

Leadership Council Discussion Draft
Proposed Approach to develop targets and benchmarks for the
Provisional Ecosystem Indicators
February 28, 2008

Discussion Purpose:

- To obtain Leadership Council guidance for developing ecological targets and benchmarks for the provisional ecosystem indicators

Background on Indicators (recap of January Leadership Council meeting)

The Puget Sound Partnership recognizes the importance of a healthy ecosystem, but this goal must be set out in more precise scientific terms in order to judge whether Puget Sound is healthy and measure progress over time. Scientists are currently refining a set of **environmental indicators** to translate terms such as “healthy,” “safe,” and “sustained” into agreed-upon and measurable criteria for assessing the state of Puget Sound. Many separate indicators have already been identified and are measured, such as water quality, population levels of valued species, levels of toxic contamination, and habitat acreage and type. Indicators for human health and well-being include negative symptoms such as outbreaks of disease from contaminated shellfish, or may be based on positive behavior such as water conservation and recycling. Indicators will also assess and measure the factors that stress and degrade the ecosystem as well as monitor restoration and recovery. An integrated set of indicators is needed to collectively measure the health of the entire Puget Sound ecosystem and the interaction of its component parts. Developing quantified outcomes and performance standards for the Action Agenda will take more than one year, but a provisional set of indicators is now being prepared and can be modified as work proceeds. NOAA Fisheries is leading the work to develop the provisional indicators. The provisional indicators will be part of the 2020 Action Agenda to be completed by September 1, 2008.

Developing Targets and Benchmarks for Provisional Indicators

The provisional indicators will us what we should measure to determine the health of Puget Sound. They do not tell us “how much” is enough (a target endpoint) or what measurable milestones might be achieved along the way. Scientifically, only a few such ‘endpoints exist now – salmon and orca, maybe a few others. Developing more endpoints needs more work and would not be completed by September 1, 2008.

For the Action Agenda, the Leadership Council could chose to identify policy-based “surrogate” targets for the indicators. A surrogate indicator target would likely be a commonly accepted measure such as existing water quality standards. The final indicator target may be higher, lower or equal to the surrogate. Examples of “surrogate” targets could include:

- A specific target: (e.g., instream flows established and achieved in all major streams and tributaries draining into Puget Sound)

- An trend target: (e.g., an increasing trend (or specific miles/acres) of an indicator such as miles of shoreline, acres of eelgrass, number of shellfish beds open for harvest, etc.).

Many such targets exist now in Puget Sound for all or most of the Partnership's goals.

Once the indicators and the healthy target for each indicator have been established, benchmarks can be identified. A benchmark is a measurable interim milestone established to demonstrate progress towards the objective for the associated indicator target. The number of benchmarks will be determined in part by how quickly measurable change can be expected to occur for each indicator. Examples could include:

- xx acres of shoreline restored by 20xx
- xx% percentage of rivers achieve established instream flows by 20xx
- xx acres or numbers of shellbeds reopened for harvest by 20xx.

As with targets, many benchmarks exist or have been proposed for most Partnership goals.

One approach to develop the target endpoints and benchmarks for the Action Agenda could be:

- Use the draft criteria and draft lists of indicators being developed as part of the provisional indicator project.
- Synthesize existing target "endpoints" that could be considered as the surrogate (e.g., existing water quality standards) for each goal and targets
- Synthesize the numerous benchmarks already in use in Puget Sound for each goal
- Match existing target endpoints and benchmarks with the provisional indicators. At some level, this will need to occur in parallel with the development of the indicators (due to the Action Agenda deadline). The process would need to include input and review by the Leadership Council, Ecosystem Coordination Board, Science Panel, in the Action Area meetings, and with interest/stakeholder groups.