Agenda

Steelhead Management and Biology

Recent History

Trends and Goals

2020/21 Forecasts

Management “Dials”
Agenda

Steelhead Management and Biology

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2020/21 Forecasts

Management “Dials”
Steelhead Management-Considerations/Constraints

- Limited in-season tools
- Effort shift uncertainty
- Recent history of overforecasting
- Tribal comanagement
- Escapement goals
Stealhead Management Plan

Policy guidance from **Statewide Steelhead Management Plan**. Provide a framework of policies, strategies and actions that will lead to achievement of goals. Goals include restore and maintain:

- **Abundance**
- **Productivity**
- **Distribution**
- **Diversity**
Steelhead Management Plan

Policy guidance from Statewide Steelhead Management Plan. Provide a framework of policies, strategies and actions that will lead to achievement of goals. Goals include restore and maintain:

- Abundance
- Productivity
- Distribution
- Diversity

Specific Abundance Guidelines:
- Runsize Greater than escapement goal: Assure escapement goals are met.
- Runsize less than escapement goal: Minimize mortality to wildstock(s); in no case exceed a 10% impact from all fisheries.
Steelhead Biology-Escapement

Chehalis River

Number of Spawners

Return Year


Hoquiam
Wishkah
Wynoochee
Satsop
Cloquallum
Black
Lower Tribs
Skookumchuck
Newaukum
Upper Mainstem
Upper Tribs
East Fork
South Fork
West Fork
U Cheh - Skook New.
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Steelhead Management and Biology

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Management “Dials”
Recent History

- **February 2020**- Closure of Chehalis and Willapa Bay
- **February and March 2020**- Meetings with Guide Advisory Group and others.
- **February-June 2020**- Steelhead Spawning Ground Surveys.
- **September 2020**- Technical discussion with comanagers.
- **November 2020**- Public Town Hall Meeting
- **December 1**- OPGA meeting
- **December 4**- Meeting with Washington Guides Association
- **December 8**- Rule Change
Agenda

Steelhead Management and Biology

Recent History

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2020/21 Forecasts

Management “Dials”
Steelhead Trends - Chehalis R.

- Runsize
- Escapement Goal
- Escapement

Number of Steelhead

<table>
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<th></th>
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<td>4000</td>
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<tr>
<td>Escapement</td>
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<td></td>
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<td></td>
<td>10000</td>
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Steelhead Trends - Willapa Bay

Return Year
Number of Steelhead
0 2000 4000 6000 8000 10000 12000

Runsize
Escapement Goal
Escapement

Number of Steelhead
0 2000 4000 6000 8000 10000 12000

Run size
Escapement Goal
Escapement

Department of Fish and Wildlife
Steelhead Trends - Humptulips R.

Number of Steelhead

Runsize
Escapement Goal
Escapement

Return Year
Number of Steelhead
0
2000
4000
6000
8000

Department of Fish and Wildlife
Steelhead Trends - Upper Quinault R.

Return Year
Number of Steelhead
0 1000 2000 3000 4000 5000

Runsize
Escapement Goal
Escapement

Map of Upper Quinault R. with geographic locations marked.
Steelhead Trends - Queets/Clearwater R.

Return Year
Number of Steelhead
0
2000
4000
6000
8000
10000
12000
14000

Runsize
Escapement Goal
Escapement

Department of Fish and Wildlife
Steelhead Trends - Hoh R.

Return Year

Number of Steelhead

Runsize
Escapement Goal
Escapement

Department of Fish and Wildlife
Steelhead Trends-
Quillayute R.
Steelhead Trends-
Hoko R.

Number of Steelhead

Return Year

Runsize
Escapement Goal
Escapement

Department of Fish and Wildlife
Steelhead Trends - Nisqually R.

Number of Steelhead

Return Year


Number of Steelhead

0 2000 4000 6000 8000

Runsize
Escapement Goal

Map of Nisqually R area with marked locations and 'R6' region.
Steelhead Trends - Puyallup R.

Graph showing the number of steelhead returning each year from 1980 to 2020, with a line indicating the runsize and a dashed line showing the escapement goal.

Map of the Puyallup River basin with labeled areas and a line connecting different locations.
Steelhead Trends-Status Quo

Description: **Release all wild steelhead.** Hatchery steelhead **Daily limit:** 2-3, **Gear type:** Variety of regulations including barbless hooks, no bait, single hook and no fishing from a floating device in select waters. **Closure day:** range from last day in February to April 30th, **Rainbow Trout:** Catch and release or minimum size 14”.

- Chehalis and Humptulips: Failure to meet escapement goal in at least 3 of last 4 years and exceedance of 10% ER in two of the last 3 years.
- Willapa Bay: Failure to meet escapement goal in last 5 years.
- Queets: Failure to meet escapement goal and exceedance of 10% ER in last 3 years.
- Hoko: Failure to meet escapement goal in 2 of last 4 years.
- 2020/21 Forecasts are below escapement goals in majority of coastal rivers.
- Declining abundance trends in majority of coastal rivers.
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Steelhead Management and Biology

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Trends and Goals

2020/21 Forecasts

Management “Dials”
2021 Forecasts - Survival

Survival Recruit/Spawner

Humptulips Wild Steelhead

Spawning Year


0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
2021 Forecasts - Ocean Conditions

Ocean Conditions (NPGO)

Ocean Entry Year
NPGO (Jan.-March)
-8, -6, -4, -2, 0, 2

Coastal Steelhead Survival

Survival (Recruit/Spawner)
-0.6, -0.4, -0.2, 0.0, 0.2, 0.4

Ocean Entry Year

Joh & Lorenzo 2017
2021 Forecasts - Ocean Conditions

Ocean Conditions (NPGO)

Ocean Entry Year
NPGO (Jan.-March)
-10 -5 0 5 10

Steelhead Runsize
0 1000 2000 3000 4000 5000 6000 7000

2021 Forecasts-Hatchery vs. Wild

Department of Fish and Wildlife

2D Graph 1

Wild Brood Year and Hatchery Release Year

Wild # Recruits / # Spawners

Hatchery # Return / # Release

Wild

Hatchery

Wild Brood Year and Hatchery Release Year
## 2021 Preliminary Forecast

*forecasts are subject to change given continuing discussions with tribal co-managers

<table>
<thead>
<tr>
<th>System</th>
<th>Forecast</th>
<th>Goal</th>
<th>Wild Steelhead Above Escapement Goal</th>
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<tbody>
<tr>
<td>Willapa</td>
<td>3862</td>
<td>4206</td>
<td>-344</td>
</tr>
<tr>
<td>Chehalis</td>
<td>6600</td>
<td>8600</td>
<td>-2000</td>
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<tr>
<td>Humptulips</td>
<td>1066</td>
<td>1600</td>
<td>-534</td>
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<tr>
<td>Upper Quinault</td>
<td>1725</td>
<td>1600</td>
<td>125</td>
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<tr>
<td>Queets/Clearwater</td>
<td>3563</td>
<td>4200</td>
<td>-637</td>
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<tr>
<td>Hoh</td>
<td>2903</td>
<td>2400</td>
<td>503</td>
</tr>
<tr>
<td>Quillayute</td>
<td>9276</td>
<td>5900</td>
<td>3,376</td>
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Agenda

Steelhead Management and Biology

Recent History

Trends and Goals

2020/21 Forecasts

Management “Dials”
Management “Dials”

- Escapement Goals
- Broodstock Collections
- Tribal Comanager Harvest
- Sport
### 2021 Preliminary Forecast*

<table>
<thead>
<tr>
<th>System</th>
<th>Forecast</th>
<th>Goal</th>
<th>Wild Steelhead Above Escapement Goal</th>
<th>Sport Impact Limit</th>
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<tr>
<td>Chehalis</td>
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<td>179</td>
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<td>1066</td>
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<td>9276</td>
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</tbody>
</table>

*forecasts are subject to change given continuing discussions with tribal comanagers
Sport Impact - Chehalis

Harvest Rate

Sport Impact-Humptulips

Harvest Rate

Department of Fish and Wildlife

0% 10% 20% 30% 40% 50% 60% 70% 80%


Department of Fish and Wildlife
Sport Impact - Skookumchuck

Harvest Rate

Potential Fisheries Options

1. Early Closure
   - Abundance
   - Productivity
   - Distribution
   - Diversity

2. Quillayute River Only
   - Abundance
   - Productivity
   - Distribution
   - Diversity

3. Gear and Harvest Restrictions
   - Abundance
   - Productivity
   - Distribution
   - Diversity

4. Full Closure
   - Abundance
   - Productivity
   - Distribution
   - Diversity
## Potential Fisheries Options

1. Early Closure
   - Abundance: ?
   - Productivity: ?
   - Distribution: ?
   - Diversity: ?

2. Quillayute River Only
   - Abundance: ?
   - Productivity: ?
   - Distribution: ?
   - Diversity: ?

3. Gear and Harvest Restrictions
   - Abundance: 
   - Productivity: 
   - Distribution: 
   - Diversity: 

4. Full Closure
   - Abundance: 
   - Productivity: 
   - Distribution: 
   - Diversity: 

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**Department of Fish and Wildlife**
2020/21 Rule Change

Description: Single point barbless hooks and Selective Gear rules (no bait), prohibit fishing from a floating device, April 1 closure date, release rainbow trout.

- Greatest likelihood of meeting management objectives outside of full closure.
- Support from public
- Maximum Opportunity
- Provides greatest “protection” for late-timed hatchery programs.
- Preferred by tribal co-managers over a full closure of state fishery.
Fishing from a boat vs. shore

Hoh River, 2018 - 2020

Wild Steelhead/Hour (CPUE)

- Shore
- Boat

JAN  FEB  MAR  APR
Quillayute Escapement
### Quillayute Escapement

<table>
<thead>
<tr>
<th>Year</th>
<th>Bogachiel</th>
<th>Sol Duc</th>
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Questions?