 N. Main Street  
Montesano, Washington 98563

For further information regarding this Draft Programmatic EIS, please contact:

Chrissy Bailey  
EIS Project Manager  
[chr461@ecy.wa.gov](mailto:chr461@ecy.wa.gov)  
(360) 407-6781

Thank you for your interest in the Chehalis Basin Strategy.

Sincerely,



Gordon White  
Program Manager  
Shorelands and Environmental Assistance Program  
Washington State Department of Ecology

# FACT SHEET

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## Project Title

Chehalis Basin Strategy: Reducing Flood Damage and Restoring Aquatic Species Habitat

## Brief Description of Proposal

The Washington State Department of Ecology (Ecology) prepared this Draft Programmatic Environmental Impact Statement (EIS) to evaluate the Chehalis Basin Strategy alternatives designed to reduce flood damage and restore aquatic species habitat in the Chehalis Basin in Southwestern Washington. This Draft EIS was prepared in compliance with the Washington State Environmental Policy Act (SEPA), and Ecology is the lead agency.

The SEPA nonproject action is the adoption of a program called the Chehalis Basin Strategy. The strategy is a program of integrated, long-term, flood damage reduction and aquatic species habitat restoration actions. The EIS evaluates how combinations of actions could function together to meet the dual purpose and need of reducing flood damage and restoring aquatic species habitat. The EIS includes four action alternatives, which are characterized by different combinations of flood damage reduction and aquatic species habitat restoration action elements. Each action alternative includes one or a combination of Large-scale Flood Damage Reduction Actions (i.e., Flood Retention Facility, Airport Levee Improvements, I-5 Projects, Aberdeen/Hoquiam North Shore Levee, and Restorative Flood Protection). All action alternatives include the same Local-scale Flood Damage Reduction Actions (i.e., Floodproofing, Local Projects, Land Use Management, and Flood Warning System Improvements) and Aquatic Species Habitat Actions (both low and high scenarios). In addition, a No Action Alternative is included, which is intended to represent the most likely future expected in the absence of implementing an action alternative. Under the No Action Alternative, actions to reduce flood damage and improve aquatic habitat conditions would continue to a lesser extent than in the action alternatives, and in a piecemeal fashion.

## Contact

Gordon White, SEPA Responsible Official  
Program Manager, Shorelands and Environmental Assistance Program  
Washington State Department of Ecology  
300 Desmond Drive SE  
Lacey, Washington 98503  
(360) 407-6977  
gordon.white@ecy.wa.gov

## Permits, Licenses, and Approvals Required

Numerous regulations, plans, laws, and treaty obligations guided or influenced the development of this EIS. Because this is a programmatic EIS for a nonproject action, and the specific nature of projects that would be proposed under the Chehalis Basin Strategy is not yet known, it is not possible to present a complete list of permits, licenses, and approvals that could be required for the components of the strategy.

Implementation of the alternatives in the EIS would require compliance with regulations and plans at federal, state, and local levels. To implement the action alternatives or their action elements, the lead agency and project proponent would need to comply with applicable laws, regulations, and Executive Orders. Examples of those commonly associated with flood damage reduction and aquatic species habitat restoration actions, which may apply, are as follows:

- State Environmental Policy Act
- National Environmental Policy Act
- Endangered Species Act
- National Historic Preservation Act
- Magnuson-Stevens Fishery Conservation and Management Act
- Section 10, Rivers and Harbors Act
- Sections 401, 402, and 404, Clean Water Act
- Washington Coastal Zone Management Act
- Fish and Wildlife Coordination Act
- National Forest Management Act
- Federal Emergency Management Agency Guidelines for Flood Risk Analysis and Mapping
- Executive Order 11988: Floodplain Management
- Washington State Hydraulic Code
- Washington State Shoreline Management Act
- Governor's Executive Order 05-05: Archeological and Cultural Resources
- Washington Forest Practices Act
- Water Right Permit
- Reservoir Permit
- Dam Safety Construction Permit
- Sand and Gravel General Permit
- Construction Stormwater General Permit
- Land Clearing Burning Permit
- Grading Permit
- Building Permit

- Aquatic Use Authorization
- Railroad right-of-way use/permits
- Local floodplain management ordinances
- Local critical areas codes, zoning ordinances, and other land use requirements

## Authors and Contributors

A list of the individuals from Ecology, other state agencies, tribes, and consulting firms who participated in the EIS evaluation is provided in Chapter 8.

## Date of Issue

September 29, 2016

## Public Comment on the Draft Programmatic Environmental Impact Statement

A public comment period is being conducted from September 29 through October 31, 2016, in accordance with Washington Administrative Code (WAC) 197-11-455. All comments on the Draft EIS received during the public comment period will be addressed in the Final EIS, planned for issuance in 2017. Comments on the Draft EIS can be submitted in the following ways:

<b>Online</b>	<a href="http://chehalisbasinstrategy.com">http://chehalisbasinstrategy.com</a>	<b>In person</b>	October 18, 2016, 6:00 p.m. Veterans Memorial Museum 100 S.W. Veterans Way Chehalis, Washington 98532
<b>By mail</b>	Chehalis Basin Strategy EIS c/o Anchor QEA 720 Olive Way, Suite 1900 Seattle, Washington 98101		October 27, 2016, 6:00 p.m. Montesano City Hall 112 N. Main Street Montesano, Washington 98563

## Timing of Additional Environmental Review

The analysis in this EIS is programmatic in nature and has been prepared to disclose probable significant adverse impacts associated with the Chehalis Basin Strategy. Any individual actions that are carried forward will require additional, more detailed, project-level environmental review prior to implementation. These projects and actions could require SEPA compliance, National Environmental Policy Act compliance, or both, depending on the implementing agency, source of funding, and/or types of permits required. If a decision is made to implement the Chehalis Basin Strategy, some projects and

actions could be advanced and ready for additional environmental review in 2017; others could require several years before they would be advanced for implementation.

## Document Availability

The Draft EIS for the Chehalis Basin Strategy is available online at: <http://www.ecy.wa.gov/programs/sea/sepa/chehalisbasin.html>. Print copies or CDs of the document may be obtained by written request to the EIS Project Manager, Chrissy Bailey, at [chrissy.bailey@ecy.wa.gov](mailto:chrissy.bailey@ecy.wa.gov), or by calling (360) 407-6781. Persons with hearing loss can call 711 for Washington Relay Service, including TTY service. Persons with a disability can call 1-866-833-6341 to access a Communications Assistant with Washington's Speech-to-Speech service.

La Cuenca de Chehalis tiene problemas con inundaciones y la degradación del hábitat acuático. El Departamento de Ecología del Estado de Washington invita al público a comentar sobre las acciones que se quiere usar para corregir los problemas. El periodo de comentario público es del 29 de septiembre hasta el 31 de octubre, 2016. Para obtener más información, favor de comunicarse con Gretchen Newman al (360) 407-6097 o por correo electrónico a [preguntas@ecy.wa.gov](mailto:preguntas@ecy.wa.gov).

## Location of Background Materials

During the past several years, Ecology has worked in coordination with local governments, other agencies, and community leaders to study the Chehalis Basin. The agency has collaborated with residents, stakeholders, and other agencies to identify potential solutions that will reduce flood damage and restore aquatic species habitat. The EIS builds off this completed work. Background materials used in the preparation of the Draft EIS are available online through the following links:

- <http://chehalisbasinstrategy.com/publications/>
- <http://www.ecy.wa.gov/programs/sea/sepa/chehalisbasin.html>
- <http://ruckelshauscenter.wsu.edu/projects/current-projects/chehalisfloodingfish/>



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# ACRONYMS AND ABBREVIATIONS LIST

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µg/L                    microgram per liter

## **A**

ASRP                    *Aquatic Species Restoration Plan*

## **B**

BFE                    Base Flood Elevation

BIA                    U.S. Bureau of Indian Affairs

BP                    before present

BPA                    Bonneville Power Association

## **C**

CAA                    Clean Air Act

CFR                    Code of Federal Regulations

CFRP                    Chehalis Fisheries Restoration Program

cfs                    cubic feet per second

CFU                    colony-forming unit

Chehalis Tribe        Confederated Tribes of the Chehalis Reservation

CIG                    Climate Impacts Group

CO<sub>2</sub>                    carbon dioxide

CO<sub>2</sub>e                    carbon dioxide equivalent

CREP                    Conservation Reserve Enhancement Program

CRS                    Community Rating System

CSZ                    Cascadia Subduction Zone

CVISN                    Commercial Vehicle Information Systems and Networks

CWA                    Clean Water Act

CZMA                    Coastal Zone Management Act

*Acronyms and Abbreviations List*

**D**

DAHP	Washington State Department of Archaeology and Historic Preservation
dB	decibel
dBA	A-weighted decibel
DNR	Washington Department of Natural Resources
DO	dissolved oxygen
DPS	Distinct Population Segment

**E**

EAP	Emergency Action Plan
Ecology	Washington State Department of Ecology
EDNA	Environmental Designation for Noise Abatement
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
EMS	emergency management services
ESA	Endangered Species Act
ESU	Evolutionary Significant Unit

**F**

FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FFFPP	Family Forest Fish Passage Program
FIRM	Flood Insurance Rate Map
FPA	Washington Forest Practices Act
FR	Forest Road
FRFA	flood retention flow augmentation
FRO	flood retention only

**G**

GHG	greenhouse gas
GMA	Growth Management Act



**H**

Hg	mercury
HCA	habitat concentration area
HCP	Habitat Conservation Plan

**I**

I-5	Interstate 5
ISSSSP	Interagency Special Status Sensitive Species Program

**J**

**K**

km	kilometer
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**L**

L <sub>dn</sub>	day-night average sound level
L <sub>eq</sub>	equivalent sound level
LiDAR	Light Detection and Ranging
LWM	large woody material

**M**

m	meter
MeHg	methylmercury
mg/L	milligram per liter
MT	metric ton
MWCI	Marine Water Conditions Index

**N**

NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NMFS	National Marine Fisheries Service
NTU	Nephelometric Turbidity Unit
NWI	National Wetlands Inventory

*Acronyms and Abbreviations List*

NWS National Weather Service

**O**

OFM Office of Financial Management

**P**

PHS Priority Habitats and Species

PSAP Puget Sound and Pacific Railroad

PSE Puget Sound Energy

PUD public utility district

**Q**

**R**

RCW Revised Code of Washington

Revolving Fund Washington State Water Pollution Control Revolving Fund Program

RM river mile

**S**

Section 319 Clean Water Act Section 319 Nonpoint Source Grant Program

SEPA State Environmental Policy Act

SIP State Implementation Plan

SMP Shoreline Master Program

SR State Route

SRFB Salmon Recovery Funding Board

**T**

TMDL total maximum daily load

TSS total suspended solids

**U**

UGA Urban Growth Area

US U.S. Route

USACE U.S. Army Corps of Engineers

USEPA U.S. Environmental Protection Agency

USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
<b>V</b>	
<b>W</b>	
WAC	Washington Administrative Code
WDFW	Washington Department of Fish and Wildlife
Work Group	Governor’s Chehalis Basin Work Group
WQI	water quality index
WRIA	Water Resource Inventory Area
WSAPM	Washington Statewide Archaeological Predictive Model
WSDOT	Washington State Department of Transportation
WUA	Weighted Usable Area
WWTP	wastewater treatment plant