Where are we now?

Current Fish & Fishery Status

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Today’s Topics

- Long-term trends
- Hatchery Mitigation
- Escapement & Viability
- Fisheries
- All-H Integration
Harvest Trend

Source: Columbia River Fishery Agencies, ISAB 2015
Abundance

Pre-development: 5 – 16 million**

* ODFW & WDFW Joint Staff Reports
** Chapman, NPPC, PFMC, ISAB
Bonneville Dam Counts*

Source: USACE dam counts, Whitney & White 1984 loss assessment  
*10-yr avg.
<table>
<thead>
<tr>
<th>Species</th>
<th>Historical*</th>
<th>Current avg.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinook</td>
<td>4.0</td>
<td>1.0</td>
</tr>
<tr>
<td>Spring</td>
<td>0.5</td>
<td>0.3</td>
</tr>
<tr>
<td>Summer</td>
<td>2.2</td>
<td>0.1</td>
</tr>
<tr>
<td>Fall</td>
<td>1.2</td>
<td>0.6</td>
</tr>
<tr>
<td>Sockeye</td>
<td>2.4</td>
<td>0.2</td>
</tr>
<tr>
<td>Coho</td>
<td>0.6</td>
<td>0.4</td>
</tr>
<tr>
<td>Chum</td>
<td>0.6</td>
<td>&lt;0.1</td>
</tr>
<tr>
<td>Steelhead</td>
<td>0.5</td>
<td>0.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>8.0</strong></td>
<td><strong>2.0</strong></td>
</tr>
</tbody>
</table>

* Midpoint of reported range of peak 5-yr runs (Chapman 1986)
** 20-year average Columbia River Run (natural & hatchery)
Hatchery Mitigation
**Hatchery Releases**

![Graph showing hatchery releases from 1950 to 2010.](chart.png)

- **Fall Chinook**: 67.0
- **Spring Chinook**: 30.0
- **Summer Chinook**: 6.0
- **Coho**: 20.0
- **Steelhead**: 15.0
- **Chum**: 0.2
- **Sockeye**: 0.5

*Below Bonneville* and *Above Bonneville* release numbers shown.

*Source: ISAB, FPC*
% Hatchery

- Spring Chinook
- Summer Chinook
- Fall Chinook
- Sockeye
- Coho
- Chum
- Steelhead

*Approximate Basin Average
Escapement & Viability
Endangered Species Act

Listed

- Lower Columbia Spring/Summer
- Upper Columbia Spring
- Snake Fall
- Lower Columbia
- Upper Willamette
- Snake Spring/Summer
- U. Columbia Spring
- Snake
- Lower Columbia
- Upper Willamette
- Middle Columbia Spring
- Snake
- SW Washington
- Okanogan
- Lake Wenatchee

Not listed

- U. Columbia Summer/Fall
- Middle Columbia Spring
- Deschutes Summer/Fall
- U. Columbia Summer/Fall
- Lower Columbia
- Columbia
<table>
<thead>
<tr>
<th>ESU</th>
<th>Chinook</th>
<th>Steelhead</th>
<th>Population status</th>
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<tr>
<td></td>
<td></td>
<td></td>
<td>V Low</td>
</tr>
<tr>
<td>L Col Spr/Fall</td>
<td>26</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td>U Will Spring</td>
<td>5</td>
<td>--</td>
<td>1</td>
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<tr>
<td>U Col Spring</td>
<td>--</td>
<td>--</td>
<td>3</td>
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<tr>
<td>Snake Spr/Su</td>
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<tr>
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</tr>
<tr>
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<td>4</td>
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</tr>
<tr>
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<tr>
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<td>Col</td>
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<tr>
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<td>Snake</td>
<td>14</td>
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</table>

Source: 2015 NOAA 5-Yr Status Review
Fisheries
Management Trends

In-river fisheries, hatchery & wild combined

Source: Columbia River Fishery Agencies
Current Fishing Rates*

* Approximate rates for natural-origin fish, recent 10-yr avg where available
Columbia Basin Harvests

Salmon & Steelhead

Chinook (~300,000 / yr)

Coho (~200,000 / yr)

Steelhead (~150,000 / yr)

Source: NOAA Mitchell Act EIS 2002-2009
All-H Integration
Understanding the connection between impacts & salmon survival

- Habitat conditions
- Predation
- Harvest
- Hatchery
- Dams
- Climate

Source: NOAA Northwest Fishery Science Center