2020/21 Coastal Steelhead
Pre-season Planning

James Losee, Coastal and Puget Sound
Regional Fish Program Manager
All callers will be muted upon entry.

You can type a question through the Q&A function or ask a question by “raising your hand.” If you’re calling in you can raise a hand by dialing *9 on your phone, or if your calling from a computer you can find the hand icon at the bottom of your screen.

When you are called on for a question or comment, we encourage you to speak up and provide comments live. To speak you will need to unmute yourself by using the mute button on your computer or mobile device, or enter *6 if you’re calling from a land line.

If you have a technical issue during the webinar, please drop us a note in the Q&A and we will help you through it.

Expect and accept non-closure during question and feedback portion.

Assume positive intentions from those speaking.
Agenda

Steelhead Management Background

Steelhead Biology/Stock Assessment

Trends and Goals

2020/21 Forecasts

Potential Fisheries Options
Agenda

Steelhead Management Background

Steelhead Biology/Stock Assessment

Trends and Goals

2020/21 Forecasts

Potential Fisheries Options
Steelhead Management-Constraints

- Limited in-season tools
- Effort shift uncertainty
- Recent history of overforecasting
- Tribal comanagement
- Escapement goals
Steelhead Management-Key Terms

**Wild steelhead** - Steelhead that were produced in the natural environment.

**Hatchery steelhead** - Steelhead that were produced in a hatchery.

**Run** - A group of anadromous fish on its return migration, identified by species, race and water of origin.

**Escapement** - Number of steelhead surviving to the spawning grounds or hatchery.

**Redd** - Spawning nest.

**Runsize** - Number of steelhead returning to the freshwater. Escapement + Harvest.

**Survival** - Number of steelhead produced by each parent spawner. Recruit per spawner.

**Forecast** - Predicted number of adult steelhead returning in future years.

**Integrated hatcheries** - Genetically integrated with natural population.

**Segregated hatcheries** - Genetically segregated from natural population.
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
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 less than escapement goal:** Minimize mortality to wildstock(s); in no case exceed a 10% impact from all fisheries.

**Runsize Greater than escapement goal:** Assure escapement goals are met.
Agenda

Steelhead Management Background

Steelhead Biology/Stock Assessment

Trends and Goals

2020/21 Forecasts

Potential Fisheries Options
Biology/Stock Assessment

Spawning Ground Surveys

Fishery Monitoring

Hatcheries

Spawning Grounds

Hatchery Releases

Fresh Water

Ocean Phase

Smolt outmigration

Collaborative Research

Graph showing the proportion of a run over time with hatchery and wild fish represented.

Light et al. 1989

Department of Fish and Wildlife
Agenda

Steelhead Management Background

Steelhead Biology/Stock Assessment

Trends and Goals

2020/21 Forecasts

Potential Fisheries Options
Steelhead Trends - Chehalis R.
Steelhead Trends - Willapa Bay

Number of Steelhead

Runsize
Escapement Goal
Escapement

Return Year


Department of Fish and Wildlife
Steelhead Trends - Humptulips R.

Number of Steelhead

- Runsize
- Escapement Goal
- Escapement

Return Year


0 2000 4000 6000 8000

Number of Steelhead

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

- Runsize
- Escapement Goal
- Escapement

Number of Steelhead

Return Year


Department of Fish and Wildlife
Steelhead Trends- Hoh R.

Return Year

Number of Steelhead

Runsize
Escapement Goal
- Escapement

Map of Hoh River area with numbered locations and map legend.
Steelhead Trends - Quillayute R.

Number of Steelhead

Return Year

Runsize
Escapement Goal
Escapement
Agenda

Steelhead Management Background

Steelhead Biology/Stock Assessment

Trends and Goals

2020/21 Forecasts

Potential Fisheries Options
2021 Forecasts-Survival

Survival Recruit/Spawner

Spawning Year

Humptulips Wild Steelhead

Department of Fish and Wildlife
2021 Forecasts-Ocean Conditions

Ocean Conditions (NPGO)

Coastal Steelhead Survival

Ocean Entry Year

Joh & Lorenzo 2017

Department of Fish and Wildlife
## 2021 Preliminary Forecast*

<table>
<thead>
<tr>
<th>System</th>
<th>Forecast</th>
<th>Goal</th>
<th>Wild Steelhead Above Escapement Goal</th>
</tr>
</thead>
<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>
</tr>
<tr>
<td>Humptulips</td>
<td>1066</td>
<td>1600</td>
<td>-534</td>
</tr>
<tr>
<td>Upper Quinault</td>
<td>1725</td>
<td>1600</td>
<td>125</td>
</tr>
<tr>
<td>Queets/Clearwater</td>
<td>3563</td>
<td>4200</td>
<td>-637</td>
</tr>
<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>
</tr>
</tbody>
</table>

*forecasts are subject to change given continuing discussions with tribal comanagers
Agenda

Steelhead Management Background

Steelhead Biology/Stock Assessment

Trends and Goals

2020/21 Forecasts

Potential Fisheries Options
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 15th, **Rainbow Trout:** Catch and release or minimum size 14”.

- Declining abundance trends in majority of coastal rivers.
- 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. ER <10%
- 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. No estimate of ER.
- Forecasts below escapement goals in majority of coastal rivers.
Potential Options

Option #1: Early Closure

Option #2: Quillayute River Only

Option #3: Gear and Harvest Restrictions

Option #4: Coastwide Closure
Option #1. Early Closure

Description: Closed to all fishing March 1 to April 15.

Pros:
– Targets early-returning hatchery releases.
– Protects peak of wild run.

Cons:
– Limited harvest of late-timed hatchery steelhead.
– Displaces anglers targeting wild steelhead.
– Disproportionately effects early end of the wild run.
Option #2.
Quillayute only

Description: Closed to fishing except the Quillayute R. and tributaries

Pros:
– Protects stocks at highest risk.

Cons:
– Decreased angler experience.
– Uncertainty around effort shifts.
– Concerns from tribal comanagers.
– Displaces some user groups and economies.
Option #3.
Gear Restrictions

Description: Bait restriction, no fishing from a floating device in select waters, release rainbow trout.

Pros:
– Maximizes time on the water.
– Consistently protects steelhead in all areas, times and at all life stages.
– Allows for harvest of early and late-timed hatchery steelhead.

Cons:
– Displaces some user groups.
– Enforcement challenge.
Option #4. Coastwide Closure

Description: Closed to fishing in coastal rivers December 1-April 15

Pros:
– Maximum protection for wild steelhead.

Cons:
– No access to hatchery origin returns.
– Closure on rivers where escapement goal is likely to be met (Quillayute R.).
– Impact to economy of coastal communities.
– Displaces important advocates, anglers.
Potential Fisheries Options

1. Early Closure

2. Quillayute River Only

3. Gear and Harvest Restrictions

4. Full Closure
Questions? Feedback?

We’re especially interested in

- Questions on the data presented by WDFW staff
- Feedback on the management options we’ve outlined

ZOOM Reminders:

- You can type a question through the Q&A function or ask a question by “raising your hand.” If you’re calling in you can raise a hand by dialing *9 on your phone, or if your calling from a computer you can find the hand icon at the bottom of your screen.
- To speak you will need to unmute yourself by using the mute button on your computer or mobile device, or enter *6 if you’re calling from a land line.
- If you have a technical issue during the webinar, please drop us a note in the Q&A and we will help you through it.
Coho Returns vs. Steelhead Returns

Chehalis River

Wild Runsize

Steelhead
Coho ÷10

Quillayute River

Wild Runsize

Steelhead
Coho

Department of Fish and Wildlife