

*Presented below are regulations that include water quality standards (WQS) submitted to EPA for review and approval by the state of Washington.*

*Please refer to Actions Summary Table on EPA's website [Water Quality Standards Regulations: Washington](#) to identify which of these WQS are approved, disapproved, or awaiting completion of EPA review.*



WASHINGTON STATE  
DEPARTMENT OF  
E C O L O G Y

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

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**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*



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# **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



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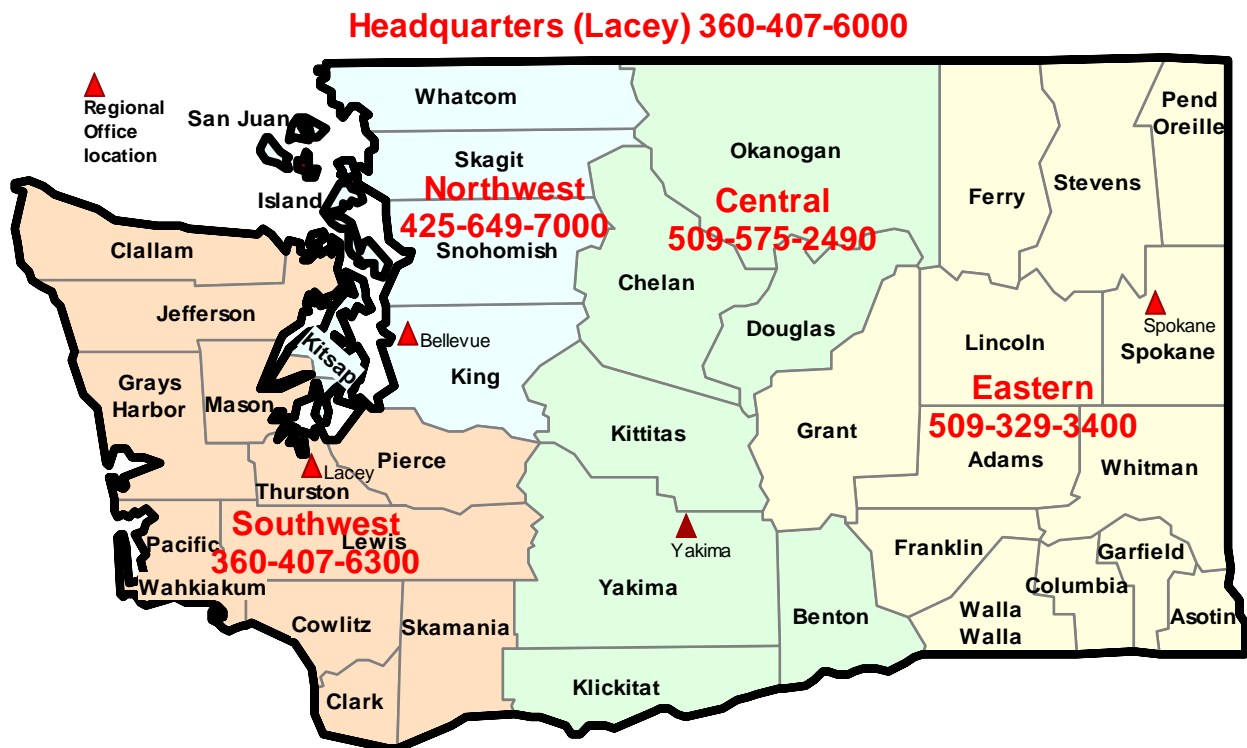


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## **Waters Requiring Supplemental Spawning and Incubation Protection for Salmonid Species**

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).

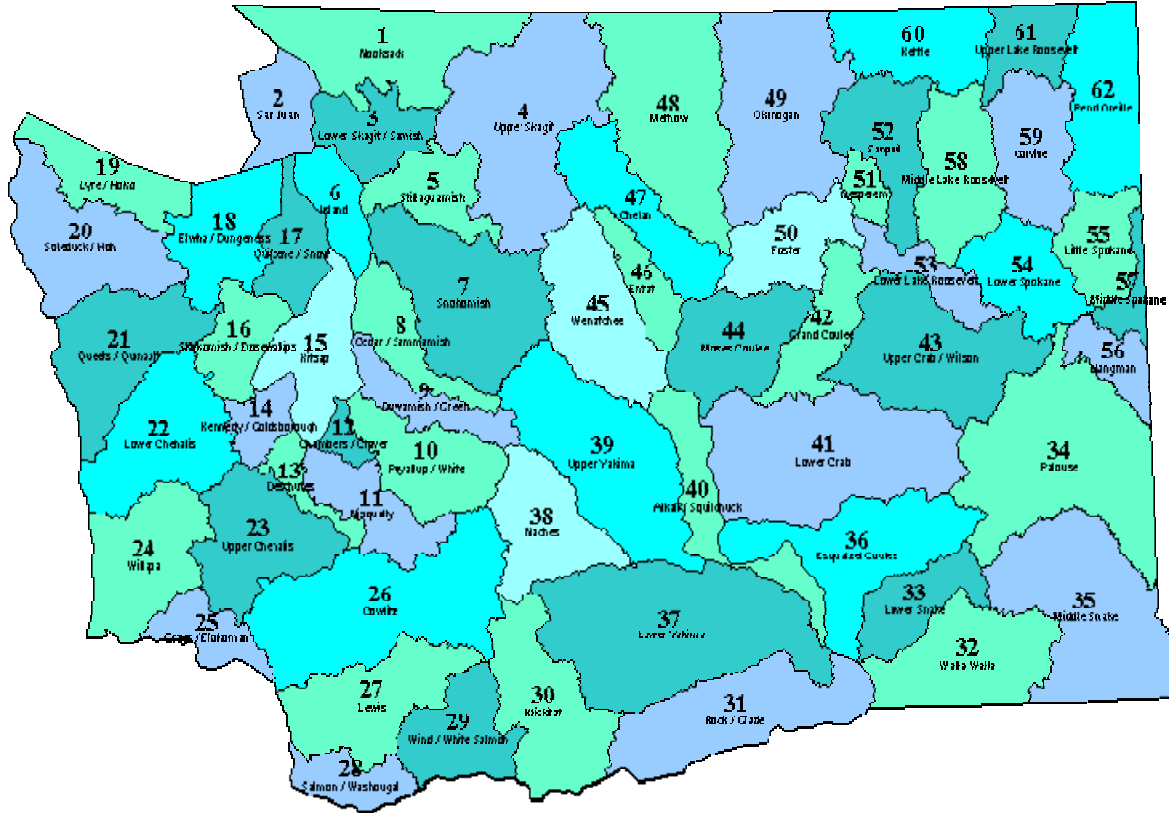
The salmonid populations targeted for the additional protection are those that have eggs and embryos developing in the stream bed in late spring to early fall. Salmonid populations which begin spawning in late fall or whose young have emerged from the stream gravels before late spring do not require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

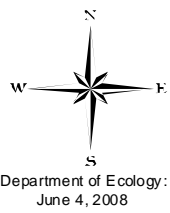
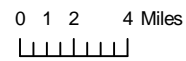
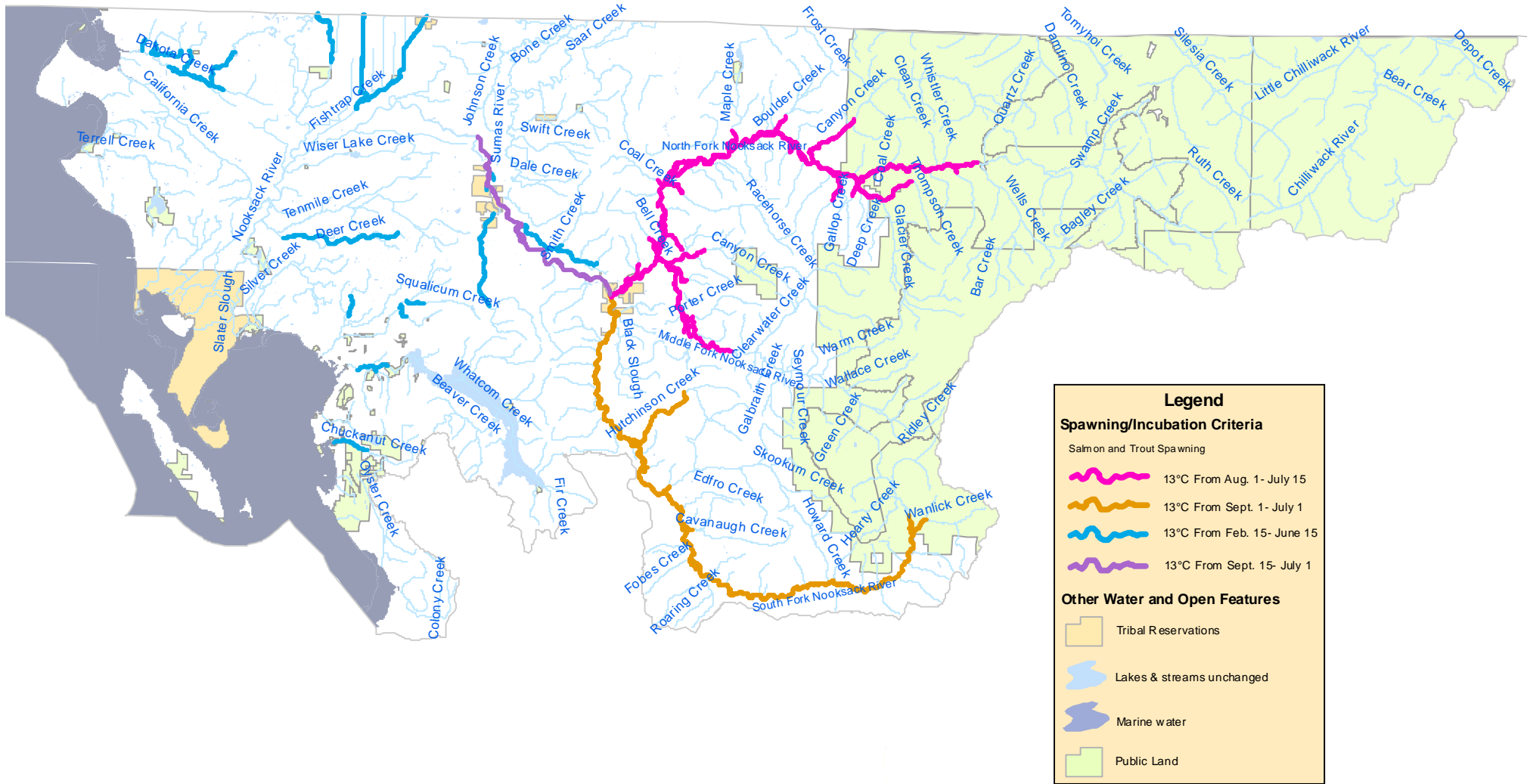


An unlinked map indicates no summer spawning data for that particular area.

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/Squillchuck	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

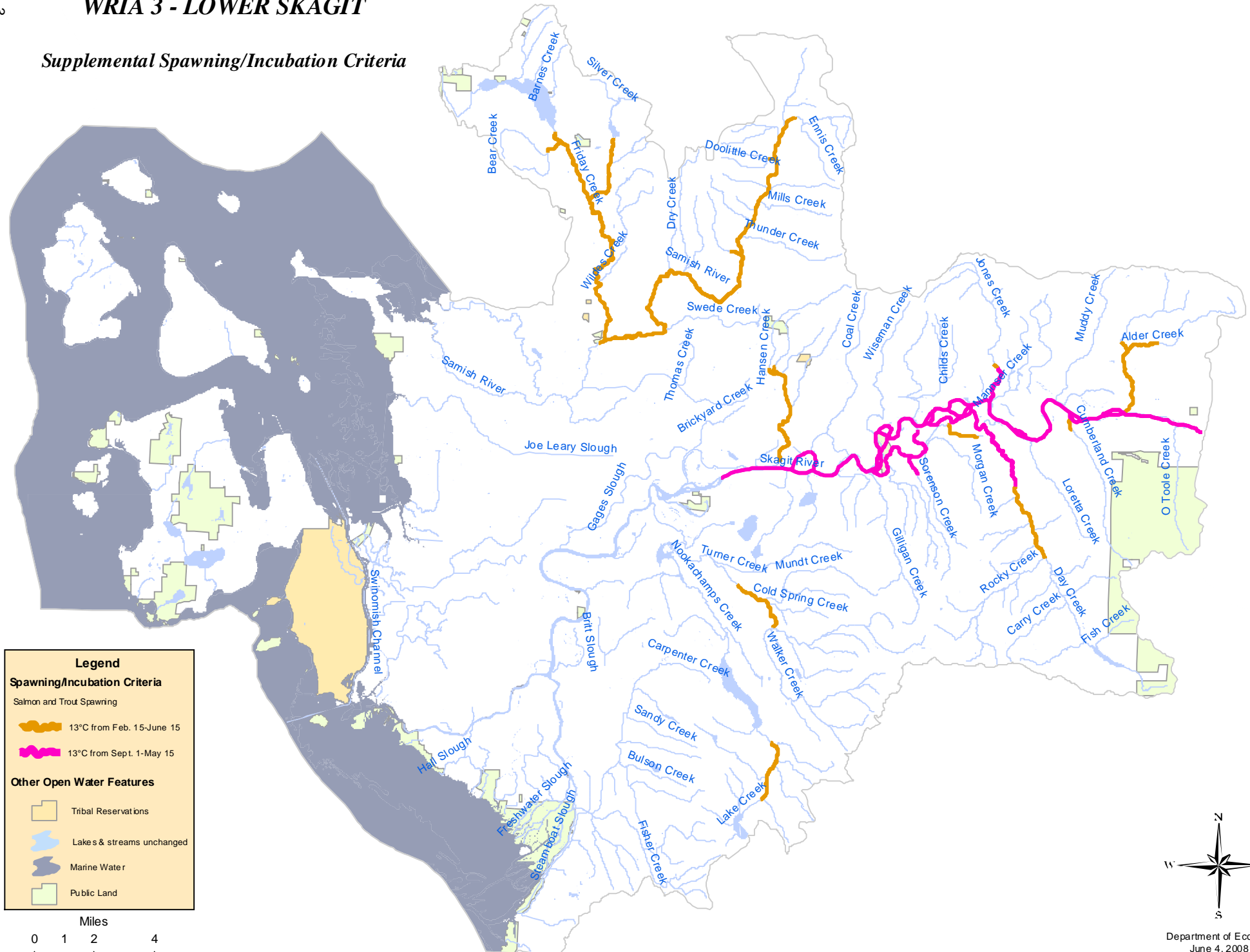
## Supplemental Spawning/Incubation Criteria



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# WRIA 3 - LOWER SKAGIT

## Supplemental Spawning/Incubation Criteria



**Legend**

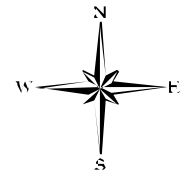
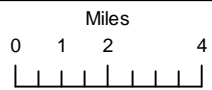
**Spawning/Incubation Criteria**

Salmon and Trout Spawning

- 13°C from Feb. 15-June 15
- 13°C from Sept. 1-May 15

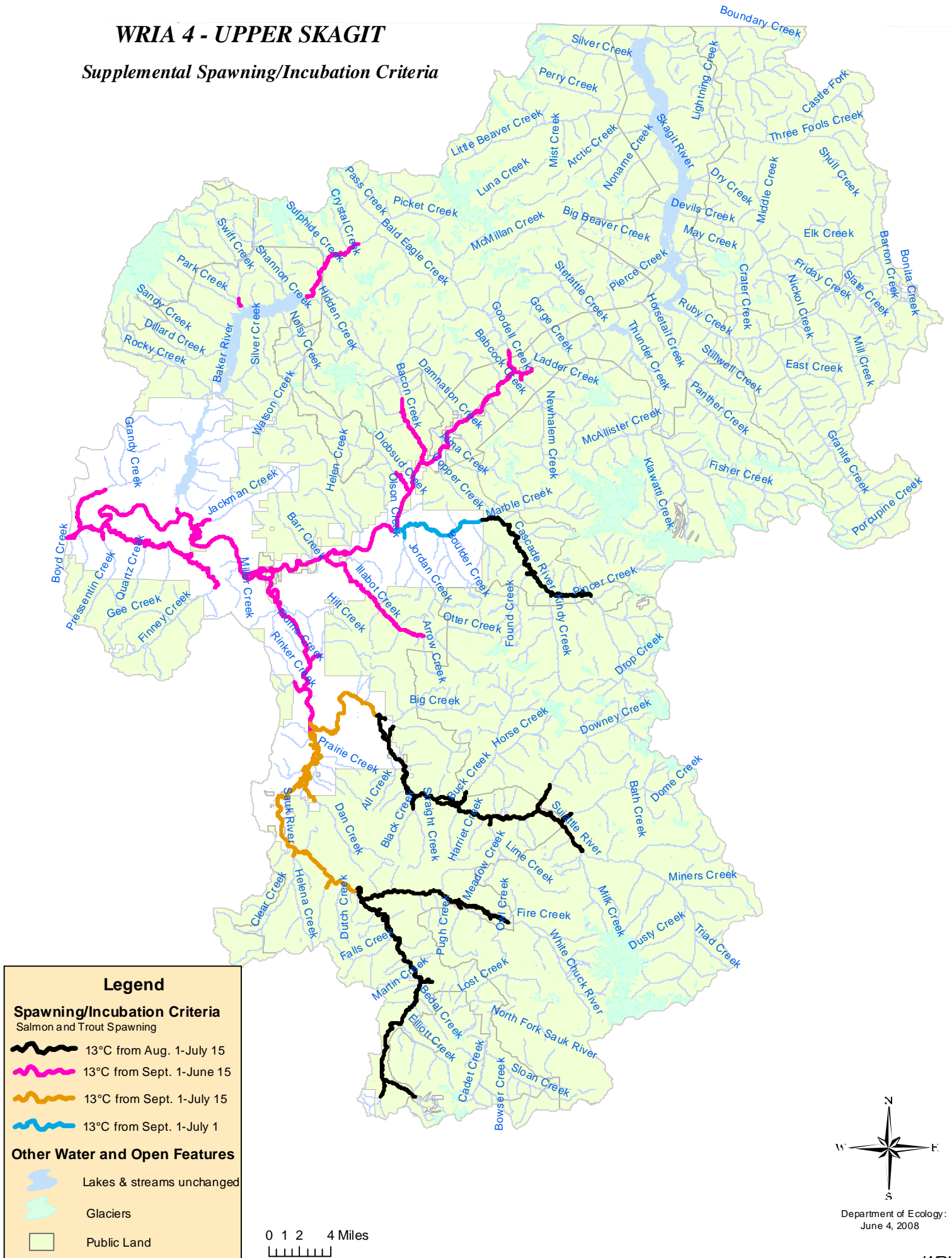
**Other Open Water Features**

- Tribal Reservations
- Lake & streams unchanged
- Marine Water
- Public Land



# WRIA 4 - UPPER SKAGIT

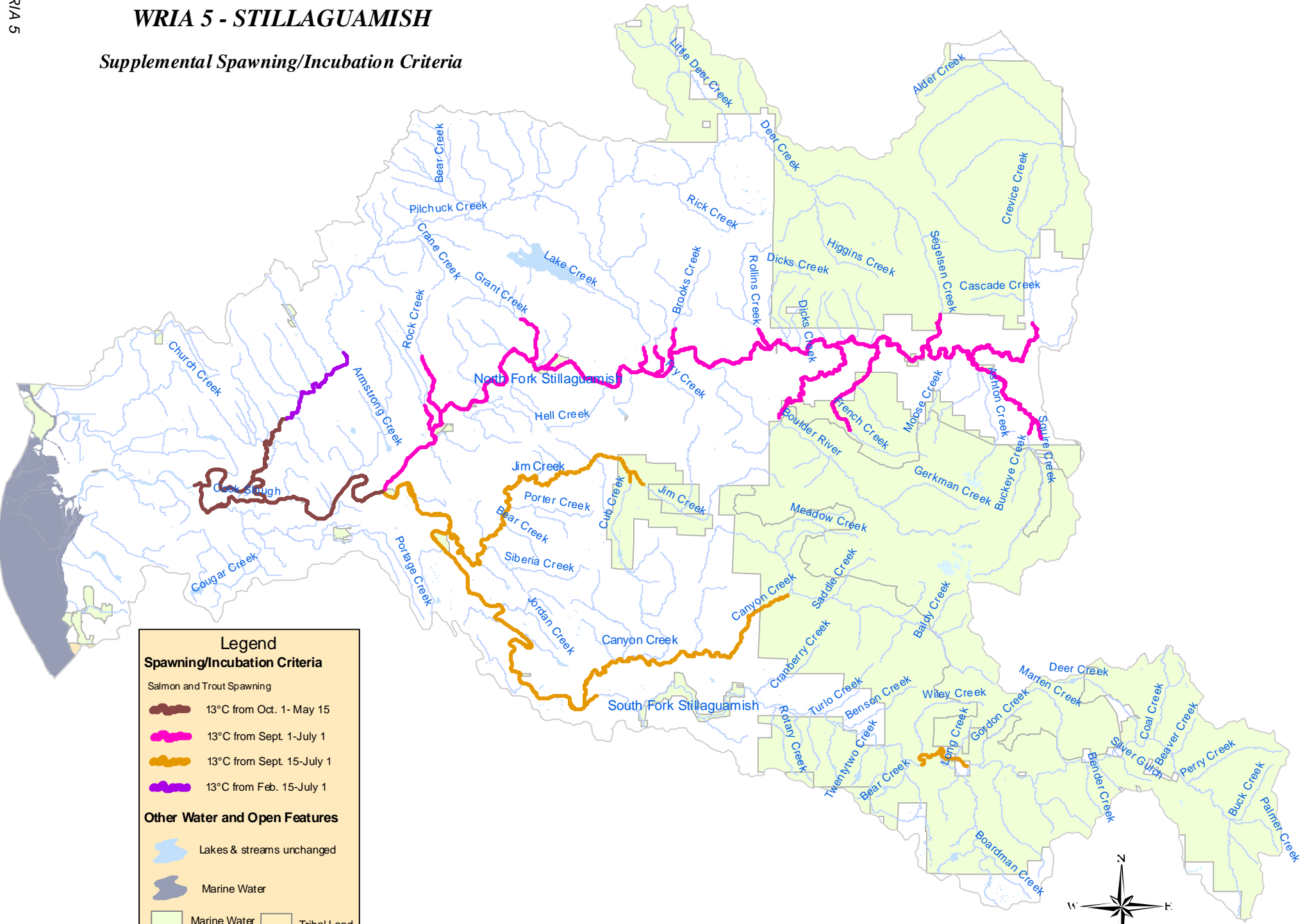
## Supplemental Spawning/Incubation Criteria





# WRIA 5 - STILLAGUAMISH

## Supplemental Spawning/Incubation Criteria



**Legend**

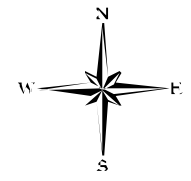
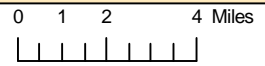
**Spawning/Incubation Criteria**

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

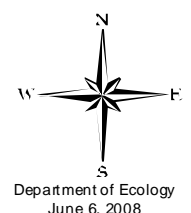
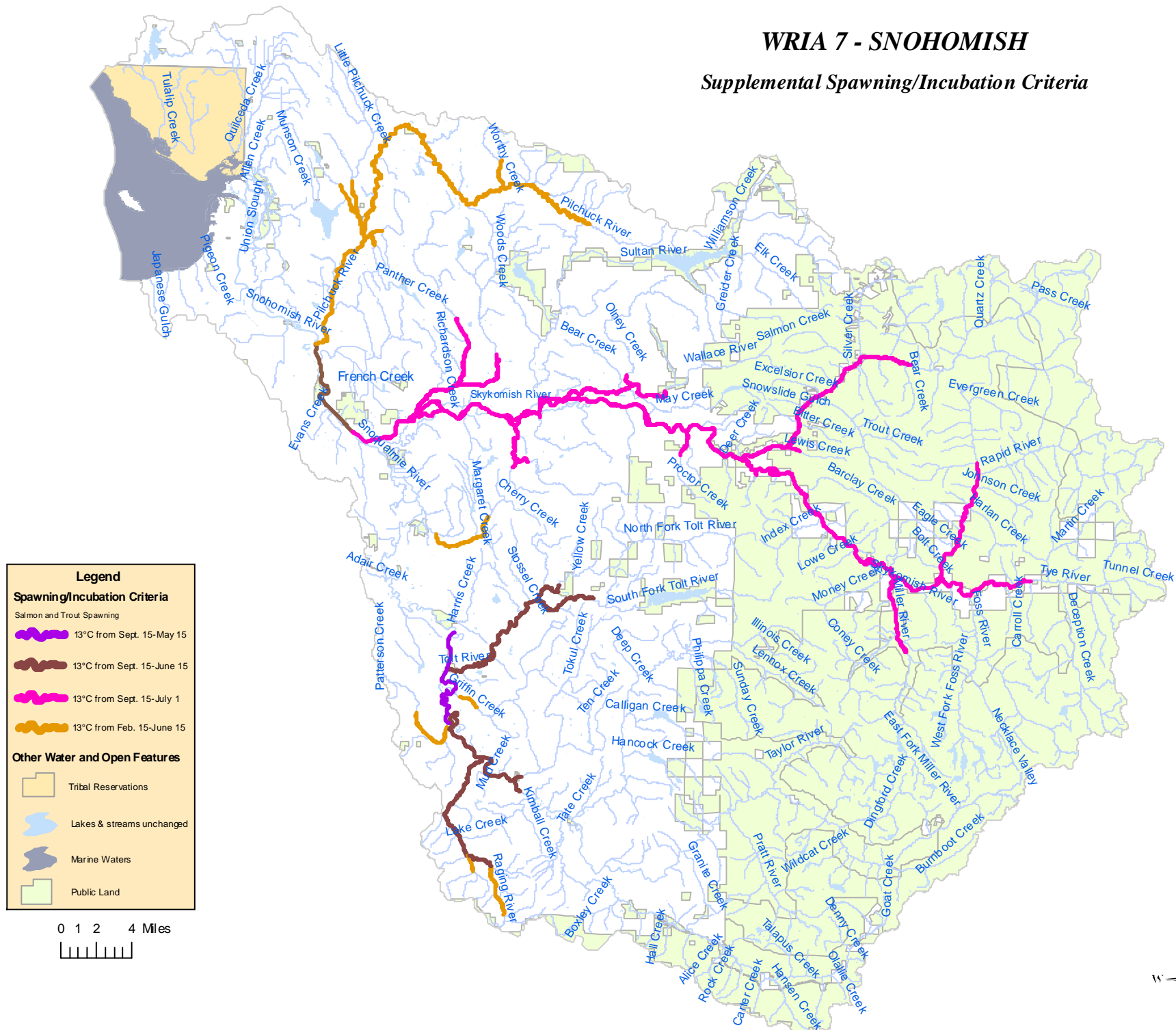
**Other Water and Open Features**

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



# WRIA 7 - SNOHOMISH

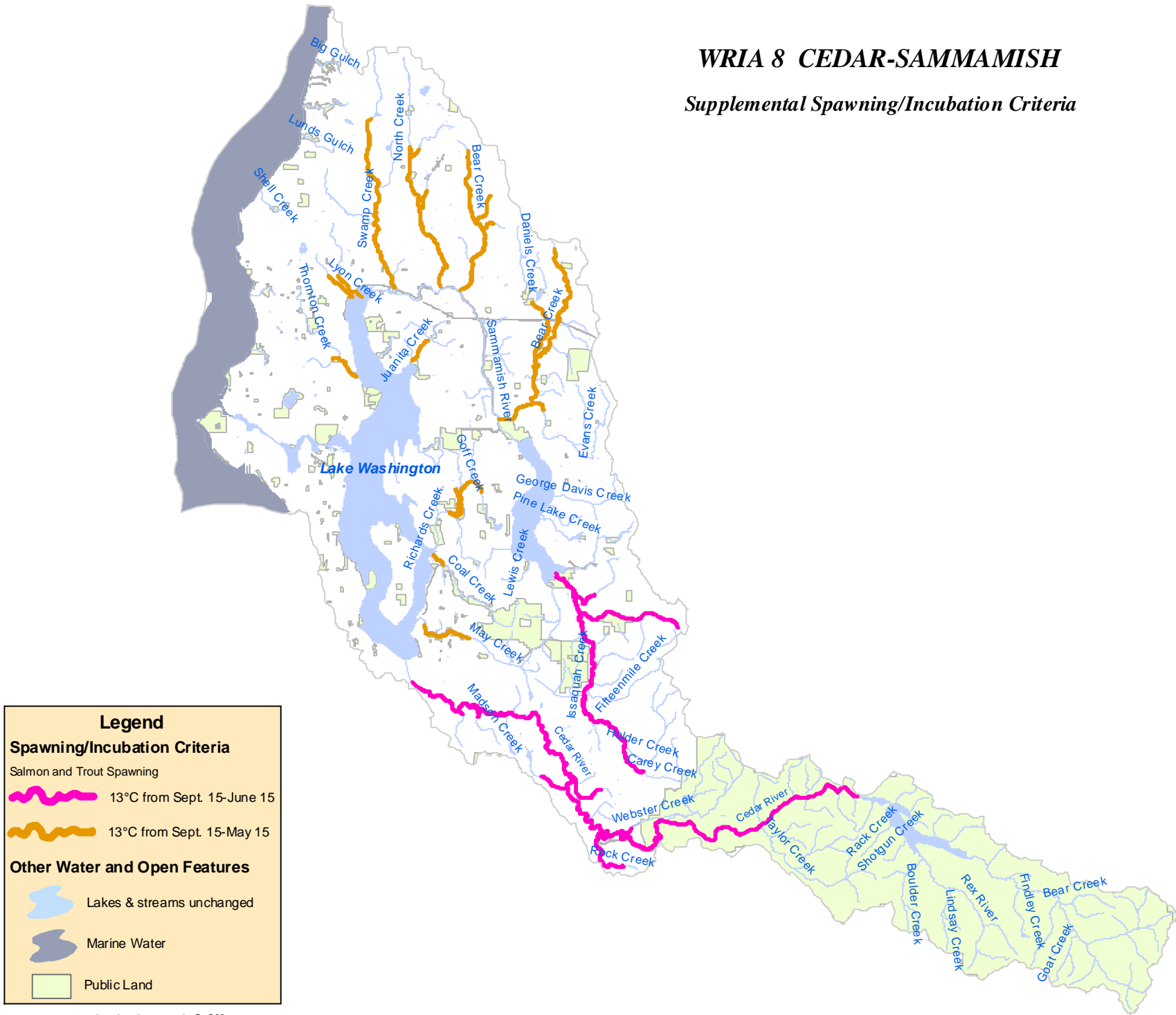
## Supplemental Spawning/Incubation Criteria





# WRIA 8 CEDAR-SAMMAMISH


## Supplemental Spawning/Incubation Criteria




**Legend**


**Spawning/Incubation Criteria**


Salmon and Trout Spawning


 13°C from Sept. 15-June 15

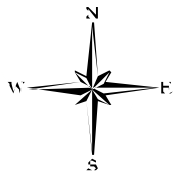
 13°C from Sept. 15-May 15

**Other Water and Open Features**

 Lakes & streams unchanged

 Marine Water

 Public Land




# WRIA 9 DUWAMISH-GREEN

## Supplemental Spawning/Incubation Criteria


**Legend**


**Spawning/Incubation Criteria**


Salmon and Trout Spawning

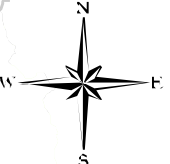
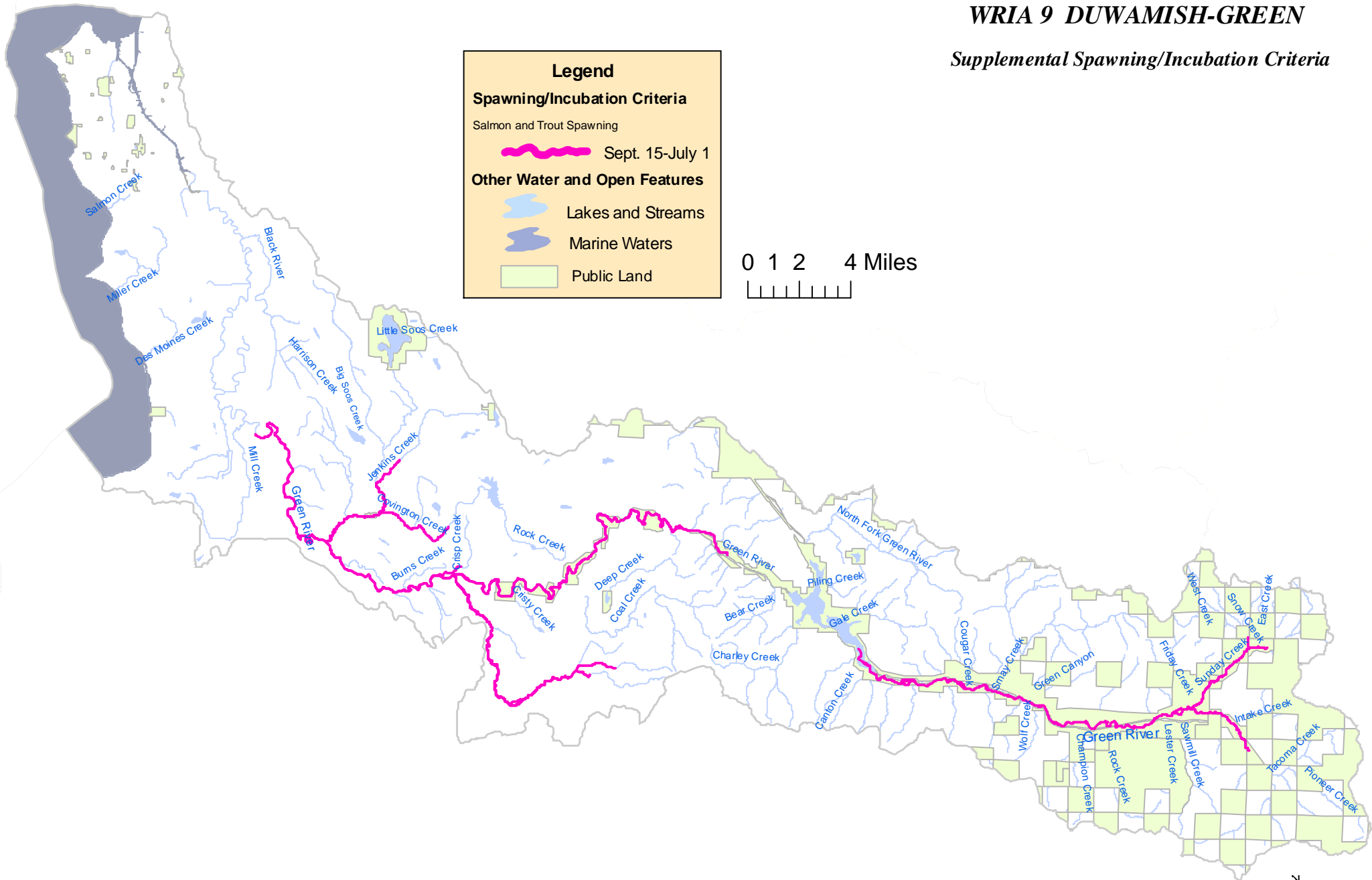
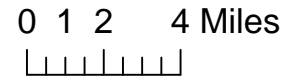
 Sept. 15-July 1

**Other Water and Open Features**

 Lakes and Streams

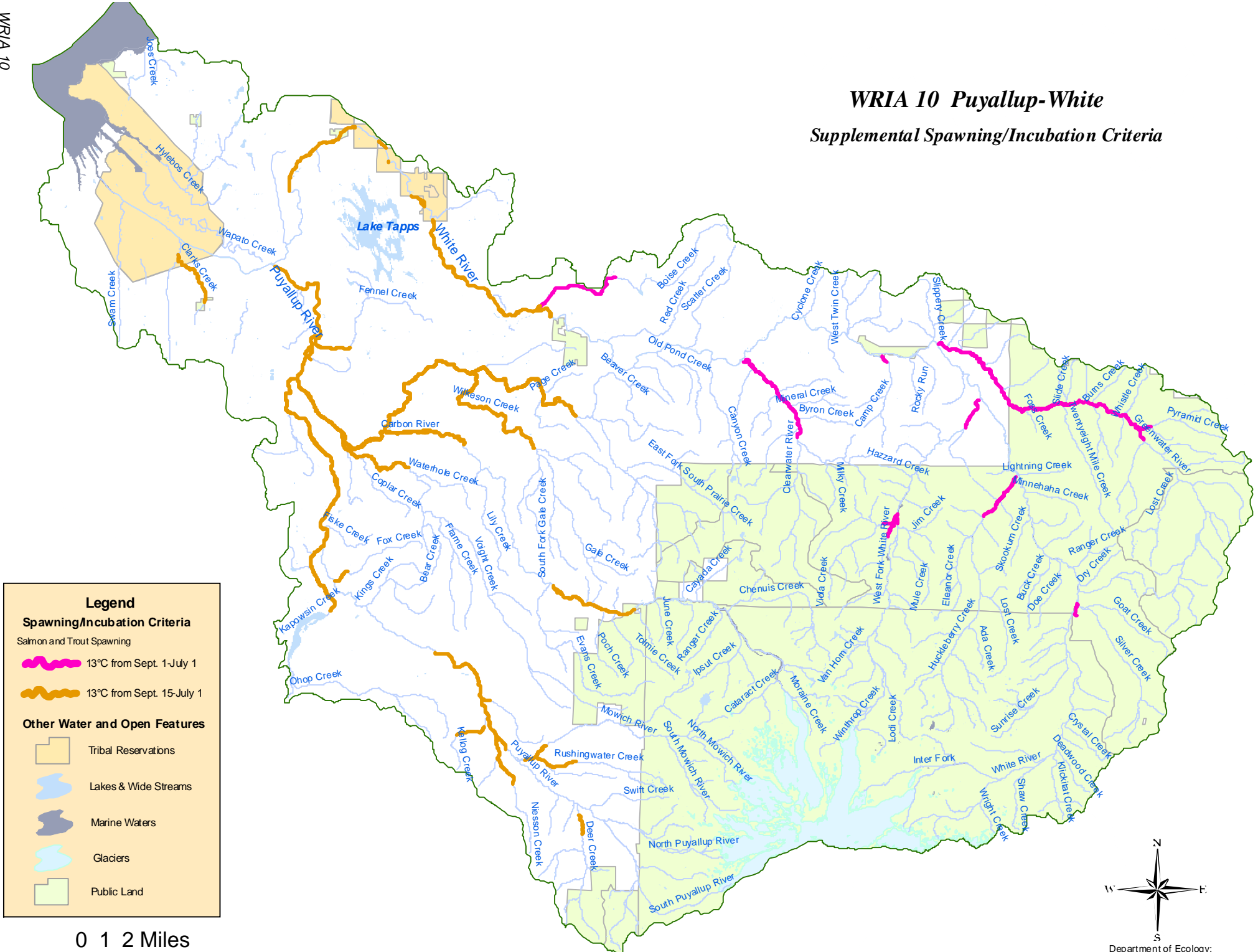
 Marine Waters

 Public Land



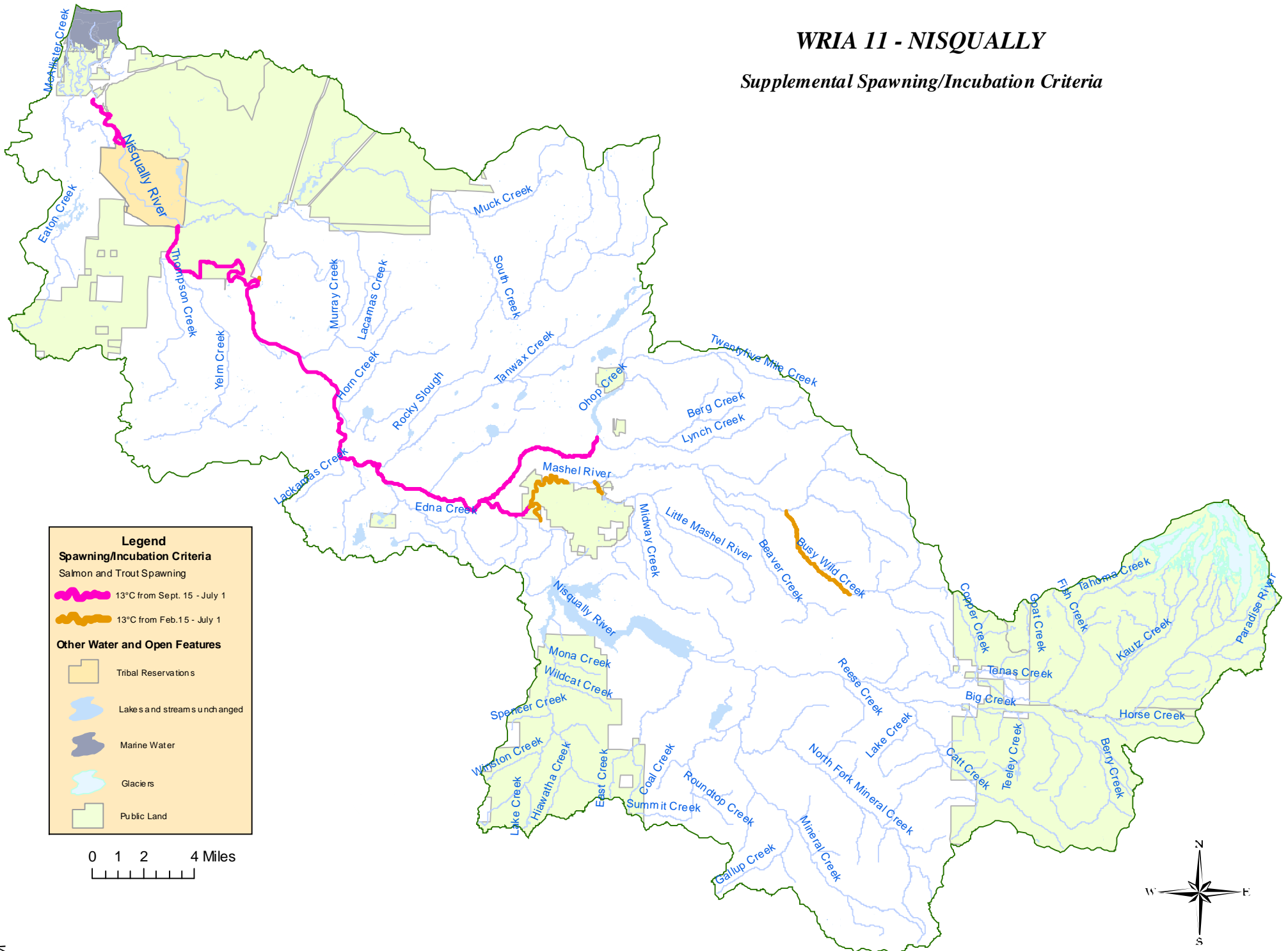
# WRIA 10 Puyallup-White

## Supplemental Spawning/Incubation Criteria



# WRIA 11 - NISQUALLY

## Supplemental Spawning/Incubation Criteria



**Legend**

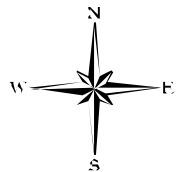
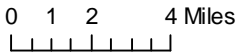
**Spawning/Incubation Criteria**

Salmon and Trout Spawning

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

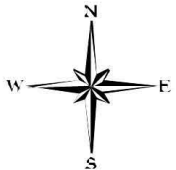
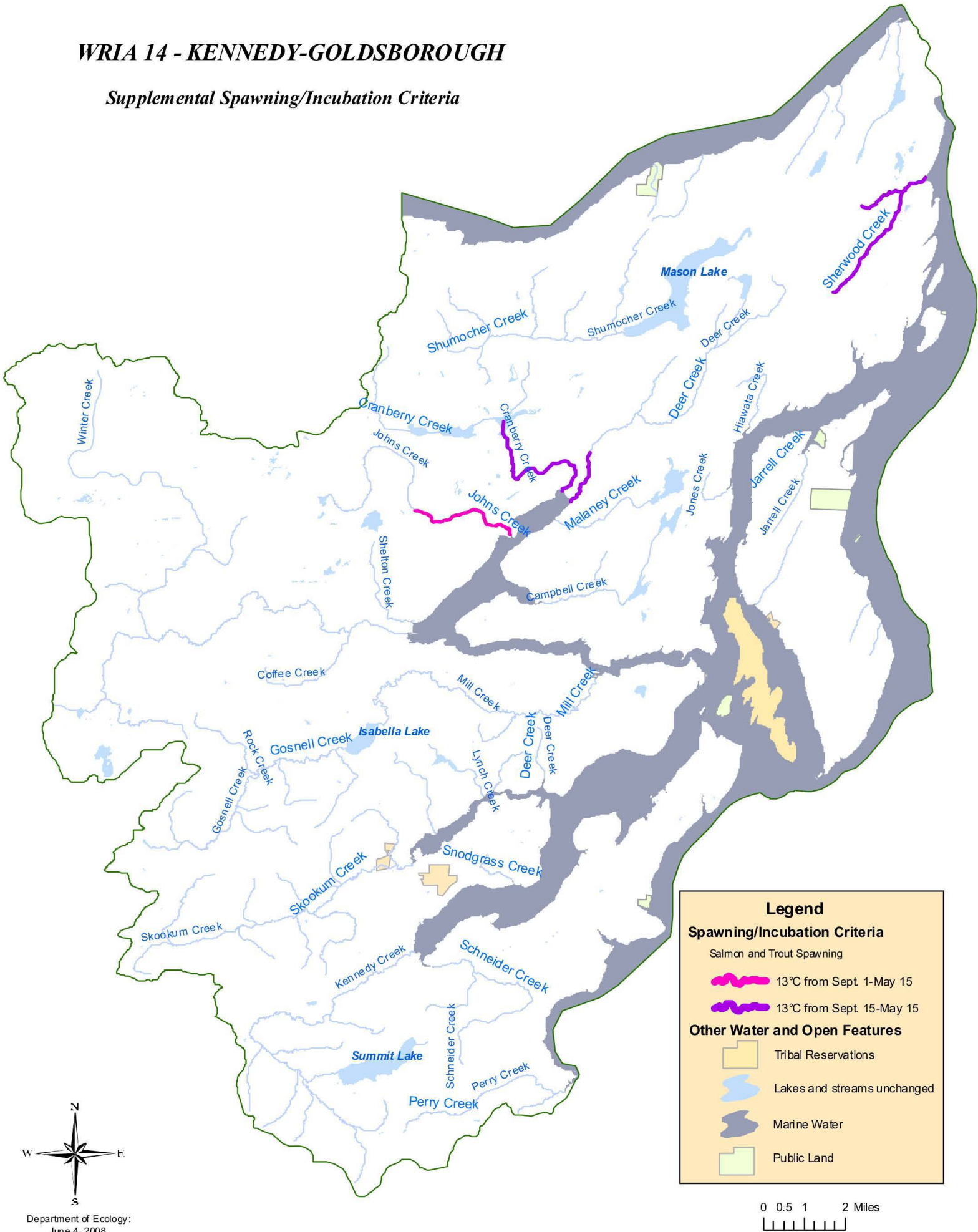
**Other Water and Open Features**

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



# WRIA 14 - KENNEDY-GOLDSBOROUGH

## Supplemental Spawning/Incubation Criteria



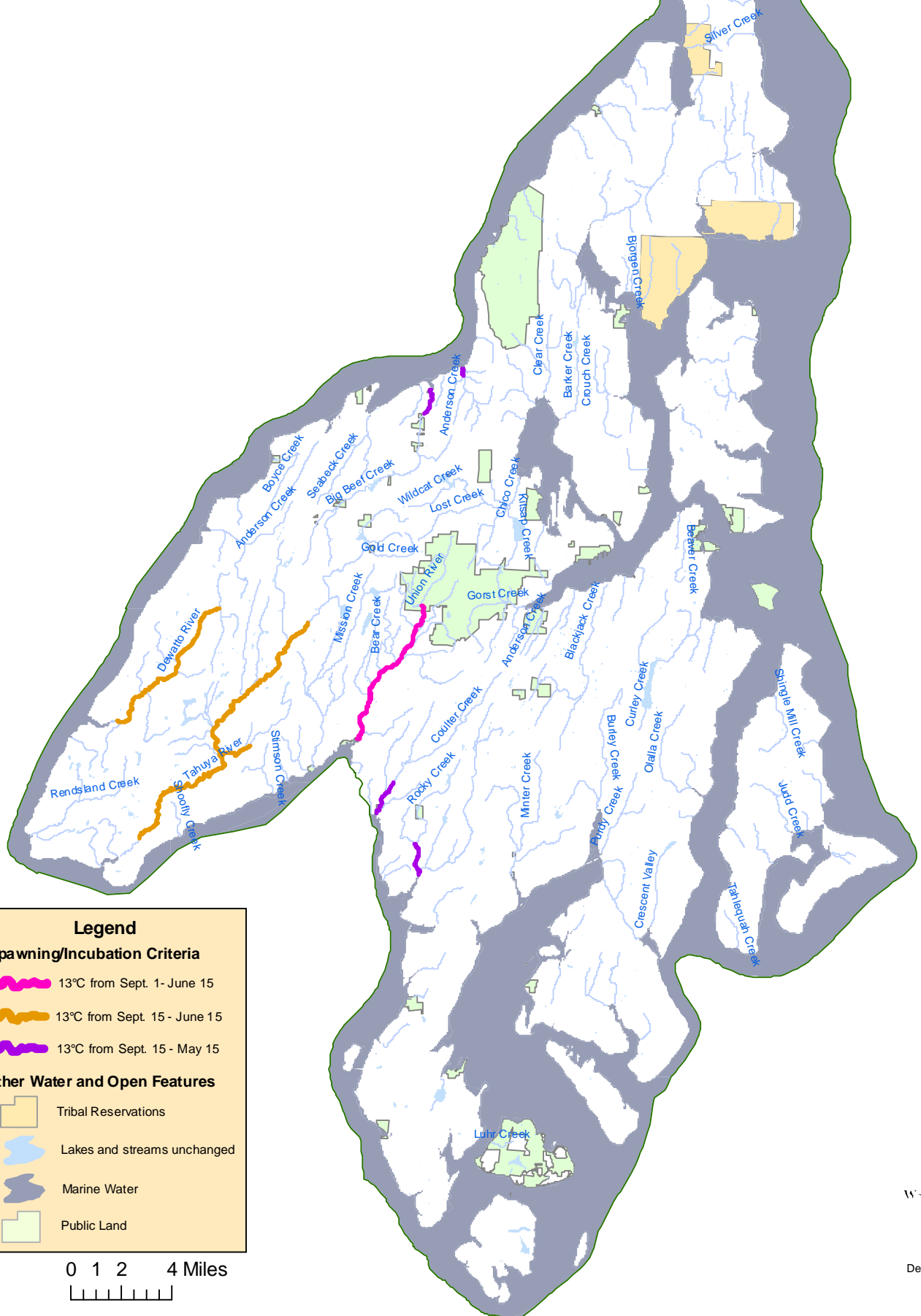
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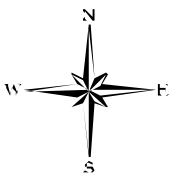
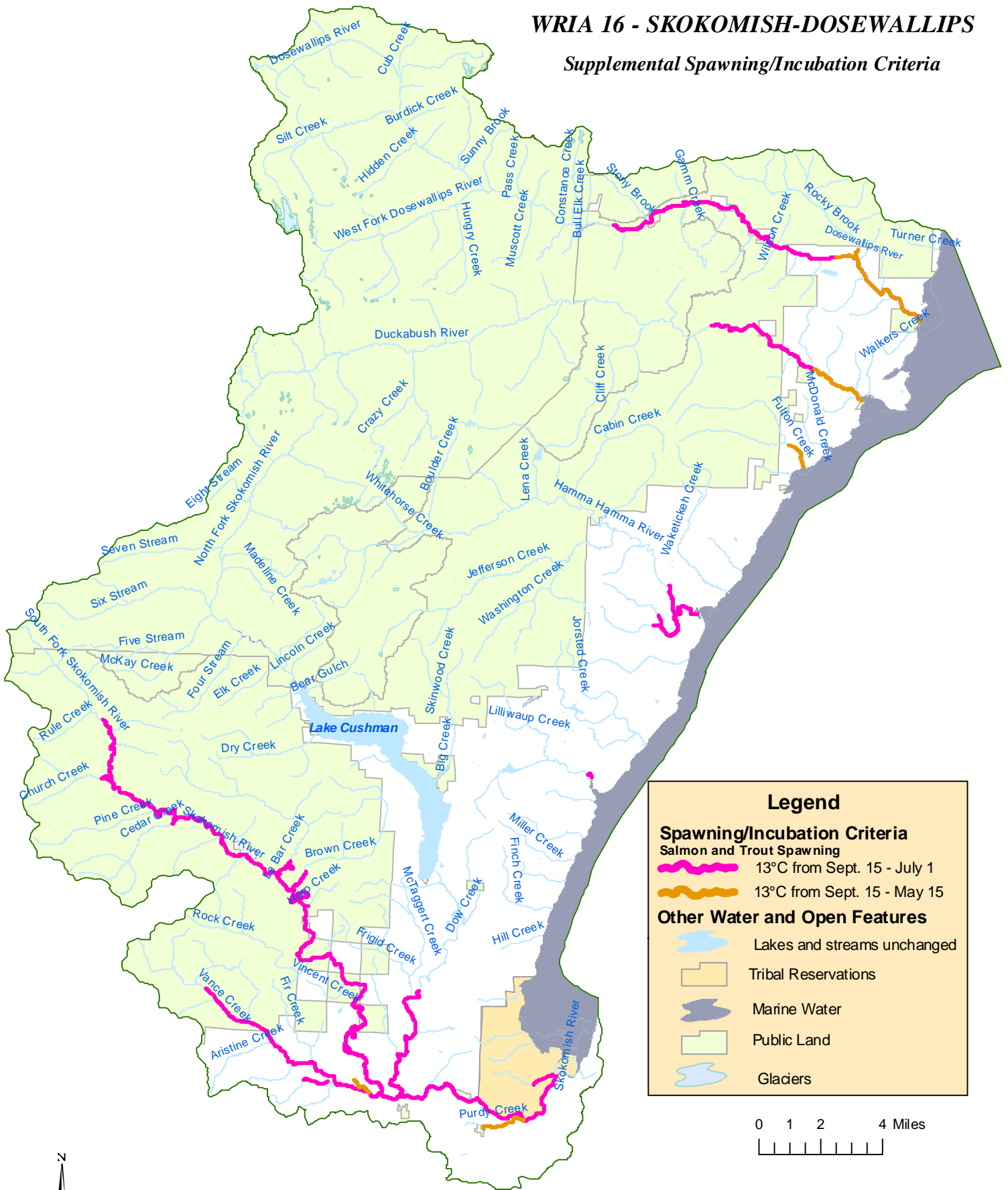
# WRIA 15 - KITSAP

## Supplemental Spawning/Incubation Criteria



# WRIA 16 - SKOKOMISH-DOSEWALLIPS

## Supplemental Spawning/Incubation Criteria



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# WRIA 17 - QUILCENE-SNOW

## Supplemental Spawning/Incubation Criteria

**Legend**

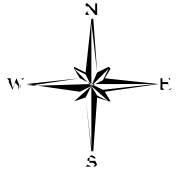
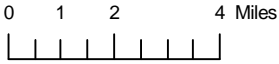
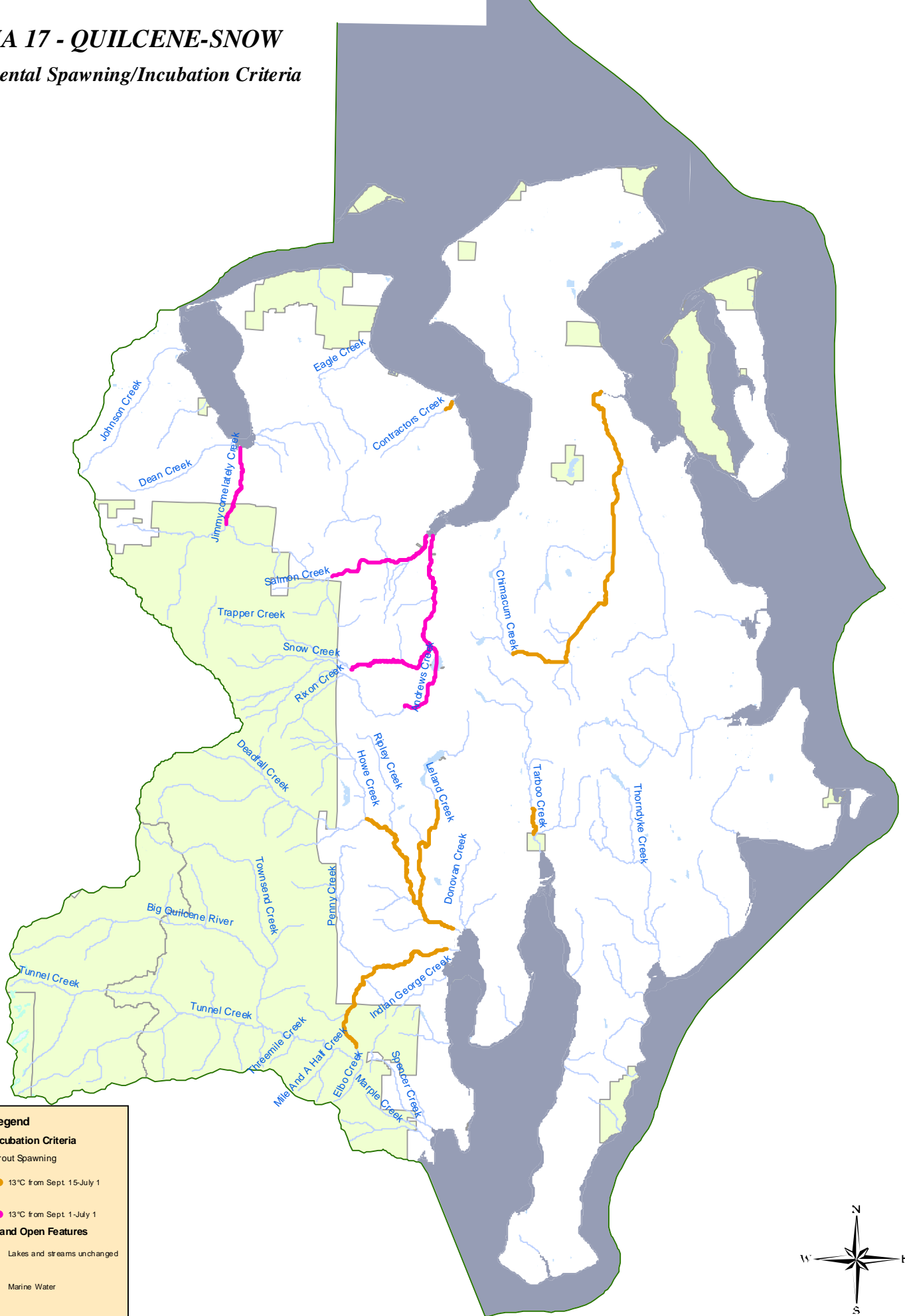
**Spawning/Incubation Criteria**

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



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# WRIA 18 - ELWHA-DUNGENESS

## Supplemental Spawning/Incubation Criteria

**Legend**

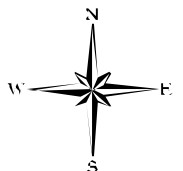
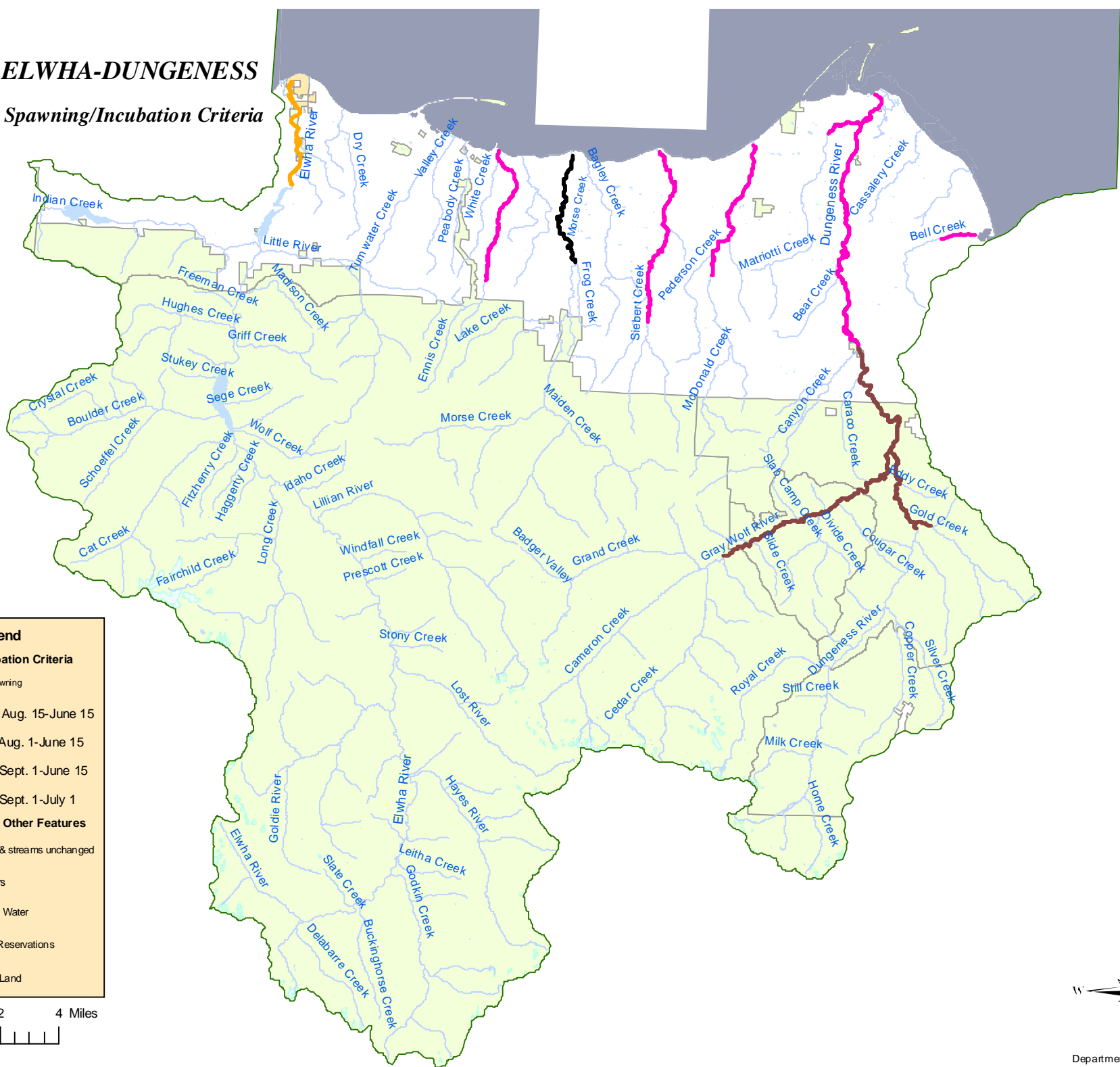
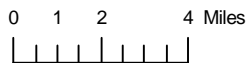
**Spawning/Incubation Criteria**

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

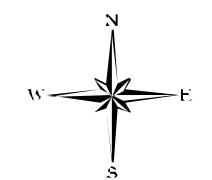
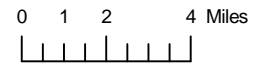
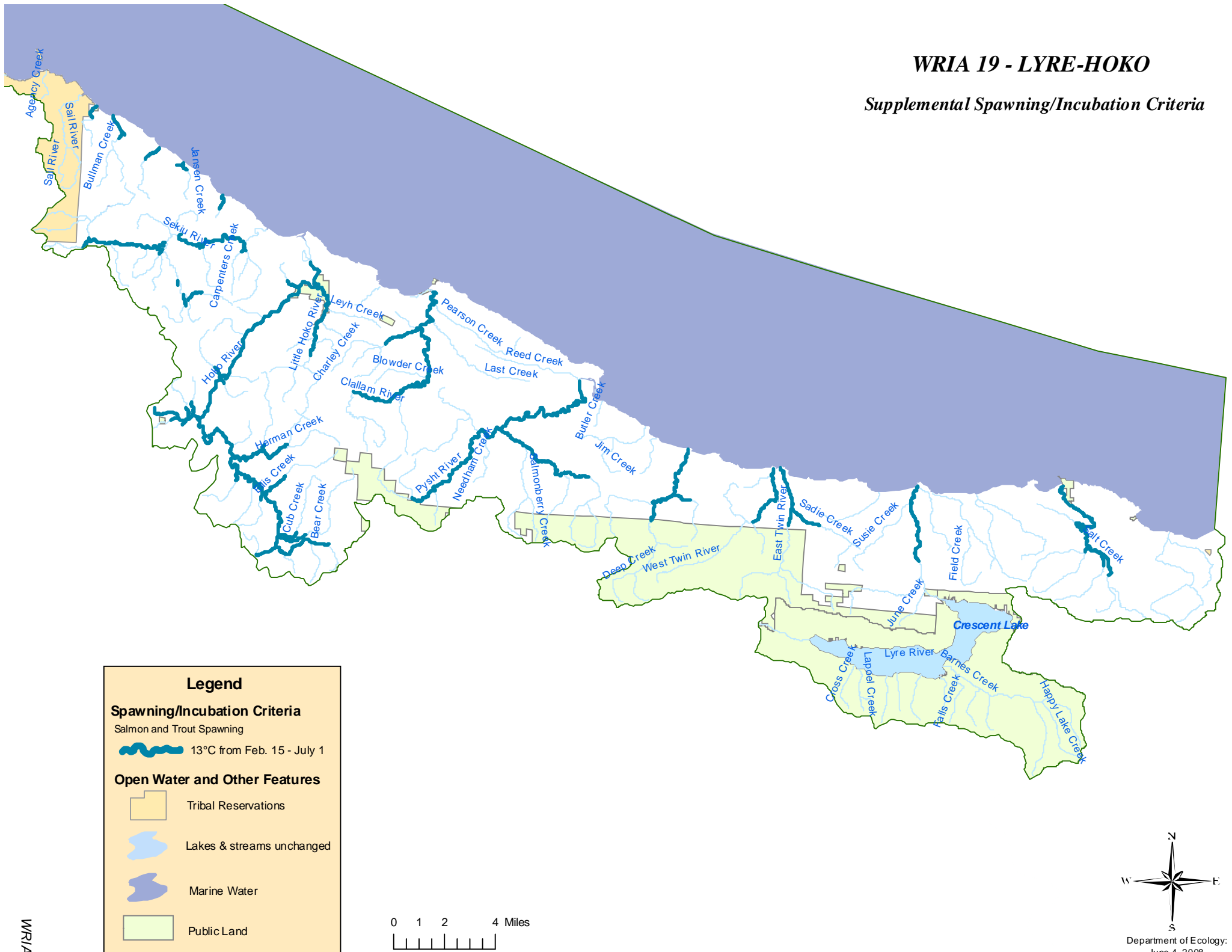
**Open Water and Other Features**

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



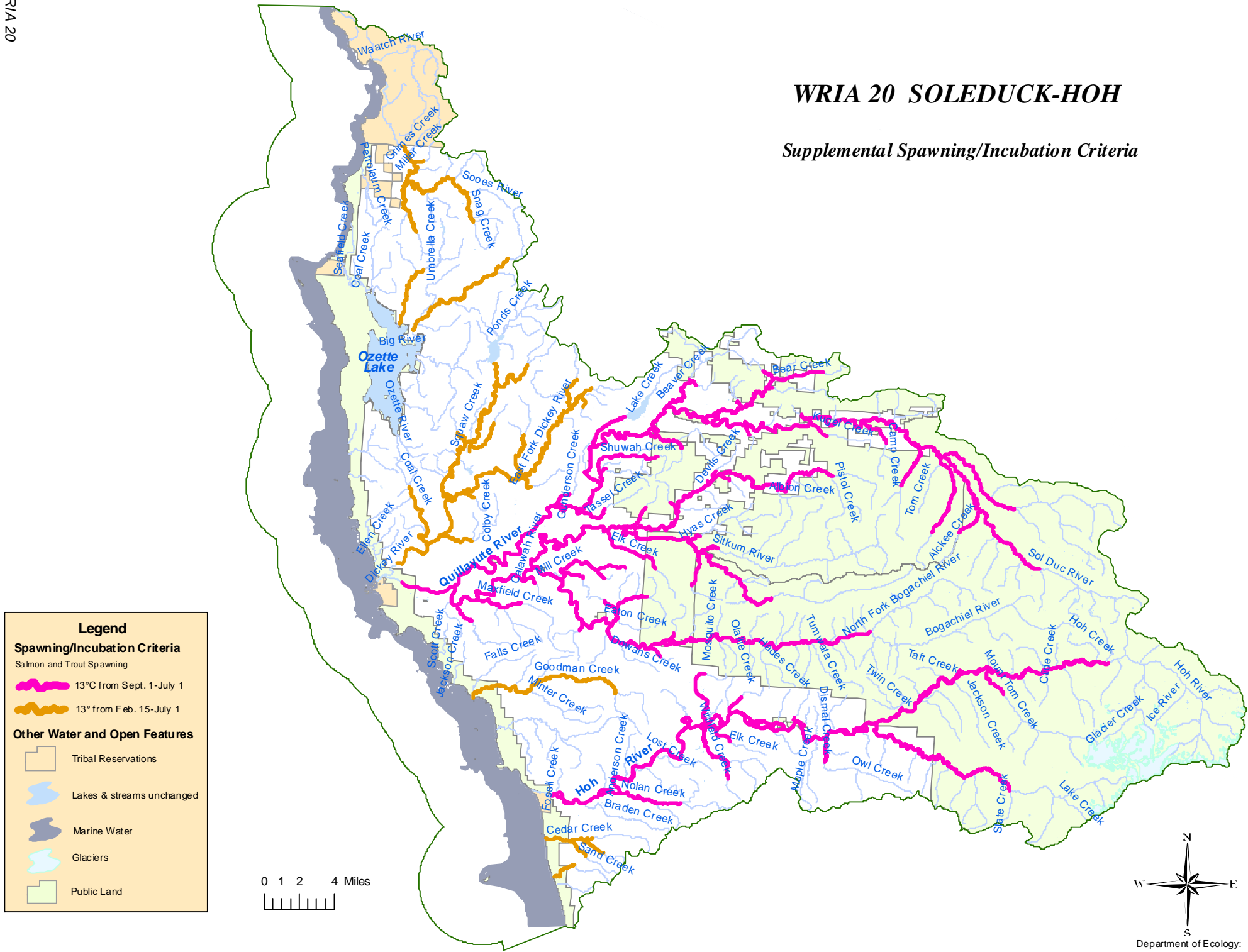
# WRIA 19 - LYRE-HOKO

## Supplemental Spawning/Incubation Criteria



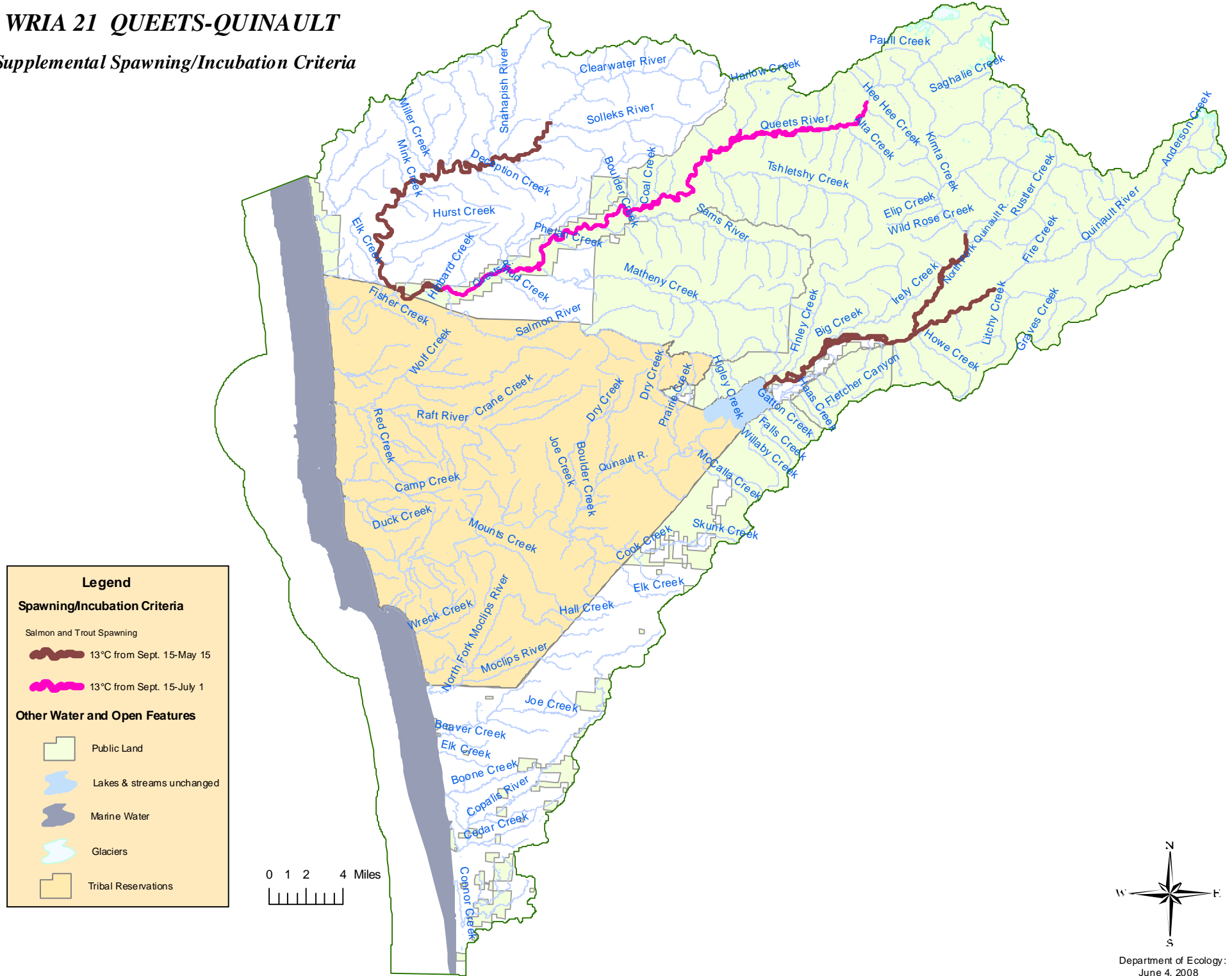
# WRIA 20 SOLEDUCK-HOH

## Supplemental Spawning/Incubation Criteria



# WRIA 21 QUEETS-QUINAULT

## Supplemental Spawning/Incubation Criteria





# WRIA 22 LOWER CHEHALIS




## Supplemental Spawning/Incubation Criteria

**Legend**

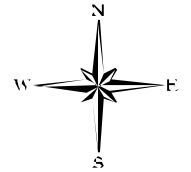
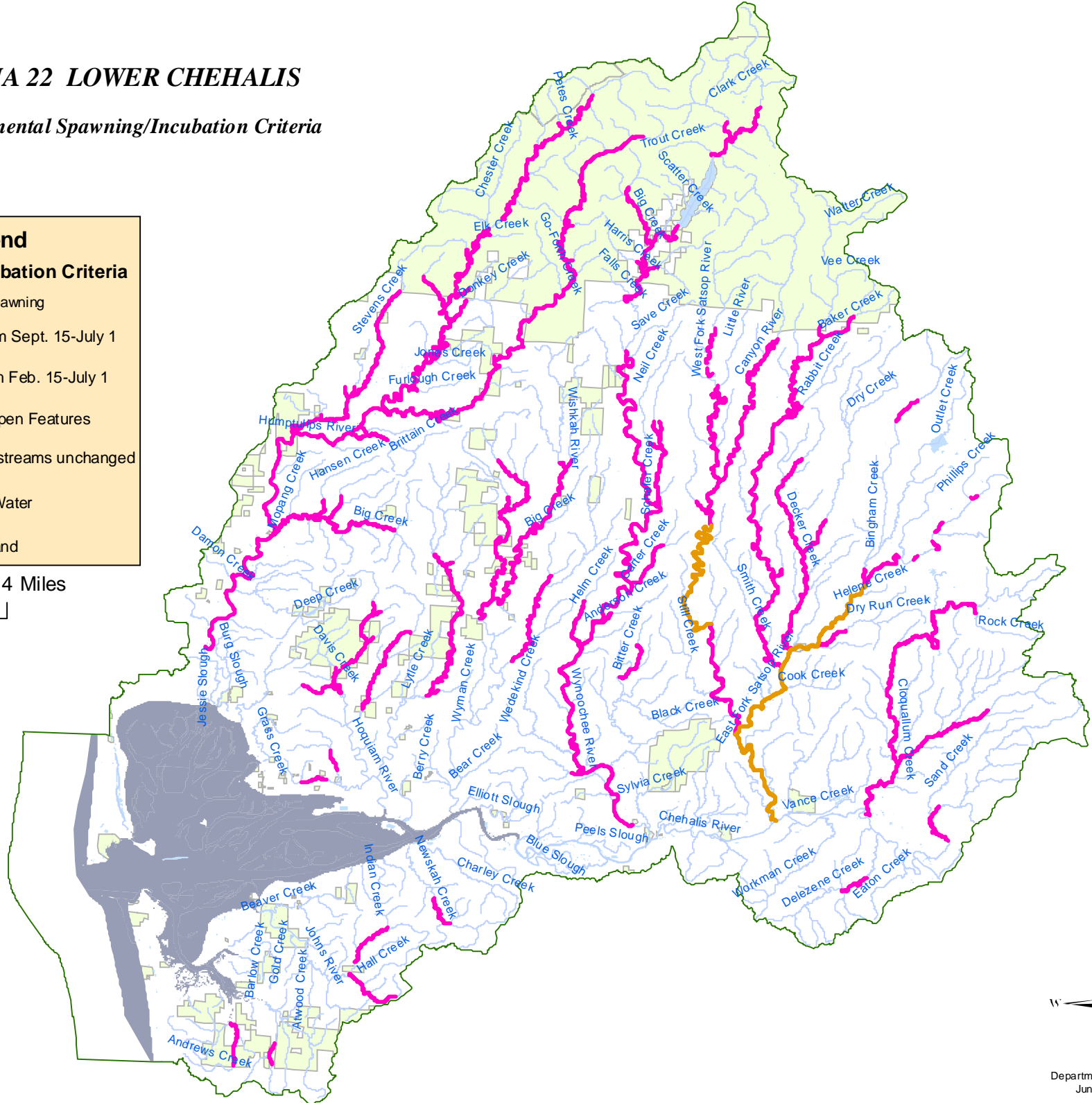
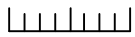
**Spawning/Incubation Criteria**

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

**Other Water and Open Features**

-  Lakes & streams unchanged
-  Marine Water
-  Public Land

0 1 2 4 Miles








# WRIA 23 UPPER CHEHALIS




## Supplemental Spawning/Incubation Criteria

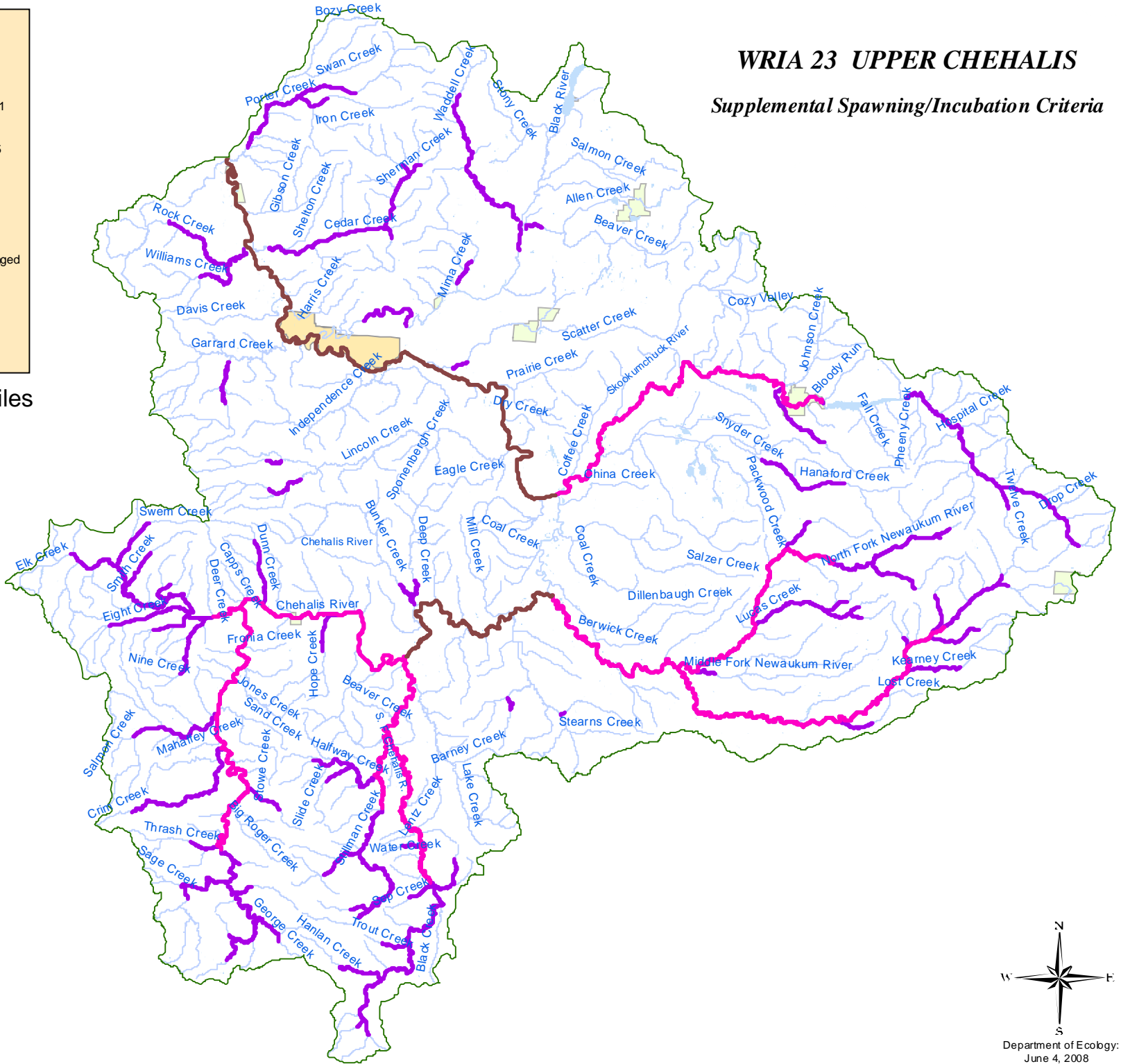
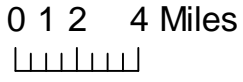
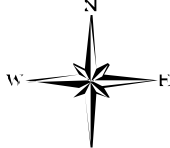
**Legend**

**Spawning/Incubation Criteria**  
Salmon and Trout Spawning

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

**Other Water and Open Features**

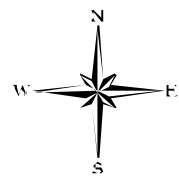
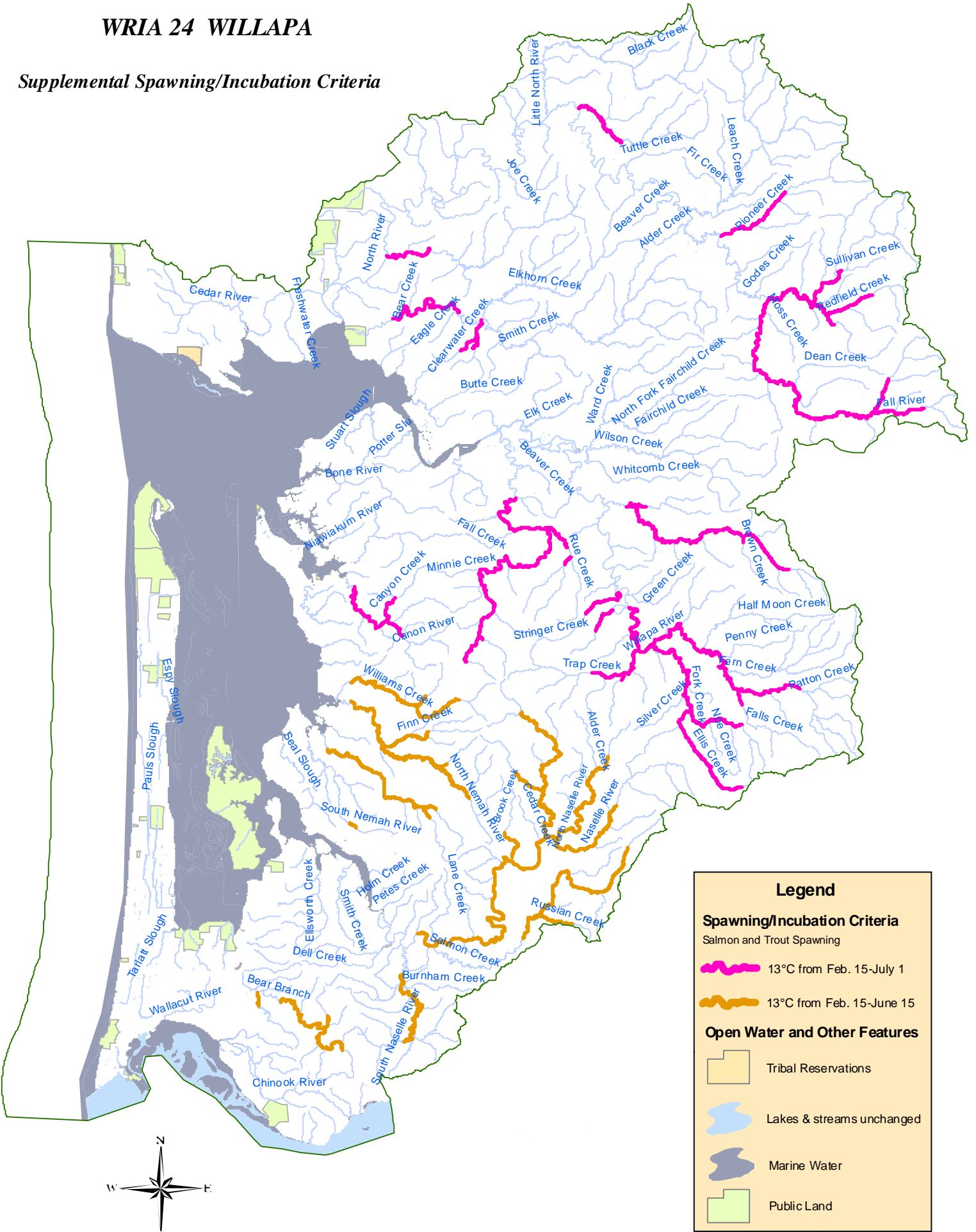
-  Lakes & streams unchanged
-  Tribal Reservations
-  Public Land

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# WRIA 24 WILLAPA

## Supplemental Spawning/Incubation Criteria





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June 4, 2008

**Legend**


**Spawning/Incubation Criteria**


Salmon and Trout Spawning

 13°C from Feb. 15-July 1


 13°C from Feb. 15-June 15

**Open Water and Other Features**

 Tribal Reservations

 Lakes & streams unchanged

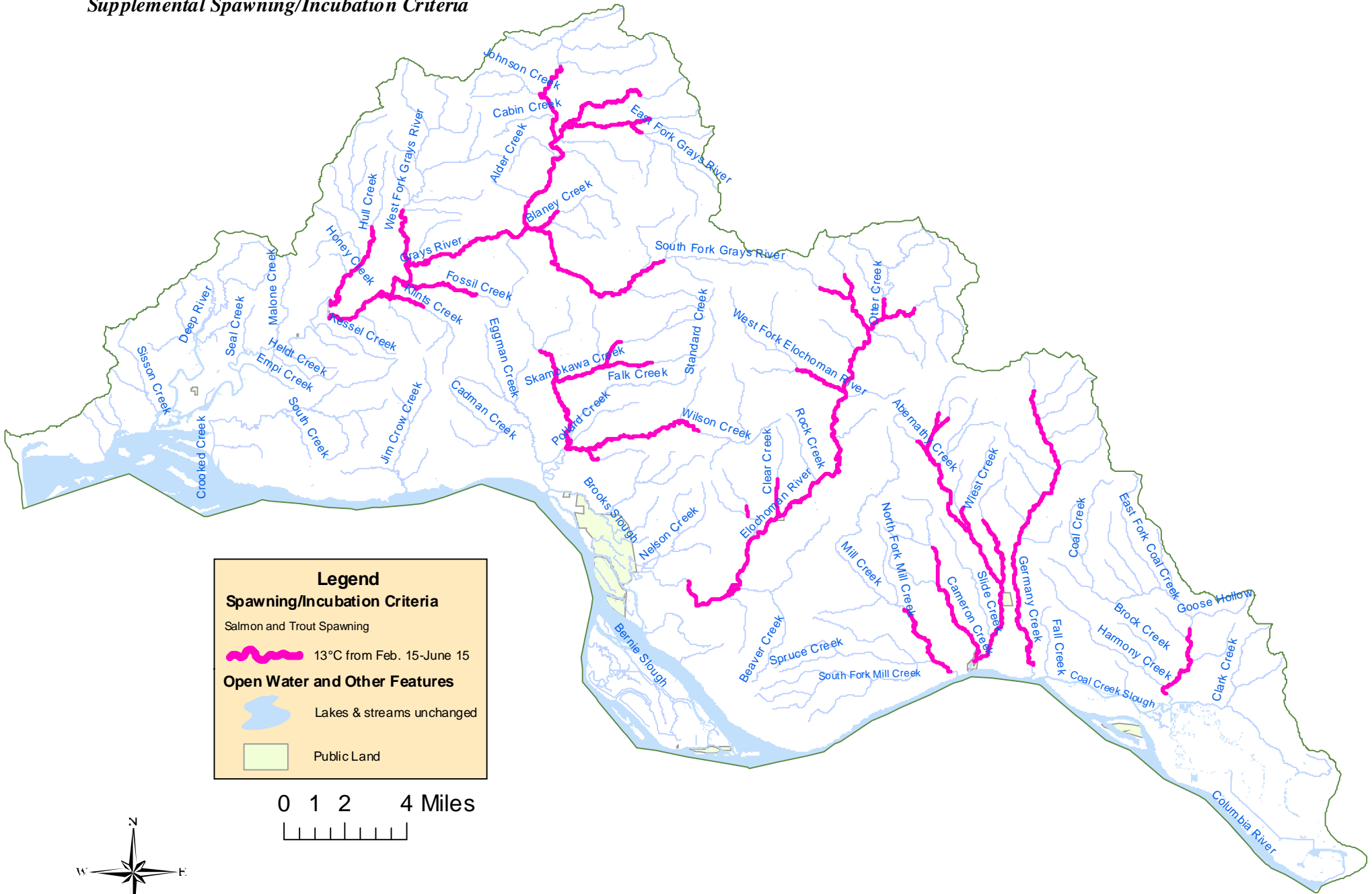
 Marine Water

 Public Land



# WRIA 25 GRAYS-ELOKOMAN


## Supplemental Spawning/Incubation Criteria




**Legend**


**Spawning/Incubation Criteria**

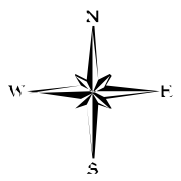
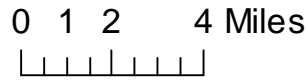
Salmon and Trout Spawning

 13°C from Feb. 15-June 15

**Open Water and Other Features**

 Lakes & streams unchanged

 Public Land

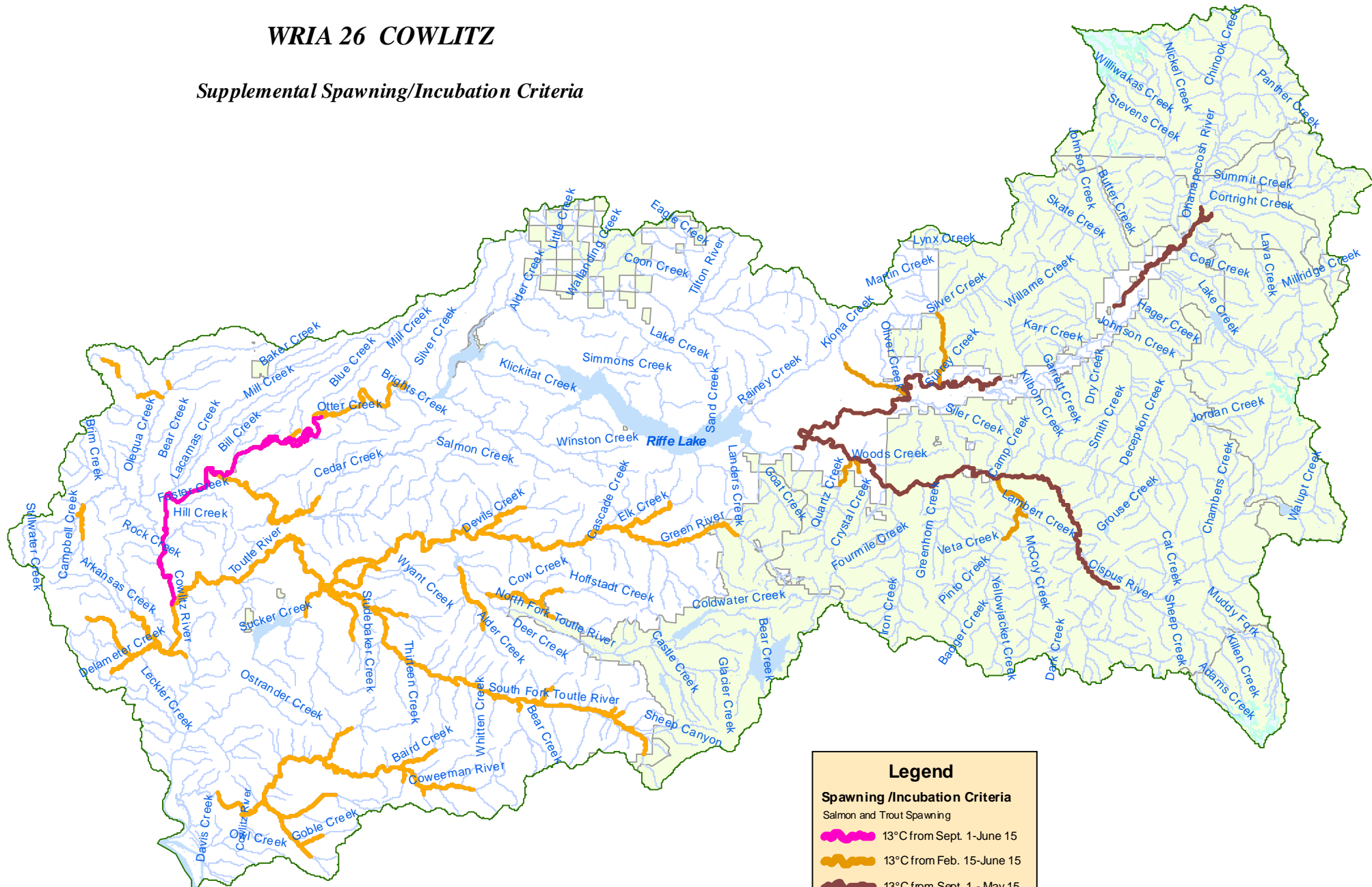


Department of Ecology:  
June 4, 2008



# WRIA 26 COWLITZ

## Supplemental Spawning/Incubation Criteria



**Legend**

**Spawning /Incubation Criteria**

- 13°C from Sept. 1-June 15
- 13°C from Feb. 15-June 15
- 13°C from Sept. 1 - May 15

**Other Water and Open Features**

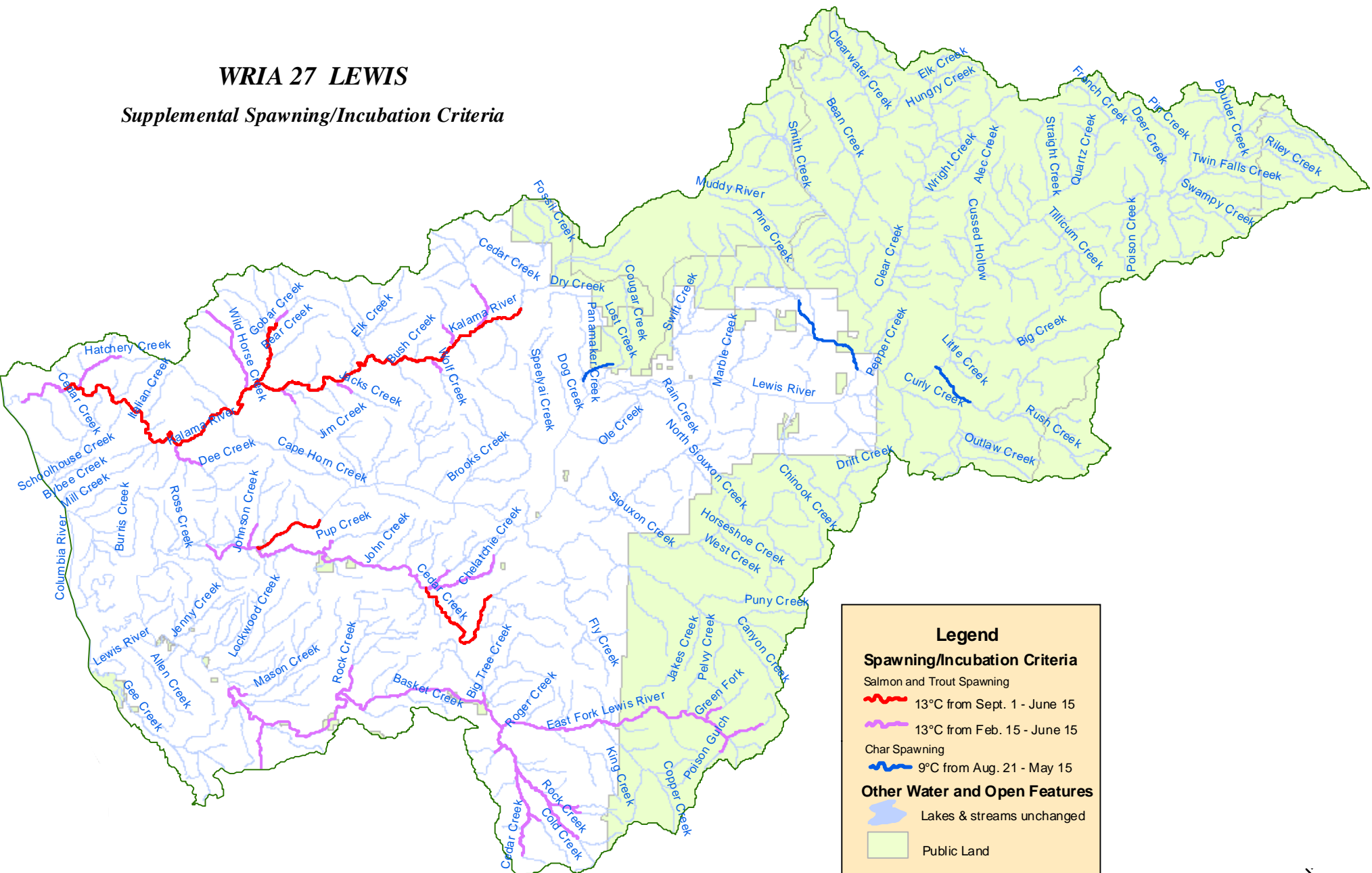
- Lakes & streams unchanged
- Glaciers
- Public Land

Department of Ecology  
June 4, 2008

0 1 2 3 4 Miles

# WRIA 27 LEWIS

## Supplemental Spawning/Incubation Criteria



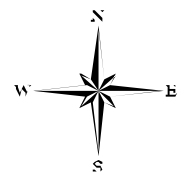
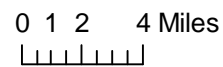
### Legend

#### Spawning/Incubation Criteria

- Salmon and Trout Spawning
- 13°C from Sept. 1 - June 15
- 13°C from Feb. 15 - June 15
- Char Spawning
- 9°C from Aug. 21 - May 15

#### Other Water and Open Features

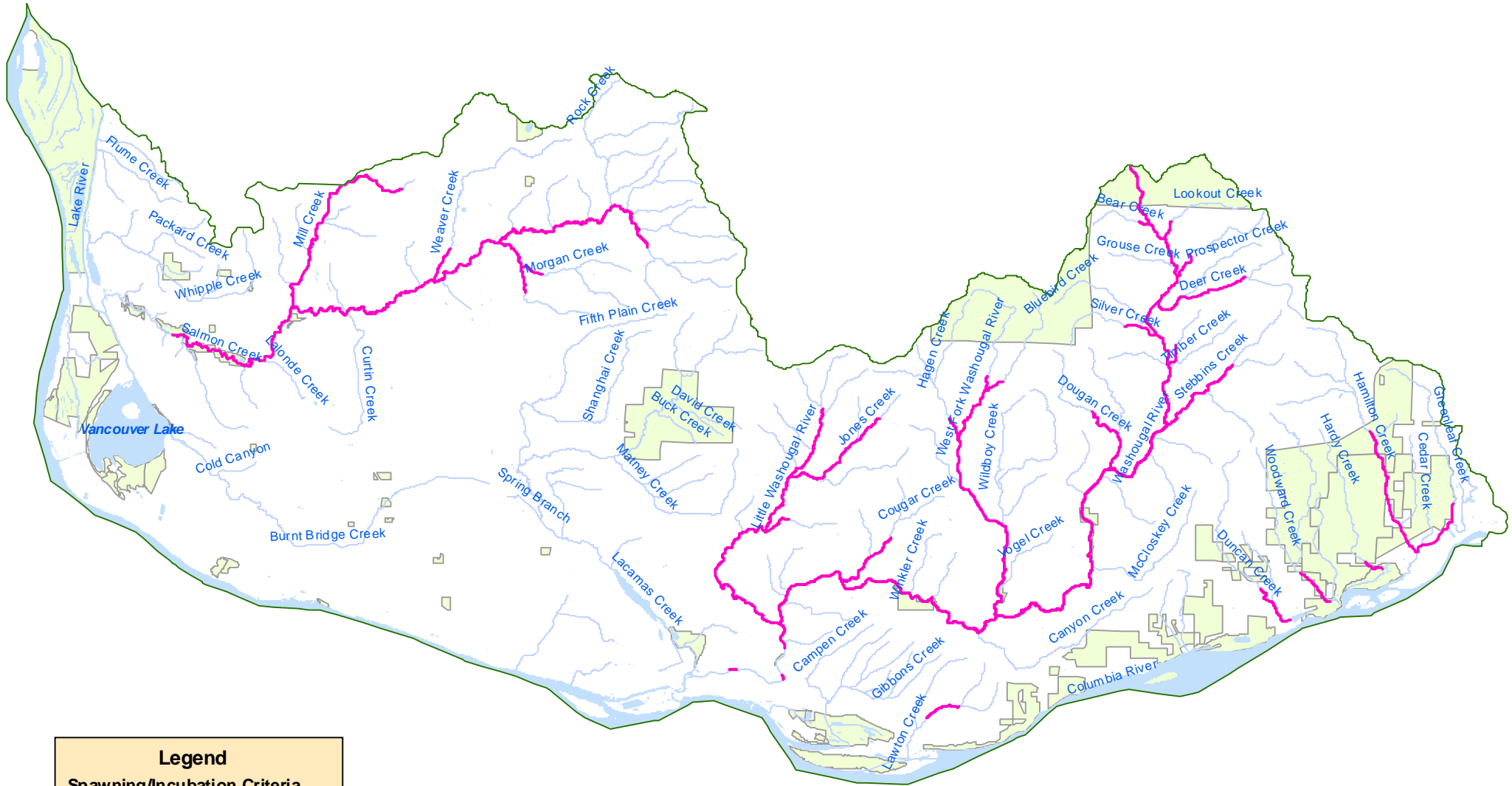
- Lakes & streams unchanged
- Public Land



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# WRIA 28 SALMON-WASHOUGAL

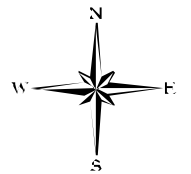
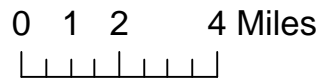
## Supplemental Spawning/Incubation Criteria



**Legend**

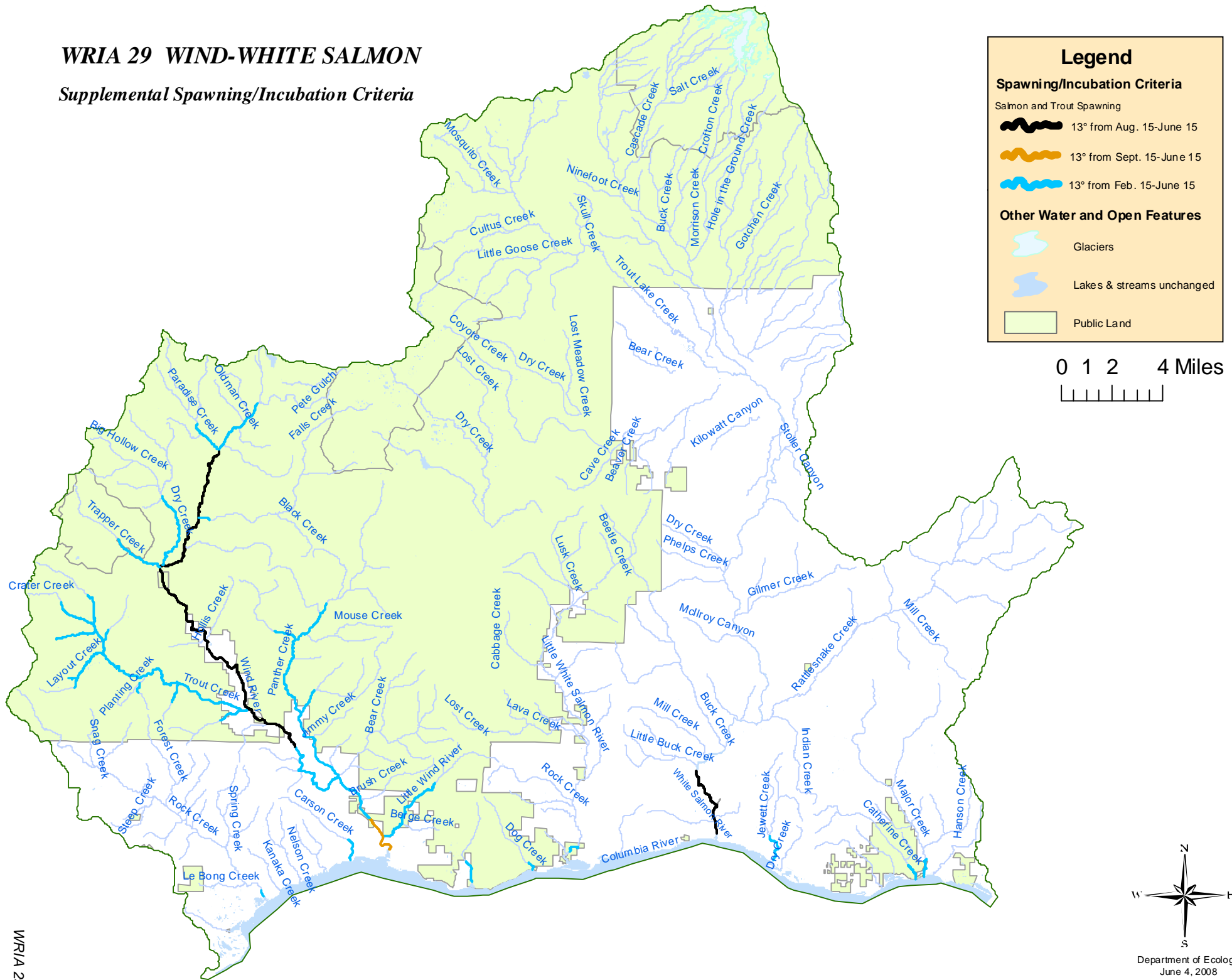
**Spawning/Incubation Criteria**  
 Salmon and Trout Spawning  
 13°C from Feb. 15-June 15

**Other Water and Open Features**  
 Lakes & streams unchanged  
 Public Land



# WRIA 29 WIND-WHITE SALMON

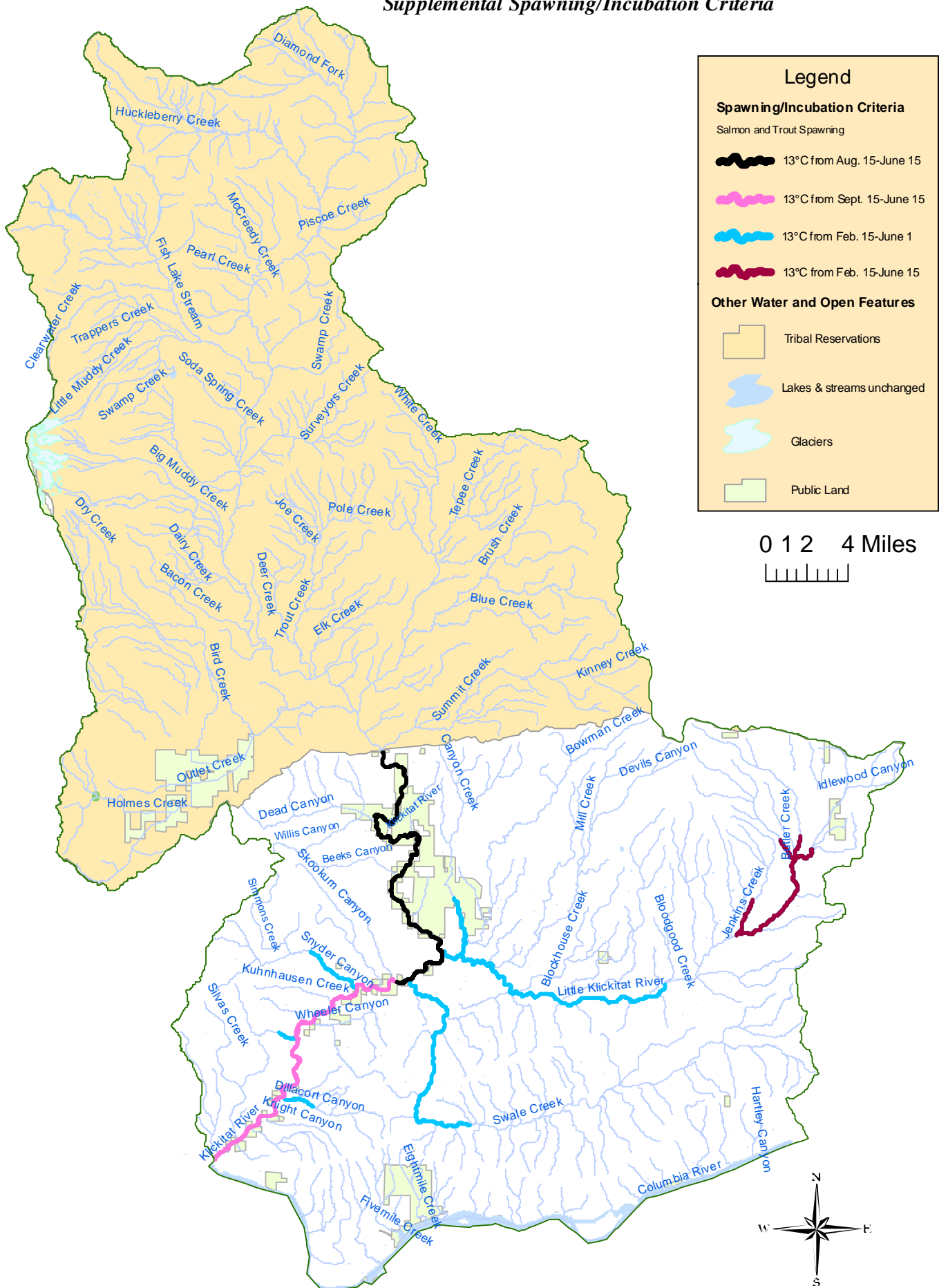
## Supplemental Spawning/Incubation Criteria





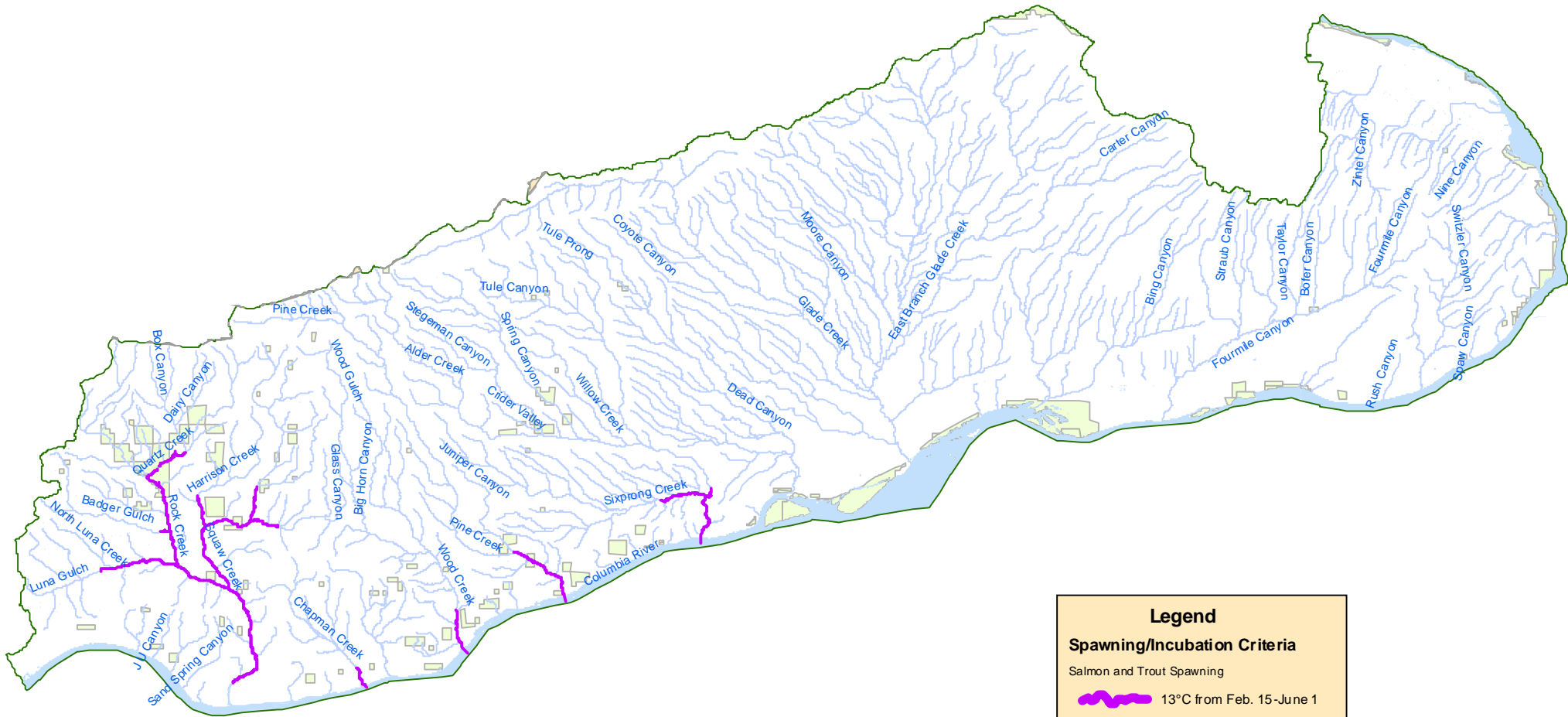
# WRIA 30 KLICKITAT

## Supplemental Spawning/Incubation Criteria



# WRIA 31 ROCK-GLADE


## Supplemental Spawning/Incubation Criteria




**Legend**


**Spawning/Incubation Criteria**

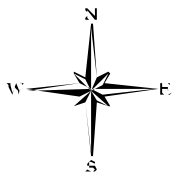
Salmon and Trout Spawning

 13°C from Feb. 15-June 1

**Other Water and Open Features**

 Lakes & streams unchanged

 Public Land



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0 1 2 4 Miles



# WRIA 32 WALLA WALLA

## Supplemental Spawning/Incubation Criteria

**Legend**

**Spawning/Incubation Criteria**

Salmon and Trout Spawning

- 13°C from Feb. 15-June 15
- 13°C from Feb. 15-June 1
- 13°C from Sept. 15-June 15

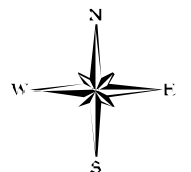
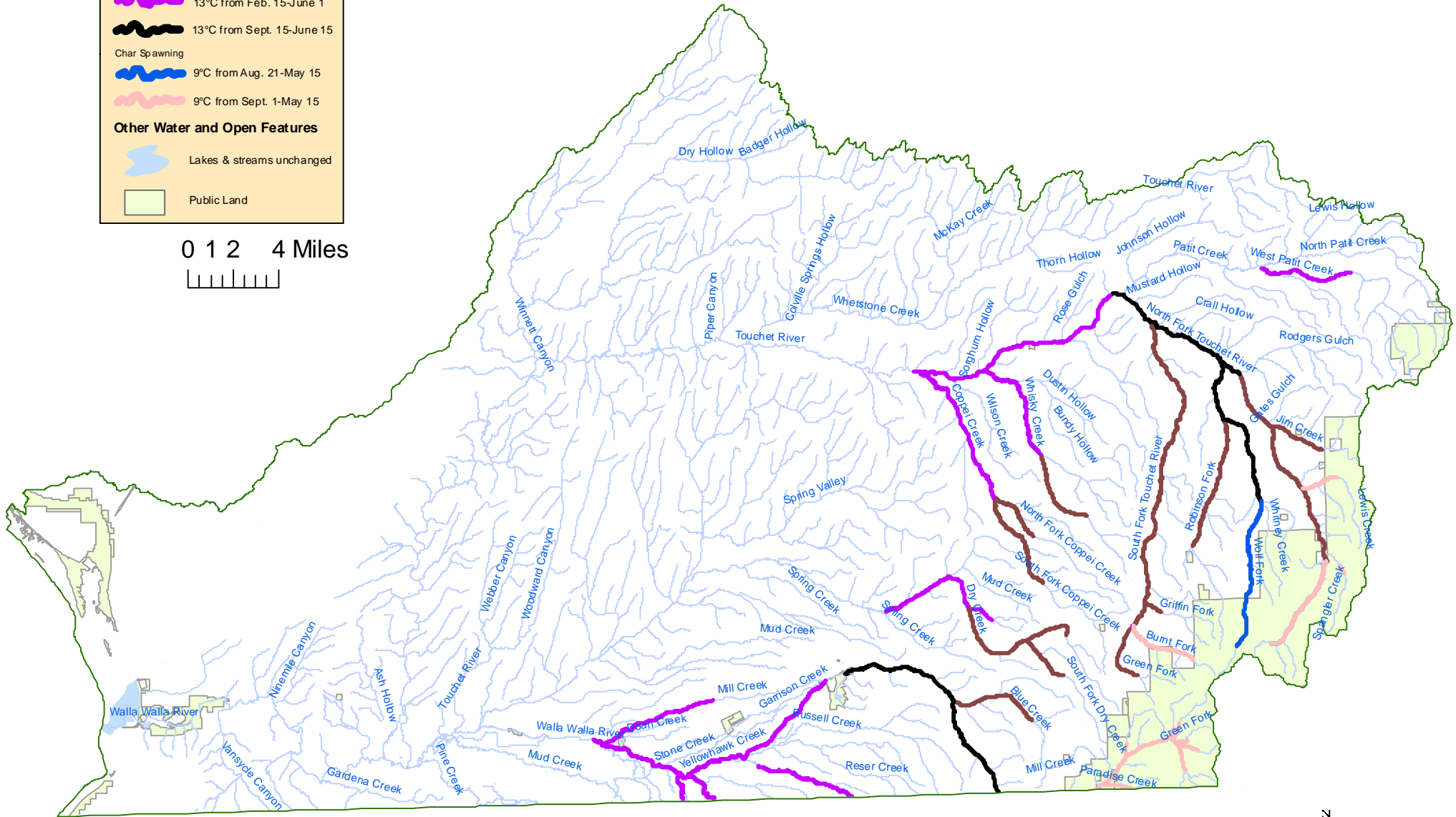
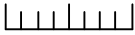
Char Spawning

- 9°C from Aug. 21-May 15
- 9°C from Sept. 1-May 15

**Other Water and Open Features**

- Lakes & streams unchanged
- Public Land

0 1 2 4 Miles



# WRIA 35 MIDDLE SNAKE

## Supplemental Spawning/Incubation Criteria

**Legend**

**Spawning/Incubation Criteria**

Salmon and Trout Spawning

- 13°C from Sept. 1-June 15
- 13°C from Feb. 15-June 15
- 13°C from Feb. 15-June 1

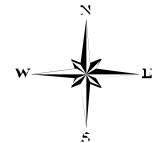
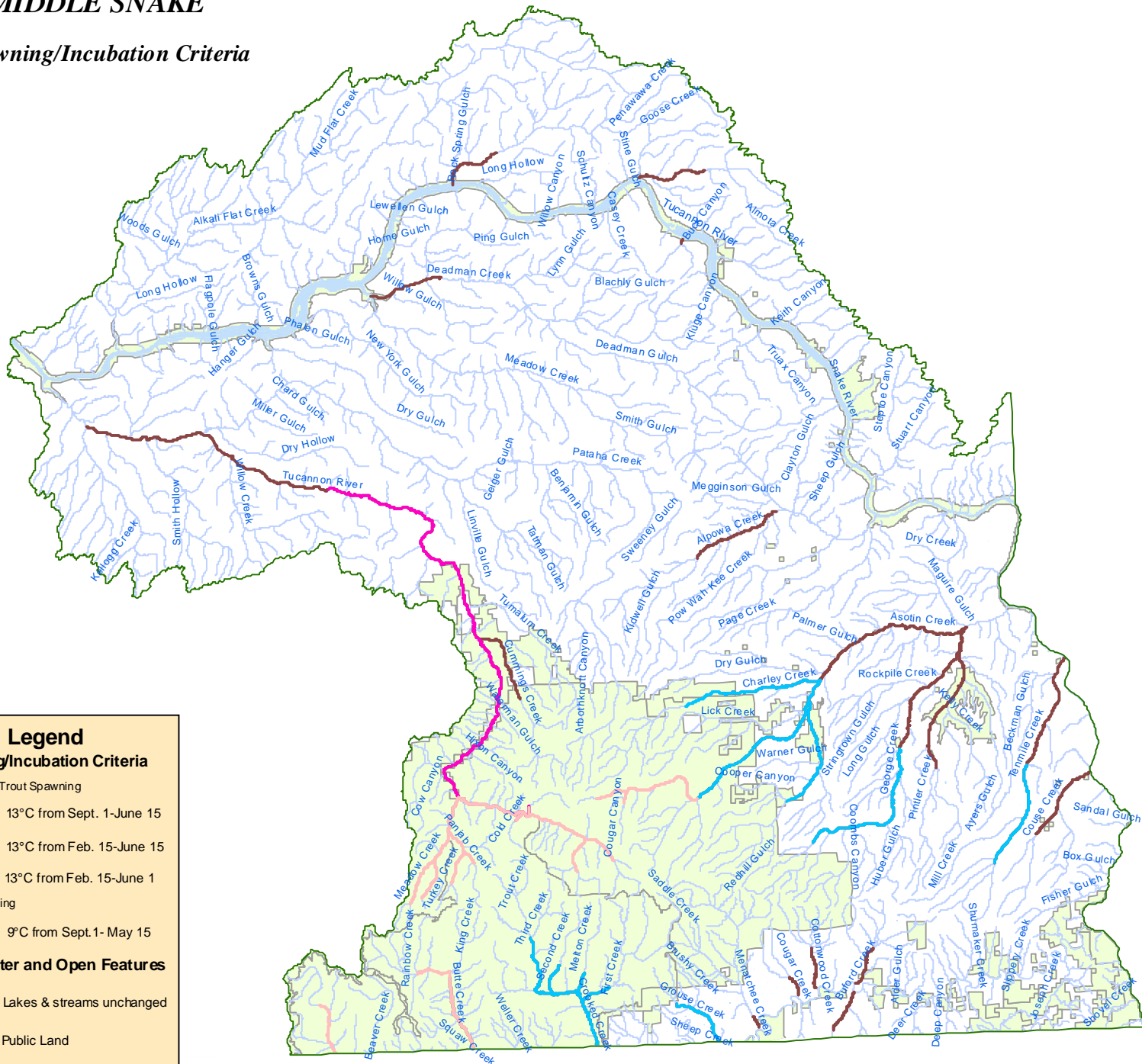
Char Spawning

- 9°C from Sept. 1- May 15

**Other Water and Open Features**

- Lakes & streams unchanged
- Public Land

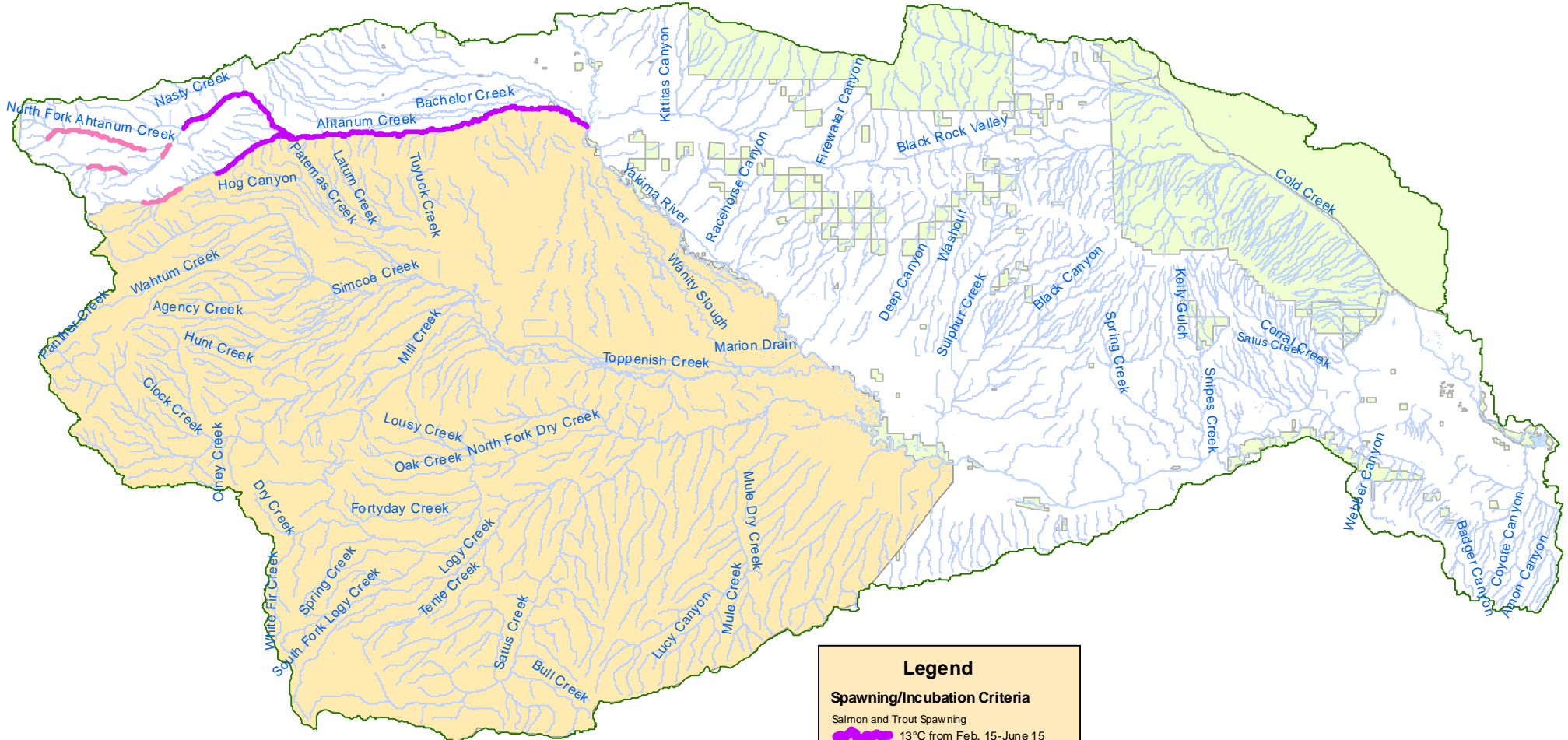
012 4 Miles






# WRIA 37 LOWER YAKIMA


## Supplemental Spawning/ Incubation Criteria




**Legend**


**Spawning/Incubation Criteria**


Salmon and Trout Spawning  
 13°C from Feb. 15-June 15

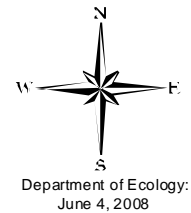
Char Spawning  
 9°C from Sept 1- May 15

**Open Water and Other Features**

 Tribal Reservations

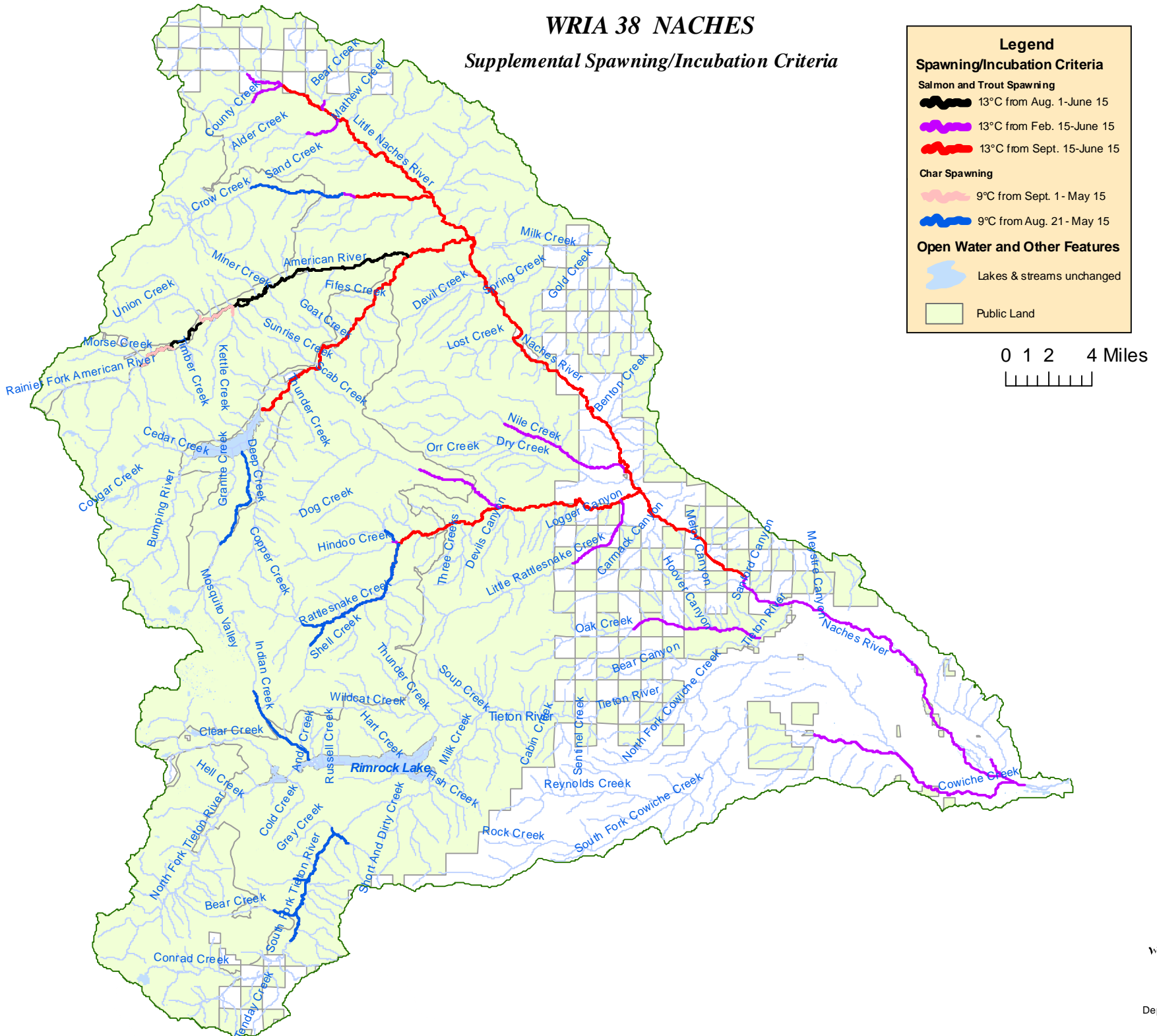
 Lakes and streams unchanged

 Public Land



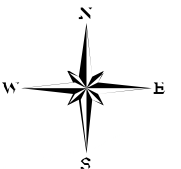
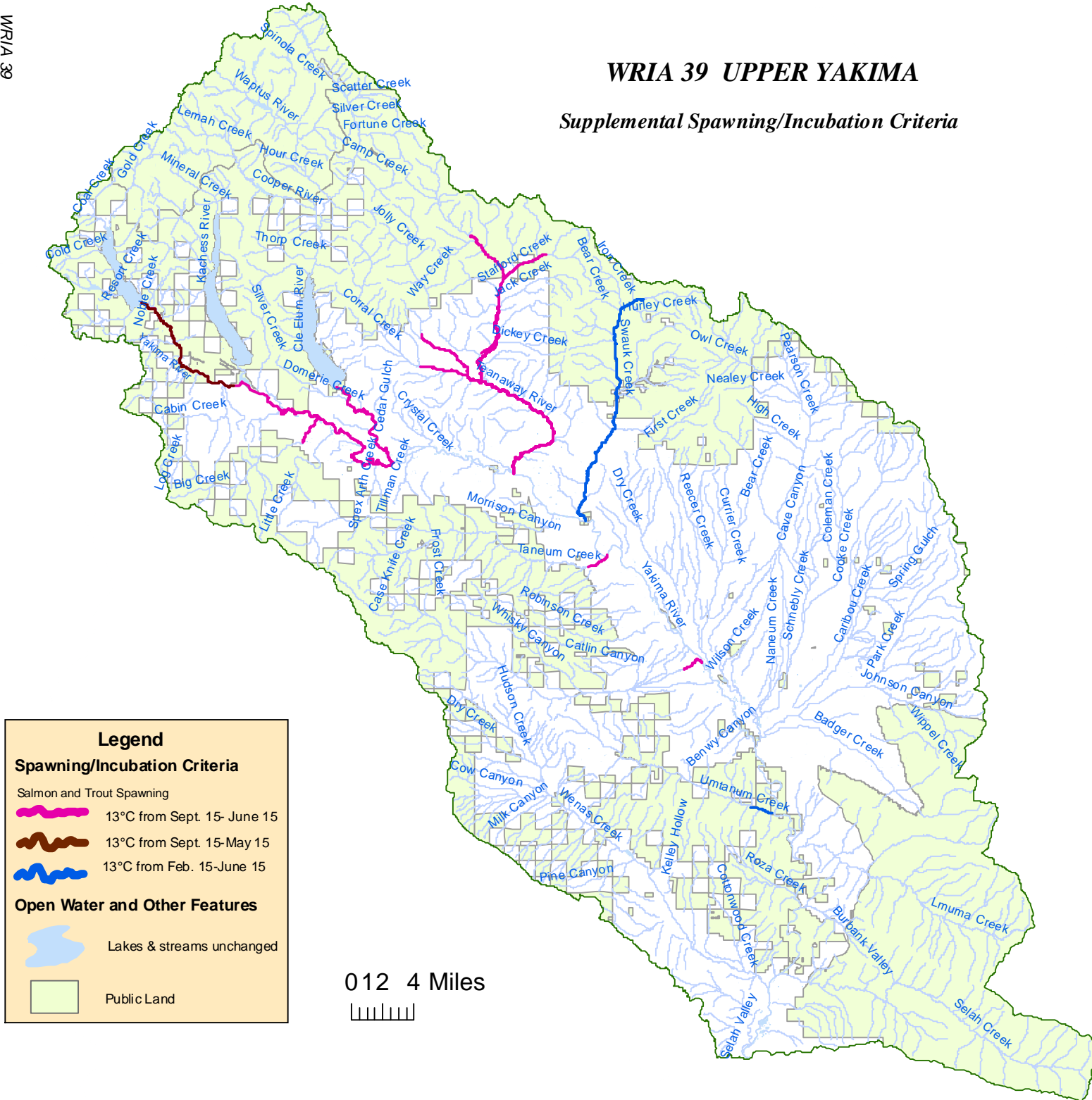
# WRIA 38 NACHES

## Supplemental Spawning/Incubation Criteria



# WRIA 39 UPPER YAKIMA

## Supplemental Spawning/Incubation Criteria



# WRIA 45 WENATCHEE

## Supplemental Spawning/Incubation Criteria

**Legend**

**Spawning/Incubation Criteria**

Salmon and Trout Spawning

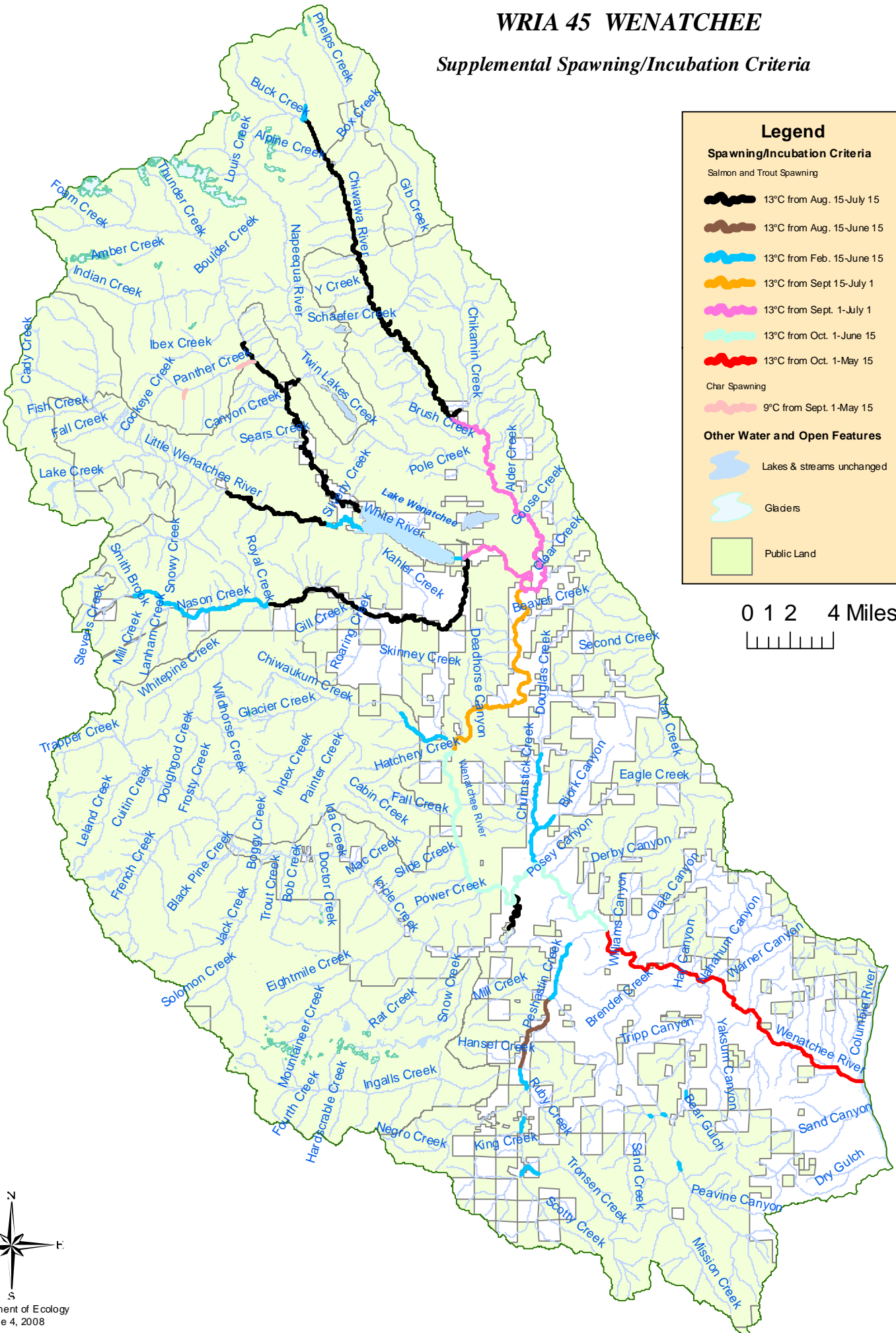
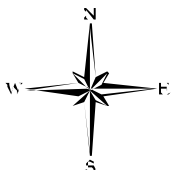
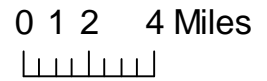
- 13°C from Aug. 15-July 15
- 13°C from Aug. 15-June 15
- 13°C from Feb. 15-June 15
- 13°C from Sept 15-July 1
- 13°C from Sept. 1-July 1
- 13°C from Oct. 1-June 15
- 13°C from Oct. 1-May 15

Char Spawning

- 9°C from Sept. 1-May 15

**Other Water and Open Features**

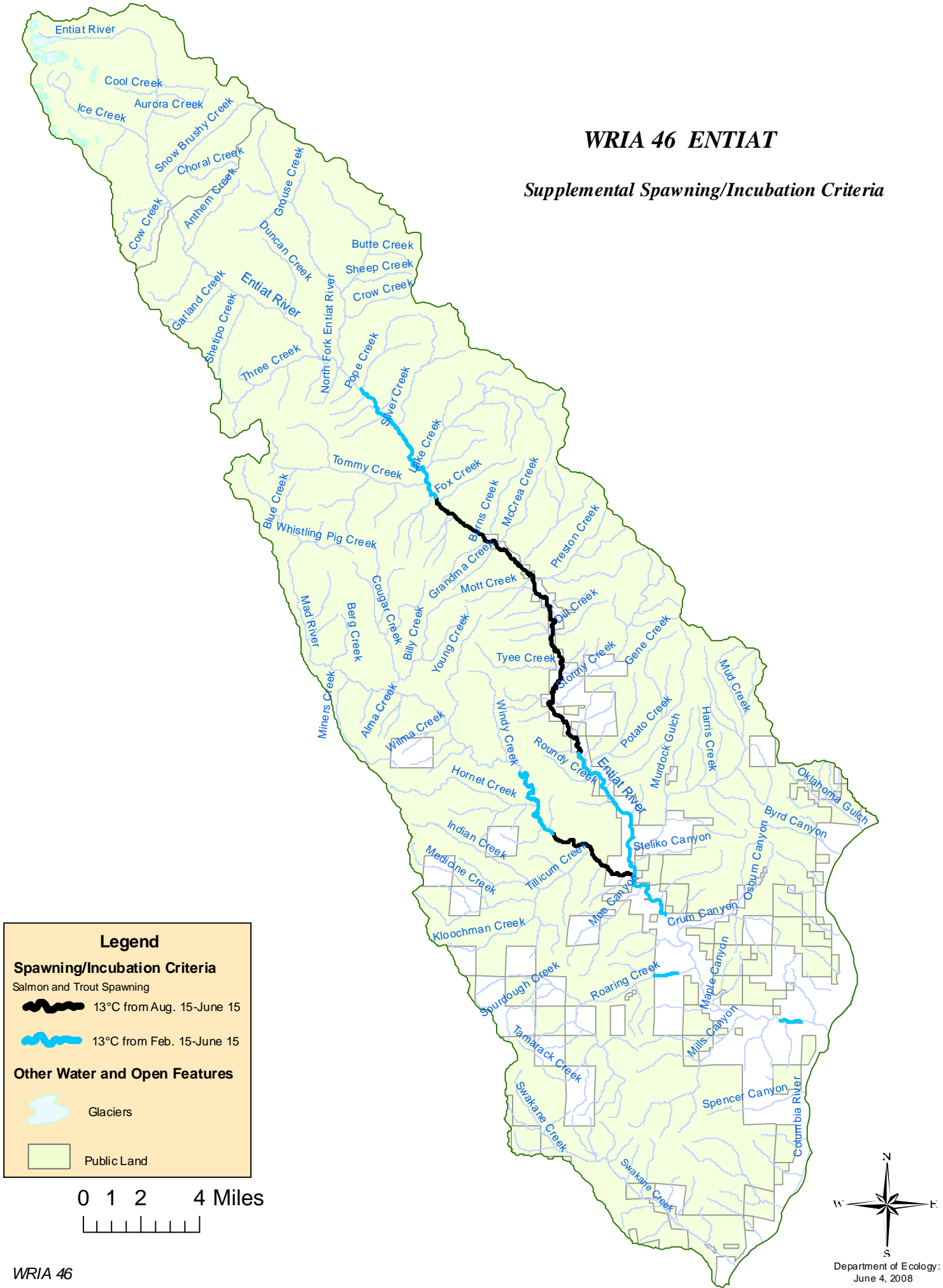
- Lakes & streams unchanged
- Glaciers
- Public Land





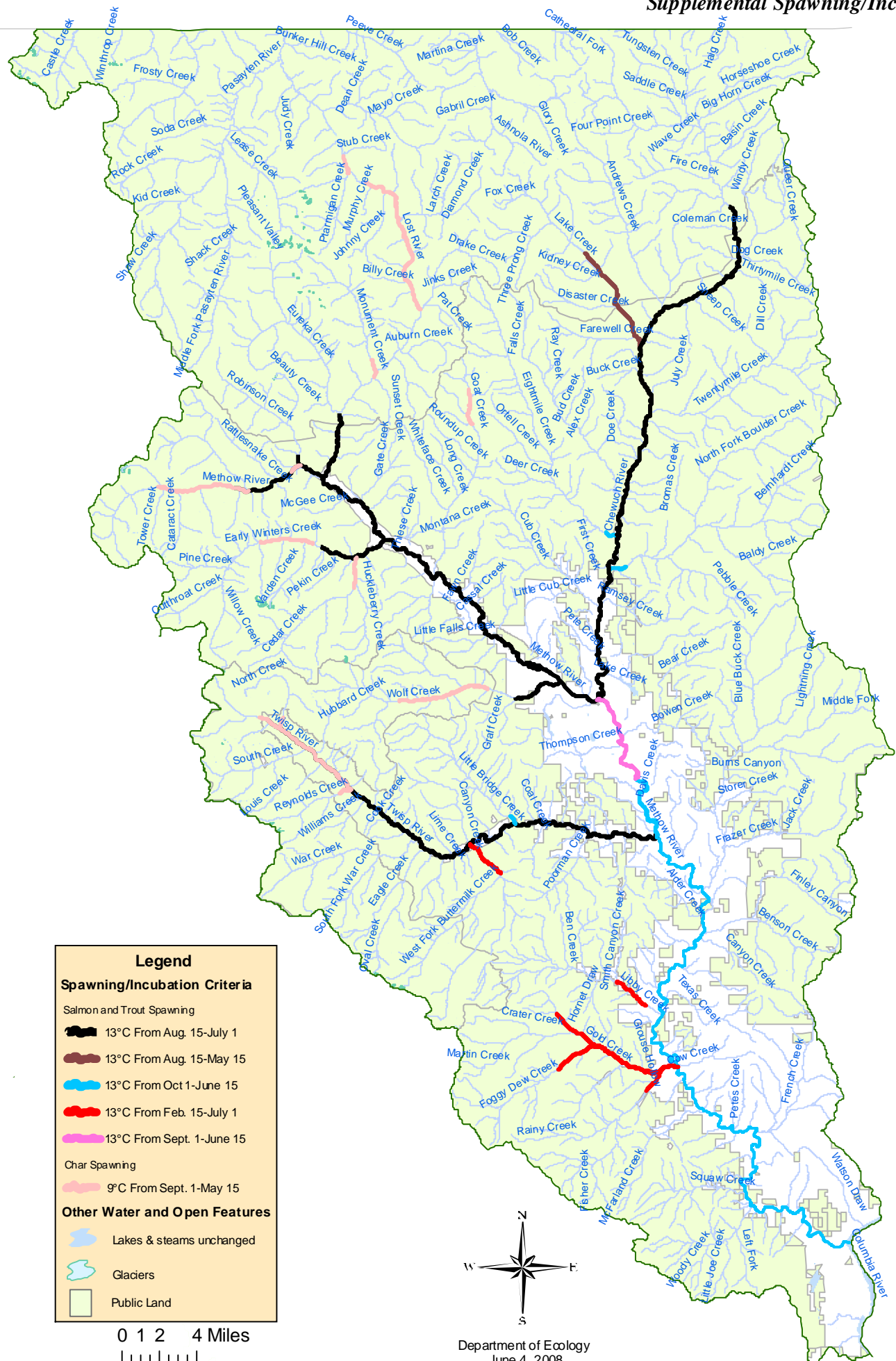
# WRIA 46 *ENTIAT*

## *Supplemental Spawning/Incubation Criteria*



# WRIA 48 METHOW

## Supplemental Spawning/Incubation Criteria





# WRIA 49 OKANOGAN

## Supplemental Spawning/Incubation Criteria

