



Fish and Wildlife Program's
Columbia River Basin High Level Indicators

*Tracking Progress in the
Council Fish and Wildlife Program*

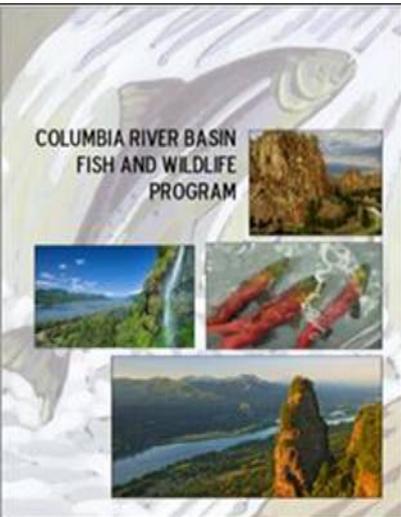
October 2009
Ketchum, Idaho

Today's Tasks

- Link FW Program, Management Questions, High Level Indicators, and FW Program indicators
- Characteristics for successful Columbia River Basin High Level Indicators
- The recommended Columbia River Basin High Level Indicators
- Role of Council FW Program Management Questions
- Role of FW Program Indicators
- Next Steps



Linkages: Program, Questions, FW Indicators, and HLI



Management Questions: *biological & implementation*

Biological

- Are Columbia River Basin fish and wildlife abundant, diverse, productive, spatially distributed, and sustainable?
- Are the actions implemented by the Council Fish and Wildlife Program having the expected biological effect on fish and wildlife and their habitat?
- Are Columbia River Basin ecosystems healthy?
- Are ocean conditions affecting Columbia River Basin anadromous fish?
- Is climate change affecting fish and wildlife in the Columbia River basin?

Implementation

- Is harvest consistent with the Council fish and wildlife program's vision?
- Does artificial production complement resident and anadromous recovery and harvest goals within the Columbia River basin?
- Are mainstem hydro operations meeting the Council Fish and Wildlife Program's survival and passage objectives?
- Do Council program actions protect, mitigate and enhance fish and wildlife and their habitats?
- Are Council program actions coordinated within the program and with other programs?

Fish and Wildlife Program Indicators' Topics

- Adult abundance
- Juvenile abundance
- Status of ESA listed species
- Watershed condition
- Non-native species distribution
- Ocean condition
- Harvest
- Contribution of hatcheries
- Survival through dams
- Predation
- Habitat acquired
- Fish passage barriers corrected
- Habitat available
- Water conserved
- Land protected
- Actions taken
- Coordination actions

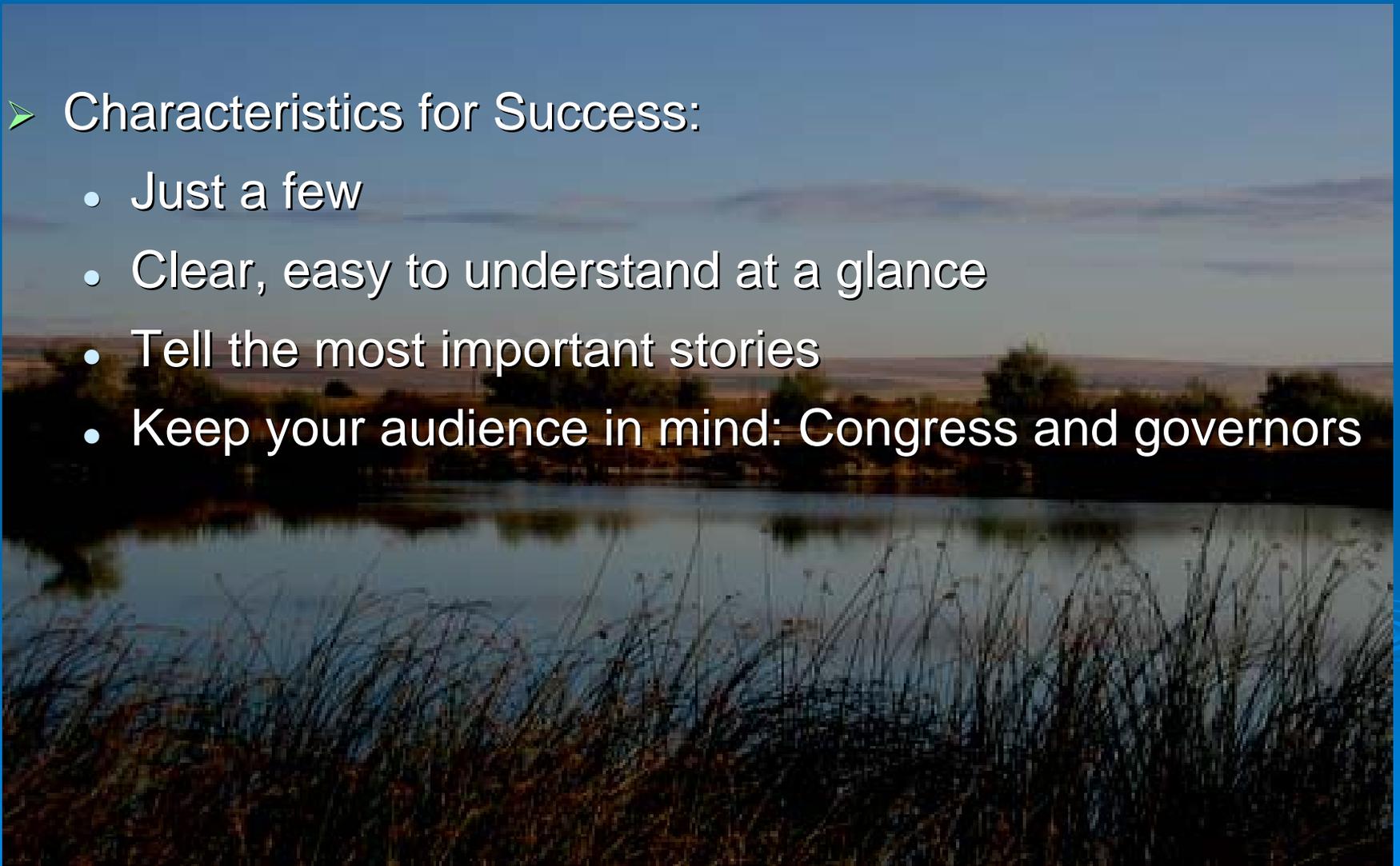
Columbia River Basin High Level Indicators

- 1. Abundance of Fish and Wildlife**
- 2. Ecosystem Health**
- 3. Hydrosystem Survival and Passage**
- 4. Council Actions**

Columbia River Basin High Level Indicators

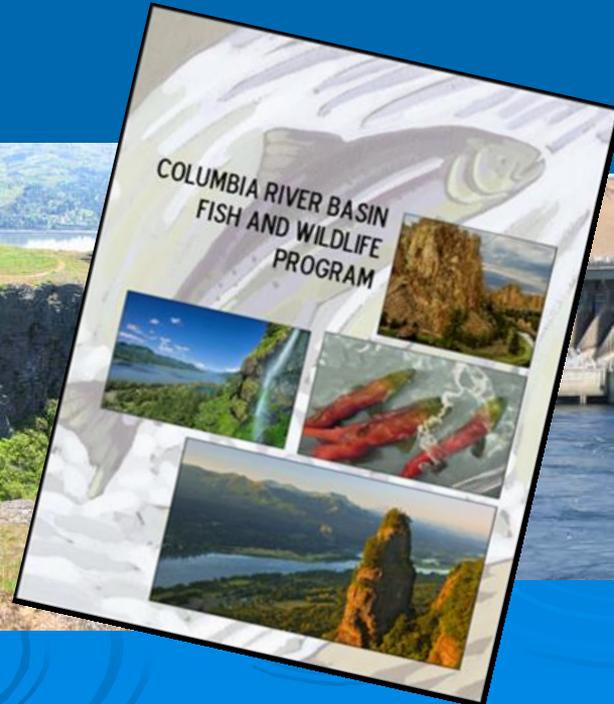
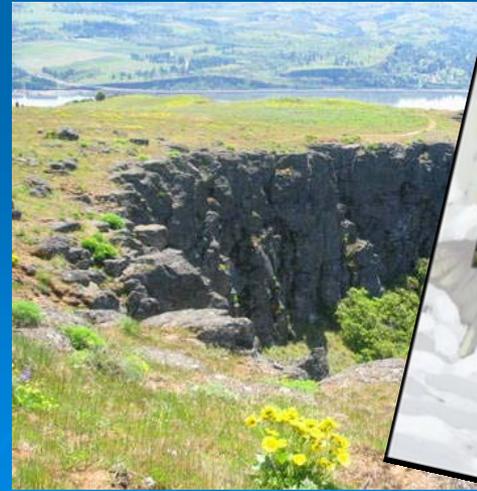
➤ Characteristics for Success:

- Just a few
- Clear, easy to understand at a glance
- Tell the most important stories
- Keep your audience in mind: Congress and governors



Columbia River Basin High Level Indicators

- The Recommended Few
 1. Abundance of Fish and Wildlife
 2. Ecosystem Health
 3. Hydrosystem Survival and Passage
 4. Council Actions



1. Abundance of Fish and Wildlife

Information presented to convey abundance indicator

- Abundance of Adult Fish
- Adult abundance of wild and hatchery salmon and steelhead
- Juvenile abundance of wild and hatchery out-migrating salmon and steelhead



2. Ecosystem Health

Information presented to convey health indicator

- Based on a few indices chose to align with region

- Indices may reflect quality of:
 - water,
 - sediment,
 - habitat stream / riparian,
 - biological/invertebrate,
 - landcover,
 - stream flow



3. Hydrosystem Survival & Passage

Information presented to convey hydrosystem indicator

➤ Adult salmon and steelhead passage survival



➤ Juvenile salmon and steelhead passage survival



4. Council Actions

Information presented to convey action indicator

- Wildlife habitat units
- Instream fish passage improvements
 - Screens, barriers, miles accessible
- Land protected for fish and wildlife
- Coordination of Council FW Program actions



Council FW Program Management Questions

What is their Role?

Management Questions: *biological & implementation*

Biological

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- Are Columbia River Basin ecosystems healthy?
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Implementation

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- Does artificial production complement resident and anadromous recovery and harvest goals within the Columbia River basin?
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- Do Council program actions protect, mitigate and enhance fish and wildlife and their habitats?
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- Reflect FW Program policy
- Facilitate tracking of program implementation with numerical indicators
- Enable adaptive management loop
- Focus content to include in Council report to Congress and governors

Council FW Program Indicators

What is their Role?

Fish and Wildlife Program Indicators

- Abundance of salmon and steelhead in the CR basin
- Abundance of pacific lamprey and sturgeon in the CR basin.
- Smolt-Adult return rates for ESA listed salmon and steelhead in the CR basin
- Abundance of focal resident fish species in the CR basin
- Wildlife species abundance and diversity in the CR Basin
- ESA listed or non-listed status and trend of fish and wildlife in the CR basin
- Watershed condition for fish and wildlife
- Non-native species distribution
- Ocean condition
- Climate change impact on FW
- Production of wild fish related to habitat improvement actions
- Predation on fish in the CR basin
- Harvest numbers and rates per year for salmon, steelhead, sturgeon, and resident fisheries.
- Contribution of FW program funded hatcheries to CR basin and Ocean fisheries.
- Implementation of artificial production recommendations supported by the FW Program's vision
- Abundance of hatchery parr/smolt released complement abundance of wild parr/smolt in-stream
- Salmon and steelhead juvenile survival through FCRPS's dams
- Salmon and steelhead adult survival through FCRPS's dams
- Wildlife habitat units acquired relative to loss by dam.
- Number of fish passage barriers removed
- Potential maximum additional miles of fish habitat made accessible
- Number of fish screens installed
- Amount of water conserved by conservation activities and water transactions for instream use.
- Amount of land protected for fish and wildlife
- Amount of land receiving actions aimed at improving habitat for fish and wildlife
- Managing predation on adult and juvenile fish.
- Resident fish substitution
- Subbasin Plan implementation
- Coordination of FW Program with other fish and wildlife entities, activities, and programs in the basin

- Communicate important program progress
- Subbasin level tracking
- Inclusion in Status of the Resource (SOTR) for outreach
- Align indicators with region as feasible, e.g. PNAMP HLI effort

Next Steps

- Comments / Approval for
 - Recommended High Level Indicators for Council's Report to Congress
 - Management Questions
 - Encourage inclusion of FW Program Indicators in SOTR

Columbia River Basin High Level Indicators

1. Abundance of Fish and Wildlife

2. Ecosystem Health

3. Hydrosystem Survival and Passage

4. Council Actions

habitats?

- Are Council program actions coordinated within the program and with other programs?

Motion from F&W Committee

➤ That the Council

- Approve three High-Level Indicators in the Council's report to Congress: 1) Abundance of Fish and Wildlife, 2) Hydrosystem Survival and Passage, and 3) Council Actions.
- Approve fish and wildlife program management questions as a working list
- Recommend that CBFWA include the fish and wildlife Program indicators in the Status of the Resource report; all as presented by the staff and recommended by the Fish and Wildlife Committee and approved by the Council [with changes adopted by the Members at today's meeting]

The Council understands that the information for these indicators is either currently available or will be collected within existing budgets and that no additional Council funding obligation will result from the adoption of the indicators unless first approved by the Council.