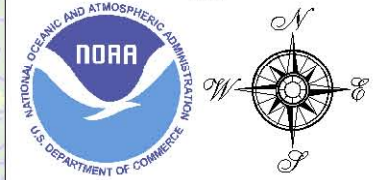
South Santiam River Accessibility

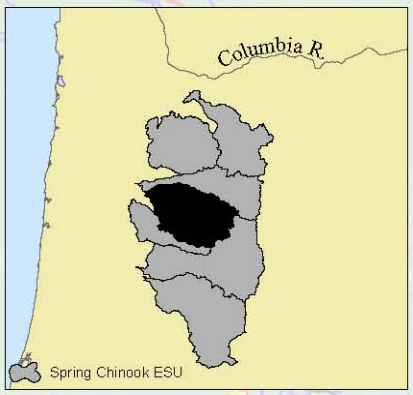
Upper Willamette Spring Chinook Salmon

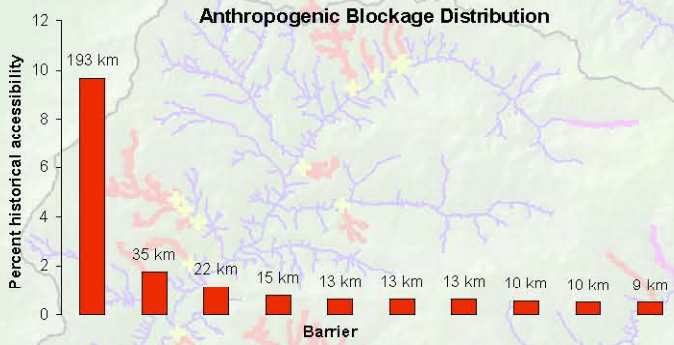
- Current accessibility
- Historical accessibility
- Above natural barriers
- Historically Inaccessible

0 5 10 15 20

Km







Accessibility	Stream km	% total
Current accessibility	1,270	64
Historical accessibility	1,803	91
Above natural barriers	189	9
Total streams	1,993	
Current / Historical		**70**

1:390,000

South Santiam River

South Santiam River Accessibility

Upper Willamette Winter Steelhead

- Current accessibility
- Historical accessibility
- Above natural barriers
- Historically Inaccessible

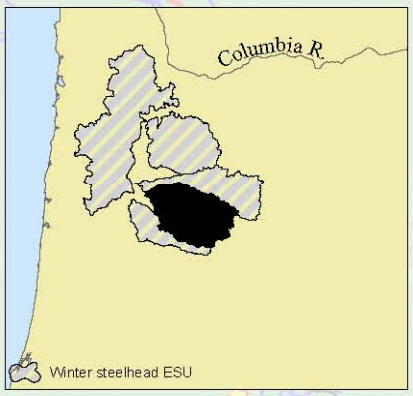
0 5 10 15 20

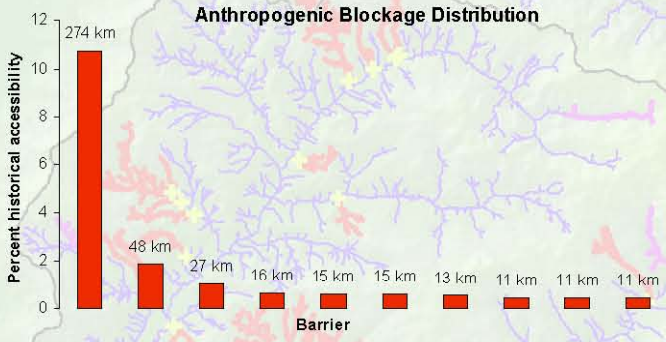
Km

NOAA — National Oceanic and Atmospheric Administration — U.S. Department of Commerce

N W E S

Sucker Slough
Peters Ditch
Mill Creek
Thomas Creek
Neal Creek
Hall Creek
Ella Creek
Mill Creek
Spring Branch
Roaring River
Crabtree Creek
Oak Creek
Beaver Creek
Rock Creek
Camp Creek
Packers Gulch
Elk Creek
Canal Creek
Quartzville Creek
Galena Creek
Moose Creek
Bald Peter Creek
First Creek
Hamilton Creek
Jack Creek
McDowell Creek
Middle Santiam River
Fifth Creek
Pyramid Creek
Bear Creek
Lake Creek
Green Peter Dam
Foster Dam
Noble Creek
Cub Creek
Cougar Creek
Trout Creek
Harter Creek
Sheep Creek
South Santiam River
Ames Creek
Falls Creek
Squaw Creek
Dobbin Creek
Little Wiley Creek
Canyon Creek
Wiley Creek
Moe Creek
Owl Creek





Accessibility	Stream km	% total
Current accessibility	1,578	62
Historical accessibility	2,249	88
Above natural barriers	303	12
Total streams	2,551	
Current / Historical		**70**

1:390,000

South Santiam River

2002 303(d) Listed Water Courses

Upper Willamette Winter Steelhead
Upper Willamette Spring Chinook Salmon

PARAMETER

Temperature

CRITERIA

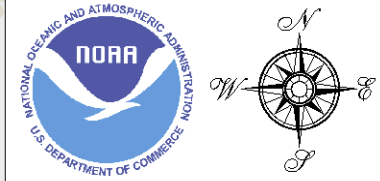
Rearing: 17.8 C

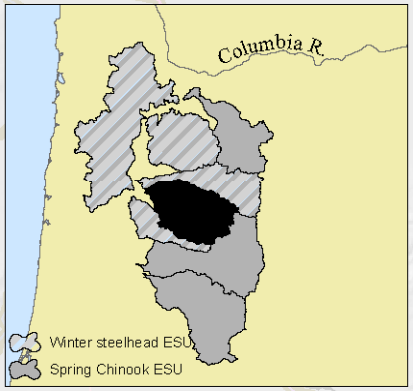
Spawning: 12.8 C

Historically Inaccessible

0 5 10 15 20

Km





Sucker Slough
Peters Ditch
Mill Creek
Thomas Creek
Neal Creek
Hall Creek
Ella Creek
Roaring River
Crabtree Creek
Rock Creek
Packers Gulch
Elk Creek
Canal Creek
Quartzville Creek
Mill Creek
Spring Branch
Oak Creek
Beaver Creek
Camp Creek
Bald Peter Creek
Moose Creek
Galena Creek
Fall Creek
Pyramid Creek
First Creek
Hamilton Creek
Jack Creek
McDowell Creek
Middle Santiam River
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Trout Creek
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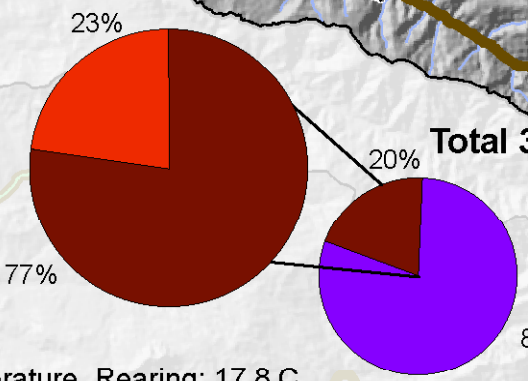
Canyon Creek
Wiley Creek
Moe Creek
Owl Creek



Total 303(d) Streams = 23% Total 100k Streams

Temperature, Rearing: 17.8 C

Temperature, Rearing: 17.8 C & Temperature, Spawning: 12.8 C

1:390,000

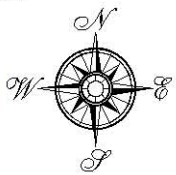
South Santiam River

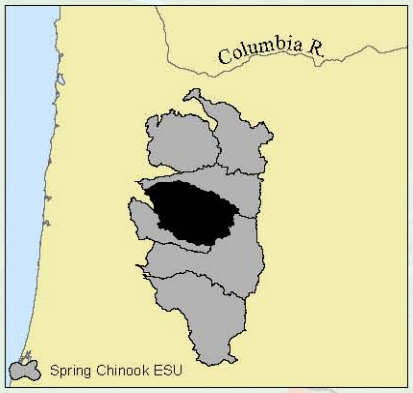
South Santiam River
ODFW Distribution

Upper Willamette Spring Chinook Salmon

- Spawning and rearing
- Rearing and migration
- Migration
- Previous/Historical
- Present, unknown use
- Absent
- Disputed
- Historically Inaccessible

0 5 10 15 20
Km





Use type	Stream km	% total
Spawning and rearing	128	7
Rearing and migration	144	8
Previous / historical	62	3
Absent	1	<1
Total use	333	18
Total 100k streams	**1,870**	100

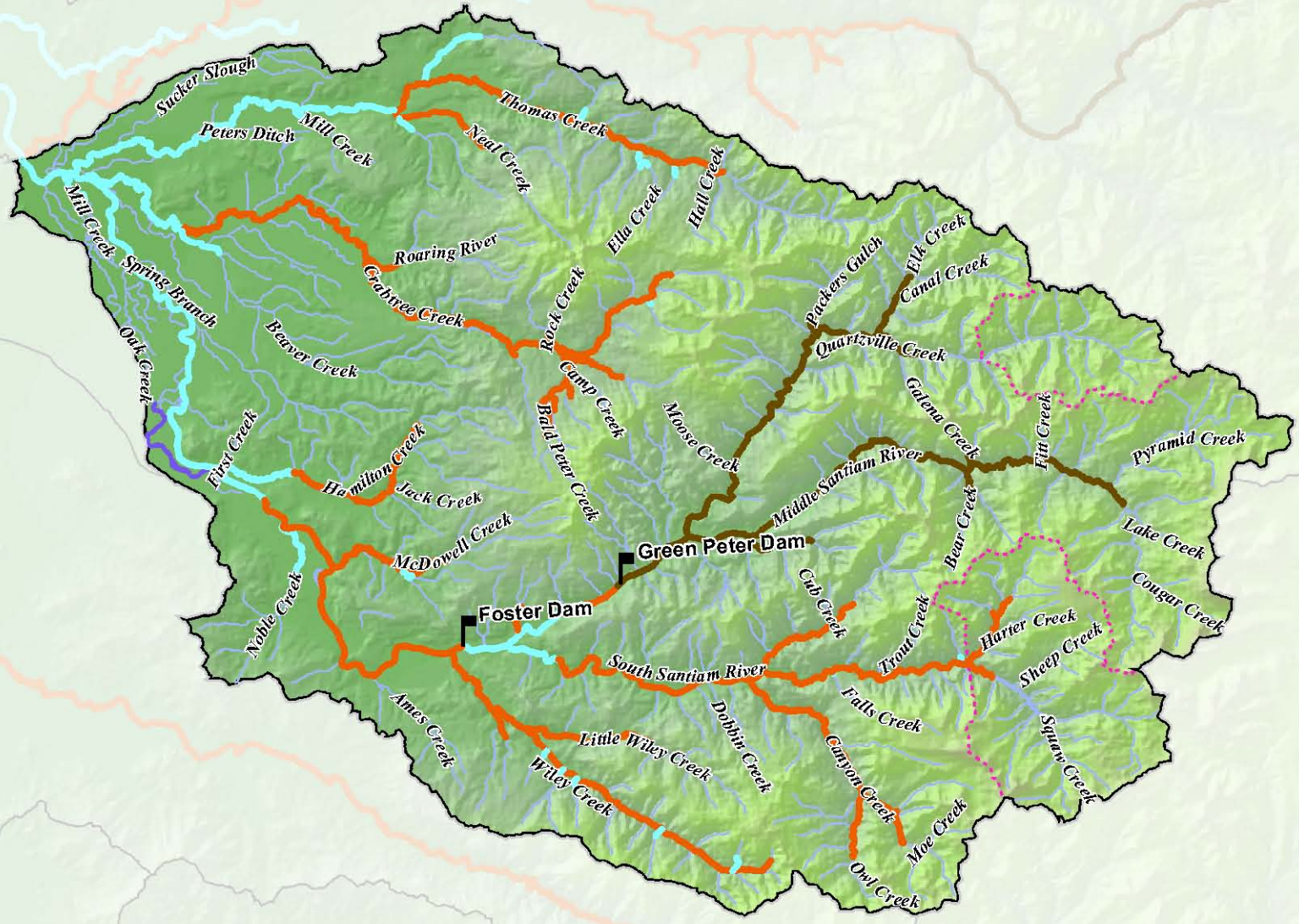
1:390,000

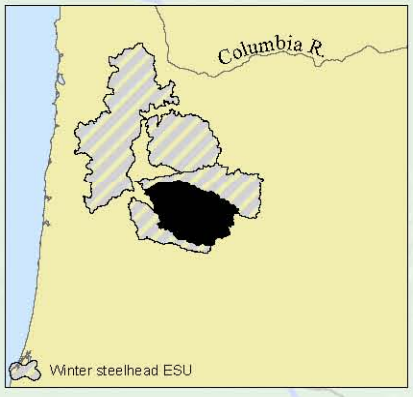
South Santiam River
ODFW Distribution

- Spawning and rearing
- Rearing and migration
- Migration
- Previous/Historical
- Present, unknown use
- Absent
- Disputed
- Historically Inaccessible

0 5 10 15 20
Km

Upper Willamette Winter Steelhead





Use type	Stream km	% total
Spawning and rearing	245	13
Rearing and migration	116	6
Migration	10	1
Previous / historical	78	4
Total use	449	24
Total 100k streams	**1,870**	**100**

1:390,000

South Santiam River

South Santiam River
FEMA Q3 Flood Data

Flood plain

Historically Inaccessible

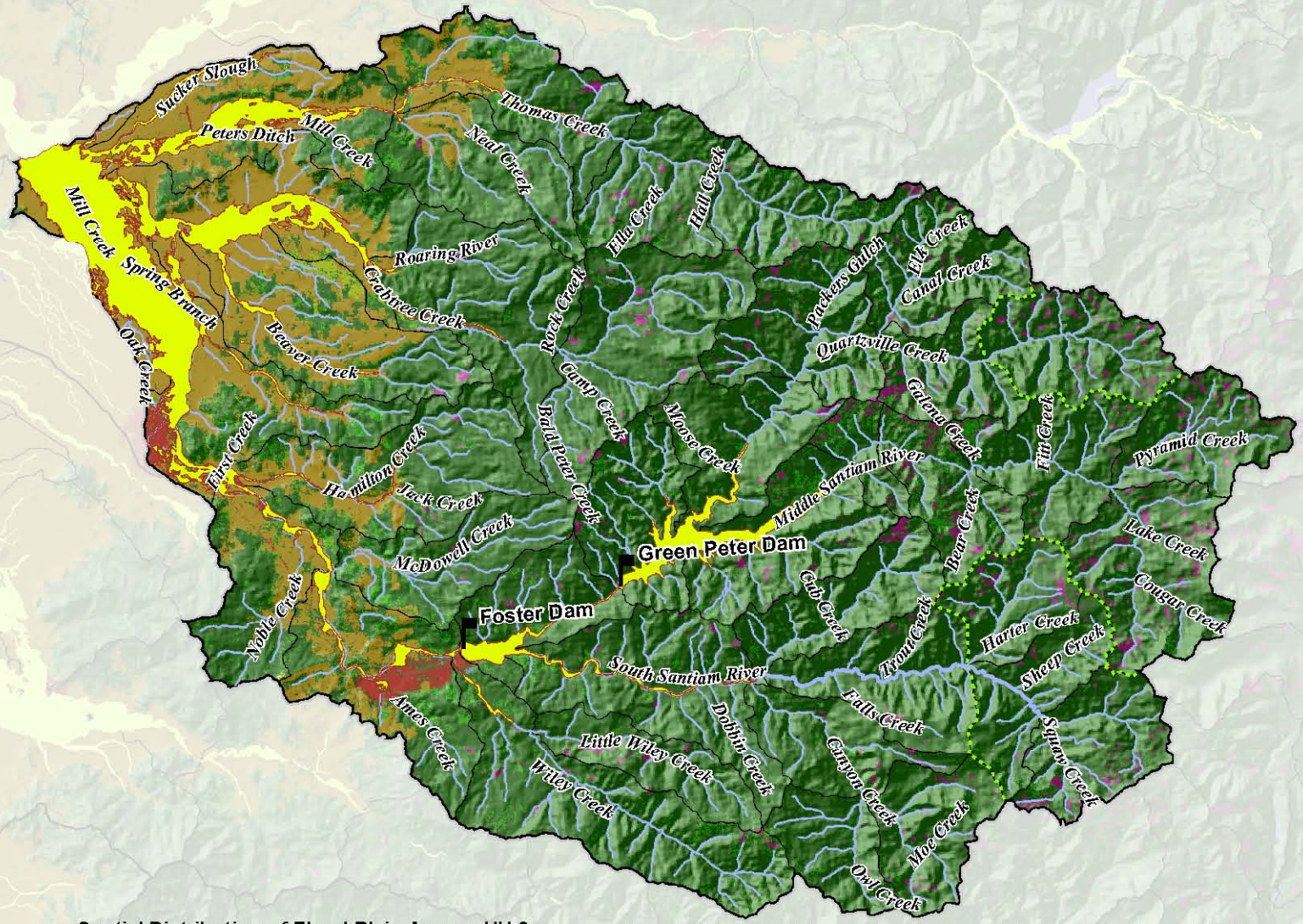
0 5 10 15 20

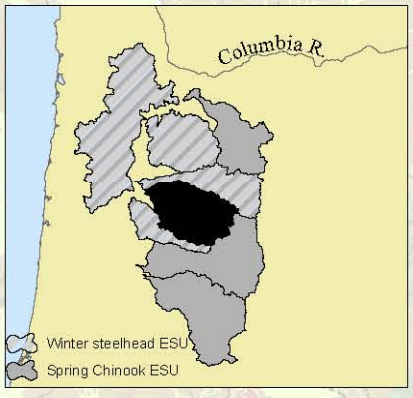
Km

NOAA — National Oceanic and Atmospheric Administration — U.S. Department of Commerce

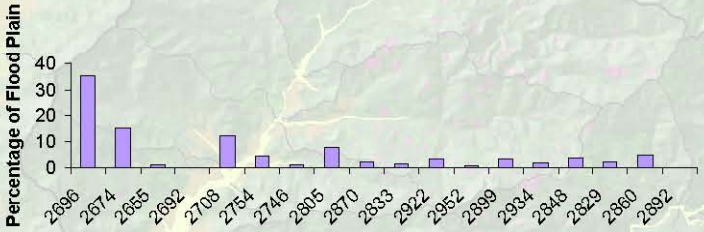
N W E S

Upper Willamette Winter Steelhead
Upper Willamette Spring Chinook Salmon





Spatial Distribution of Flood Plain Across HU 6s



Flood Plain Land Cover	Square Km	Pecent Total
Lakes and streams	21	14
Rock, sand and clay	0	0
Sparse vegetation in transition/recovery	0	0
Grasslands	2	2
Developed	2	2
Forest and shrubs	23	16
Agriculture	97	65
Wetlands	2	2
Total 100 yr. Flood Plain	**148**	**100**

1:390,000

South Santiam
2000 HU 6
Population Density

0 - 6
7 - 17
18 - 33
34 - 51
52 - 77
78 - 126
127 - 204
205 - 275
276 - 436
437 - 806
807 - 1505
1506 - 2327
2328 - 3002
Historically Inaccessible

0 5 10 15 20
Km

NOAA NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION U.S. DEPARTMENT OF COMMERCE

N W E S

Upper Willamette Winter Steelhead
Upper Willamette Spring Chinook Salmon

Sucker Slough
Peters Ditch
Mill Creek
Thomas Creek
Neal Creek
Hall Creek
Ella Creek
Mill Creek
Spring Branch
Roaring River
Crabtree Creek
Oak Creek
Beaver Creek
Rock Creek
Camp Creek
Bald Peter Creek
First Creek
Hamilton Creek
Jack Creek
McDowell Creek
Noble Creek
Ames Creek
Packers Gulch
E.R. Creek
Canal Creek
Quartzville Creek
Moose Creek
Galena Creek
Fill Creek
Pyramid Creek
Middle Santiam River
Bear Creek
Lake Creek
Cougar Creek
Green Peter Dam
Foster Dam
Crib Creek
Tyron Creek
Harter Creek
Sheep Creek
South Santiam River
Falls Creek
Squaw Creek
Dobbin Creek
Little Wiley Creek
Canyon Creek
Wiley Creek
Moe Creek
Owl Creek

Columbia R.
Winter steelhead ESU
Spring Chinook ESU

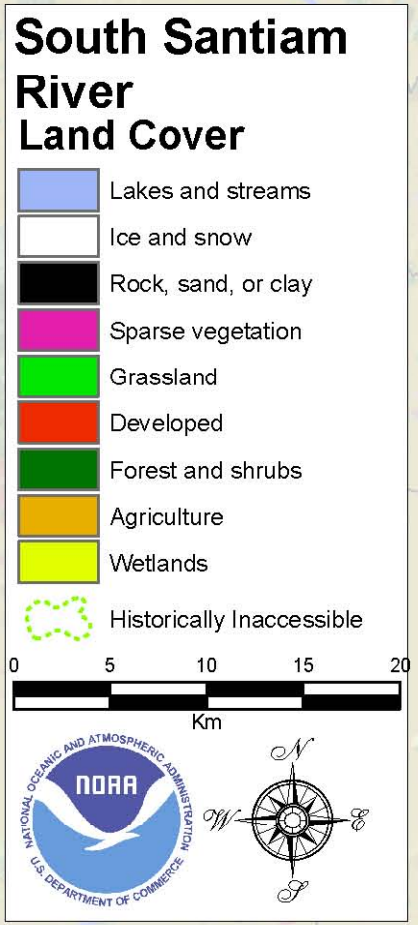
Year	Total Human Population / Square Km	Total Human Population	% Increase
2000	12	31,319	
2040	17	44,471	42

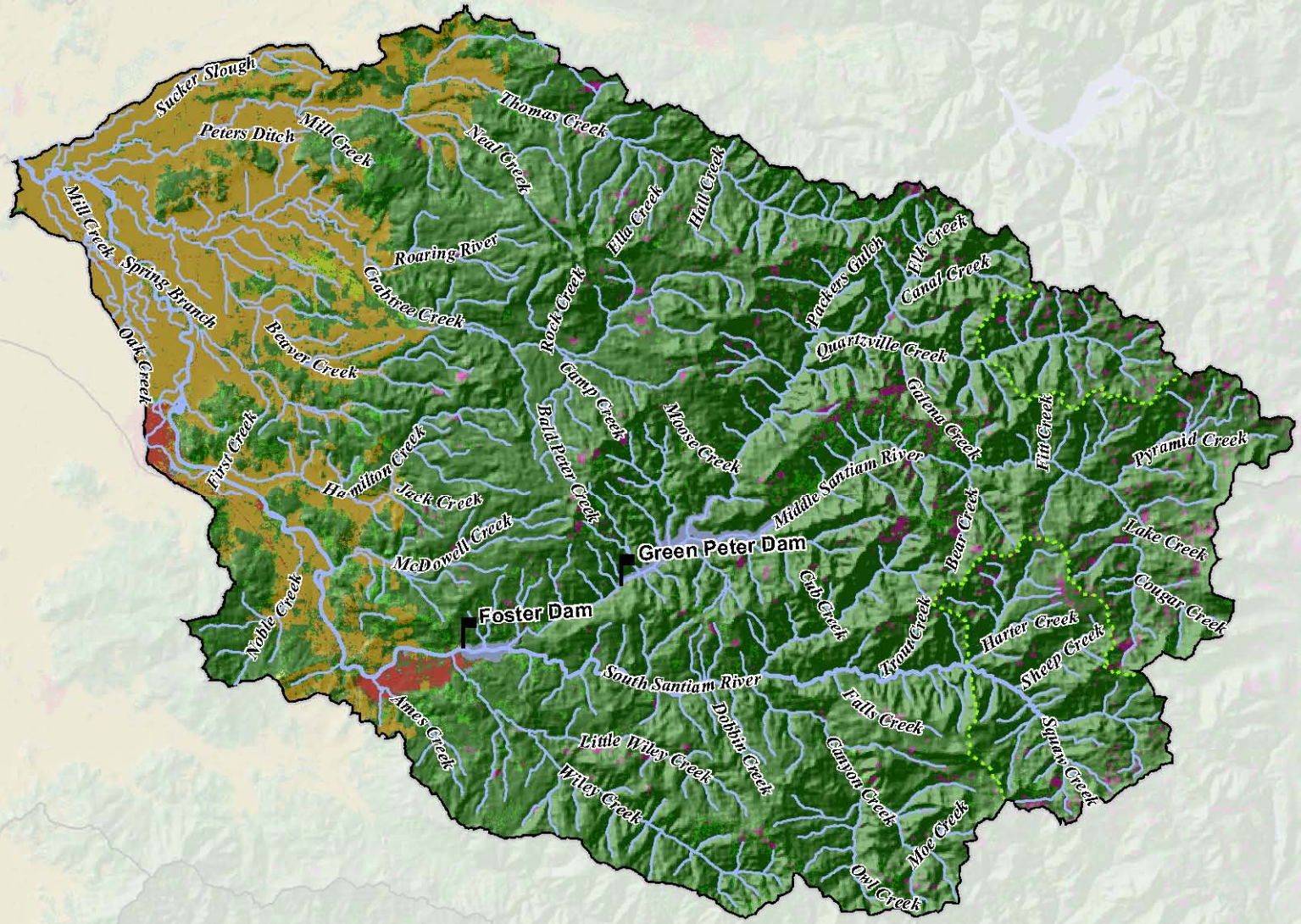
1:390,000

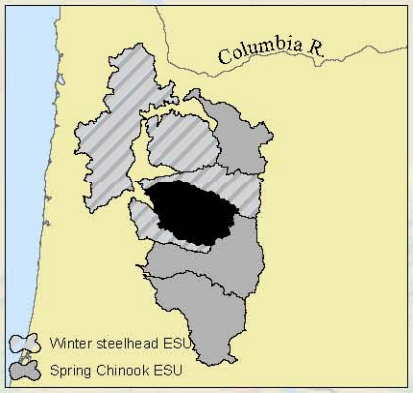
South Santiam River

South Santiam River
Land Cover

Upper Willamette Winter Steelhead
Upper Willamette Spring Chinook Salmon







Land Cover	Watershed Polygon Square Km	% Area	Historically Accessible Square Km	% Area
Lakes and streams	23	1	23	1
Rock, sand and clay	1	<1	1	<1
Sparse vegetation	57	2	47	2
Grasslands	112	4	106	4
Developed	18	1	18	1
Forest and shrubs	2,082	77	1,885	76
Agriculture	392	15	392	16
Wetlands	10	<1	10	<1
Total	2,695	100	2,482	100

1:390,000

South Santiam River
Land Use

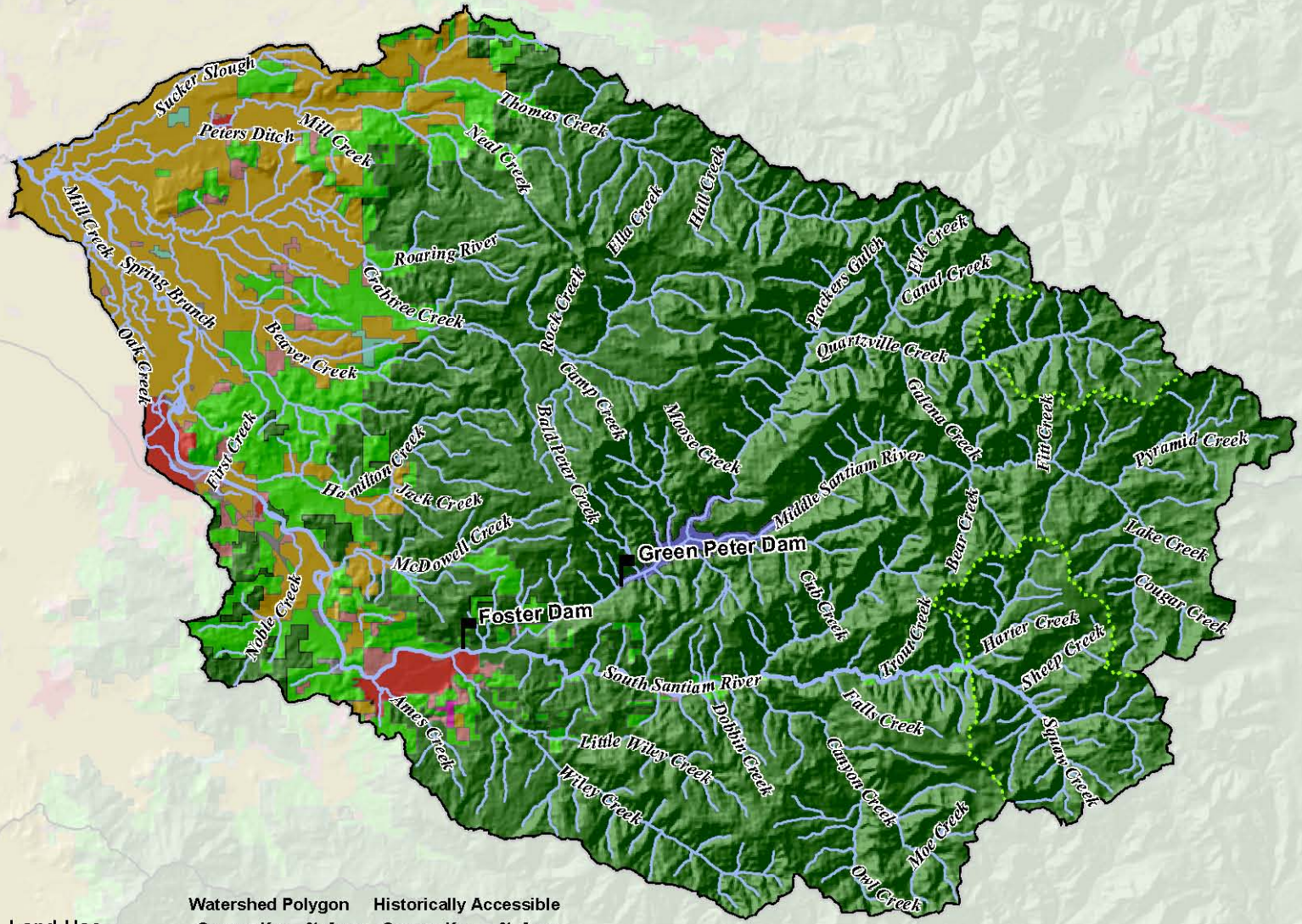
- Agriculture - forest zone
- Agriculture
- Forest
- Mineral resource zone
- Conservation zone
- Park and recreation
- Public facility
- Rural commercial
- Rural industrial
- Rural residential
- Urban
- Water
- Historically Inaccessible

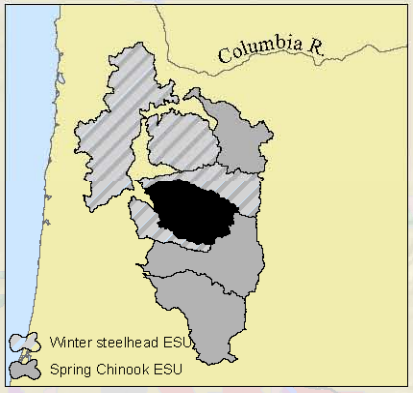
0 5 10 15 20
Km

NOAA NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION U.S. DEPARTMENT OF COMMERCE

N W E S

Upper Willamette Winter Steelhead
Upper Willamette Spring Chinook Salmon





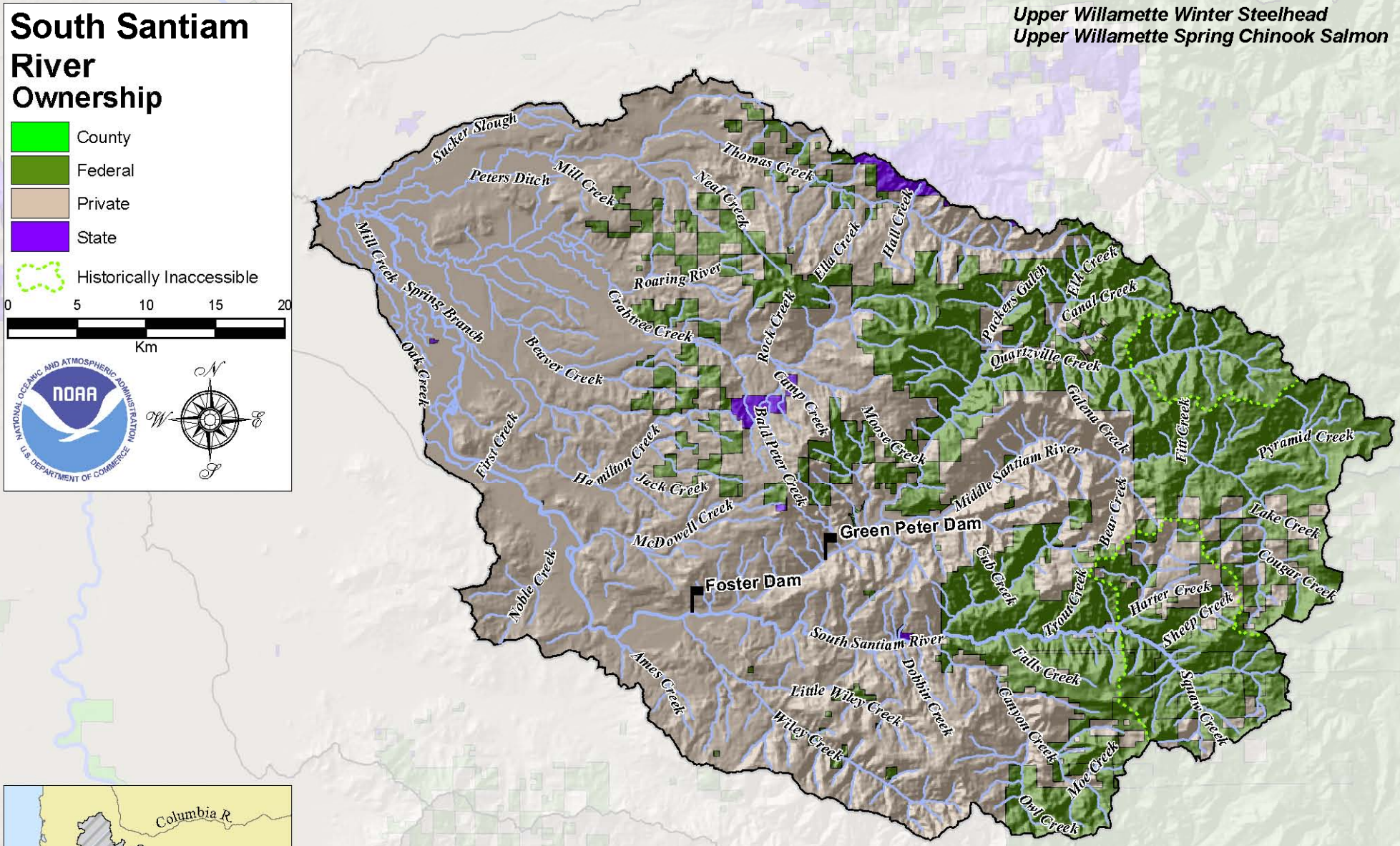
Land Use	Watershed Polygon Square Km	% Area	Historically Accessible Square Km	% Area
Ag-Forest zone	280	10	280	11
Agriculture	345	13	345	14
Forest	1.989	74	1.776	72
Mineral resource zone	1	<1	1	<1
Public facility	1	<1	1	<1
Rural industrial	3	<1	3	<1
Rural residential	30	1	30	1
Rural service center	4	<1	4	<1
Urban	28	1	28	1
Water	14	1	14	1
Total	**2,695**	**100**	**2,482**	**100**

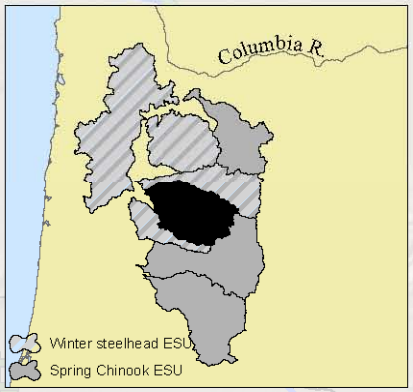
1:390,000

South Santiam River

South Santiam River Ownership

Upper Willamette Winter Steelhead
Upper Willamette Spring Chinook Salmon





Ownership	Watershed Polygon Square Km	% Area	Historically Accessible Square Km	% Area
County	<1	<1	<1	<1
Federal	871	32	696	28
Private	1,807	67	1,768	71
State	17	1	17	1
Total	**2,695**	**100**	**2,481**	**100**

1:390,000

South Santiam River
Riparian Condition

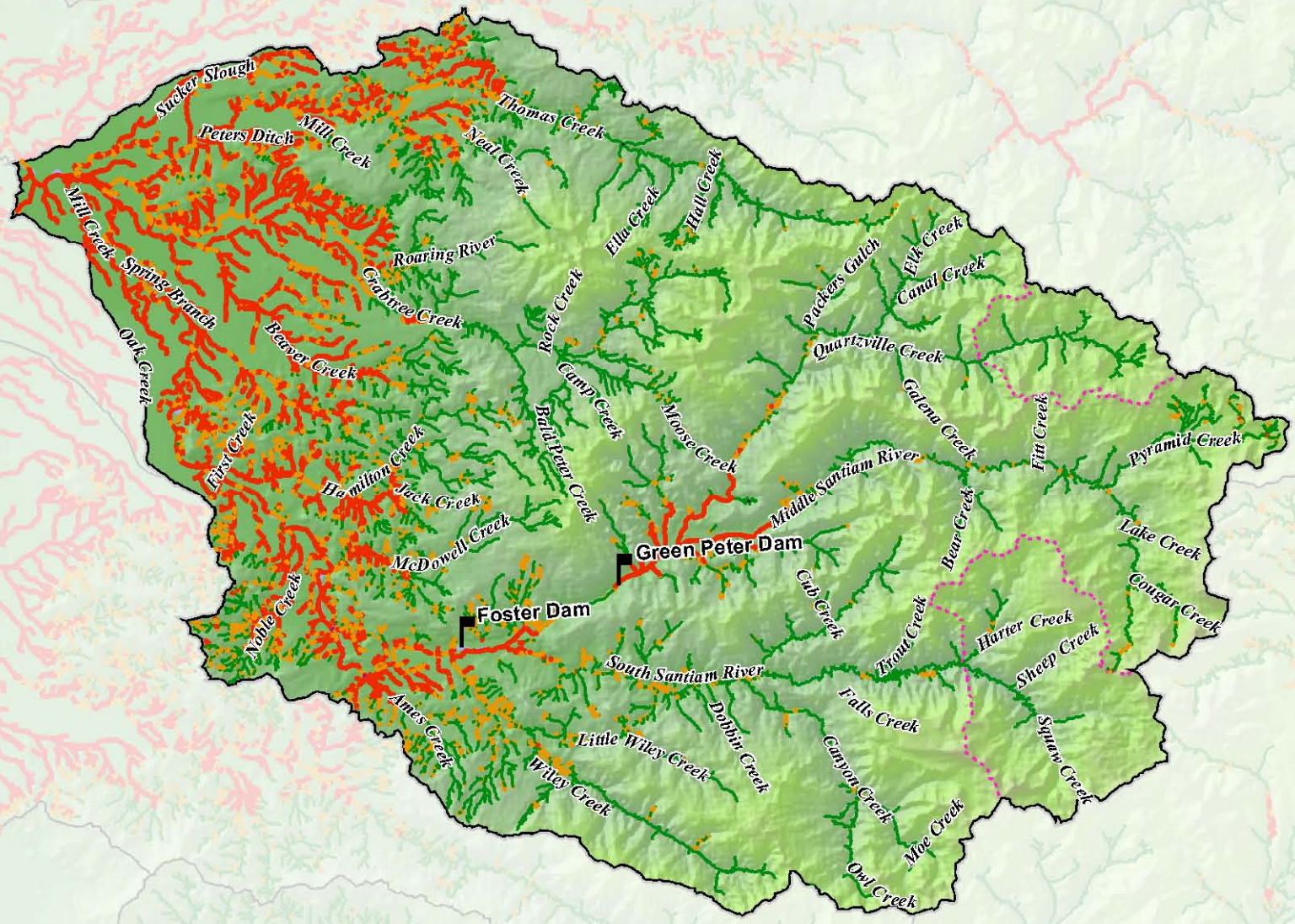
Functional
Impaired
Moderately Impaired
No Data
Water
Historically Inaccessible

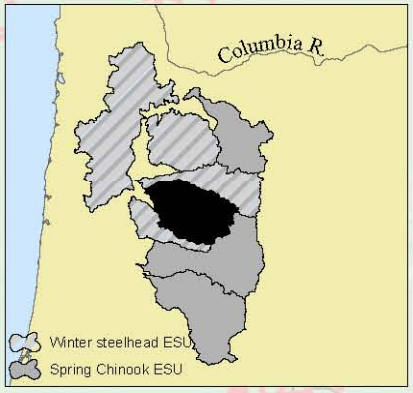
0 5 10 15 20
Km

NOAA NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION U.S. DEPARTMENT OF COMMERCE

N W E S

Upper Willamette Winter Steelhead
Upper Willamette Spring Chinook Salmon





Riparian condition	Stream km	% total
Functional	1,427	56
Impaired	675	26
Moderately impaired	436	17
No data	14	1
Water	<1	<1
Total	**2,551**	**100**

1:390,000

South Santiam River

South Santiam River

Water Rights

Max rate cfs

- 0.0008 - 4.17
- 4.17 - 11.625
- 11.625 - 23.965
- 23.965 - 42.372
- 42.372 - 76.195
- 76.195 - 123.82
- 123.82 - 201.807
- 201.808 - 345.248
- 345.248- 505.973
- 505.974 - 1900
- 1900 - 4600
- no data
- Historically Inaccessible

0 5 10 15 20

Km

Upper Willamette Winter Steelhead
Upper Willamette Spring Chinook Salmon

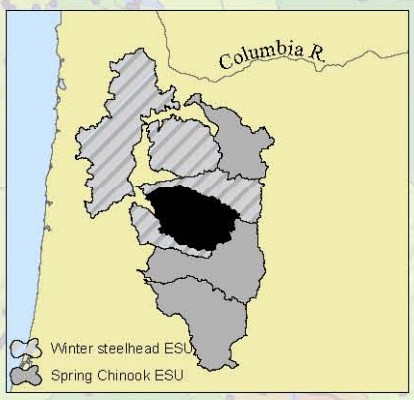
Total max rate for population equals 859 cfs.

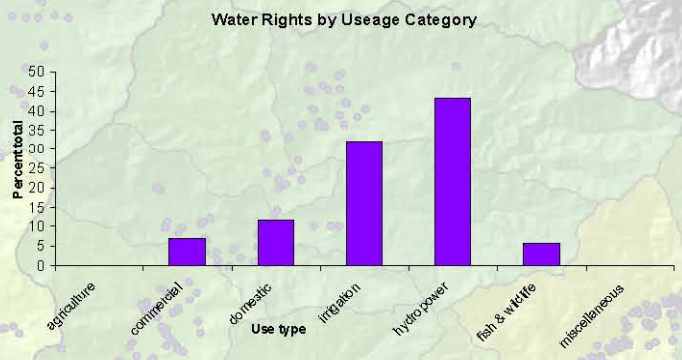
Max rate cfs
- 0 - 1.35
- 1.35 - 8
- 8 - 29
- 29 - 50
- 50 - 275

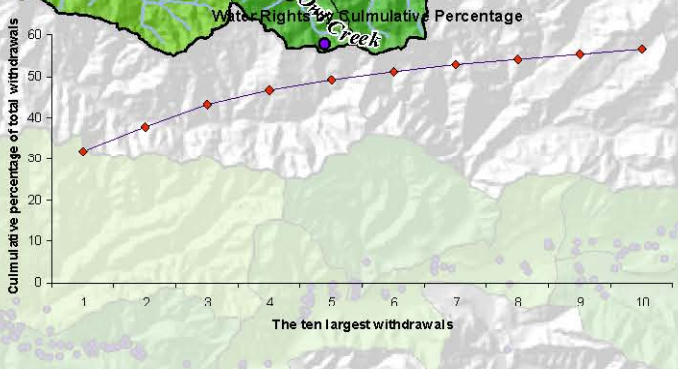
Green Peter Dam

Foster Dam

Sucker Slough, Peters Ditch, Mill Creek, Thomas Creek, Neal Creek, Mill Creek, Spring Branch, Oak Creek, Roaring River, Crabtree Creek, Beaver Creek, First Creek, Hamilton Creek, Jack Creek, McDowell Creek, Noble Creek, Ames Creek, Rock Creek, Camp Creek, Bald Peter Creek, Ella Creek, Hall Creek, Packers Gulch, Elk Creek, Canal Creek, Quartzville Creek, Moose Creek, Galena Creek, Middle Santiam River, Fir Creek, Pyramid Creek, Bear Creek, Crib Creek, Lake Creek, Cougar Creek, Trout Creek, Harter Creek, Sheep Creek, South Santiam River, Falls Creek, Squaw Creek, Dobbin Creek, Little Wiley Creek, Canyon Creek, Wiley Creek, Moe Creek, Ory Creek







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