

Chapter 6  
Alternatives  
to the Habitat  
Conservation Plan



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# Chapter 6. Alternatives to the Habitat Conservation Plan

As part of the analysis of actions that might avoid take of sensitive species and their habitat, Washington State Department of Natural Resources (Washington DNR) considered three alternatives:

**Alternative 1:** No Action

**Alternative 2:** Implementation of an Aquatic Lands Habitat Conservation Plan for all state-owned aquatic lands (the proposed action)

**Alternative 3:** Implementation of an Aquatic Lands Habitat Conservation Plan for the saltwater-nearshore and saltwater-offshore ecosystems of the Puget Trough and Northwest Coast

What follows is a summary of these three alternatives; the complete discussion is presented in the environmental impact statement that accompanies this habitat conservation plan. The three alternatives are compared in Table 6.7 at the end of this chapter.

## 6.1 Alternative 1: No action

Under alternative 1, Washington DNR would not develop a habitat conservation plan and would continue to manage state-owned aquatic lands based solely on current agency practices, policies, laws, and rules (Table 6.1). The department would continue to require compliance with all local, state, and federal permitting for both construction and operation of activities on state-owned aquatic lands (Table 6.2).

**Table 6.1** Summary of statutory authority specific to state-owned aquatic lands.

Chapter	Title	Content
79.105 RCW	Aquatic Lands in General	Sets basic definitions and authorities for managing state-owned aquatic lands. Gives Washington DNR authority to sell, lease, and exchange certain aquatic lands, as well as authority to sell valuable materials (e.g. sediment and geoducks) from those aquatic lands.
79.110 RCW	Aquatic Lands — Easements and Rights of Way	Sets Washington DNR’s authority to grant easements and rights-of-way for specific activities on and over the state’s aquatic lands

<b>Chapter</b>	<b>Title</b>	<b>Content</b>
79.115 RCW	Aquatic Lands — Harbor Areas	Stipulates that harbor areas are to be established by the Board. Harbor areas are to be reserved for navigation and commerce and for facilities that promote navigation and commerce (i.e. docks and wharves).
79.120 RCW	Aquatic Lands — Waterways and Streets	Stipulates that Washington DNR must plat waterways at the same time it establishes harbor areas. Waterways are generally reserved from sale or lease so they can remain free as public highways for watercraft.
79.125 RCW	Aquatic Lands — Tidelands and Shorelands	Defines tidelands and shorelands and sets Washington DNR's authority to lease these lands for a variety of uses. Also stipulates that Washington DNR may exchange these lands if such an exchange is in the public interest and of benefit to the state.
79.130 RCW	Aquatic Lands — Beds of Navigable Waters	Sets Washington DNR's authority to lease (for up to 55 years) beds of navigable waters that lie waterward of the extreme low tide mark. Washington DNR may not, however, lease or grant authority for anyone to use aquatic lands that lie waterward of outer harbor lines.
79.135 RCW	Aquatic Lands — Oysters, Geoducks, Shellfish, and Other Aquaculture Uses	In coordination with the Washington Department of Fish and Wildlife and Washington Department of Health, sets Washington DNR's authority to lease lands for shellfish harvesting and aquaculture. The Washington Department of Fish and Wildlife regulates commercial shellfish growers and their harvesting, while the Washington Department of Health monitors beaches and shellfish tracts for pollution and other issues that affect human health. Also confirms Washington DNR's authority to sell geoducks as valuable materials and enter into agreements with the purchasers on the terms and conditions deemed necessary.
79.100 RCW	Derelict Vessels	Gives Washington DNR and other public authorities certain powers to abate hazards posed by derelict vessels.
332-30 WAC	Aquatic Land Management	Defines rules for Washington DNR's land management

Note: RCW = *Revised Code of Washington*; WAC = *Washington Administrative Code*

**Table 6.2** Regulatory authority for state-owned aquatic lands.

<b>Entity</b>	<b>Permit/Approval</b>
Federal Energy Regulatory Commission (FERC)	Licensing for interstate transmission of electricity, natural gas, and oil; construction and operation of hydroelectric projects
Local city or county planning office	Shoreline substantial development permit, shoreline conditional use permit, shoreline variance permit
	Floodplain development permit
Local diking districts	Dike construction
NOAA Fisheries	Section 7 (Endangered Species Act) and the Marine Mammal Protection Act
US Coast Guard	Oil Pollution Act (OPA)
	Federal navigational servitude
U.S. Army Corps of Engineers	Construction in navigable waters (Section 404 of the Clean Water Act, Section 10 of the Rivers and Harbors Act)
U.S. Army Corps of Engineers (continued)	Federal navigational servitude
U.S. Environmental Protection Agency (EPA)	Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) Consent Decree
	Ocean Dumping Act
U.S. Fish and Wildlife Service	Section 7 (Endangered Species Act)
U.S. Food and Drug Administration	Federal Food, Drug, and Cosmetic Act (seafood and fish feeds)
Washington State Department of Ecology	Water Pollution Act and National Pollutant Discharge Elimination System (NPDES)
	Coastal Zone Management Act (CZMA) Consistency Determination
	Water Quality Certification (Section 401 of the Clean Water Act)

Entity	Permit/Approval
	Oil and Hazardous Substance Spill and Prevention and Response
	Pre-assessment Screening and Oil Spill Compensations Schedule Regulations
	Washington State Oil Spill Response Plan
	Sediment Management Standards
	Model Toxics Control Act (MTCA) Policy Advisory Committee
Washington Department of Fish and Wildlife	Hydraulic Project Approval (HPA)
	Commercial shellfish licenses
	Aquatic farm registrations
Washington Department of Health	Shellfish Closure Zone establishment

Under alternative 1 (no action) no conservation program would be implemented to ensure that either current or future authorized activities comply with the Endangered Species Act (ESA). There would be no statewide, long-term consistency in the application of conservation measures for species or habitat, nor would timeframes, objectives, strategies, or goals be developed for species or habitat conservation.

Washington DNR would manage requests for uses of state-owned aquatic lands on a site-by-site basis. Some conservation measures might be implemented in a use authorization when the authorization is negotiated, but this would be at the discretion of land managers and district staff.

Under this alternative, use authorizations for all authorized activities occurring on state-owned aquatic lands would be based on Washington DNR's current management practices. Washington DNR would:

- Determine whether the general public will be excluded from the area by physical encumbrances, use encumbrances, or changes in aquatic land management.
- Determine who has preference rights to lease the land.
- Determine if the proposal is statutorily allowable, environmentally acceptable, and in the best interests of the state.
- Determine whether all pertinent regulatory permits have been obtained.

Under alternative 1 (no action), when deciding whether or not leasing a site is in the public interest, Washington DNR would not consider landscape-scale factors, such as species distribution, habitat distribution, the use of the area by forage fish to spawn, the cumulative

impacts of locating multiple authorizations in an area or ecosystem, or the effects of the use on sediment transport or aquatic vegetation. As funding allows, Washington DNR would continue to implement existing programs, such as identifying and managing aquatic reserves, taking part in various restoration projects, and removing derelict vessels.

Under alternative 1 (no action), Washington DNR would generally rely on regulatory requirements and intermittent review by scientific stewardship staff to provide environmental protection. If the proponent has obtained the required regulatory permits, Washington DNR would generally rely on these permits when deciding whether a proposed use should be sited in a particular location if consistent with Washington DNR's existing rules and policies. Under alternative 1 (no action), however, there could be circumstances in which Washington DNR would decide leasing is not appropriate for reasons besides those spelled out in regulation. In addition, under alternative 1, Washington DNR might not consistently incorporate prescribed best management practices into lease agreements.

Under alternative 1 (no action), inspection of any individual leasehold by Washington DNR would likely be linked either to a lease renewal (approximately once every 12 to 30 years), or to a revaluation of rental rates (approximately once every 4 years). Aside from these revenue-related visits, Washington DNR would visit individual leaseholds sporadically, as staff time allows. Washington DNR would verify the general condition of improvements (structures) on site, but would not necessarily inspect those improvements for the purpose of assessing their potential effects on species or habitats. Under alternative 1 (no action), Washington DNR would not conduct comprehensive monitoring of compliance or effectiveness or practice adaptive management. Changes to existing structures or operations would be driven by regulatory requirements, if any, or by business decisions on the part of the leaseholder.

## 6.2 Alternative 2: Statewide habitat conservation plan for all state-owned aquatic lands

Under alternative 2, Washington DNR would develop and implement a habitat conservation plan and obtain an incidental take permit that encompasses all state-owned aquatic lands in each of the defined ecoregions and ecosystems (Table 6.3). Alternative 2 is the preferred alternative of Washington DNR.

As with alternative 1 (no action), under this second alternative, Washington DNR would continue to manage state-owned aquatic lands based on current agency practices, policies, laws, and rules (Table 6.1), as well as require compliance with all local, state, and federal permits for both construction and operation prior to authorizing activities on state-owned aquatic lands (Table 6.2).

Under alternative 2, however, a specific conservation program would be implemented through the habitat conservation plan, which would ensure compliance with the Endangered Species Act. Washington DNR would conduct an evaluation of the effects that activities covered under the habitat conservation plan have on covered species and their habitats. Washington DNR would also consider direct and indirect effects of the covered activities when making all future leasing decisions. To address adverse effects (Chapter 5, Section 4), Washington DNR would adopt specific avoidance and minimization measures, standards, and best management practices, as well as compensation actions (to which NOAA Fisheries and the U.S. Fish and Wildlife Service have

agreed in the habitat conservation plan). This agreement would remain in effect for a term of 50 years, providing consistency in the management of impacts from covered activities throughout this term.

## 6.2.1 Area covered by the habitat conservation plan

Implementation of alternative 2 would include the entirety of the lands managed by Washington DNR (Chapter 1, Section 1.4, Land and Habitat Covered). Table 6.3 summarizes the distribution of the land covered by ecoregion and ecosystem.

**Table 6.3** Approximate distribution of state-owned aquatic lands by Natural Heritage Program ecoregion and defined ecosystem.

Ecoregion	Ecosystem	Acres	Portion of Total State-owned Land
Blue Mountains	Lacustrine	356	< 1%
	Riverine	1,333	< 1%
	Sub-total	1,689	< 1%
Canadian Rockies	Lacustrine	18,801	< 1%
	Riverine	0	0%
	Sub-total	18,801	< 1%
Columbia Plateau	Lacustrine	99,772	4%
	Riverine	4,832	< 1%
	Sub-total	104,604	4%
East Cascades	Lacustrine	55,240	2%
	Riverine	2,045	< 1%
	Sub-total	57,285	2%
North Cascades	Lacustrine	5,894	< 1%
	Riverine	5,040	< 1%
	Sub-total	10,934	< 1%
Northwest Coast	Lacustrine	20,088	< 1%
	Saltwater nearshore	504,393	19%
	Saltwater offshore	256,928	10%
	Riverine	14,403	< 1%
	Sub-total	795,812	30%
Okanogan	Lacustrine	40,228	2%
	Riverine	4,554	< 1%
	Sub-total	44,781	2%
Puget Trough	Lacustrine	49,766	2%

Ecoregion	Ecosystem	Acres	Portion of Total State-owned Land
	Saltwater nearshore	869,700	33%
	Saltwater offshore	672,460	25%
	Riverine	25,713	1%
	Sub-total	1,617,638	61%
West Cascades	Lacustrine	10,027	< 1%
	Riverine	4,601	< 1%
	Sub-total	14,628	< 1%
<b>Total</b>		<b>2,666,171</b>	

## 6.2.2 Covered species

The 29 species of animals included as covered species under alternative 2 are summarized in Table 6.4. Detailed descriptions of species' life histories and habitats, along with potential effects on species as a result of the covered activities, are in Chapter 4: Factors Affecting Covered Species.

**Table 6.4** Covered species for alternative 2.

Species	Listing Status	Natural Heritage Rank <sup>1</sup>
<b>Amphibians and Turtles</b>		
Columbia spotted frog ( <i>Rana luteiventris</i> )	State candidate	G4, S4
Northern leopard frog ( <i>Rana pipiens</i> )	Federal concern; state endangered	G5, S1
Oregon spotted frog ( <i>Rana pretiosa</i> )	Federal candidate; state endangered	G2, S1
Western toad ( <i>Bufo boreas</i> )	Federal concern; state candidate	G4, S3
Western pond turtle ( <i>Actinemys marmorata</i> )	Federal concern; state endangered	G3G4, S1

<sup>1</sup> Key to Natural Heritage program ranks:

G = Global	1 = Critically imperiled	GNR = not ranked globally
S = State	2 = Imperiled	SNR = not state ranked.
B = Breeding populations	3 = Rare locally or with a restricted range	
N = Non-breeding populations	4 = Apparently secure	
	5 = Demonstrably secure.	

Species	Listing Status	Natural Heritage Rank <sup>1</sup>
<b>Birds</b>		
<i>Black tern</i> ( <i>Chlidonias niger</i> )	State monitored	G4, S4B
Common loon ( <i>Gavia immer</i> )	State sensitive	G5, S2B, S4N
Harlequin duck ( <i>Histrionicus histrionicus</i> )	Not listed	G4, S2B, S3N
Marbled murrelet ( <i>Brachyramphus marmoratus</i> )	Federal threatened; state threatened	G3G4, S2
Western snowy plover ( <i>Charadrius alexandrinus nivosus</i> )	Federal threatened; state endangered	G3, S1
<b>Fish – Forage Fish</b>		
Eulachon/ Pacific smelt ( <i>Thaleichthys pacificus</i> )	Federal threatened; state candidate	G5, S4
Pacific herring ( <i>Clupea pallasii</i> )	Federal concern; state candidate	GNR, SNR
Pacific sand lance ( <i>Ammodytes hexapterus</i> )	Not listed	None
Surf smelt ( <i>Hypomesus pretiosus</i> )	Not listed	G5, SNR
<b>Fish - Rockfish</b>		
Bocaccio ( <i>Sebastes paucispinis</i> )	Federal endangered; state candidate	G4, SNR
Canary rockfish ( <i>Sebastes pinniger</i> )	Federal threatened; state candidate	GNR, SNR
Yelloweye rockfish ( <i>Sebastes ruberrimus</i> )	Federal threatened; state candidate	GNR, SNR
<b>Salmonids</b>		
Bull trout ( <i>Salvelinus confluentus</i> )	Federal threatened (Columbia River, coastal Puget Sound); state candidate	G4, S3
Chinook salmon ( <i>Oncorhynchus tshawytscha</i> )	Federal endangered (Upper Columbia spring run); federal threatened (Lower Columbia River, Puget Sound, Snake River fall run, Snake River spring/summer runs); state candidate	G5, S3S4
Chum salmon ( <i>Oncorhynchus keta</i> )	Federal threatened (Lower Columbia River, Hood	G5, S3

<b>Species</b>	<b>Listing Status</b>	<b>Natural Heritage Rank<sup>1</sup></b>
	Canal); state candidate	
Coastal cutthroat trout ( <i>Oncorhynchus clarki clarki</i> )	Federal species of concern	G4, SNR
Coho salmon ( <i>Oncorhynchus kisutch</i> )	Federal threatened (Lower Columbia River); federal species of concern (Puget Sound)	G4, S3
Pink salmon ( <i>Oncorhynchus gorbuscha</i> )	Not listed	G5, S3
Sockeye/kokanee salmon ( <i>Oncorhynchus nerka</i> )	Federal threatened (Lake Ozette); federal endangered (Snake River); state candidate (sockeye); not listed (kokanee)	G5, S2S3
Steelhead trout ( <i>Oncorhynchus mykiss</i> )	Federal threatened (Snake River basin; Upper Columbia, Middle Columbia, and Lower Columbia River runs; Puget Sound); state candidate	G5, S5
<b>Sturgeon</b>		
Green sturgeon ( <i>Acipenser medirostris</i> )	Federal threatened (southern distinct population segment (DPS))	G3, S2N
White sturgeon ( <i>Acipenser transmontanus</i> )	Not listed	G4, S3B, S4N
<b>Lamprey</b>		
Pacific lamprey ( <i>Lampetra tridentate</i> )	Federal species of concern; state monitor	G4, S1
<b>Marine Mammal</b>		
Southern resident killer whale (orca) ( <i>Orcinus orca</i> )	Federal endangered; state endangered	G4G5, SNR

## 6.2.3 Covered activities

Three activity groups—log booming and storage, aquaculture, and overwater structures (boat ramps, launches, hoists, docks and wharves, floating homes, rafts and floats, marinas, mooring

buoys, nearshore buildings, shipyards, and terminals)—will be covered under alternative 2. These activities are described in detail in Chapter 3: Description of Activities.

## 6.2.4 Conservation strategies

Under alternative 2, Washington DNR would implement the standards, programmatic strategies, and activity-specific conservation measures described in Chapter 5, Section 2 (“Operating Conservation Program”).

Site-specific implementation of the conservation program would be determined based on the type of authorized activity, the species predicted to be present, and the presence of important habitats (for example, submerged aquatic vegetation and forage fish spawning areas). Both new and existing covered activities would be required to implement conservation program measures under the terms and conditions of the lease or grant issued.

## 6.2.5 Monitoring

The monitoring plan developed under alternative 2 would include all covered activities and occur in ecosystems. The plan would be composed of two specific components:

1. Monitoring for compliance with the terms and conditions of the habitat conservation plan and incidental take permit (*compliance monitoring*).
2. Monitoring the effectiveness of the applied conservation measures for improving habitat conditions (*effectiveness monitoring*).

A more detailed discussion of both elements may be found in Chapter 5, Section 4 (Monitoring).

## 6.2.6 Adaptive management

Alternative 2 would include an adaptive management component, providing a process whereby the conservation actions implemented under the habitat conservation plan would be evaluated for effectiveness and alternative strategies adopted as needed to meet the goals of the habitat conservation plan. Information gathered in the course of effectiveness monitoring would be used to guide the adaptive management process. This program would be a collaborative process involving regional, divisional, and habitat conservation plan staff; external scientific oversight and review; and input from other natural resource management agencies.

## 6.3 Alternative 3: Habitat conservation plan for saltwater-nearshore and saltwater-offshore ecosystems of the Puget Trough and Northwest Coast

Under alternative 3, Washington DNR would develop and implement a habitat conservation plan and obtain an incidental take permit that consider only those state-owned aquatic lands that are associated with the saltwater ecosystems of the Puget Trough and Northwest Coast ecoregions.

As with the preceding alternatives, under alternative 3, Washington DNR would continue to manage state-owned aquatic lands based on current agency practices, policies, laws, and rules (Table 6.1), as well as require compliance with all local, state, and federal permits for both construction and operation prior to authorizing activities on state-owned aquatic lands (Table 6.2).

Similar to alternative 2, the operating conservation program described in Chapter 5, Section 2 of this document would be implemented through the habitat conservation plan to ensure compliance with the Endangered Species Act. Washington DNR would conduct an evaluation of the effects that activities covered under the habitat conservation plan have on covered species and their habitats and consider direct and indirect effects when making all future leasing decisions for the covered activities. Specific avoidance and minimization measures, standards, and best management practices, as well as compensation actions (to which NOAA Fisheries and the U.S. Fish and Wildlife Service have agreed in the habitat conservation plan), would be adopted by Washington DNR to address adverse effects (see Chapter 5, Section 4). This agreement would remain in effect for a term of 50 years, providing consistency in the management of impacts from covered activities throughout this term.

### 6.3.1 Area covered

Alternative 3 would include only the saltwater habitat managed by Washington DNR. Table 6.5 summarizes the distribution (by ecoregion and ecosystem) of the land covered.

**Table 6.5** Approximate distribution of state-owned aquatic lands for alternative 3 by Natural Heritage Program ecoregion and defined ecosystem.

<b>Ecoregion</b>	<b>Functional Ecosystem</b>	<b>State-owned Aquatic Lands</b>	<b>Percent of State Ownership</b>
Northwest Coast	Saltwater nearshore	504,393	19%
	Saltwater offshore	256,928	10%
	<i>Total</i>	<i>761,321</i>	<i>29%</i>
Puget Trough	Saltwater nearshore	869,700	33%
	Saltwater offshore	672,460	25%
	<i>Total</i>	<i>1,542,159</i>	<i>58%</i>
<b>Total</b>		<b>2,303,480</b>	<b>86%</b>

## 6.3.2 Covered species

Under alternative 3, 23 species would be included in the habitat conservation plan (Table 6.6). Only those effects on species and habitats that occur in nearshore and offshore saltwater ecosystems would be considered. Detailed descriptions of the species, their habitats, and potential effects from the covered activities can be found in Chapter 4 (Factors Affecting Covered Species) of this document.

**Table 6.6** Covered species for alternative 3.

Species	Listing Status	Natural Heritage Rank <sup>2</sup>
<b>Birds</b>		
Common loon ( <i>Gavia immer</i> )	State sensitive	G5, S2B, S4N
Harlequin duck ( <i>Histrionicus histrionicus</i> )	Not listed	G4, S2B, S3N
Marbled murrelet ( <i>Brachyramphus marmoratus</i> )	Federal threatened; state threatened	G3G4, S2
Western snowy plover ( <i>Charadrius alexandrinus nivosus</i> )	Federal threatened; state endangered	G3, S1
<b>Fish – Forage Fish</b>		
Eulachon/ Pacific smelt ( <i>Thaleichthys pacificus</i> )	Federal threatened; state candidate	G5, S4
Pacific herring ( <i>Clupea pallasii</i> )	Federal concern; state candidate	GNR, SNR
Pacific sand lance ( <i>Ammodytes hexapterus</i> )	Not listed	None
Surf smelt ( <i>Hypomesus pretiosus</i> )	Not listed	G5, SNR
<b>Fish - Rockfish</b>		
Bocaccio ( <i>Sebastes paucispinis</i> )	Federal endangered; state candidate	G4, SNR

<sup>2</sup> Key to Natural Heritage program ranks:

G = Global	1 = Critically imperiled	GNR = not ranked globally
S = State	2 = Imperiled	SNR = not state ranked.
B = Breeding populations	3 = Rare locally or with a restricted range	
N = Non-breeding populations	4 = Apparently secure	
	5 = Demonstrably secure.	

Species	Listing Status	Natural Heritage Rank <sup>2</sup>
Canary rockfish ( <i>Sebastes pinniger</i> )	Federal threatened; state candidate	GNR, SNR
Yelloweye rockfish ( <i>Sebastes ruberrimus</i> )	Federal threatened; state candidate	GNR, SNR
<b>Salmonids</b>		
Bull trout ( <i>Salvelinus confluentus</i> )	Federal threatened (Columbia River, coastal Puget Sound); state candidate	G4, S3
Chinook salmon ( <i>Oncorhynchus tshawytscha</i> )	Federal endangered (Upper Columbia spring run); federal threatened (Lower Columbia River, Puget Sound, Snake River fall run, Snake River spring/summer runs); state candidate	G5, S3S4
Chum salmon ( <i>Oncorhynchus keta</i> )	Federal threatened (Lower Columbia River, Hood Canal); state candidate	G5, S3
Coastal cutthroat trout ( <i>Oncorhynchus clarki clarki</i> )	Federal species of concern	G4, SNR
Coho salmon ( <i>Oncorhynchus kisutch</i> )	Federal threatened (Lower Columbia River); federal species of concern (Puget Sound)	G4, S3
Pink salmon ( <i>Oncorhynchus gorbuscha</i> )	Not listed	G5, S3
Sockeye/kokanee salmon ( <i>Oncorhynchus nerka</i> )	Federal threatened (Lake Ozette); federal endangered (Snake River); state candidate (sockeye); not listed (kokanee)	G5, S2S3
Steelhead trout ( <i>Oncorhynchus mykiss</i> )	Federal threatened (Snake River basin; Upper Columbia, Middle Columbia, and Lower Columbia River runs; Puget Sound); state candidate	G5, S5
<b>Sturgeon</b>		

Species	Listing Status	Natural Heritage Rank <sup>2</sup>
Green sturgeon ( <i>Acipenser medirostris</i> )	Federal threatened (southern distinct population segment (DPS))	G3, S2N
White sturgeon ( <i>Acipenser transmontanus</i> )	Not listed	G4, S3B, S4N
<b>Lamprey</b>		
Pacific lamprey ( <i>Lampetra tridentate</i> )	Federal species of concern; state monitor	G4, S1
<b>Marine Mammal</b>		
Southern resident killer whale (orca) ( <i>Orcinus orca</i> )	Federal endangered; state endangered	G4G5, SNR

### 6.3.3 Covered activities

Three activity groups would be covered under alternative 3: log booming and storage, aquaculture, and overwater structures (boat ramps, launches, hoists, docks and wharves, floating homes, rafts and floats, marinas, mooring buoys, nearshore buildings, shipyards, and terminals). These activities are described in detail in Chapter 3: Description of Activities.

### 6.3.4 Conservation strategies

Under alternative 3, Washington DNR would implement the standards, programmatic strategies, and activity-specific conservation measures described in Chapter 5, Section 2 of the habitat conservation plan (operating conservation program). Site-specific implementation of the conservation program would be determined based on the type of authorized activity, the species predicted to be present, and the presence of important habitats (such as submerged aquatic vegetation and forage fish spawning areas). Both new and existing covered activities would be required to implement conservation program measures under the terms and conditions of the lease issued.

### 6.3.5 Monitoring

The monitoring plan developed under alternative 3 would include all covered activities within the nearshore and offshore ecosystems of the Puget Trough and Northwest Coast. The plan would be composed of two specific components:

1. Monitoring for compliance with the terms and conditions of the habitat conservation plan and incidental take permit (*compliance monitoring*).

2. Monitoring the effectiveness of the applied conservation measures for improving habitat conditions (*effectiveness monitoring*).

A more detailed discussion of both elements may be found in Chapter 5, Section 4 (Monitoring).

### **6.3.6 Adaptive management**

Alternative 3 would include an adaptive management component, providing a process whereby the conservation actions implemented under the habitat conservation plan would be evaluated for effectiveness and alternative strategies adopted as needed to meet the goals of the habitat conservation plan. Information gathered in the course of effectiveness monitoring would be used to guide the adaptive management process. This program would be a collaborative process involving regional, divisional, and habitat conservation plan staff; external scientific oversight and review; and input from other natural resource management agencies.

## 6.4 Comparison of alternatives

The three alternatives described in this chapter are briefly described and compared in Table 6.7.

**Table 6.7** Comparison of three alternatives.

	<b>1. No Action</b>	<b>2. Statewide Habitat Conservation Plan (HCP)</b>	<b>3. Habitat Conservation Plan (HCP) for Saltwater-Nearshore and Saltwater-Offshore Ecosystems of Puget Trough and NW Coast</b>
<b>Management Approach</b>	Washington DNR's current practices, policies, laws, and rules; compliance with all permitting no strategic long-term or landscape-scale conservation plan	Washington DNR's current practices, policies, laws, and rules; compliance with all permitting; habitat conservation plan for 50 years	Washington DNR's current practices, policies, laws, and rules; compliance with all permitting; habitat conservation plan for 50 years
<b>Area Covered</b>	Statewide: All state-owned aquatic lands managed by Washington DNR	Statewide: All state-owned aquatic lands managed by Washington DNR	All state-owned aquatic lands managed by Washington DNR in saltwater ecosystems of Puget Trough and Northwest Coast eco-regions
	2,666,171 acres	2,666,171 acres	2,303,480 acres
<b>Species Covered</b>	None	29 species	23 species
<b>Activities Covered</b>	None	3 activity groups: Aquaculture (shellfish), log booming and storage, overwater structures	3 activity groups: Aquaculture (shellfish), log booming and storage, overwater structures

	<b>1. No Action</b>	<b>2. Statewide Habitat Conservation Plan (HCP)</b>	<b>3. Habitat Conservation Plan (HCP) for Saltwater-Nearshore and Saltwater-Offshore Ecosystems of Puget Trough and NW Coast</b>
<b>Conservation Measures</b>	Existing measures are used at discretion of land managers and district staff	Activity-specific conservation measures and programmatic strategies implemented under HCP	Activity-specific conservation measures and programmatic strategies implemented under HCP
<b>Basis of Analysis</b>	Site by site	Species (life history, habitat use, distribution, potential threats, and limiting factors)	Species (life history, habitat use, distribution, potential threats, and limiting factors)
<b>Landscape-scale Factors</b>	Discretionary consideration	Sensitive areas, species presence, historical uses, land condition	Sensitive areas, species presence, historical uses, land condition
<b>Programmatic Measures</b>	Continue to implement existing programs	Continue to implement existing programs, plus commitment to new programmatic measures (protecting aquatic vegetation, protecting forage fish spawning habitat, aquatic landscape prioritization).	Continue to implement existing programs, plus commitment to new programmatic measures (protecting aquatic vegetation, protecting forage fish spawning habitat, aquatic landscape prioritization).
<b>Environmental Protections</b>	Rely on regulatory requirements and review by scientific stewardship staff	Specific avoidance, minimization, and compensation actions adopted by Washington DNR under HCP	Specific avoidance, minimization, and compensation actions adopted by Washington DNR under HCP
<b>Role of Other Regulations</b>	Normally rely on other agency regulations for establishing siting and construction standards if consistent with Washington DNR's existing rules and policies.	Washington DNR will implement its own siting and construction standards and not rely on regulators for standards	Washington DNR will implement its own siting and construction standards and not rely on regulators for standards
<b>Best Management Practices</b>	Not consistently incorporated	Consistently incorporated	Consistently incorporated

	<b>1. No Action</b>	<b>2. Statewide Habitat Conservation Plan (HCP)</b>	<b>3. Habitat Conservation Plan (HCP) for Saltwater-Nearshore and Saltwater-Offshore Ecosystems of Puget Trough and NW Coast</b>
<b>Structure Upgrades</b>	Based on regulatory requirements	Based on Washington DNR's standards	Based on Washington DNR's standards
<b>Inspections</b>	Linked to a lease renewal (every 12–30 years) or revaluation of rental rate; inspection typically not based on environmental factors	Annual inspections for environmental impacts	Annual inspections for environmental impacts
<b>Compliance or Effectiveness Monitoring</b>	None	Monitoring plan for all covered activities and ecosystems: Monitor compliance of the HCP terms and conditions; monitor effectiveness of conservation measures	Monitoring plan for all covered activities and ecosystems: Monitor compliance of the HCP terms and conditions; monitor effectiveness of conservation measures
<b>Adaptive Management</b>	None	Collaborative adaptive management with internal and external involvement; evaluate and adapt strategies to meet HCP goals and objectives	Collaborative adaptive management with internal and external involvement; evaluate and adapt strategies to meet HCP goals and objectives