

# *Priority Habitats and Species*



Fish and Wildlife Commission  
January 6, 2012  
Katie Knight, Land Use Policy Lead

# PHS Presentation Outline

---



## Part 1 – Overview

- PHS tools and resources
- Who uses PHS and why

## Part 2 – Implementation

- How PHS data is used
- Demonstration of *PHS on the Web*

# Priority Habitat and Species Program

Delivering information and tools

---



- Identify and define what species and habitats are priorities for conservation
- Map where these habitats and species are located
  - Guide how to protect these resources



# PHS Delivers Results for the Agency

---

- Implements agency **mission** by providing tools and resources to “**preserve, protect and perpetuate fish, wildlife and the ecosystems they depend on** while providing sustainable fish and wildlife recreational and commercial opportunities.”
- Key Strategy in agency **Strategic Plan**
  - **Protect fish, wildlife and their habitats by providing the best available science to inform local government and others’ decision making.**



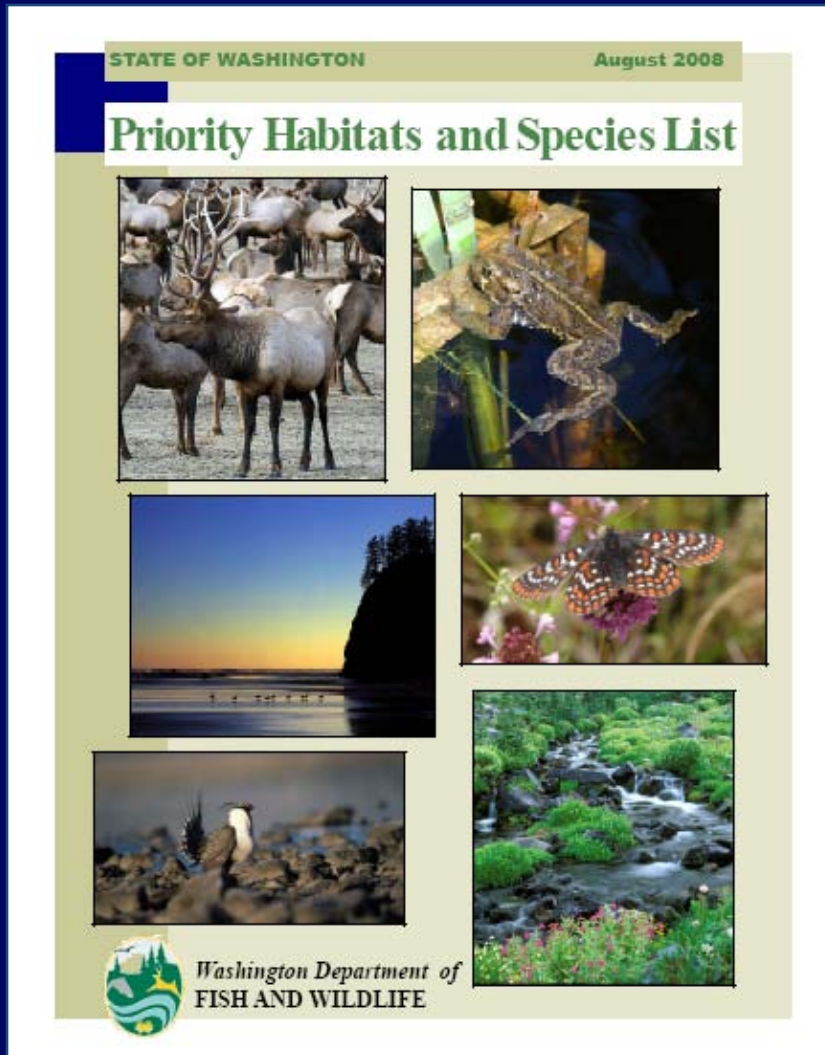
# PHS Delivers Results for the Programs

---

- Key Strategy in **Habitat Program Strategic Plan**
  - Provide Priority Habitats and Species information for use by tribes, local governments, land managers and developers, conservation and restoration groups, state and federal agencies and the general public in making important land use decisions that affect fish and wildlife resources.
- Key Action in **Comprehensive Wildlife Conservation Strategy**
  - Provide biological assessment, local planning and information services.
- Key Deliverable for **Salmon and Steelhead for the 21st Century**
  - All local protection standards and land use decisions reflect the needs of salmon and steelhead.

# PHS List:

## A catalog of agency priorities



- 20 habitat types
- 152 vertebrate species
- 41 invertebrates
- 10 species groups

# PHS Maps:

## A clearinghouse of agency priority data

The screenshot displays the 'PHS on the Web' interface from the Washington Department of Fish & Wildlife. The main map shows a river system with a yellow highlighted area along its banks and purple shaded regions. The interface includes a top navigation bar with 'Help', 'FAQs', 'Legend', and 'Order PHS Map'. On the left, there are 'Locators' (PlaceName Search, Parcel Search, Address Search, Zoom to TRS, Zoom to Coordinates, Zoom to County, Zoom to WRIA) and 'Tools' (Create Map/Report). At the bottom, there are 'Base Map Views' (Aerial, Hybrid, Boundaries, Parcel, Street, Topography), a 'Toggle PHS' button (Turn PHS Data Off), and a 'PHS View Source' dropdown menu (PHS Plus Public View (Hide Masked Data)). The map is powered by Esri and includes a scale bar (0 to 0.6 miles) and an imagery date of 2009.

- Fish Surveys
- Wildlife surveys
- Habitat Areas
- Field Observations

# PHS Management Recommendations: Guidance for how to protect

State of Washington

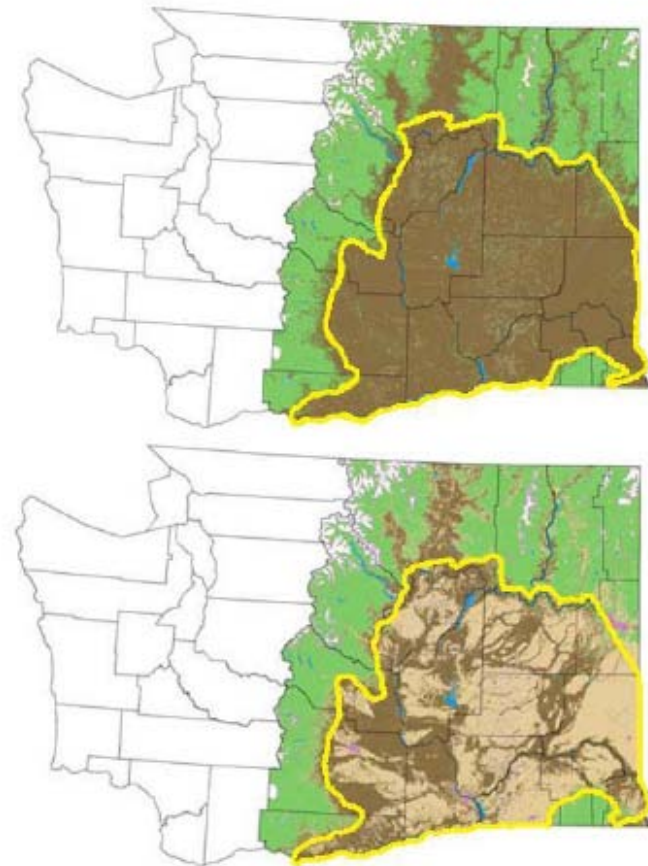
November 2011

## MANAGEMENT RECOMMENDATIONS FOR WASHINGTON'S PRIORITY HABITATS:

### Management of Shrub-steppe in Developing Landscapes

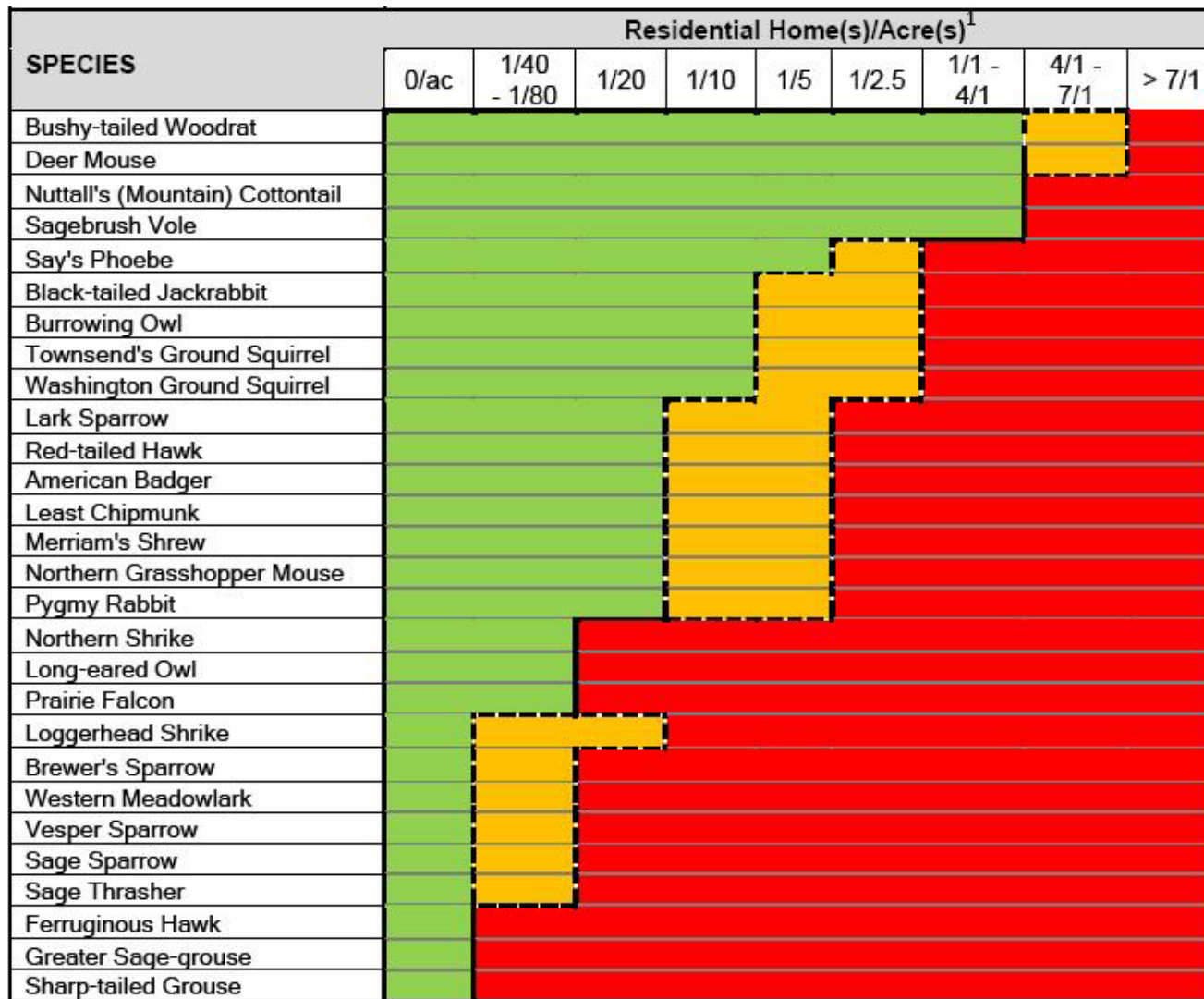


Washington Department of  
FISH AND WILDLIFE



**Figure 4.** Historical (top) vs. current (bottom) shrub-steppe and steppe in eastern Washington (53). Green=forest; brown=shrub-steppe/steppe; tan=agriculture; yellow=Columbia Plateau ecoregional boundary.





**Figure 12.** Predicted response to development for shrub-steppe species<sup>2</sup>. In green are densities where species are expected to persist; in orange species could occur if conservation measures are put in place; and in red are densities where species are not expected to occur.

Identify and map high priority areas of shrub-steppe across a planning area.

Designate mapped areas of shrub-steppe in comprehensive plan.

Adopt policies, regulations, and incentives to protect shrub-steppe

## Long-Range Planning Activities (Regional Planning)

## Current Planning Activities (Site-Specific)

Evaluate projects to look for potential impacts to shrub-steppe.

Develop a habitat management plan (HMP) for projects found to have impacts.

Monitor to ensure conditions of HMPs are met and produced desired outcome.



Theresa Nation



Eric Pentico



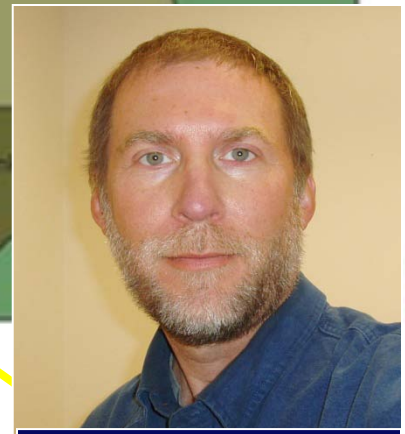
Ken Bevis



Karin Divens



George Fornes



Mark Teske

# PHS Team



Jeff Azerrad  
Publications



Terry Johnson  
Data Steward



Lori Guggenmos  
Map Distribution

# Who Uses PHS?

- Landowners
- Local Governments
- Tribal biologists
- Federal and state agencies
- Universities
- Non-profit conservancies



# PHS Authorizing Environment

---

- **Growth Management Act:** land use planning and zoning, critical areas ordinances, development regulations, incentive programs
- **Shoreline Management Act:** inventory and protect shoreline areas, ensure no-net-loss of ecological function, implement a restoration plan and adopt regulations



# Growth Management Act

---

## *WAC 365-190-130 Fish and wildlife habitat conservation areas.*

- (2) Fish and wildlife habitat conservation areas that must be considered for classification and designation include:
- (a) Areas where endangered, threatened, and sensitive species have a primary association;
  - (b) Habitats and species of local importance, as determined locally;
- (4) (a) Counties and cities should consult current information on **priority habitats and species** identified by the Washington state department of fish and wildlife.



# Shoreline Management Act

---

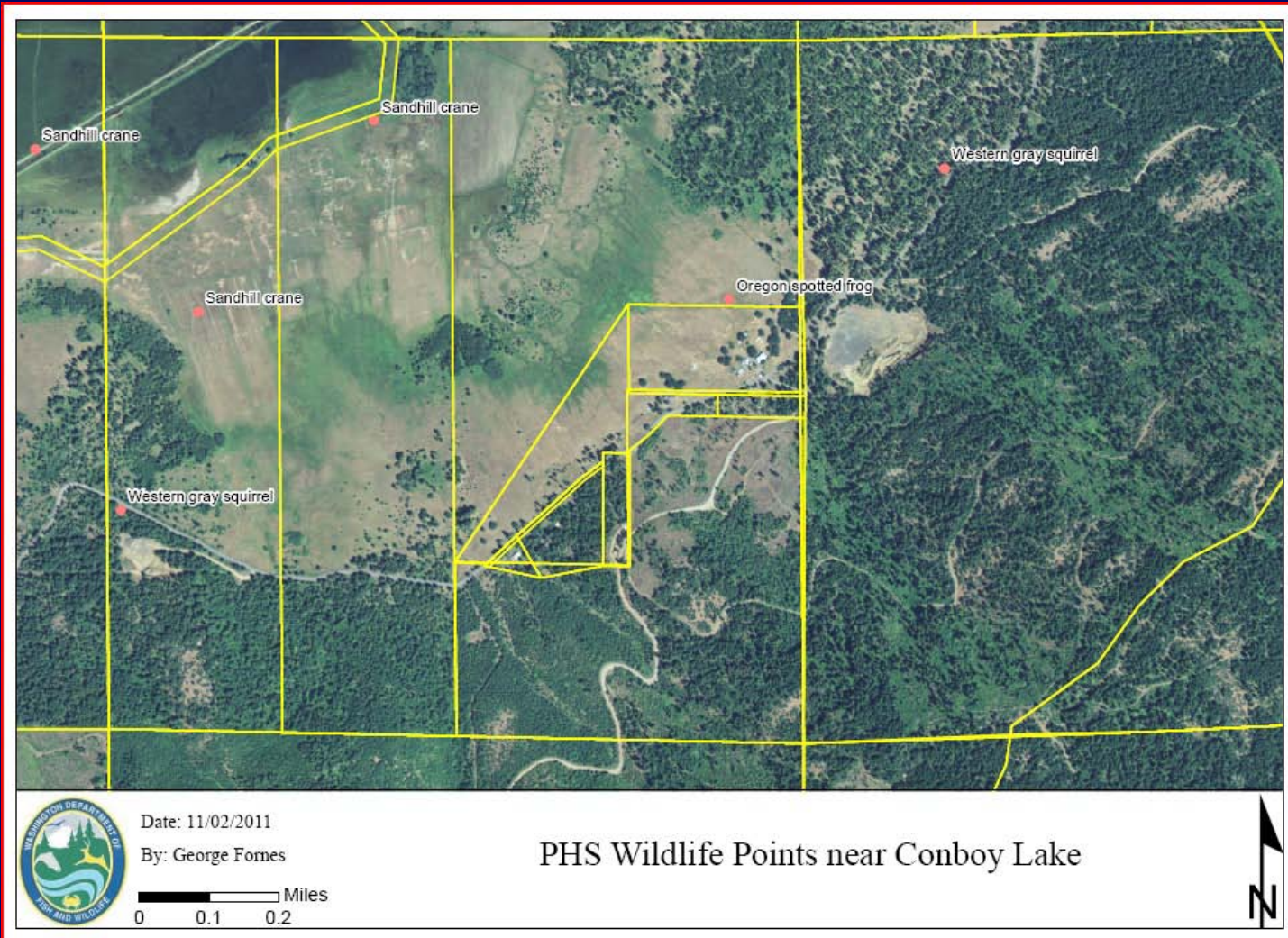
## ***WAC 173-26-221 General master program provisions.***

Shoreline master programs must provide for management of critical areas.

Local governments shall protect kelp and eelgrass beds, forage fish spawning and holding areas, and priority species habitat identified by the department of natural resources' aquatic resources division, the department of fish and wildlife, the department, and affected Indian tribes as critical saltwater habitats.



# Part II: How is PHS data used?



# Subdivision Design



**Figure 14.** A conventional layout of eight home sites dispersed throughout an 80 acre parcel. The green area is shrub-steppe.



**Figure 15.** The same site as in the previous figure, except the eight homes are clustered and the shrub-steppe is placed in an area that has been designated and protected as open space.



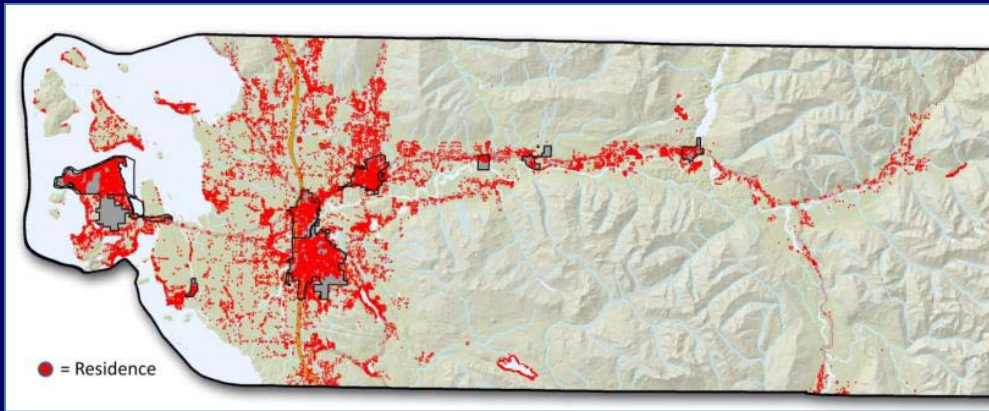
**ENVISION**  
*Skagit*  
**2060**

*Preserving our heritage, shaping our future*



**SKAGIT  
VALLEY  
DIVERSITY**

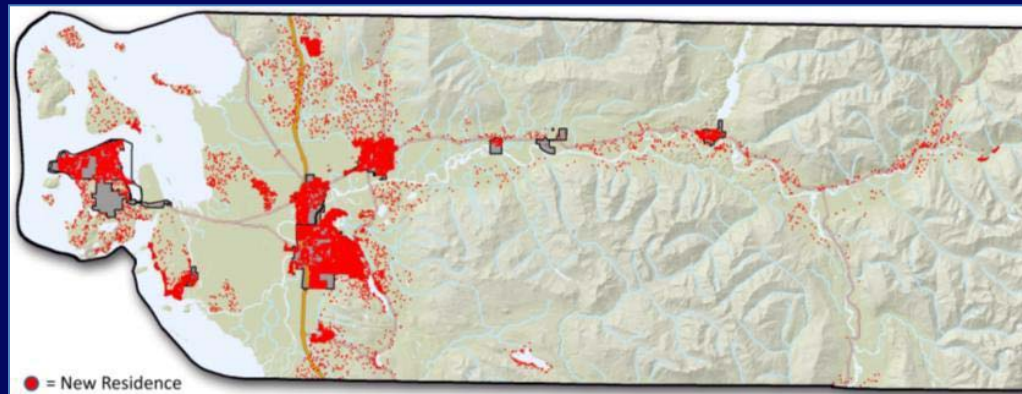




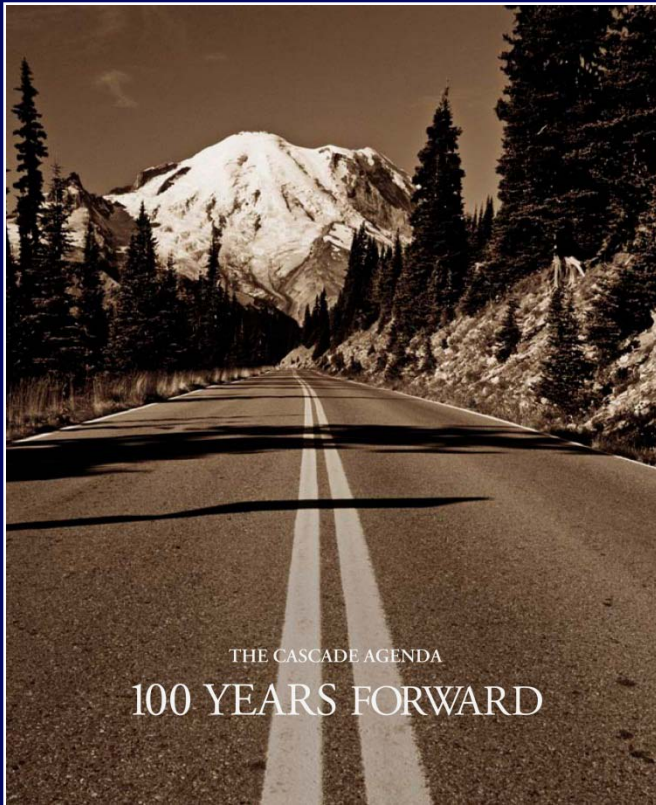
**2060 Current  
Future trends**



**PHS Local Habitat  
Assessment**



**2060 Preferred  
Future**



THE CASCADE AGENDA  
100 YEARS FORWARD



## THE OLYMPIC AGENDA A First Look



*An Emerging Collaboration to Build a Future of Great Communities and Healthy Landscapes on the Olympic Peninsula.*

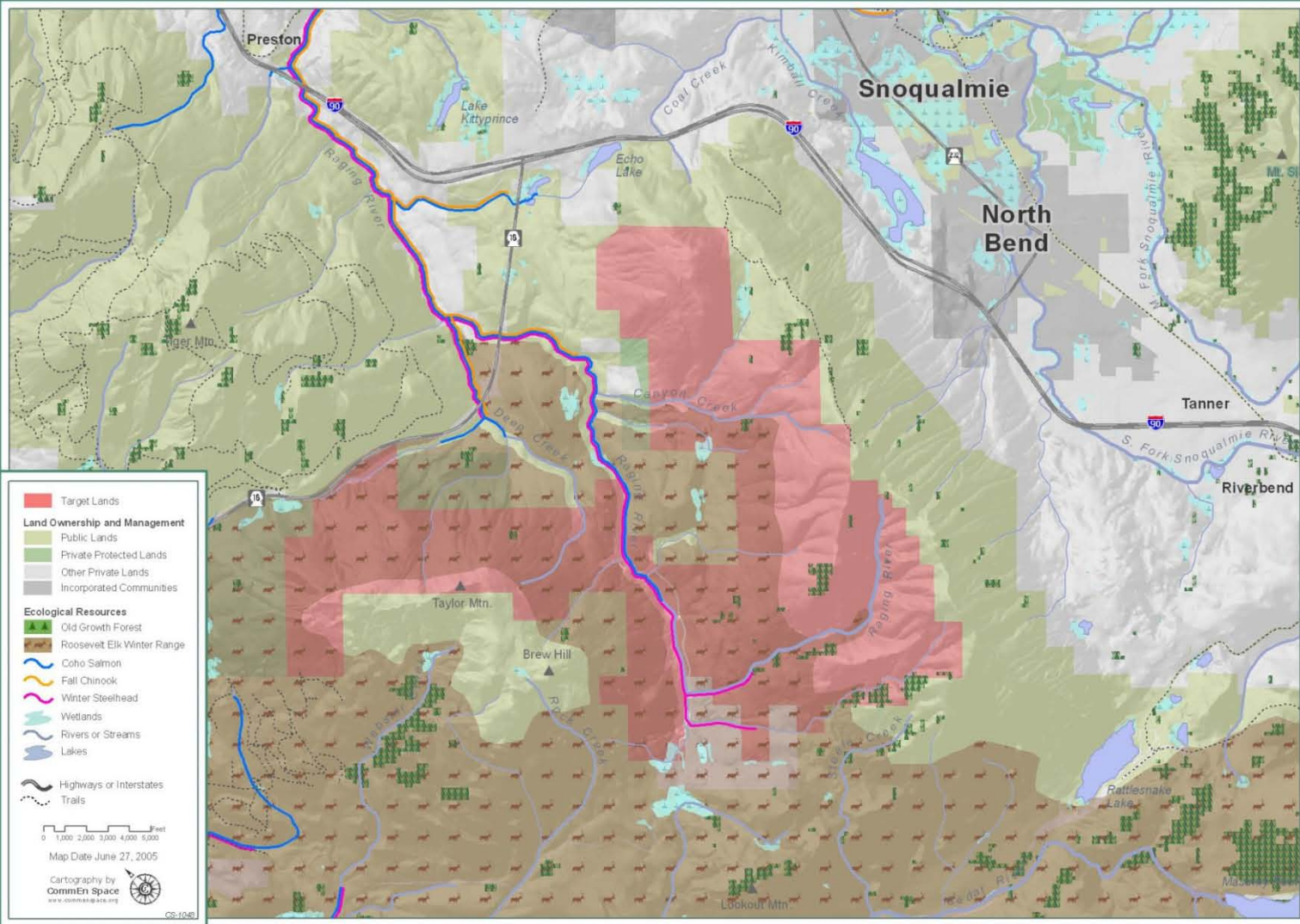
Cascade Land Conservancy is working with residents of the Peninsula to create The Olympic Agenda, a 100-year vision and immediate action plan for the lands, communities and economy of Clallam, Grays Harbor, Jefferson and Mason Counties. So far, we have had dialogues with more than 500 community leaders, business owners and other residents on issues in three counties and will expand the conversation to a region-wide discussion on maintaining our agricultural viability, sustaining our forests, and creating regional growth patterns and practices that suit our unique landscape and quality of life. This process will harness the best thinking of today's leaders to ensure the Olympic Peninsula's working landscapes and rural economy continue to thrive, the communities grow in a sustainable fashion and quality of life is maintained over the next 100 years.

After the first 2 years of work, we are reporting on where we stand, looking at what we have uncovered so far, and offering a map for how we will move ahead toward that common goal of a vision for the Peninsula. After reading this first look, join us in our continuing work to create the Olympic Agenda.



CASCADELAND.ORG

Mason County ~ PO Box 1898 ~ Shelton, WA 98584 ~ P. 360.462.5263  
info@cascadeland.org



**Target Lands**

**Land Ownership and Management**

- Public Lands
- Private Protected Lands
- Other Private Lands
- Incorporated Communities

**Ecological Resources**

- Old Growth Forest
- Roosevelt Elk Winter Range
- Coho Salmon
- Fall Chinook
- Winter Steelhead
- Wetlands
- Rivers or Streams
- Lakes

Highways or Interstates  
Trails

0 1,000 2,000 3,000 4,000 5,000 Feet

Map Date June 27, 2005

Cartography by  
CommEn Space  
www.commen.space.org

CS-1045

# Raging River

2005 National Fish and Wildlife Foundation Proposal

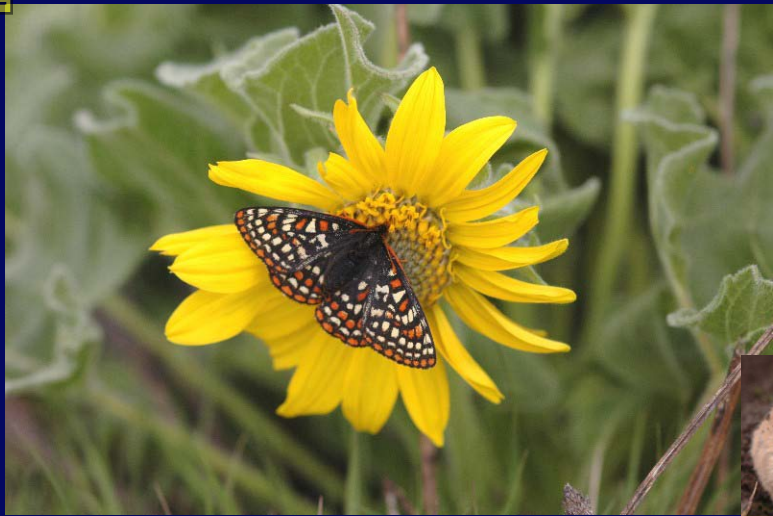


# Highway construction projects are subject to thorough & lengthy review



**Biologists review PHS during early phases of project design**

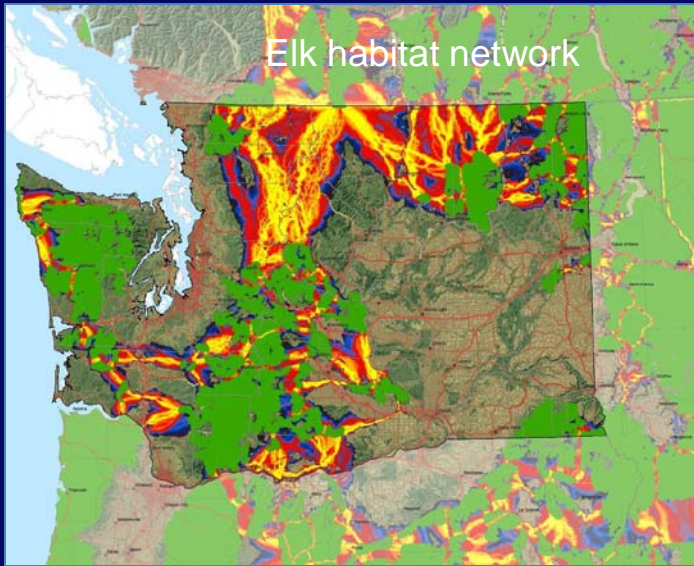




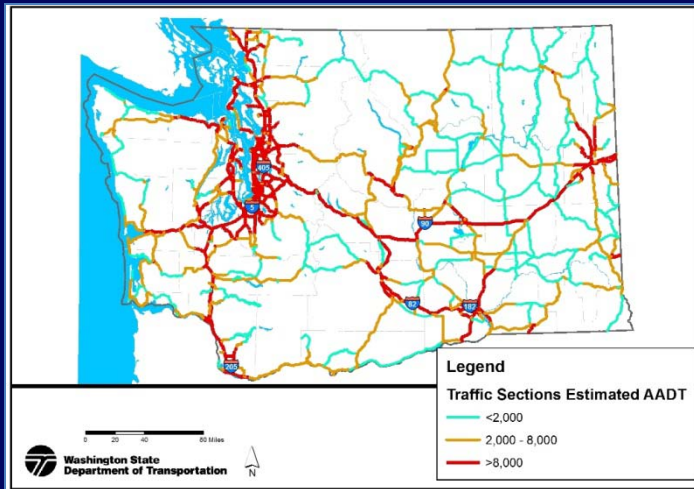
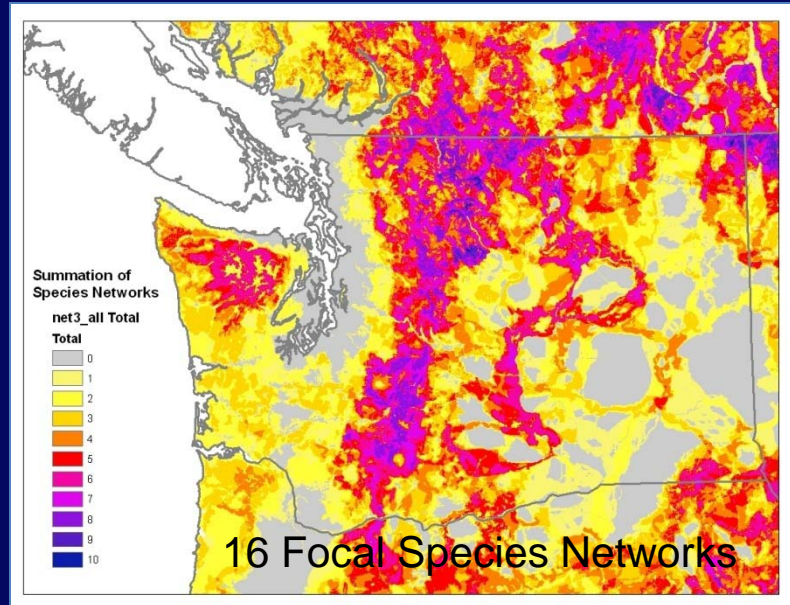
**WSDOT's Terrestrial Species Guidance is used by maintenance crews working on highways**



**PHS provides the information that helps these crews avoid inadvertent harm to sensitive areas**



# WSDOT is a co-lead of the Washington Wildlife Habitat Working Group



**PHS supplied base data used in models for the Washington Connected Landscapes Project**

# PHS on the Web

<http://wdfw.wa.gov/mapping/phs/>



WASHINGTON DEPARTMENT OF FISH & WILDLIFE

## PHS on the Web


Help    FAQs    Legend    Order PHS Map

Locators

- PlaceName Search
- Parcel Search
- Address Search
- Zoom to TRS
- Zoom to Coordinates
- Zoom to County
- Zoom to WRIA

Tools

- Create Map/Report



Base Map Views

- Aerial
- Hybrid
- Boundaries
- Parcel
- Street
- Topography

Toggle PHS

- Turn PHS Data Off

PHS View Source

- PHS Plus Public View (Hide Masked Data)

Imagery Date: 2009 esri

# WASHINGTON DEPARTMENT OF FISH & WILDLIFE PHS on the Web



[Help](#) [FAQs](#) [Legend](#) [Order PHS Map](#)

### Locators

- PlaceName Search
- Parcel Search
- Address Search
- Zoom to TRS
- Zoom to Coordinates
- Zoom to County
- Zoom to WRIA

### Tools

- Create Map/Report



### Base Map Views

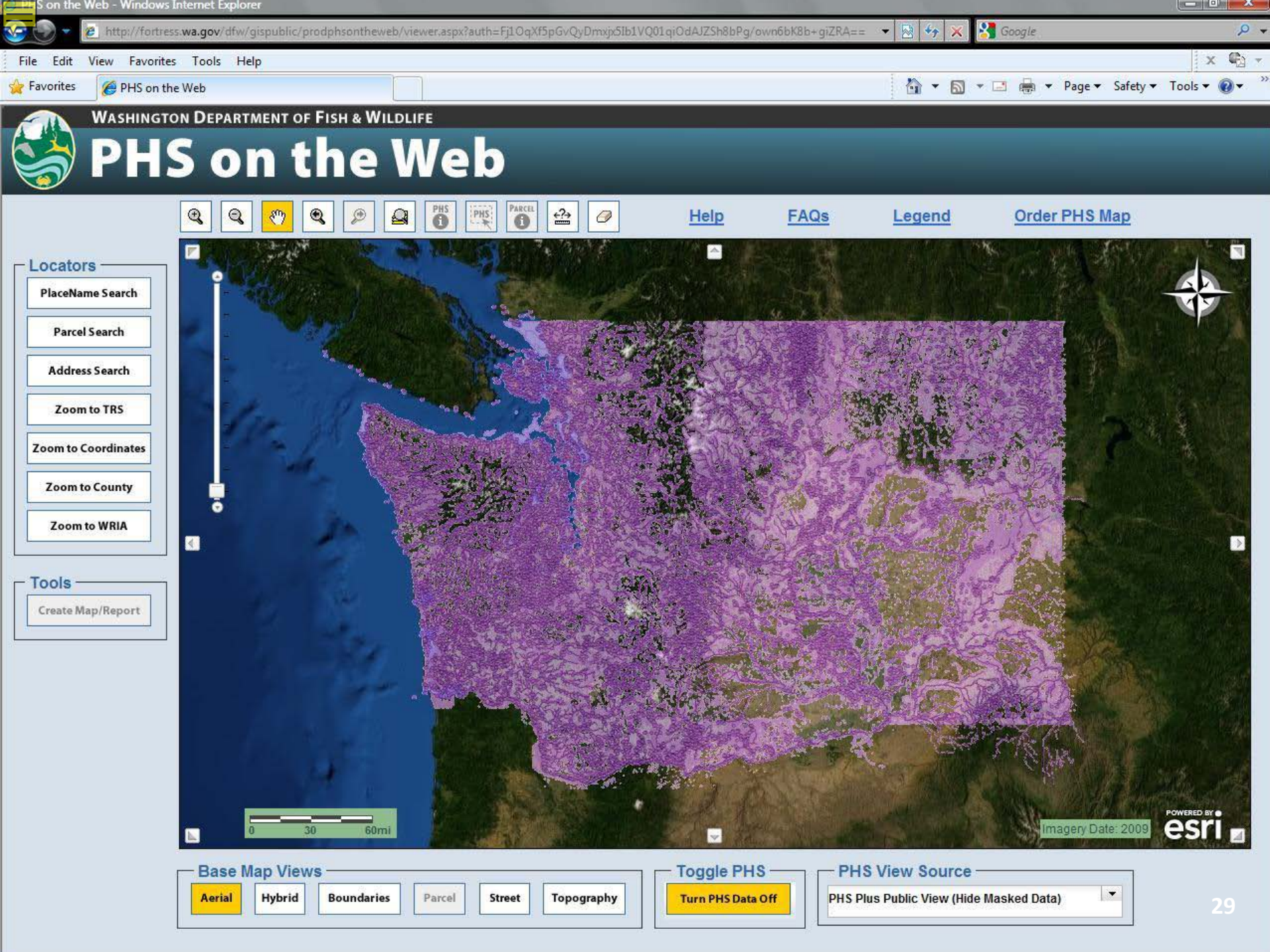
- Aerial**
- Hybrid
- Boundaries
- Parcel
- Street
- Topography

### Toggle PHS

- Turn PHS Data On

Select PHS Data Source

- PHS Plus Public View (Show Masked Data)
- PHS Plus Public View (Hide Masked Data)**
- PHS Plus Public View (Hide Masked Data)



WASHINGTON DEPARTMENT OF FISH & WILDLIFE  
**PHS on the Web**

Map navigation icons: Home, Search, Hand, Pan, Zoom In, Zoom Out, PHS, PARCEL, Print, Refresh

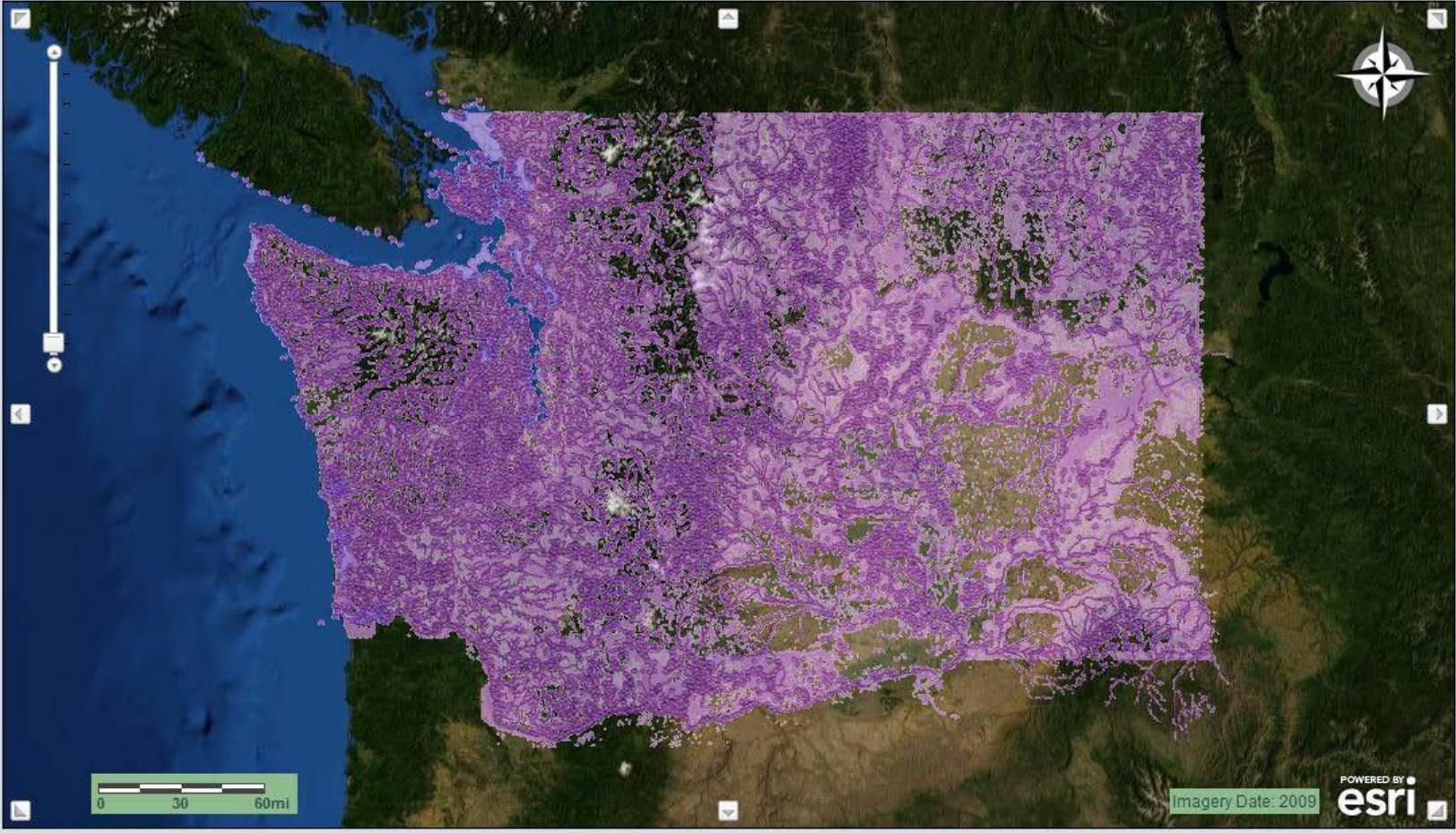
[Help](#) [FAQs](#) [Legend](#) [Order PHS Map](#)

**Locators**

- PlaceName Search
- Parcel Search
- Address Search
- Zoom to TRS
- Zoom to Coordinates
- Zoom to County
- Zoom to WRIA

**Tools**

- Create Map/Report



**Base Map Views**

- Aerial
- Hybrid
- Boundaries
- Parcel
- Street
- Topography

**Toggle PHS**

- Turn PHS Data Off

**PHS View Source**

- PHS Plus Public View (Hide Masked Data)

WASHINGTON DEPARTMENT OF FISH & WILDLIFE  
**PHS on the Web**



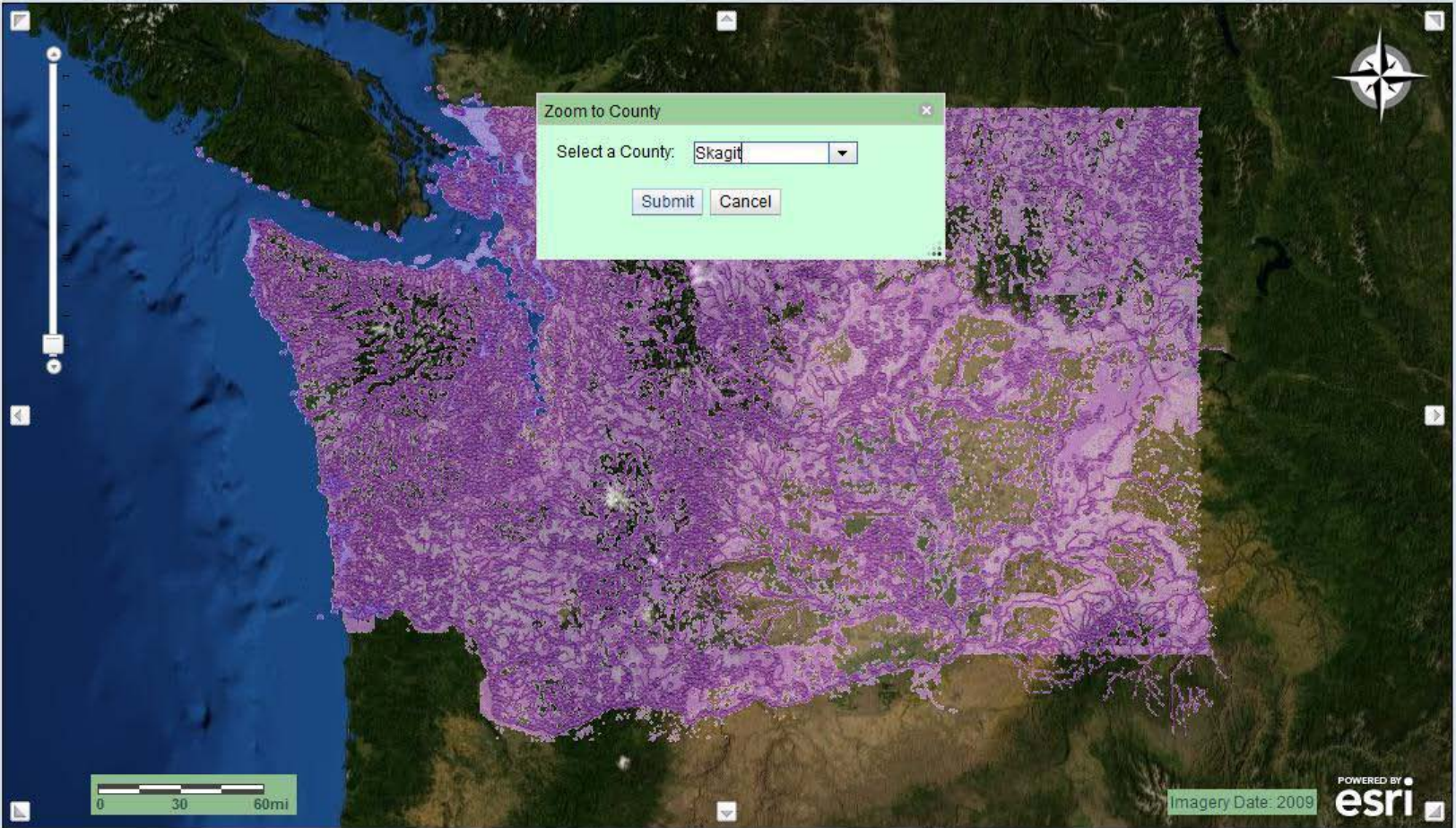
[Help](#) [FAQs](#) [Legend](#) [Order PHS Map](#)

**Locators**

- PlaceName Search
- Parcel Search
- Address Search
- Zoom to TRS
- Zoom to Coordinates
- Zoom to County**
- Zoom to WRIA

**Tools**

- Create Map/Report



**Base Map Views**

- Aerial**
- Hybrid
- Boundaries
- Parcel
- Street
- Topography

**Toggle PHS**

- Turn PHS Data Off**

**PHS View Source**

- PHS Plus Public View (Hide Masked Data)



# WASHINGTON DEPARTMENT OF FISH & WILDLIFE PHS on the Web

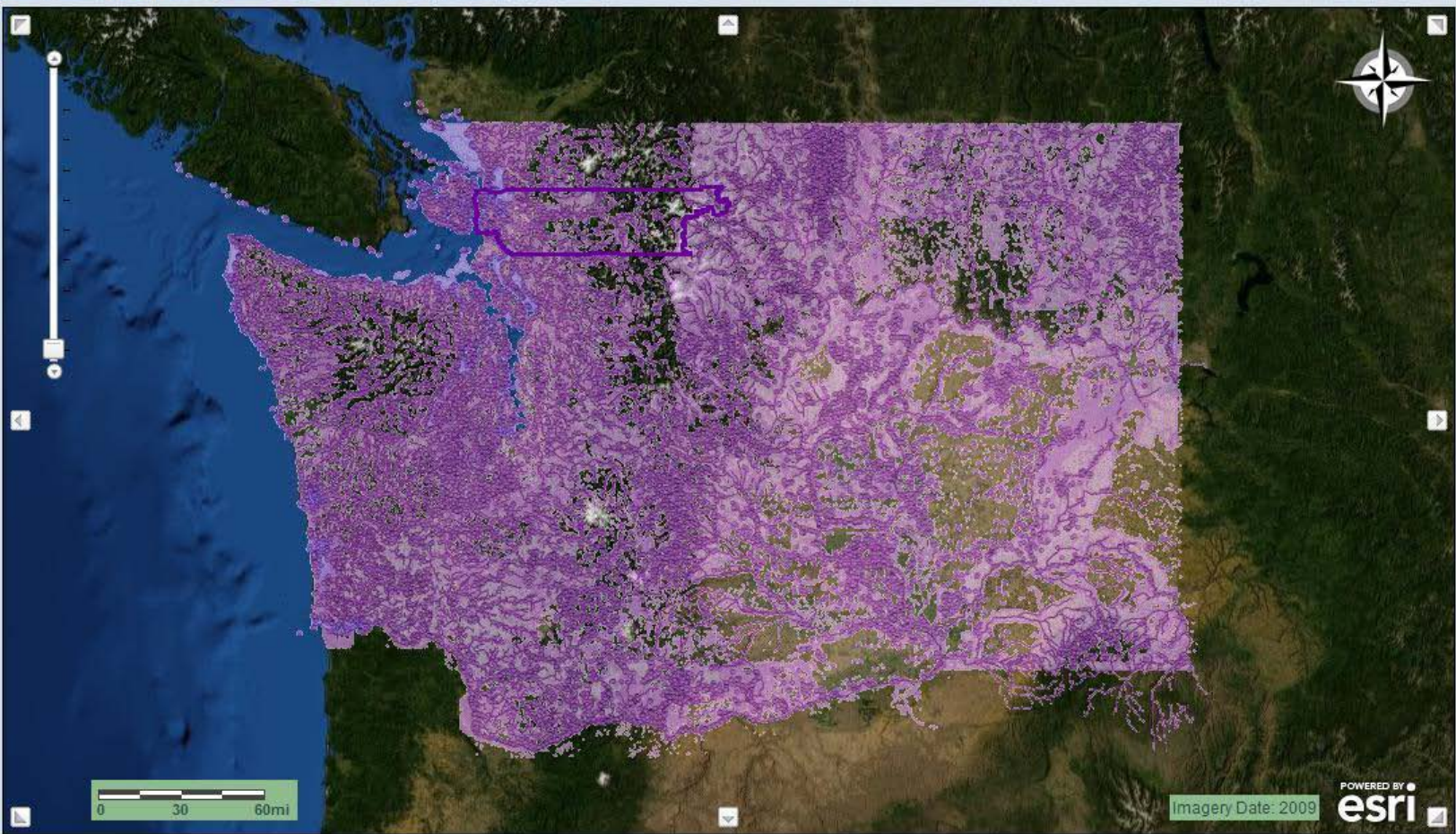
[Help](#)
[FAQs](#)
[Legend](#)
[Order PHS Map](#)

### Locators

- 
- 
- 
- 
- 
- 
- 

### Tools

- 



### Base Map Views

- 
- 
- 
- 
- 
- 

### Toggle PHS

- 

### PHS View Source

- PHS Plus Public View (Hide Masked Data)



# WASHINGTON DEPARTMENT OF FISH & WILDLIFE

## PHS on the Web

Map navigation icons: Home, Search, Hand, Zoom In, Zoom Out, Full Screen, PHS, Parcel, Print, Copy

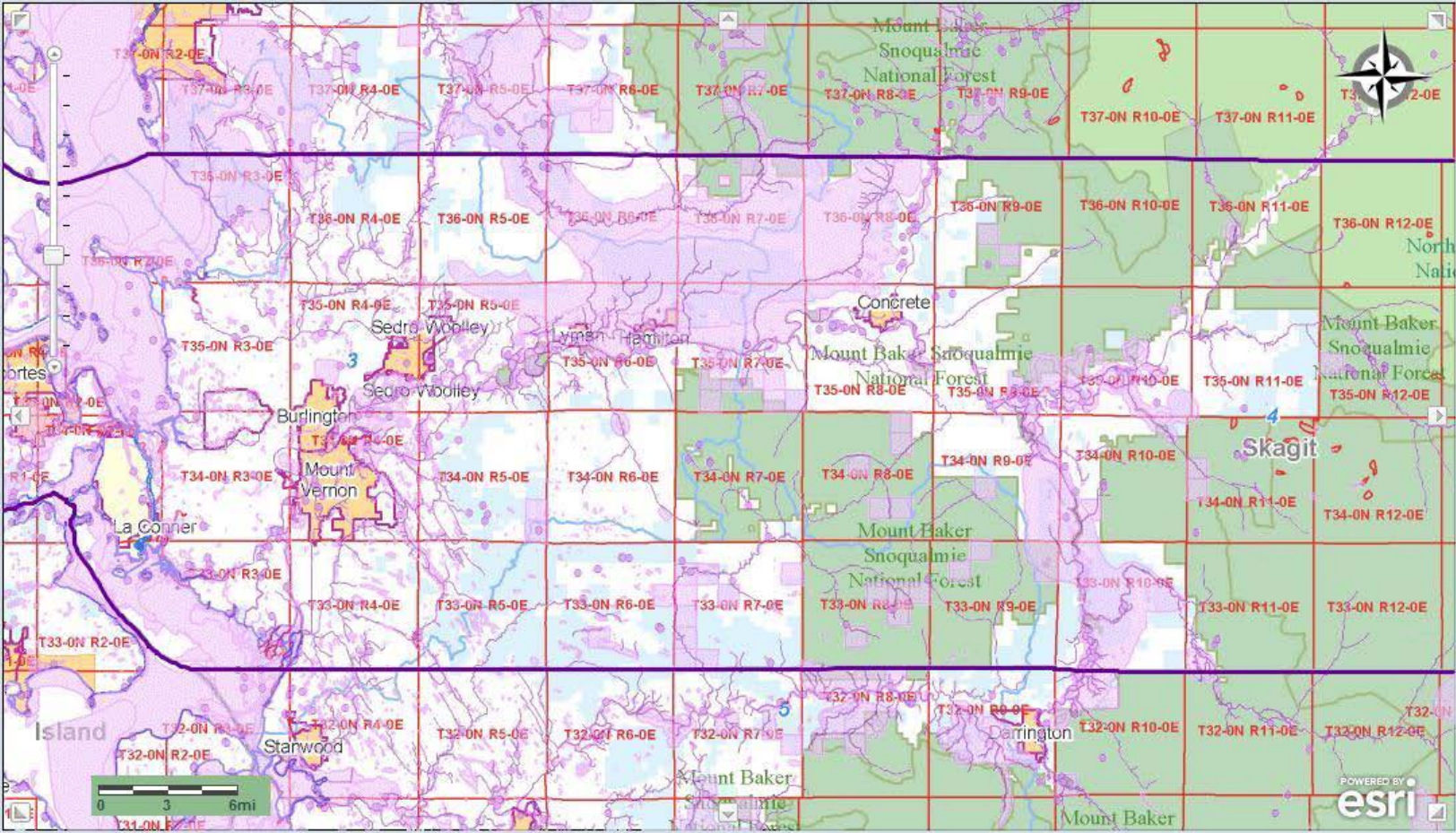
[Help](#) [FAQs](#) [Legend](#) [Order PHS Map](#)

### Locators

- PlaceName Search
- Parcel Search
- Address Search
- Zoom to TRS
- Zoom to Coordinates
- Zoom to County
- Zoom to WRIA

### Tools

- Create Map/Report



### Base Map Views

- Aerial
- Hybrid
- Boundaries**
- Parcel
- Street
- Topography

### Toggle PHS

- Turn PHS Data Off**

### PHS View Source

PHS Plus Public View (Hide Masked Data)



# WASHINGTON DEPARTMENT OF FISH & WILDLIFE

## PHS on the Web

[Help](#) [FAQs](#) [Legend](#) [Order PHS Map](#)

### Locators

PlaceName Search

Parcel Search

Address Search

**Zoom to TRS**

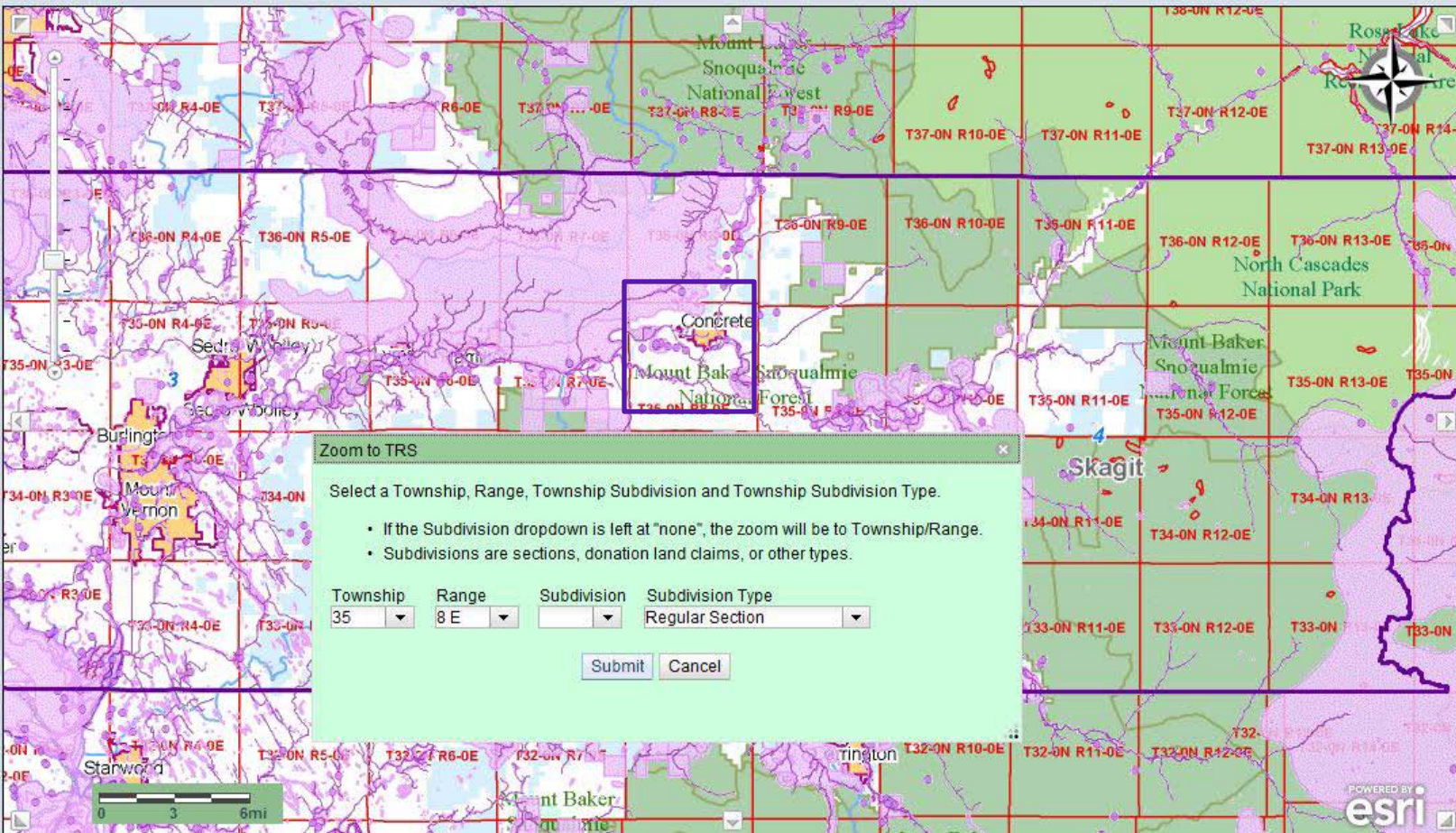
Zoom to Coordinates

Zoom to County

Zoom to WRIA

### Tools

Create Map/Report



### Base Map Views

Aerial Hybrid **Boundaries** Parcel Street Topography

### Toggle PHS

Turn PHS Data Off

### PHS View Source

PHS Plus Public View (Hide Masked Data)



WASHINGTON DEPARTMENT OF FISH & WILDLIFE

# PHS on the Web

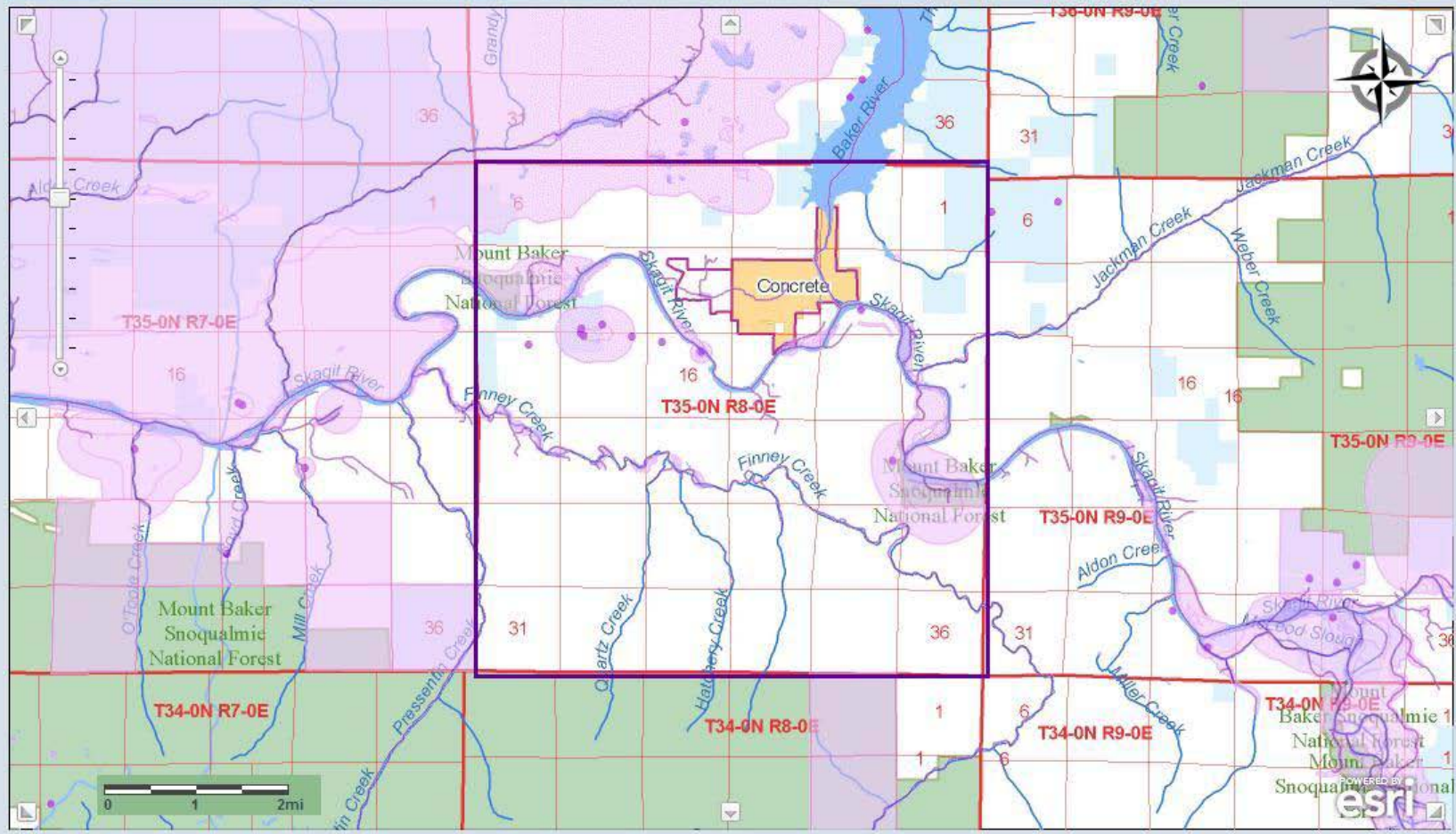
[Help](#) [FAQs](#) [Legend](#) [Order PHS Map](#)

### Locators

- 
- 
- 
- 
- 
- 
- 

### Tools

- 



### Base Map Views

- 
- 
- 
- 
- 
- 

### Toggle PHS

- 

### PHS View Source

- PHS Plus Public View (Hide Masked Data)

# WASHINGTON DEPARTMENT OF FISH & WILDLIFE PHS on the Web



[Help](#) [FAQs](#) [Legend](#) [Order PHS Map](#)

- Locators**
- PlaceName Search
  - Parcel Search
  - Address Search
  - Zoom to TRS
  - Zoom to Coordinates
  - Zoom to County
  - Zoom to WRIA

- Tools**
- Create Map/Report



- Base Map Views**
- Aerial**
  - Hybrid
  - Boundaries
  - Parcel
  - Street
  - Topography

- Toggle PHS**
- Turn PHS Data Off**

- PHS View Source**
- PHS Plus Public View (Hide Masked Data)



# WASHINGTON DEPARTMENT OF FISH & WILDLIFE

## PHS on the Web



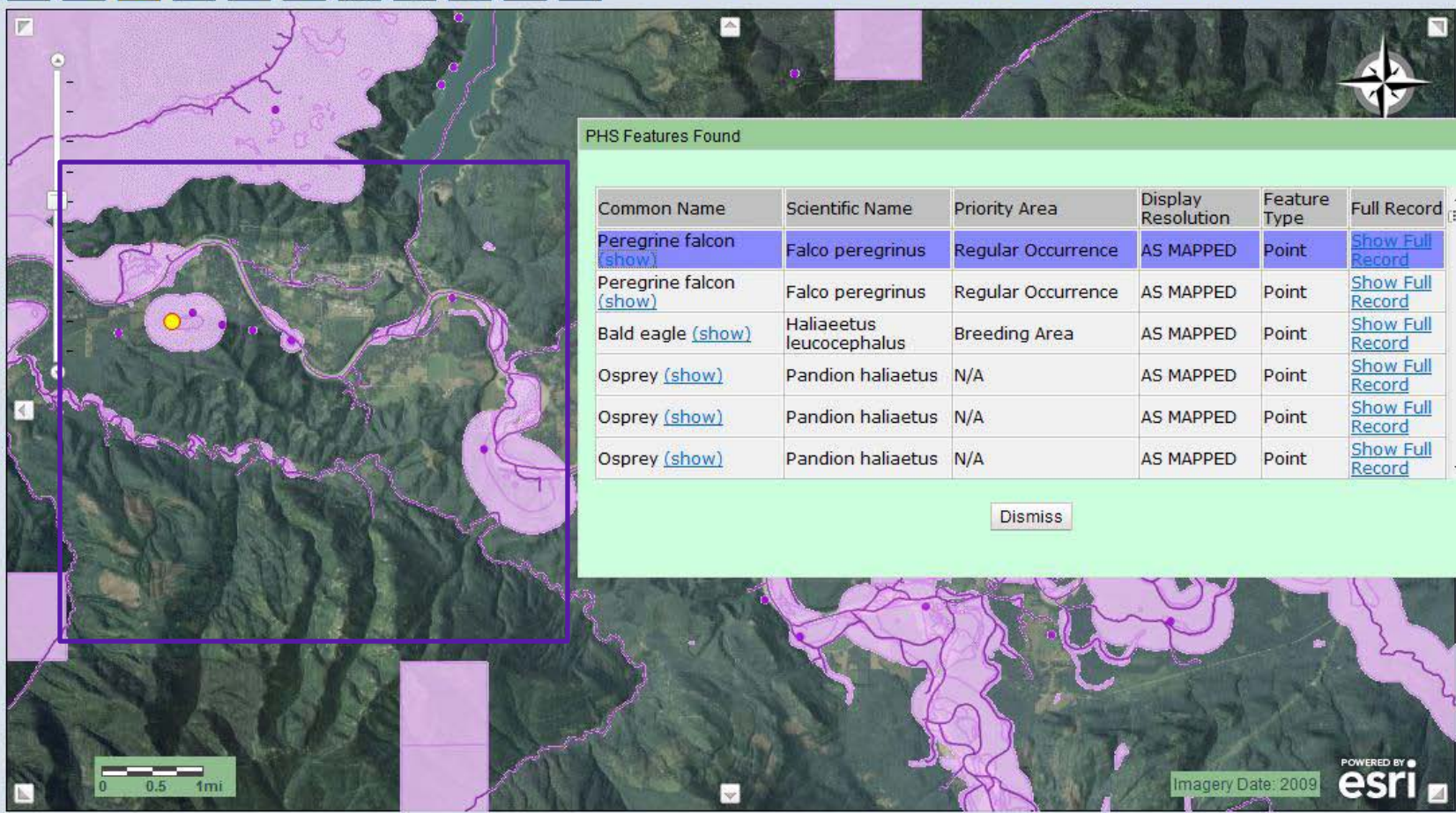
[Help](#) [FAQs](#) [Legend](#) [Order PHS Map](#)

**Locators**

- PlaceName Search
- Parcel Search
- Address Search
- Zoom to TRS
- Zoom to Coordinates
- Zoom to County
- Zoom to WRIA

**Tools**

- Create Map/Report



**Base Map Views**

- Aerial**
- Hybrid
- Boundaries
- Parcel
- Street
- Topography

**Toggle PHS**

- Turn PHS Data Off**

**PHS View Source**

- PHS Plus Public View (Hide Masked Data)

# WASHINGTON DEPARTMENT OF FISH & WILDLIFE

## PHS on the Web



[Help](#) [FAQs](#) [Legend](#) [Order PHS Map](#)

- Locators**
- PlaceName Search
  - Parcel Search
  - Address Search
  - Zoom to TRS
  - Zoom to Coordinates
  - Zoom to County
  - Zoom to WRIA

- Tools**
- Create Map/Report

**PHS Full Record**

Item	Value
Common Name	Peregrine falcon
Scientific Name	Falco peregrinus
Priority Area	Regular Occurrence
Display Resolution	AS MAPPED
Federal Status	Fed Spp Concern
State Status	Sensitive
SGCN	Y
PHS Listing Status	PHS LISTED OCCURRENCE
Source Date	6/30/2004
Source Dataset	WS_OccurPoint

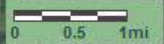
Priority Area	Display Resolution	Feature Type	Full Record
Regular Occurrence	AS MAPPED	Point	<a href="#">Show Full Record</a>
Regular Occurrence	AS MAPPED	Point	<a href="#">Show Full Record</a>
Priority Area	AS MAPPED	Point	<a href="#">Show Full Record</a>
	AS MAPPED	Point	<a href="#">Show Full Record</a>
	AS MAPPED	Point	<a href="#">Show Full Record</a>
	AS MAPPED	Point	<a href="#">Show Full Record</a>

**Base Map Views**

**Toggle PHS**

**PHS View Source**

PHS Plus Public View (Hide Masked Data)



Imagery Date: 2009



http://fortress.wa.gov/dfw/gispublic/proaphsonthweb/viewer.aspx?auth=IZYJCG/ZLqLyUPbz5JB6Xn2jgPI+VOnp+CWMW/wyfDtf+DBqUv1fgg==

File Edit View Favorites Tools Help

PHS on the Web

WASHINGTON DEPARTMENT OF FISH AND WILDLIFE

**PHS on the Web**

January 2005



WASHINGTON DEPARTMENT OF FISH AND WILDLIFE  
 Management Recommendations for Washington's Priority Species  
 FOR USE TO GUIDE SITE SPECIFIC MANAGEMENT OF PRIORITY SPECIES  
 Peregrine Falcon (*Falco peregrinus*)

Order PHS Map

Locators

Table. Recommended protective buffers for specified activities.

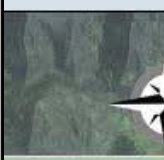
Activities	Buffer width	Buffer from	Time of Year
Human access along cliff rim	2620'	cliff nest	March – late June <sup>b</sup>
Human activities on face of, or immediately below, nest cliffs	1310-2620'	cliff nest	March – late June <sup>b</sup>
Development of trails, picnic grounds, or other facilities	1310-2620'	cliff nest	year-round <sup>c</sup>
Cliff tops directly above nests should remain undeveloped	N/A	cliff nest	year-round <sup>c</sup>
Review forest practices (i.e., logging) <sup>a</sup>	1310'	any nest	year-round <sup>c</sup>
Review forest practice (i.e., logging) <sup>a</sup>	2620'	any nest/ nesting season	March 1 – June 30 <sup>b</sup>
Aircraft approaches	1640'	nest	March 1 – June 30 <sup>b</sup>

<sup>a</sup> Nests occurring within non-forested lands, and those nests not subjected to forest practices or forest practice rules, should be similarly considered through the development of a site-specific peregrine management plan when activities near nests are considered. <sup>b</sup> Seasonal buffer. <sup>c</sup> Permanent buffer.

**Table 2.1: Planning tools to manage development impacts on salmonid habitat**

Development Action	Potential Impact on Salmonid Habitat Function	Potential Planning Tool to Manage Development Impacts
River channel clearing and channelization (stream bank alterations)	Water quality, flow regime, habitat structure, access	Channel Migration Zone protection (3.2.9), riparian buffers and vegetation retention (3.2.3), <sup>9</sup> floodplain protection (3.2.8), large woody debris recruitment (3.2.6), in-stream work standards (3.2.7), clearing and grading standards (3.3.4)
Loss of riparian vegetation	Water quality, flow regime, habitat structure, food source	Riparian buffers and vegetation retention (3.2.3), building setbacks (3.3.5), stormwater management (3.2.2), LID practices (3.2.2), clearing and grading standards (3.3.4), LWD recruitment standards (3.2.6), habitat restoration projects (3.2.1), incentives to protect habitat (3.3.10)

Map



- PED Point
- PED Line
- PED Line
- PED Line
- PED Line
- PED Line
- PED Line
- PED Line
- PED Line
- PED Line



Aerial Hybrid Boundaries

View (Hide Masked Data)



# WASHINGTON DEPARTMENT OF FISH & WILDLIFE

## PHS on the Web

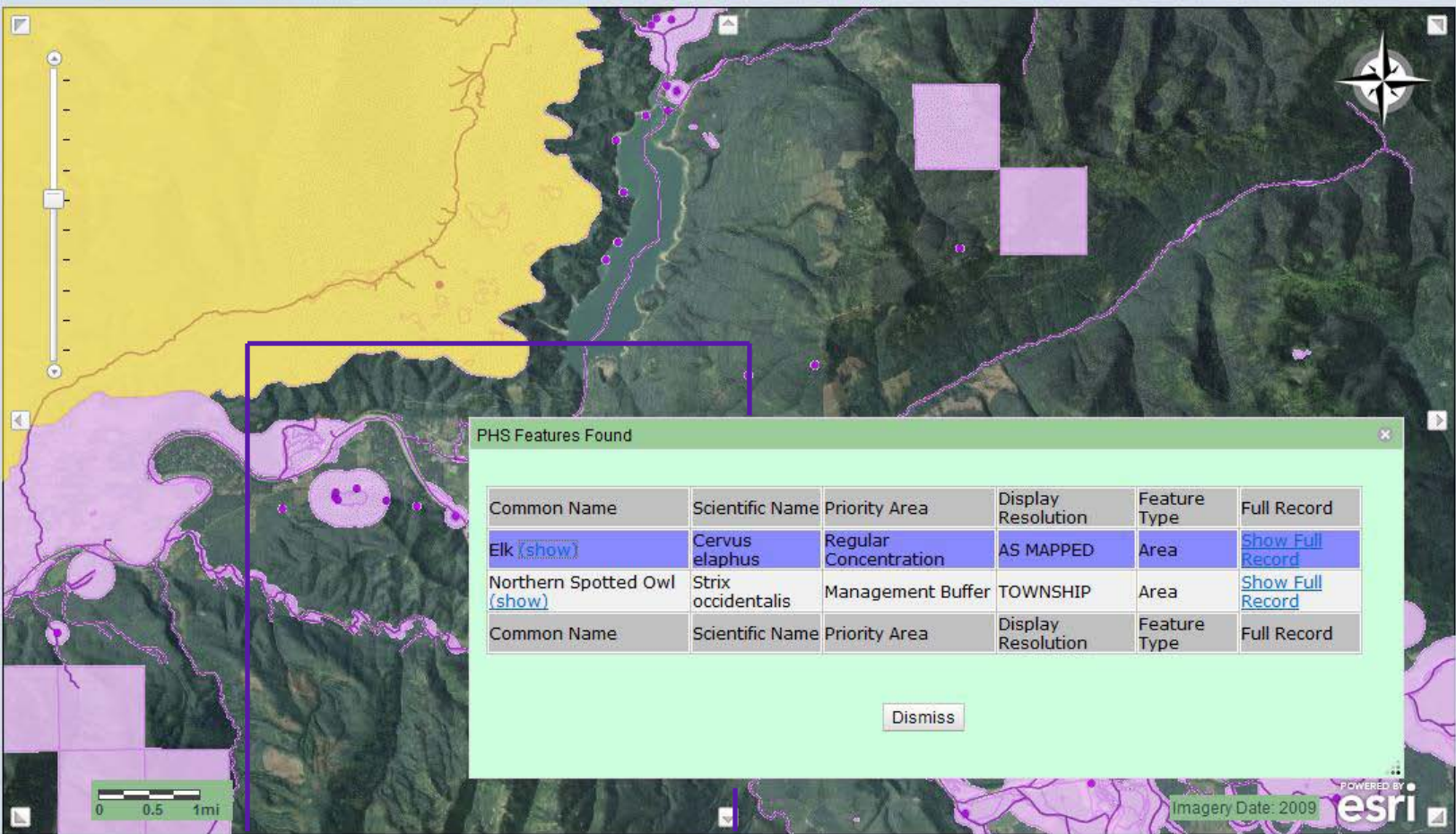
[Help](#)
[FAQs](#)
[Legend](#)
[Order PHS Map](#)

### Locators

- 
- 
- 
- 
- 
- 
- 

### Tools

- 



PHS Features Found

Common Name	Scientific Name	Priority Area	Display Resolution	Feature Type	Full Record
<a href="#">Elk (show)</a>	<a href="#">Cervus elaphus</a>	Regular Concentration	AS MAPPED	Area	<a href="#">Show Full Record</a>
<a href="#">Northern Spotted Owl (show)</a>	<a href="#">Strix occidentalis</a>	Management Buffer	TOWNSHIP	Area	<a href="#">Show Full Record</a>
Common Name	Scientific Name	Priority Area	Display Resolution	Feature Type	Full Record

### Base Map Views

- 
- 
- 
- 
- 
- 

### Toggle PHS

- 

### PHS View Source

- PHS Plus Public View (Hide Masked Data)



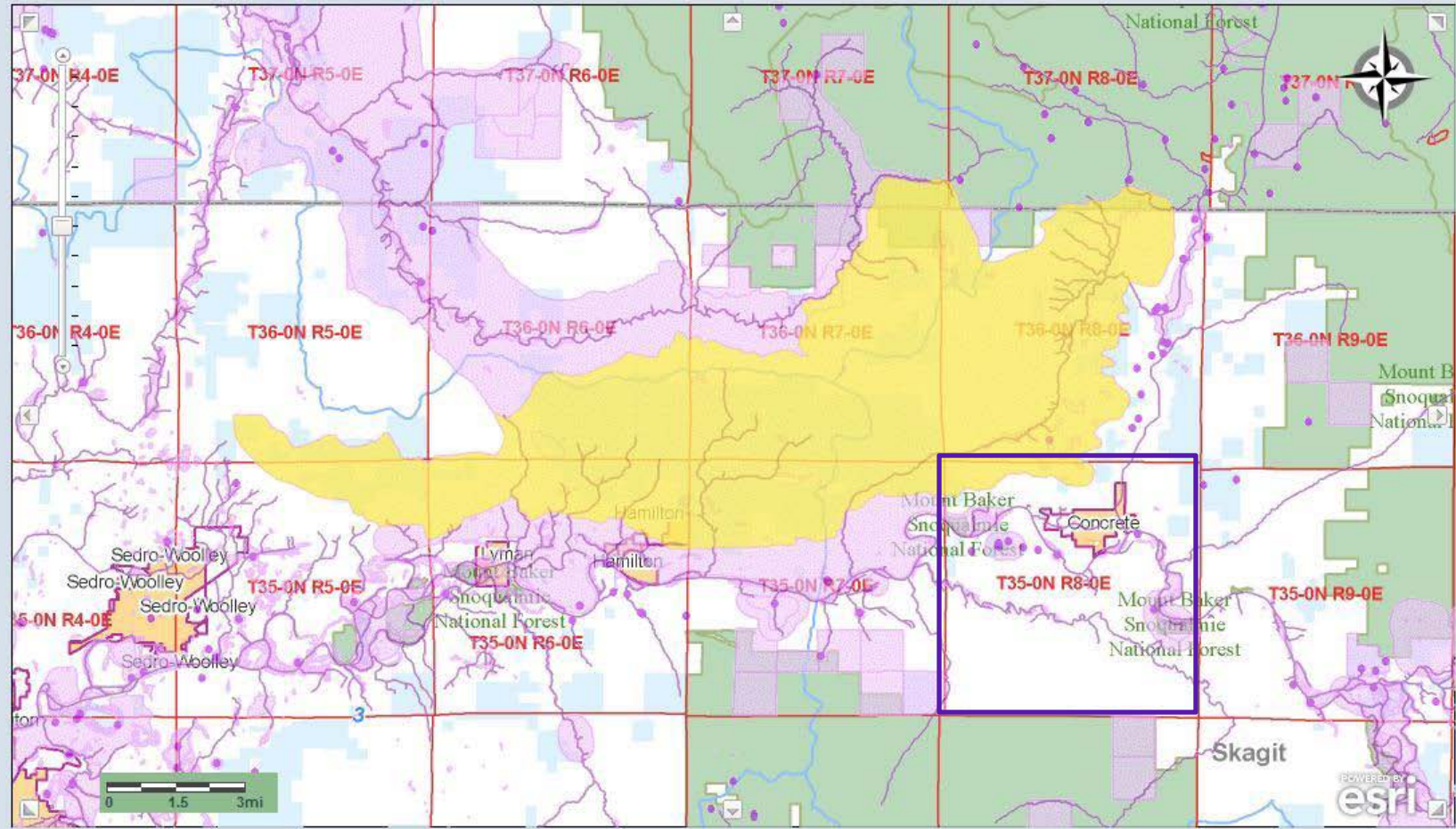
# WASHINGTON DEPARTMENT OF FISH & WILDLIFE PHS on the Web



[Help](#) [FAQs](#) [Legend](#) [Order PHS Map](#)

- Locators**
- PlaceName Search
  - Parcel Search
  - Address Search
  - Zoom to TRS
  - Zoom to Coordinates
  - Zoom to County
  - Zoom to WRIA

- Tools**
- Create Map/Report



**Base Map Views**

- Aerial
- Hybrid
- Boundaries**
- Parcel
- Street
- Topography

**Toggle PHS**

- Turn PHS Data Off**

**PHS View Source**

- PHS Plus Public View (Hide Masked Data)

# Questions?

WASHINGTON DEPARTMENT OF FISH & WILDLIFE

## PHS on the Web

Help FAQs Legend Order PHS Map

**Locators**

- PlaceName Search
- Parcel Search
- Address Search
- Zoom to TRS
- Zoom to Coordinates
- Zoom to County
- Zoom to WRIA

**Tools**

- Create Map/Report

**Base Map Views**

- Aerial
- Hybrid
- Boundaries
- Parcel
- Street
- Topography

**Toggle PHS**

- Turn PHS Data Off

**PHS View Source**

- PHS Plus Public View (Hide Masked Data)

<http://wdfw.wa.gov/conservation/phs/>  
[Katie.Knight@dfw.wa.gov](mailto:Katie.Knight@dfw.wa.gov)