



# **Waters Requiring Supplemental Spawning and Incubation Protection For Salmonid Species**

---

**Revised January 2011  
Publication Number 06-10-038**

*As Described in:  
The Proposed Water Quality Standards for Surface Waters of the State of  
Washington, Chapter 173-201A*



# **Waters Requiring Supplemental Spawning and Incubation Protection For Salmonid Species**

Prepared by:

Sabrina Payne  
Washington State Department of Ecology  
Water Quality Program

Revised January 2011  
Publication Number 06-10-038



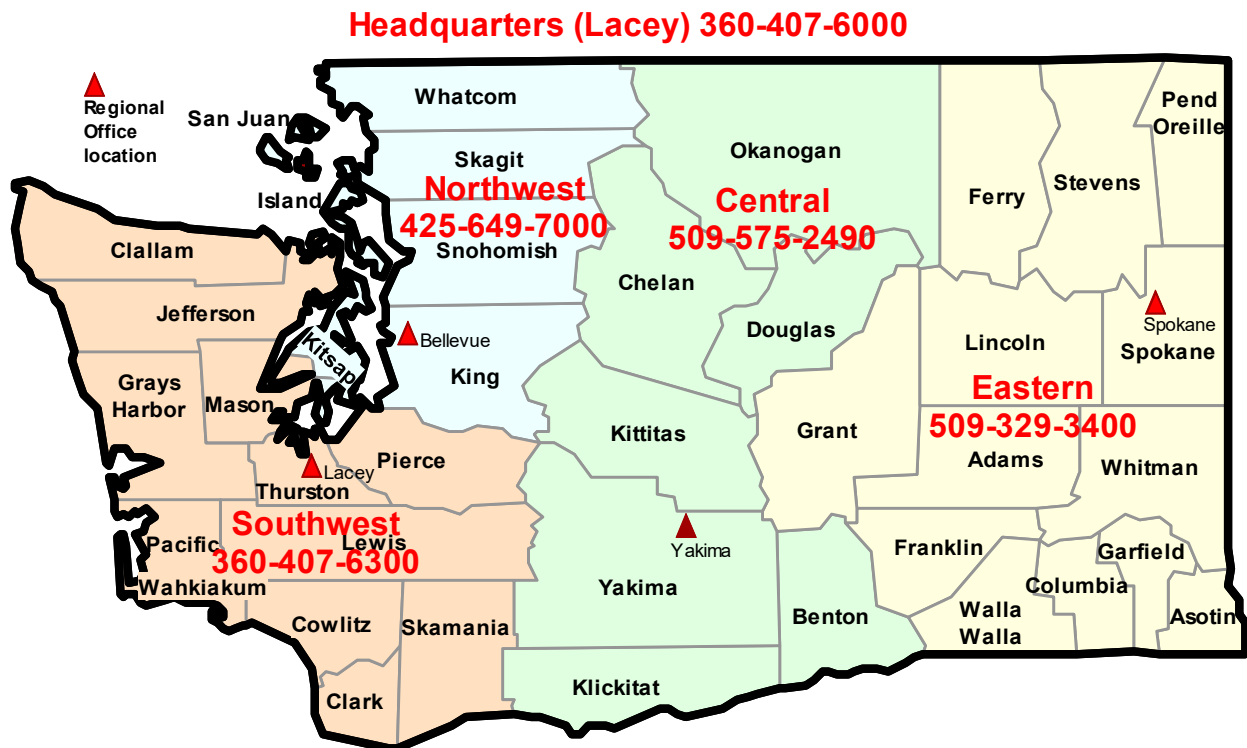
*Printed on Recycled Paper*

You can print or download this document from our Web site at:  
<http://www.ecy.wa.gov/biblio/0610038.html>

For more information contact:

Department of Ecology  
Water Quality Program  
Watershed Management Section  
P.O. Box 47600  
Olympia, WA 98504-7600

Telephone: 360-407-6157



**Persons with a hearing loss can call 711 for Washington Relay Service.  
Persons with a speech disability can call 877-833-6341.**

*If you need this publication in an alternate format, please call the Water Quality Program at 360-407-6404. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.*

## **Waters Requiring Supplemental Spawning and Incubation Protection for Salmonid Species**

This publication is part of the Water Quality Standards for Surface Waters of the State of Washington (Chapter 173-201A WAC). The maps contained within this publication describe where and when additional temperature criteria are required to ensure protection for the incubation of salmon, trout, and char. Spawning information provided within this publication should be used in conjunction with other aquatic life use information provided in the surface water quality standards. Temperature criteria that apply outside of the spawning seasons can be found in Chapter 173-201A-600 and 602 (Table 602).

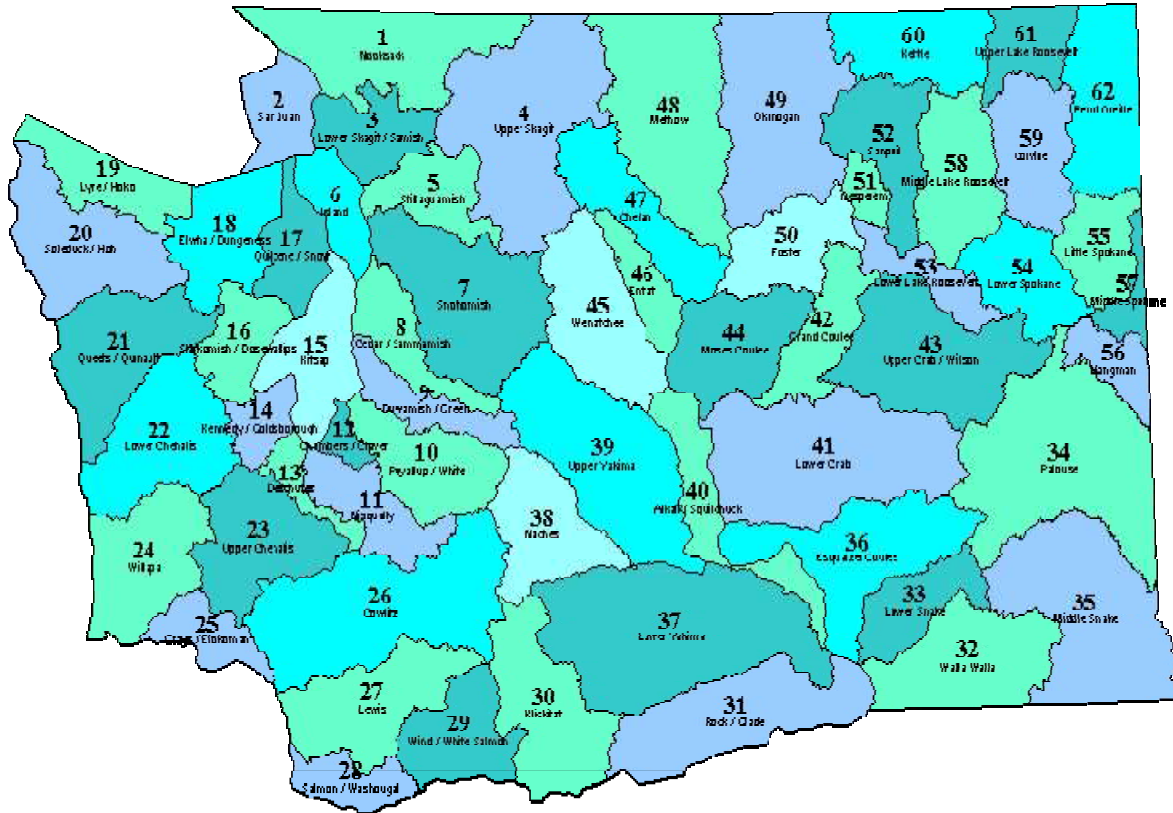
The salmonid populations targeted for the additional protection are those that have eggs and embryos developing in the stream bed in late spring to early fall. Salmonid populations which begin spawning in late fall or whose young have emerged from the stream gravels before late spring do not require added protection.

A spawning temperature of 13°C (as a 7-day average of daily maximum temperatures) is used to protect summer reproduction areas for salmon and trout, and a criterion of 9°C (as a 7-day average of daily maximum temperatures) is used to protect summer reproduction by native char species (bull trout and Dolly Varden). The following maps provide the locations where these criteria are to be applied along with the dates to which they apply.

The state is divided into Water Resource Inventory Areas (WRIA). These large watersheds aid in water management activities. Maps of each WRIA showing waters that require more protective temperature criterion make up the body of this publication. A statewide WRIA map is located in the front of this publication. ***(If there is no map for a given WRIA, this indicates there is no summer spawning data for that particular area.)***

***Note:*** *The maps herein show only where and when supplemental temperature criteria are required to protect the summer season spawning of salmonids. For some of these waters more stringent year-round criteria (7-day average daily maximum of 12°C) must be met to protect use by native char. Refer to Chapter 173-201A-602 (Table 602) to identify where more restrictive criteria have been designated to protect native char (bull trout and Dolly Varden).*

## Washington State Water Resource Inventory Areas

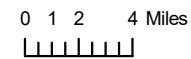
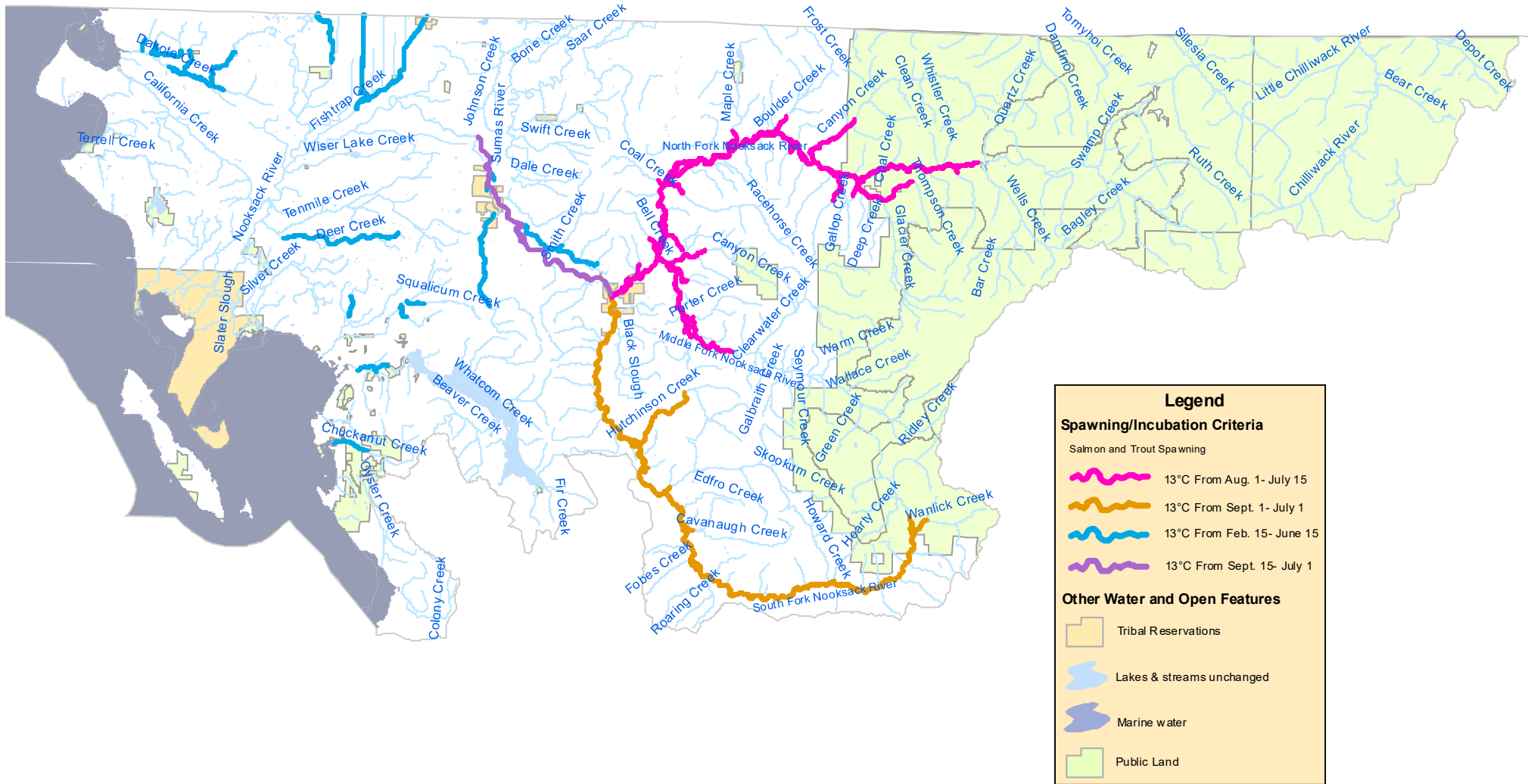


An unlinked map indicates no summer spawning data for that particular area.

1. Nooksack	17. Quilcene/Snow	33. Lower Snake	49. Okanogan
2. San Juan	18. Elwha/Dungeness	34. Palouse	50. Foster
3. Lower Skagit/Samish	19. Lyre/Hoko	35. Middle Snake	51. Nespelem
4. Upper Skagit	20. Soleduc	36. Esquatzel Coulee	52. Sanpoil
5. Stillaguamish	21. Queets/Quinault	37. Lower Yakima	53. Lower Lake Roosevelt
6. Island	22. Lower Chehalis	38. Naches	54. Lower Spokane
7. Snohomish	23. Upper Chehalis	39. Upper Yakima	55. Little Spokane
8. Cedar/Sammamish	24. Willapa	40. Alkaki/Squilchuck	56. Hangman
9. Duwamish/Green	25. Grays/Elochoman	41. Lower Crab	57. Middle Spokane
10. Puyallup/White	26. Cowlitz	42. Grand Coulee	58. Middle Lake Roosevelt
11. Nisqually	27. Lewis	43. Upper Crab/Wilson	59. Colville
12. Chambers/Clover	28. Salmon/Washougal	44. Moses Coulee	60. Kettle
13. Deschutes	29. Wind/White Salmon	45. Wenatchee	61. Upper Lake Roosevelt
14. Kennedy/Goldsborough	30. Klickitat	46. Entiat	62. Pend Oreille
15. Kitsap	31. Rock/Glade	47. Chelan	
16. Skokomish/Dosewallips	32. Walla Walla	48. Methow	

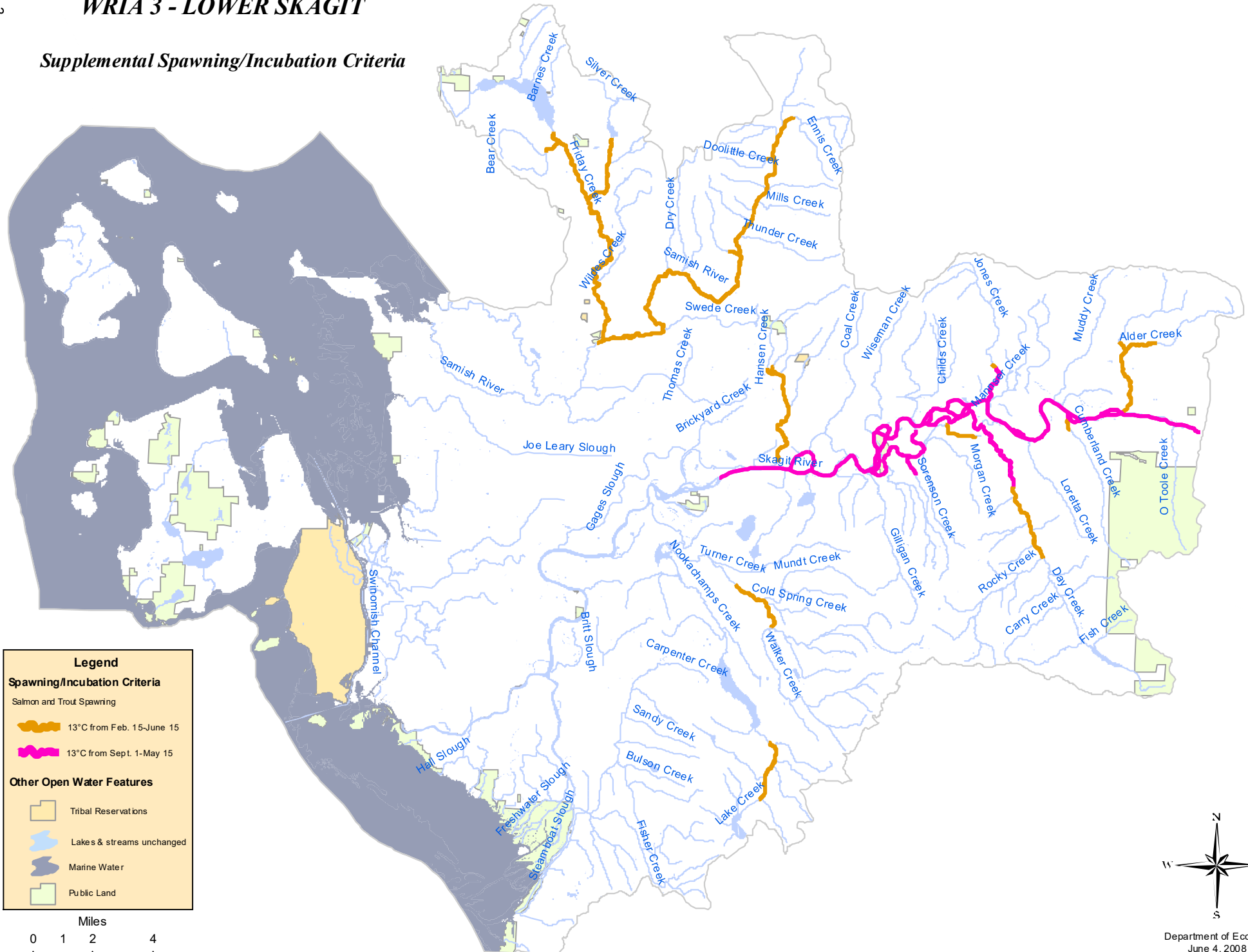
# WRIA 1 NOOKSACK

## Supplemental Spawning/Incubation Criteria



# WRIA 3 - LOWER SKAGIT

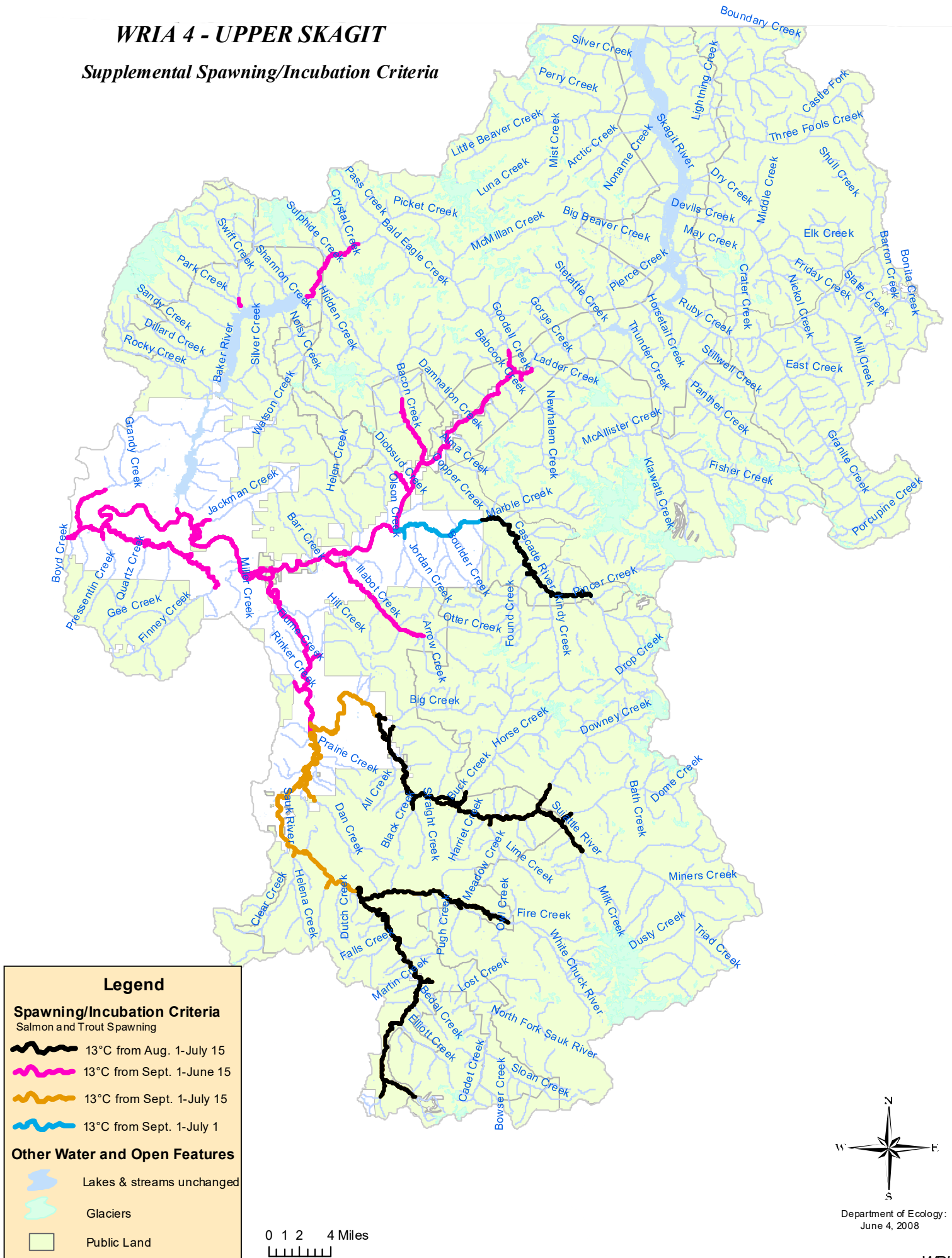
## Supplemental Spawning/Incubation Criteria





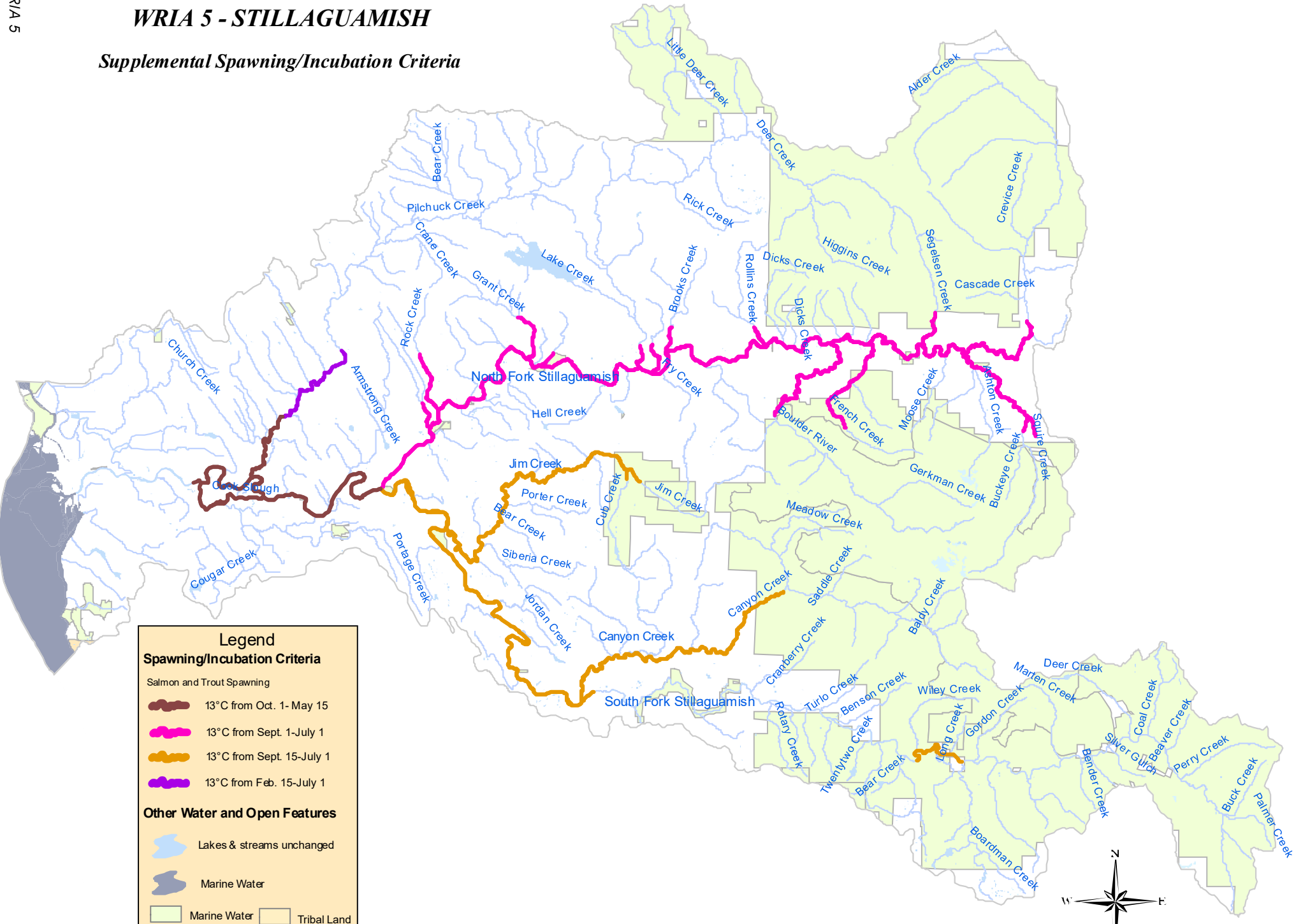
# WRIA 4 - UPPER SKAGIT

## Supplemental Spawning/Incubation Criteria



# WRIA 5 - STILLAGUAMISH

## Supplemental Spawning/Incubation Criteria



**Legend**

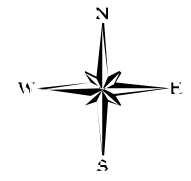
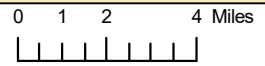
**Spawning/Incubation Criteria**

Salmon and Trout Spawning

- 13°C from Oct. 1- May 15
- 13°C from Sept. 1-July 1
- 13°C from Sept. 15-July 1
- 13°C from Feb. 15-July 1

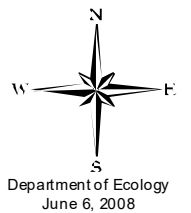
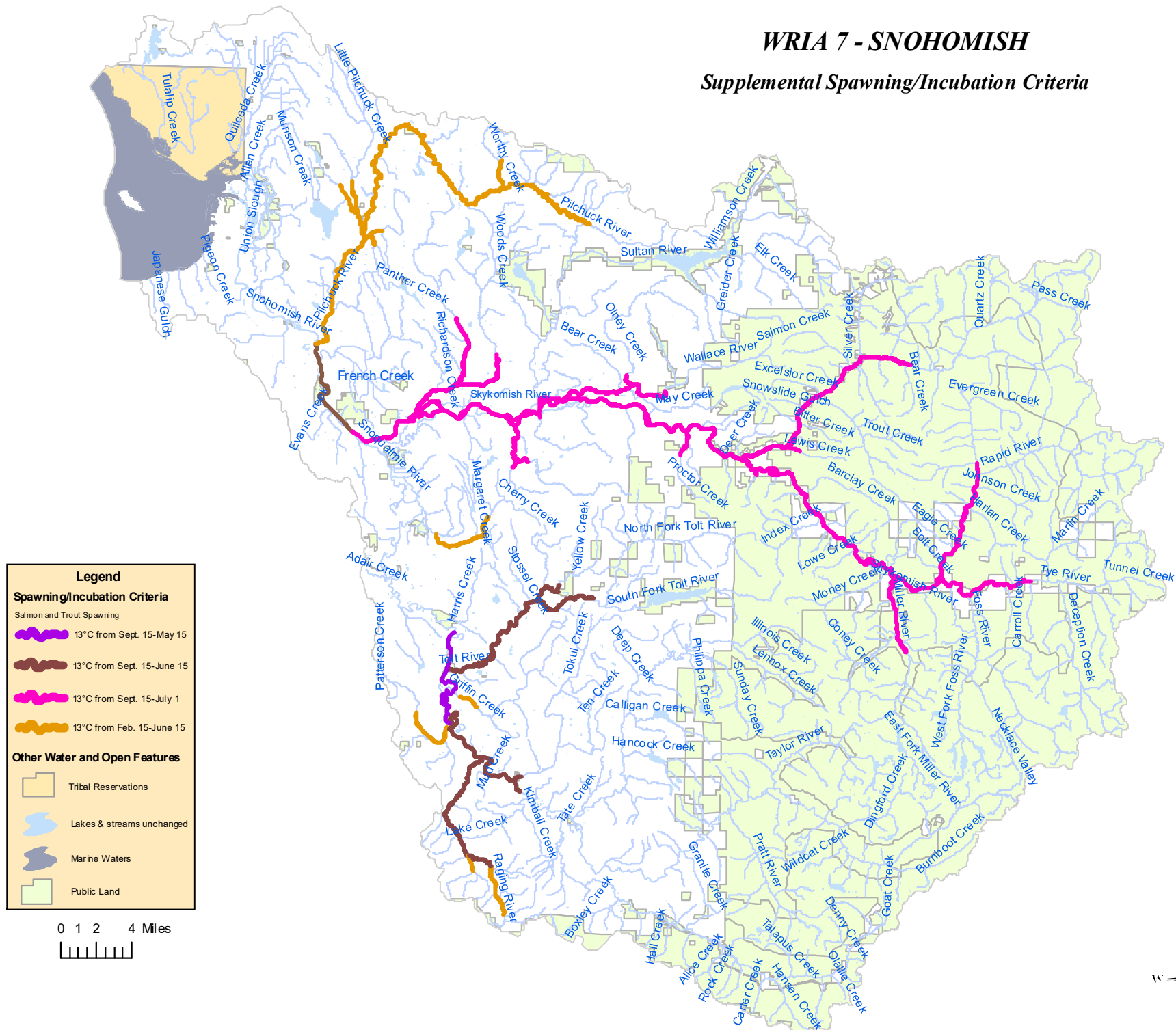
**Other Water and Open Features**

- Lakes & streams unchanged
- Marine Water
- Marine Water
- Tribal Land



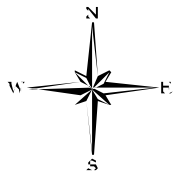
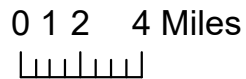
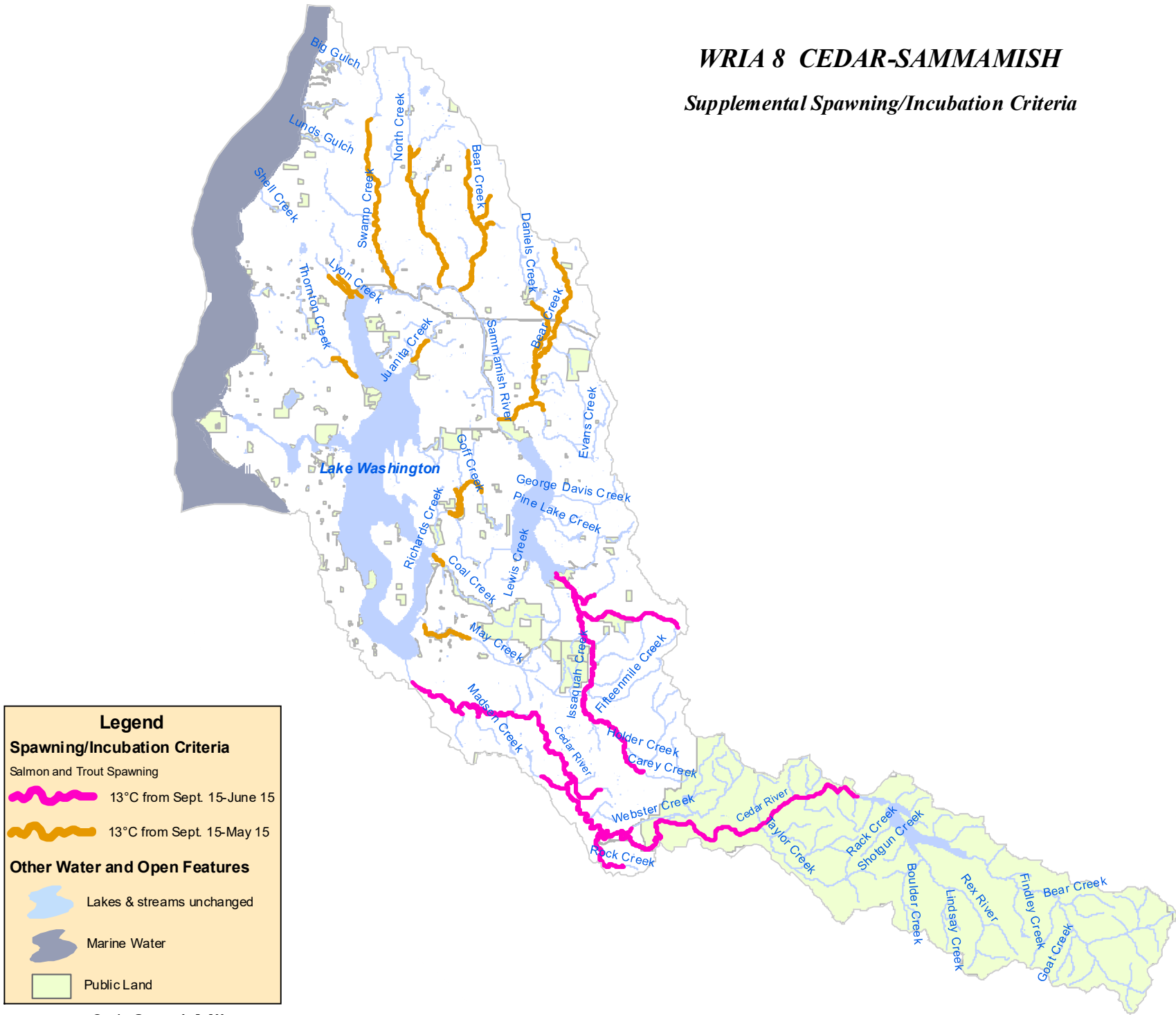
# WRIA 7 - SNOHOMISH

## Supplemental Spawning/Incubation Criteria



# WRIA 8 CEDAR-SAMMAMISH

## Supplemental Spawning/Incubation Criteria




# WRIA 9 DUWAMISH-GREEN

## Supplemental Spawning/Incubation Criteria


**Legend**


**Spawning/Incubation Criteria**


Salmon and Trout Spawning

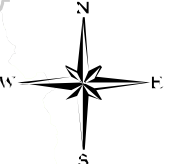
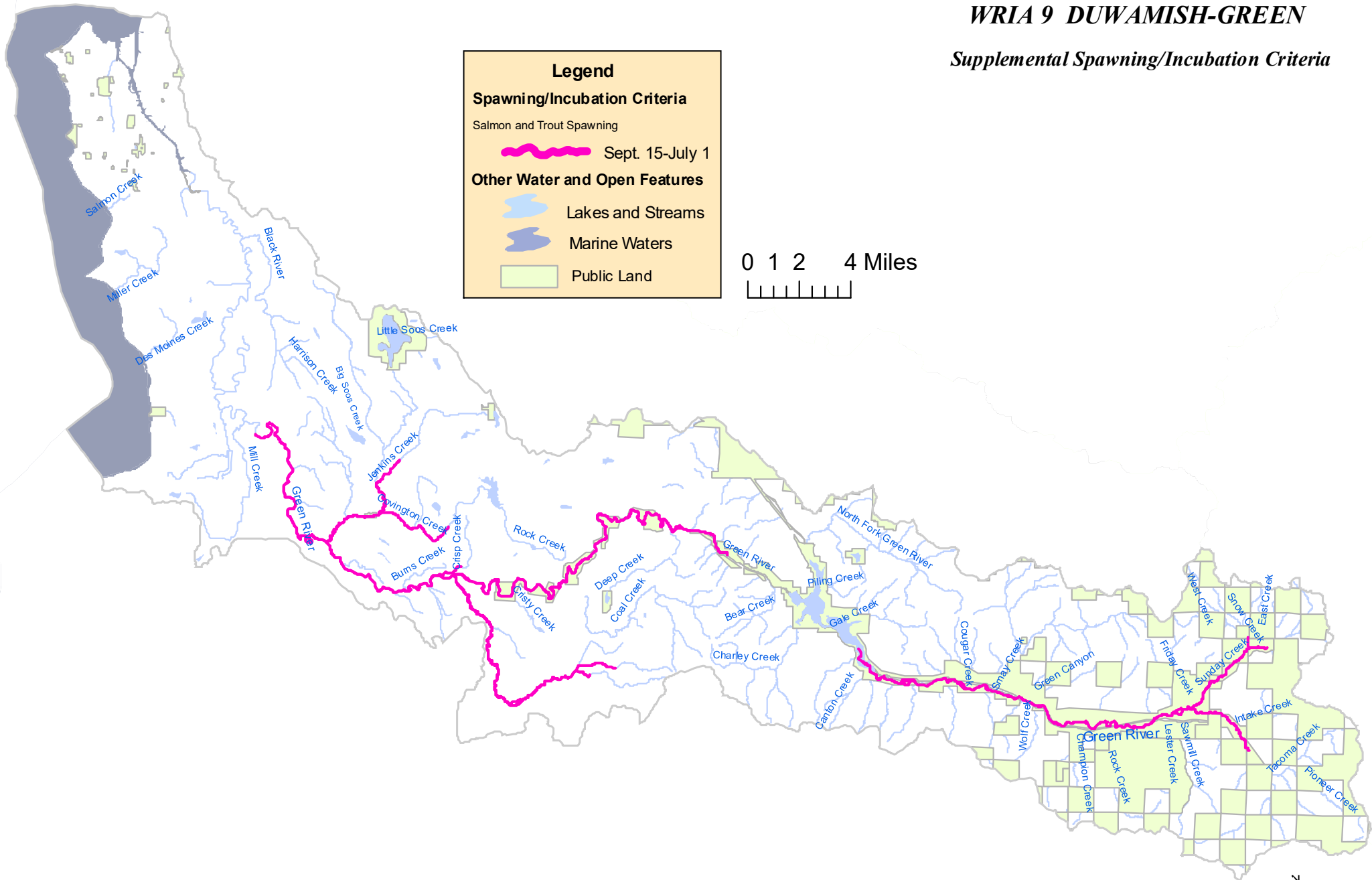
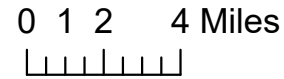
 Sept. 15-July 1

**Other Water and Open Features**

 Lakes and Streams

 Marine Waters

 Public Land





# WRIA 10 Puyallup-White






## Supplemental Spawning/Incubation Criteria

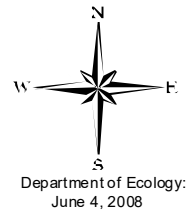
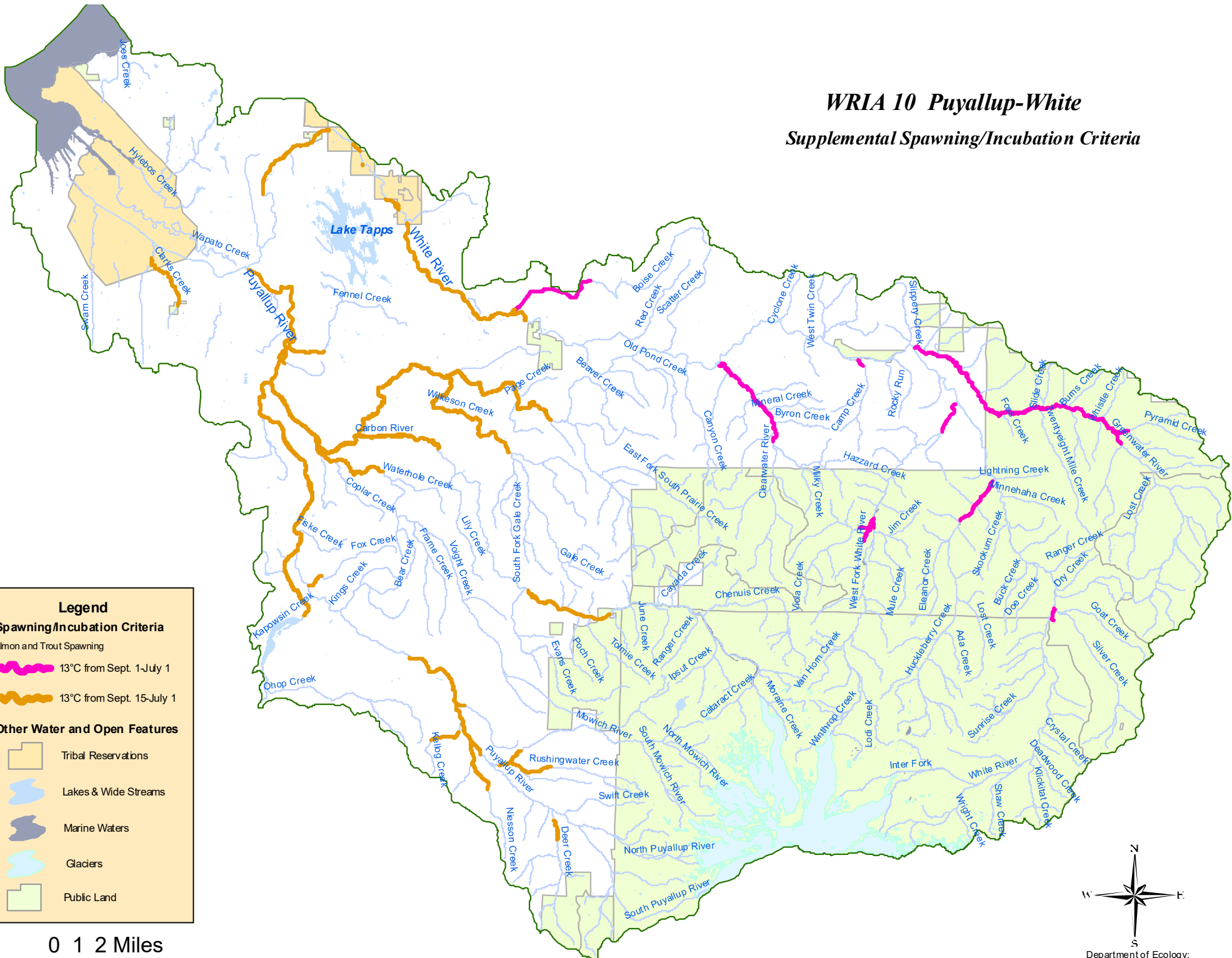
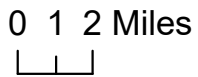
**Legend**

**Spawning/Incubation Criteria**

- Salmon and Trout Spawning
-  13°C from Sept. 1-July 1
-  13°C from Sept. 15-July 1

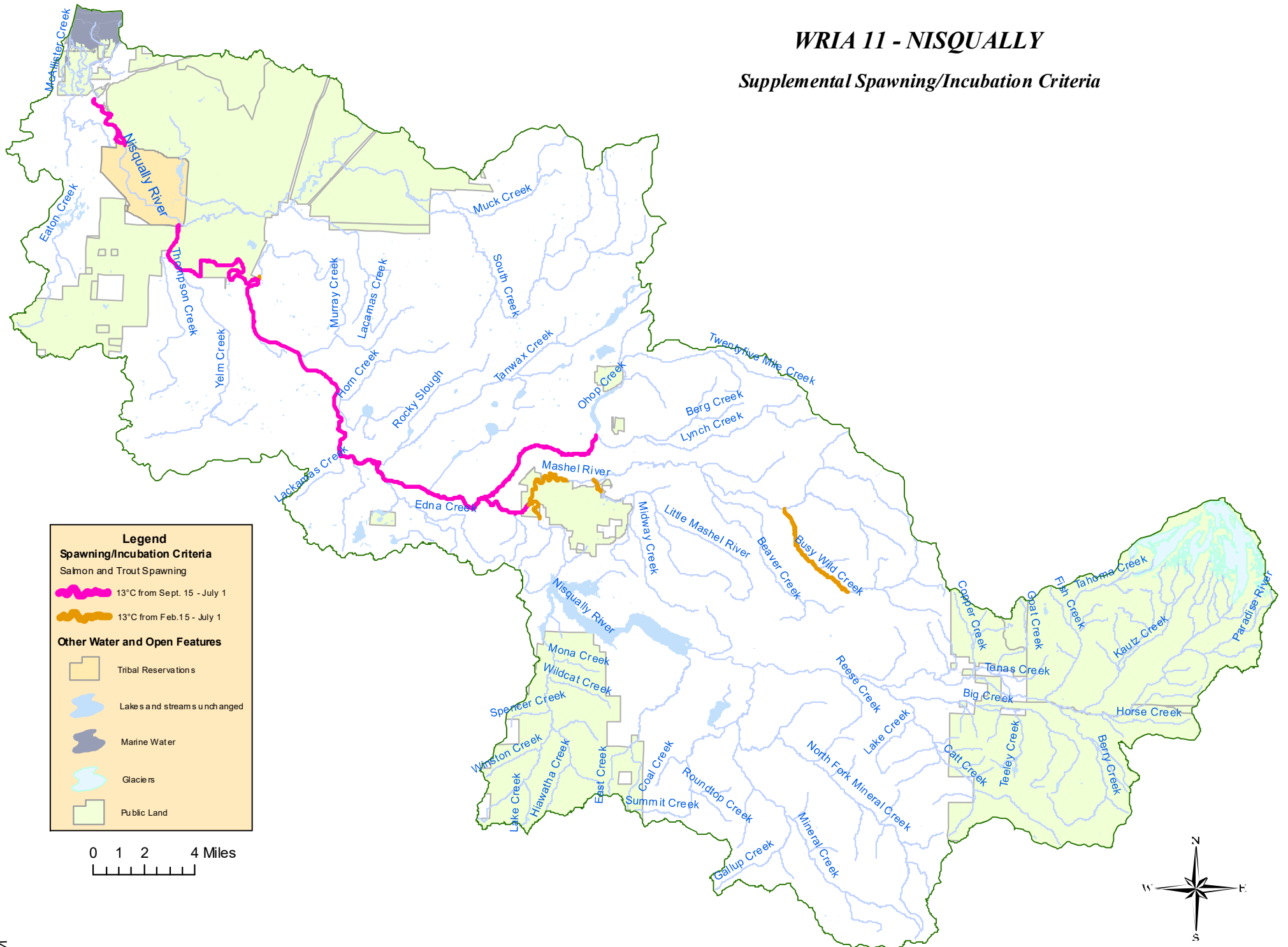
**Other Water and Open Features**

-  Tribal Reservations
-  Lakes & Wide Streams
-  Marine Waters
-  Glaciers
-  Public Land



# WRIA 11 - NISQUALLY

## Supplemental Spawning/Incubation Criteria



**Legend**

**Spawning/Incubation Criteria**

Salmon and Trout Spawning

13°C from Sept. 15 - July 1

13°C from Feb. 15 - July 1

**Other Water and Open Features**

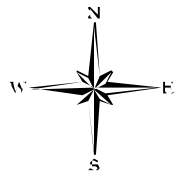
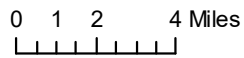
Tribal Reservations

Lakes and streams unchanged

Marine Water

Glaciers

Public Land

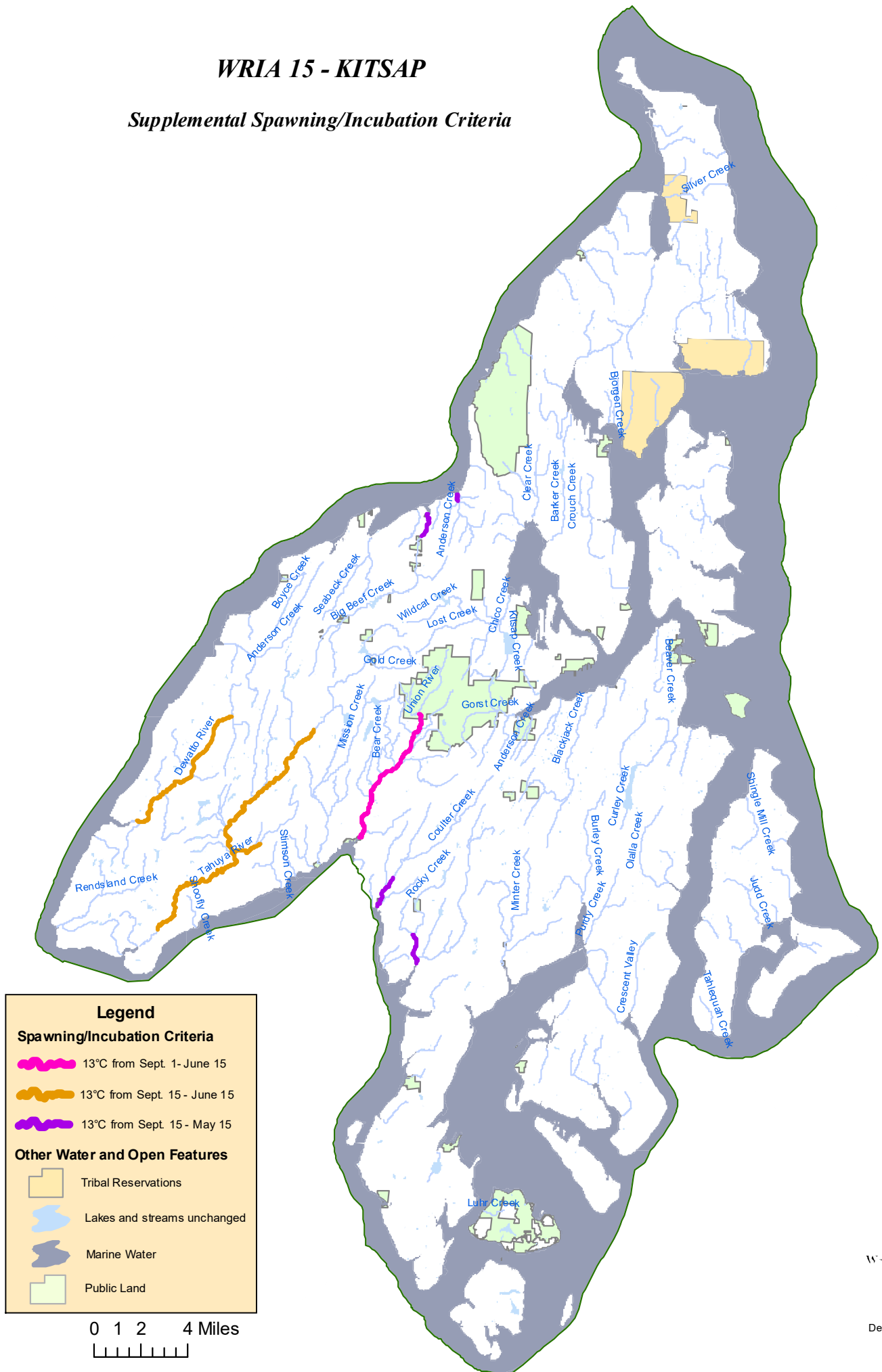






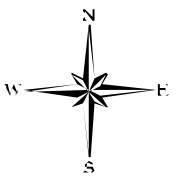
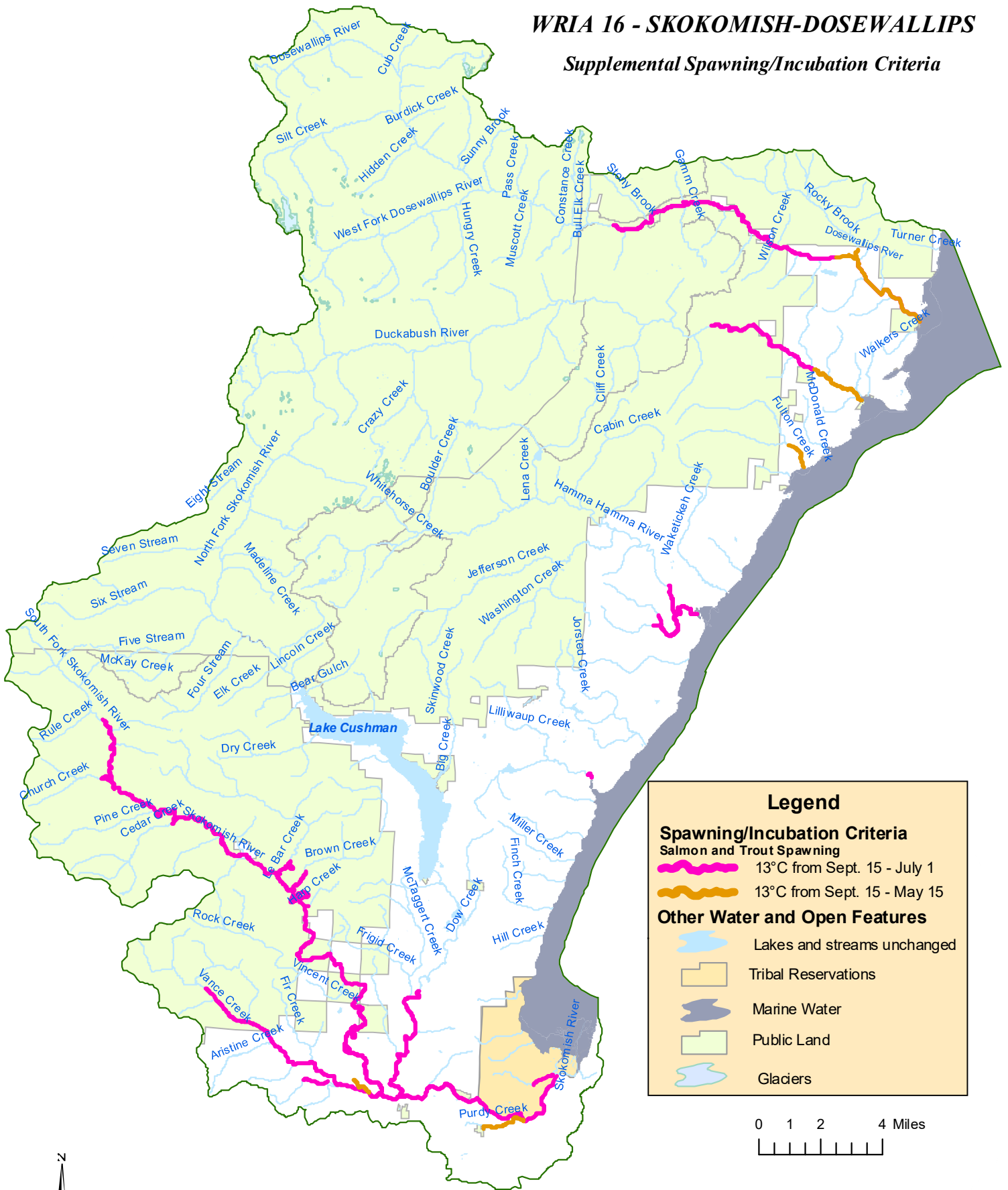
# WRIA 15 - KITSAP

## Supplemental Spawning/Incubation Criteria



# WRIA 16 - SKOKOMISH-DOSEWALLIPS

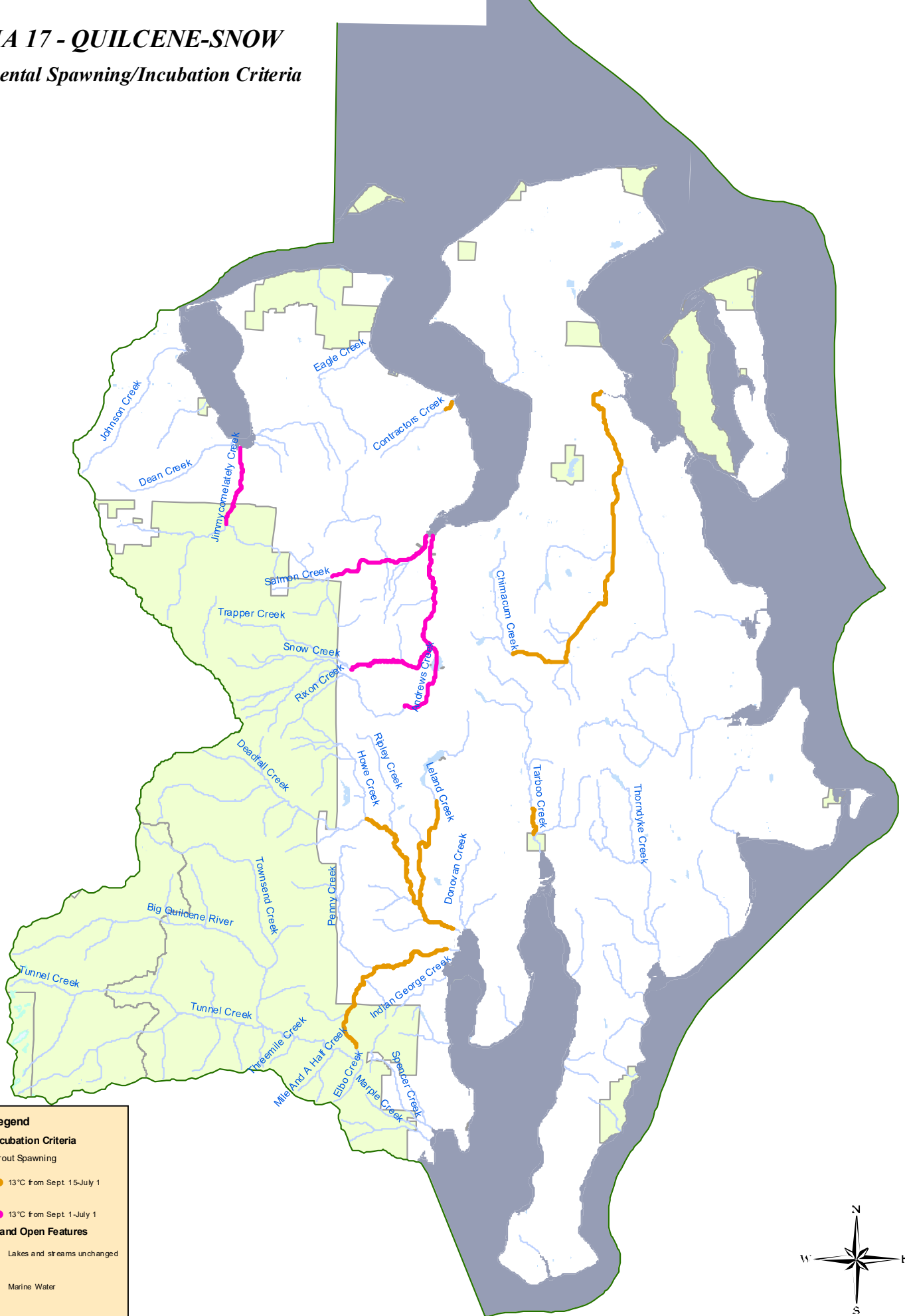
## Supplemental Spawning/Incubation Criteria



Department of Ecology:  
June 4, 2008

# WRIA 17 - QUILCENE-SNOW

## Supplemental Spawning/Incubation Criteria



**Legend**

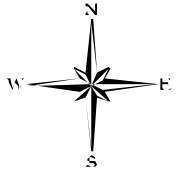
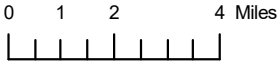
**Spawning/Incubation Criteria**

Salmon and Trout Spawning

- 13°C from Sept 15-July 1
- 13°C from Sept 1-July 1

**Other Water and Open Features**

- Lakes and streams unchanged
- Marine Water
- Glaciers
- Public Land



Department of Ecology:  
June 4, 2008

# WRIA 18 - ELWHA-DUNGENESS

## Supplemental Spawning/Incubation Criteria

**Legend**

**Spawning/Incubation Criteria**

Salmon and Trout Spawning

-  13°C Aug. 15-June 15
-  13°C Aug. 1-June 15
-  13°C Sept. 1-June 15
-  13°C Sept. 1-July 1

**Open Water and Other Features**

-  Lakes & streams unchanged
-  Glaciers
-  Marine Water
-  Tribal Reservations
-  Public Land

