



HOW DO WE RECOVER  
PUGET SOUND TO  
HEALTH?

# How Do We Recover Puget Sound to Health?

This section describes how strategies and actions were developed and presents the complete picture of Puget Sound recovery including strategies and sub-strategies, ongoing activities and near-term actions. The strategies and sub-strategies are intended to be durable and adapted as needed.

There is a many-to-many relationship between the strategies and actions needed to achieve recovery targets and ecosystem goals. That is, individual strategies and actions contribute towards multiple goals and individual goals drive multiple strategies and actions. Strategies and actions are organized into four broad sub-sections.

- A. Freshwater and Terrestrial Protection and Restoration;
- B. Marine and Nearshore Protection and Restoration,
- C. Pollution Prevention and Cleanup,
- D. Strategic Leadership and Collaboration

In each section, strategies and sub-strategies describe the overall, long-term directions and approaches that are needed for Puget Sound protection and recovery. Cross-cutting issues such as salmon recovery and climate adaptation are discussed throughout.

Ongoing program activities and near-term actions are nested under strategies and sub-strategies. Both are critical to recovery.

- **Ongoing activities** provide the foundation for recovery efforts and create the regulatory, policy, and incentive-based framework upon which the near-term actions are built.
- **Near-term actions** are considered the “change agenda”. These are high priority steps for the next two years. They can be new activities that are needed, high profile work related to new or ongoing activities, large scale, critical next steps of long-term efforts including expansion of proven tools, and important new initiatives. These are the actions that will be tracked for implementation by the Partnership. They will have owners and reportable milestones.

## How Were the 2012 Strategies and Actions Developed?

As the recovery targets were emerging, work began to ensure the strategies and actions in the Action Agenda would make meaningful progress towards achieving recovery. Five interdisciplinary teams were formed to focus on developing and refining strategies and actions related to achieving the recovery targets for the focus pressures of: 1) land development, 2) loss of floodplain function, 3) shoreline alteration, 4) urban stormwater runoff, and 5) wastewater. These teams included representatives of the business, environmental, academic and public interest communities, state and federal agencies, and Tribal governments. They met through the summer and fall of 2011 and used a process based on the

Open Standards for the Practice of Conservation (<http://www.conservationmeasures.org/>) to develop strategies and actions, building from the 2008 Action Agenda and considering the guiding principles for ecosystem management in Puget Sound. Other strategy areas, such as oil spill preparedness and response, toxic cleanup, and invasive species, were assigned to staff leads who worked with standing or ad hoc groups of efforts to refine and update the existing strategies if and as needed. Well over 100 people participated in this process, which included upwards of 50 intensive meetings and discussions.

At the same time, updates to the local area strategies and actions were underway. This work both informed the Soundwide strategies and actions, and defined local priorities for and contributions to Puget Sound recovery. Over 30 meetings were held in local areas during this time.

Subject-focused workshops were held on draft Action Agenda content in September 2011, attended by approximately 100 subject experts from a wide range of interests. Six public open houses were held around the Sound around the same time. The Ecosystem Coordination Board and Leadership Council were briefed on draft Action Agenda content in September, October and November 2011 and the Action Agenda was released for public review and comment in December 2011. [Insert description of the Public Comment period and key comments/responses once complete.]

---

## SCIENCE IN THE ACTION AGENDA

After completion of the first Action Agenda in 2008, the Partnership, including the Science Panel, embarked on identifying and building more rigorous and systematic approach to future iterations of the Action Agenda. The Partnership adopted the Open Standards for the Practice of Conservation (The Conservation Measures Partnership, 2007) as the adaptive framework to use moving forward (Partnership's Strategic Science Plan (2010)).

The Open Standards process provides a common means of understanding and supporting the critical role of science, and a means to identify where in the project management cycle science is relevant and needed. Each step in the Open Standards process has scientific, performance and policy inputs. The choice of what actions to take and their priority and sequencing are ultimately policy choices. These choices are grounded in scientific information so that decision-makers can make the most informed decisions possible, and understand the certainty and uncertainties in their choices.

There are multiple other scientific inputs to the Action Agenda content and process, summarized in Appendix E.

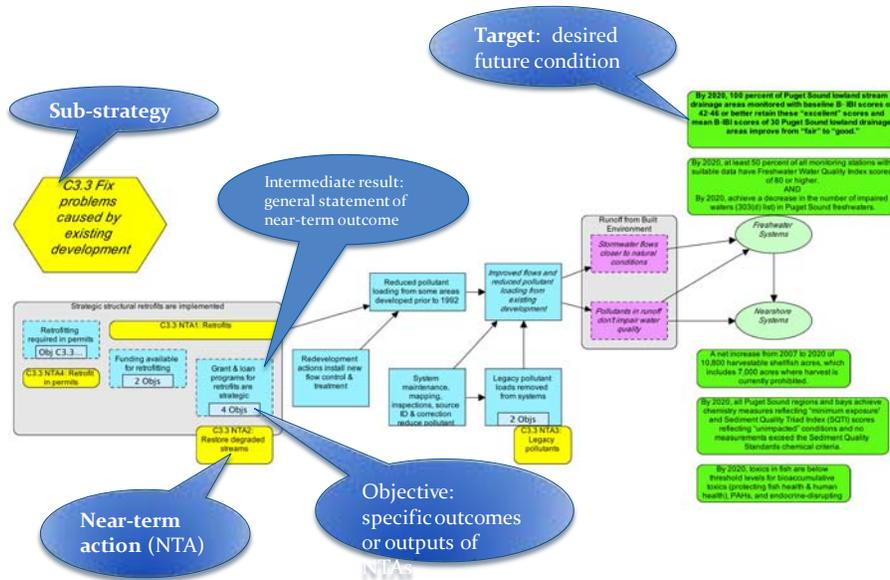
In the 2008 Action Agenda, the Partnership recognized that climate change would need to be incorporated into future versions of the Action Agenda. For this update, the Partnership is working with the University of Washington Climate Impacts Group to set the Puget Sound region and the Action Agenda on a path for adapting our work in the face of a changing climate.

---

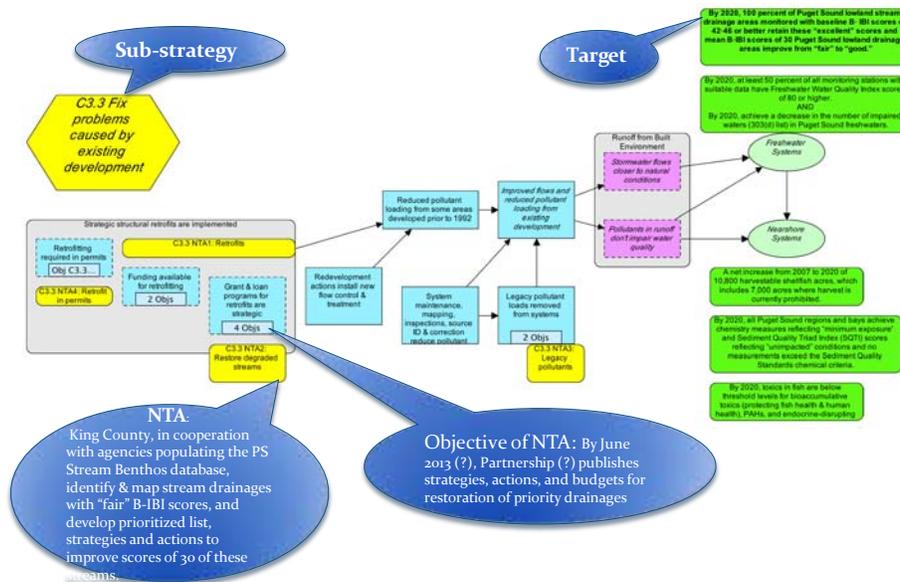
## Logic Models for Strategies and Actions

Throughout the Action Agenda Strategies section you will see graphical depictions of this thinking in the form of “results chains.” The results chains illustrate relationships between strategies and actions, pressures on the ecosystem, and ecosystem conditions, as follows.

### Logic models as “results chains”



### Example results chain for a sub-strategy



---

## POTENTIAL LEGISLATIVE ACTION

During development of the draft Action Agenda update, some partners identified potential changes to the underlying statutory framework that drives Puget Sound protection and recovery. These potential actions are consolidated here for consideration by the Legislature and will be considered by PSP in working with partners to develop future legislative strategies.

### At the State Level

- Amend the Open Space Tax Program to improve incentives for small landowners and to reduce tax and administrative burden on working farm and forest landowners.
- Provide authority for tax increment financing for local governments to finance infrastructure improvements within designated areas.
- Authorize county treasurers to collect local board of health fees needed to implement local OSS management plans via property tax statements. The funding authority will allow inspection, monitoring, reporting, education and compliance activities, and associated technology and infrastructure. Funding authority is needed for entire county OSS management areas and should not be limited to MRAs or special study areas.
- Increase state financial support to local governments for plan and regulatory implementation, enforcement, management, training, and education by 2013.
- Increase WWRP funding for purchasing development rights, ensuring easement language doesn't preclude future habitat restoration and prioritizing those places without levees or hardened banks by 2013.

### At the Federal Level

- Encourage passage of the Community Forestry Conservation Act (HR 1982 and S 1105 of the 112th Congress), which would enable non-profit conservation organizations to use bonds to purchase private working forests for long-term environmental and economic sustainable management.
  - Secure NRCS funding for Puget Sound flood easements in the next farm bill and identify/design a pilot. Compensation rates should be based on the level of floodplain function that is protected (i.e., different rates for those behind levees (no flooding), those behind riprap (no channel migration), and those that are fully connected).
- 

## Climate Change Pressures in Puget Sound

The *Puget Sound Science Update* Chapter 3 contains descriptions of the pressures that climate change is expected to exert on the Salish Sea ecosystem. These include water cycle changes, weather and temperature changes, sea level changes, and ocean warming and acidification.

- Watersheds with streamflow based mostly or partially on snowmelt are projected to have the greatest hydrological shifts associated with climate change. Impacts to the water cycle include earlier peak stream flows, decreasing runoff in spring/summer, increasing runoff in fall/winter.
- Over the last century (1900-2000), average air temperature in the Puget Sound region registered 2.3°F<sup>1</sup>. The rise in temperature is expected to increase over the coming century, although natural climate variations will continue to cause substantial variability between years and decades. Relative to 1970-1999, average annual temperature in the Pacific Northwest is projected to increase about 2°F by the 2020s (range: 1.1°F to 3.4°F), 3.5°F by the 2040s (range: 1.6°F to 5.2°F), and 6°F (range: +2.8°F to +9.7°F) by the 2080s<sup>2</sup>. Most models agree that there will be enhanced seasonal precipitation cycles with wetter winters and drier summers, although the region's large natural variations in precipitation will make it difficult to distinguish the influence of climate change on Northwest precipitation in the next few decades<sup>3</sup>.
- The loss of snowpack and glacial retreat are one of the most far-reaching impacts of rising temperature, affecting water availability for both people and wildlife. Under a moderate warming scenario (the A1B greenhouse emissions scenario), average spring snowpack in Washington State is projected to decrease 29% by the 2020s, 44% by the 2040s, and 65% by the 2080s, relative to the average for 1916-2006<sup>4</sup>. This decline in snowpack contributes to lower spring runoff in snow-fed rivers and streams and lower summer streamflows. Warmer spring temperatures also reduce late spring and summer streamflows by shifting the timing of peak snowmelt runoff earlier into the spring season.
- Global sea level is rising due to ocean thermal expansion and melting of land ice. Sea level in the Puget Sound region is expected to increase 6 inches (range of 3 to 22 inches) by 2050 and by 13 inches (range of 6 to 50 inches) by 2100<sup>5</sup>. Changes at specific locations within Puget Sound will vary from these regional projections depending on local factors, including uplift or subsidence rates. Major impacts associated with sea level rise are likely to be inundation, flooding, erosion and infrastructure damage, with the largest impacts occurring when storm and/or river flooding events converge with high tides.

---

Climate change scenarios for Puget Sound are projections, not predictions. There is more confidence in some aspects of climate and environmental changes than others. For example, the highest confidence is in rising air and water temperatures – and the impacts that result from these changes, such as decreased snowpack and altered streamflow timing, increasing ocean acidification, and rising global sea levels. The lowest confidence is in future precipitation, future wind patterns important for coastal upwelling, storminess and wave height. Climate impacts and the consequences of those impacts will evolve at different rates, times and locations.

<sup>1</sup> Source: Snover, A.K., P.W. Mote, L.C. Whitely Binder, A.F. Hamlet, and N.J. Mantua. 2005. *Uncertain Future: Climate Change and Its Effects on Puget Sound*. Climate Impacts Group, Center for Science in the Earth System, Joint Institute for the Study of the Atmosphere and Oceans, University of Washington.

<sup>2</sup> Mote, P.W., and E.P. Salathé. 2010. Future climate in the Pacific Northwest. *Climatic Change* 102(1-2): 29-50, doi: 10.1007/s10584-010-9848-z.

<sup>3</sup> Mote and Salathé 2010 (see previous)

<sup>4</sup> Elsner, M.M., L. Cuo, N. Voisin, J. Deems, A.F. Hamlet, J.A. Vano, K.E.B. Mickelson, S.Y. Lee, and D.P. Lettenmaier. 2010. Implications of 21st century climate change for the hydrology of Washington State. *Climatic Change* 102(1-2): 225-260, doi: 10.1007/s10584-010-9855-0.

<sup>5</sup> Mote, P.W., A. Petersen, S. Reeder, H. Shipman, and L.C. Whitely Binder. 2008. *Sea Level Rise in the Coastal Waters of Washington State*. Report prepared by the Climate Impacts Group, Center for Science in the Earth System, Joint Institute for the Study of the Atmosphere and Oceans, University of Washington, Seattle, Washington and the Washington Department of Ecology, Lacey, Washington.

- As the global ocean absorbs atmospheric carbon dioxide, these increasing concentrations are reducing ocean pH and carbonate ion concentrations, resulting in ocean acidification. Impacts of ocean acidification include altered marine food web, loss of shellfish production, and impacts to the growing environment for sea grasses like eelgrass.

## Climate Change in the Action Agenda

Puget Sound climate is also affected by large-scale patterns of variability, particularly the El Niño/Southern Oscillation and Pacific Decadal Oscillation. While the inter-relationship of these patterns with climate change is not certain, we should expect continued year-to-year and decade-to-decade variability in regional conditions *plus* additional variations due to climate changes.

### Adapting for a Changing Climate

Planning for climate change is part of long-term risk management, not a one-time effort. As described in *PREPARING FOR A CHANGING CLIMATE: Washington State’s Integrated Climate Change Response Strategy* (Department of Ecology, in prep.) adaptation means adjusting to a changing climate to reduce the negative impacts already occurring and to avoid, minimize or mitigate future impacts.

The goal of integrating climate adaptation into planning efforts, such as the Action Agenda, is to create more “climate resilient” organizations, communities, economies and ecosystems. Resiliency means taking steps to avoid or minimize harmful climate change impacts that can be anticipated while increasing the ability of human and natural systems to “bounce back” from the impacts that cannot be avoided or anticipated.

Adaptation steps include:

1. Building awareness. Recognizing that the past may no longer be a reliable guide to the future is an important first step. We face a challenge in that our planning paradigms are rooted in the past.
2. Conducting analysis. Determining the likely consequences of climate change for a specific sector or resource will help us make more informed decisions.
3. Taking action. Integrating climate change projects into planning processes now is critical for the future. Taking action now requires authority, guidance and leadership.
4. Assessment and Adjustment. Evaluating climate adaption efforts in light of progress to date and emerging science and adjusting actions as necessary are part of adaptive management. The long time horizon of some impacts, and the expected continued variability in Puget Sound climate and impacts, are a challenge.

---

#### GUIDING PRINCIPLES FOR WASHINGTON’S CLIMATE CHANGE RESPONSE STRATEGY

- Use best available science
- Build on principles of sustainability
- Increase our resilience and protect the most vulnerable
- Maximize mutual benefits and avoid unintended consequences
- Emphasize collaboration and strengthen partnerships
- Recognize the impacts of decisions

The final Action Agenda strategies and actions, including scientific actions, will reflect an initial consideration of climate adaptation. Consistent with the state climate response guidance, taking action now reduces the costs of current and future climate impacts, lowers the risks to communities from more frequent and severe climate-related disruptions, and improves the resilience of the natural environment and its ability to provide critical functions and services in the face of climate change. We want to preserve options needed for the future and set ourselves on the right trajectory.

Fully integrating climate change into the Action Agenda will require looking at the implications of a changing climate beyond 2020 for the long-term, medium term (2020) and near-term (2-3 years) goals and trajectories. How will the definition of a “healthy Puget Sound” change in a changing climate? How will this alter how we measure and evaluate progress? We may need to refine value terms like “priority”, “ecologically important”, “sensitive” and “high value”, as well as re-evaluate strategies that are based on existing policies, plans and tools that may not include climate change considerations. In a region with high natural climate variability, we will need to recognize the impacts of climate fluctuations as well as change, to ensure appropriate approaches and metrics for planning and evaluation.

Most strategies in the Action Agenda have some nexus with climate change. For December draft, Partnership staff worked with the University of Washington Climate Impacts Group to begin to identify Puget Sound’s vulnerabilities to climate change, develop climate change guidance for strategy conveners and conduct early review of the strategies and actions to identify adaptation considerations that needs to be incorporated into the final Action Agenda. In the same time period as the update, the Department of Ecology, working with many partners has drafted a State Integrated Climate Response strategy.

It is widely understood that an ecosystem’s ability to adapt to climate change may be enhanced by reducing non-climate stressors such as pollution and habitat loss. In this way, the Action Agenda’s strategies and near-term actions are an important contribution to improving Puget Sound resilience to climate variability and change. However, more deliberate attention to integrating climate change impacts and adaptation needs into the Action Agenda is essential for building climate preparedness. In the draft, a few strategy areas, such as floodplains, call for the inclusion of climate change information. However, most strategies need modification to incorporate climate related projections and all need to better articulate the adaptation work to begin now or in the next version of Action Agenda. During the review period, Partnership staff will work with the strategy conveners to identify specific climate impacts and adaptation needs. The initial analysis of the Climate Impacts Group and the state response strategy will inform this work.

---

## GUIDING PRINCIPLES FOR ECOSYSTEM MANAGEMENT IN PUGET SOUND

Input from the topic forums and action area meetings in 2008 led to the development of the following principles for ecosystem management. The principles, refined by the Leadership Council, Science Panel, and Ecosystem Coordination Board, were used to develop the strategic priorities and actions. They were reviewed by the Science Panel in 2011 and reflect only modest addition related to human communities.

- A. Address threats and choose opportunities with the highest potential magnitude of impact.
- B. Address threats with the highest level of urgency. (How imminent is the threat; will it result in an irreversible loss; how resilient are the resources that are affected?)
- C. Use strategies that have a reasonable certainty of effectiveness and reflect a balanced precautionary and adaptive approach.
  - Actions should have a realistic expectation that they will be effective in addressing the identified threat.
  - Actions and decisions about the use of resources should err on the side of caution to avoid irreversible ecological consequences.
  - Actions should be designed so they can be measured, monitored, and adapted.
- D. Use scientific input – about the importance, urgency, and reversibility of threats; opportunities for management impact; effectiveness of actions; and monitoring and adaptation – in designing, implementing, and evaluating strategies.
- E. Use strategies that are cost effective in making efficient use of funding, personnel, and resources with realistic expectations of achieving results.
- F. Address the processes that form and sustain ecosystems and increase ecosystem resiliency rather than focus narrowly on fixing individual sites. Consider the Salish Sea ecosystem perspective.
- G. Attempt to address threats at their origin instead of reacting after the damage has been done. Anticipate and prevent problems before they occur, and plan for extreme events. (With more people coming to the region and a changing climate, a proactive strategy is increasingly important.)
- H. Consider the linkages and interactions among strategies.
  - Address multiple threats and their interactions with strategies that work together. We cannot afford to look at problems or develop solutions in isolation.
  - Watch out for unintended consequences. Evaluate strategies so actions to address one problem do not cause harm to other ecosystem processes, functions, and structure, as well as social and economic considerations.
  - Integrate salmon recovery actions with ecosystem management actions.
- I. Account for the variations in ecosystem conditions and processes in different geographic areas of Puget Sound. Some parts of Puget Sound are fairly intact while others are severely degraded, and rebuilding strategies need flexibility to encompass regional differences. Ensure that no region or economic sector bears the entire brunt of the responsibility for implementing solutions.
- J. Account for human communities and values as fundamental, central elements of the Puget Sound ecosystem (i.e., the Puget Sound social-ecological system)

## Locally Developed Information in the Action Agenda

Many of the priorities, strategies, and actions identified in the Action Agenda must be implemented in local communities. Since 2008 with the development of the first Action Agenda, local areas have been working toward both a structure and an approach to implement, as well as integrate, local community efforts to advance the Action Agenda. Through these efforts, some local areas have formed what are called, “local integrating organizations (LIO)” and have had these LIOs recognized by the Leadership Council. These LIO’s have helped to update the Action Agenda by more clearly articulating local information, priorities, and actions. LIOs have been established in most areas around Puget Sound, with a few areas still under development.

Throughout 2011, the Partnership staff has worked closely with each local area to develop an approach for identifying and prioritizing local strategies and actions that help to restore Puget Sound to health. The result of this work is portrayed in the 2011 Action Agenda in the following ways:

- An updated profile for each local area is included in the ‘How Are Local Areas Working to Protect and Recover Puget Sound?’ section. These profiles contain information on each area’s work to-date to identify local ecosystem threats and strategies and actions for addressing those threats.
- Information flowing out of the local areas was used by strategy conveners to help develop the Soundwide strategies in the 2011 Action Agenda. Text boxes throughout the document highlight local strategies for those areas that have completed their prioritization process, and provide a sampling of where other areas are considering local strategies.
- For those LIOs that identified and prioritized near term actions, these are also embedded into the regional relevant strategies and sub-strategies. Many local areas were not able to identify Near Term Actions at this time. This does not mean that actions and strategies are not important in these areas, but rather instead reflects the differences between the local area processes. Local near term actions are indicated with a LNTA label.
- Most local areas identified scientific needs. These are included in the 2011 Biennial Science Workplan (BSWP).

It is important to note that work is ongoing in all local areas. Each area is at a unique point in the process of identifying their priorities and contributing to the Action Agenda. Some areas have prioritized strategies and actions with performance measures, others are working to further refine content and add specificity around actions, while others are

## Locally Developed Information in the Action Agenda

beginning to establish their LIO and define and prioritize strategies and actions. The table below provides an overview of the current status of each area as it relates to Action Agenda engagement.

LOCAL AREA	STATUS	LOCAL AREA	STATUS
<b>Hood Canal</b>	LIO developed; Strategies and actions identified; undergoing prioritization and further refinement	<b>South Central</b>	LIO developed; Strategies and actions identified and prioritized; undergoing further refinement
<b>Island</b>	LIO developed; Starting to identify strategies and actions and discuss prioritization	<b>South Sound</b>	LIO developed; Starting to identify strategies and actions and discuss prioritization
<b>North Central (West Sound)</b>	LIO information; Strategies and actions identified; undergoing prioritization and further refinement	<b>Stillaguamish/Snohomish</b>	LIO information; Starting to identify strategies and actions
<b>San Juan Islands</b>	LIO developed; Strategies and actions identified and prioritized; actions to be further defined	<b>Strait</b>	LIO developed; Strategies and actions identified and prioritized
<b>Skagit</b>	LIO information; Starting to identify strategies and actions	<b>Whatcom</b>	LIO developed; Starting to identify strategies and actions

In the next two years, each local area will continue to move forward in defining priorities, implementing actions, and contributing to a cleaner, more vibrant, and community oriented Puget Sound.

# Recovery Target Views

Throughout this section, “target views” describe the targets, the current status of the ecosystem, and show the logic behind why we think the strategies and actions developed will lead to achievement of the targets. During the Action Agenda review, the Partnership will be working to verify that the strategies and actions needed to achieve the targets are accurately and adequately represented.

---

## STRATEGIC INITIATIVES

Recovering Puget Sound by 2020 is a complex undertaking. Many actions, both on-going and new, are required to achieve the six goals given to us by the legislature and our recovery targets. In addition, there is a need to emphasize the most vital work to focus on in the next two years. During the Action Agenda update process, partners proposed the concept of strategic initiatives. A strategic initiative will allow more focused attention on actions that address priority pressures to Puget Sound health. The focused attention will allow the Partnership to encourage, track and deliver progress at a substantial level.

Specific actions to include within a strategic initiative would be drawn from the list of final near-term actions that emerge after the review of the draft update. There should be a clear linkage between the actions within the strategic initiatives and targets related to achievement of recovery goals. Actions that are included in the strategic initiatives should generally rank high in the near-term action ranking process that will be conducted in early 2012 or otherwise be indicated through high-priority policy discussions such as those on-going in response to the tribal white paper regarding treaty rights at risk. Strategic initiatives should focus on the ecological priority of protecting healthy components of the ecosystem first. Examples of strategic initiatives may include:

- Protection of habitat in support of salmon recovery;
- Prevention of water pollution from urban stormwater runoff; and
- Protection of water quality and nearshore habitat from rural and agricultural runoff.

Partnership staff will continue to work with partners to identify strategic initiatives and associated actions prior to the presentation of the final draft Action Agenda.

---

## Setting 2012 Near-Term Priorities

RCW 90.71 requires PSP to prioritize actions necessary to recover Puget Sound. A prioritized list of actions also is needed to direct allocation of increasingly scarce federal, state and local resources.

Prioritization will first be done for the near term actions; following that, in early 2012, the Partnership will begin to evaluate and prioritize on-going programs, starting with state programs, in a separate process. The same methodology used to rank near term actions will be used to rank on-going programs.

In 2008, near-term actions were prioritized into three lists organized by the strategic priorities of protection, restoration, and prevent pollution. The priority lists were created by PSP staff based on evaluation of the expected ecological benefits, considering the Action Agenda ecosystem management principles, of each action and other factors such as cost, readiness and the likely effectiveness of each action. Prioritization results were then reviewed in public with the ECB and the Leadership Council.

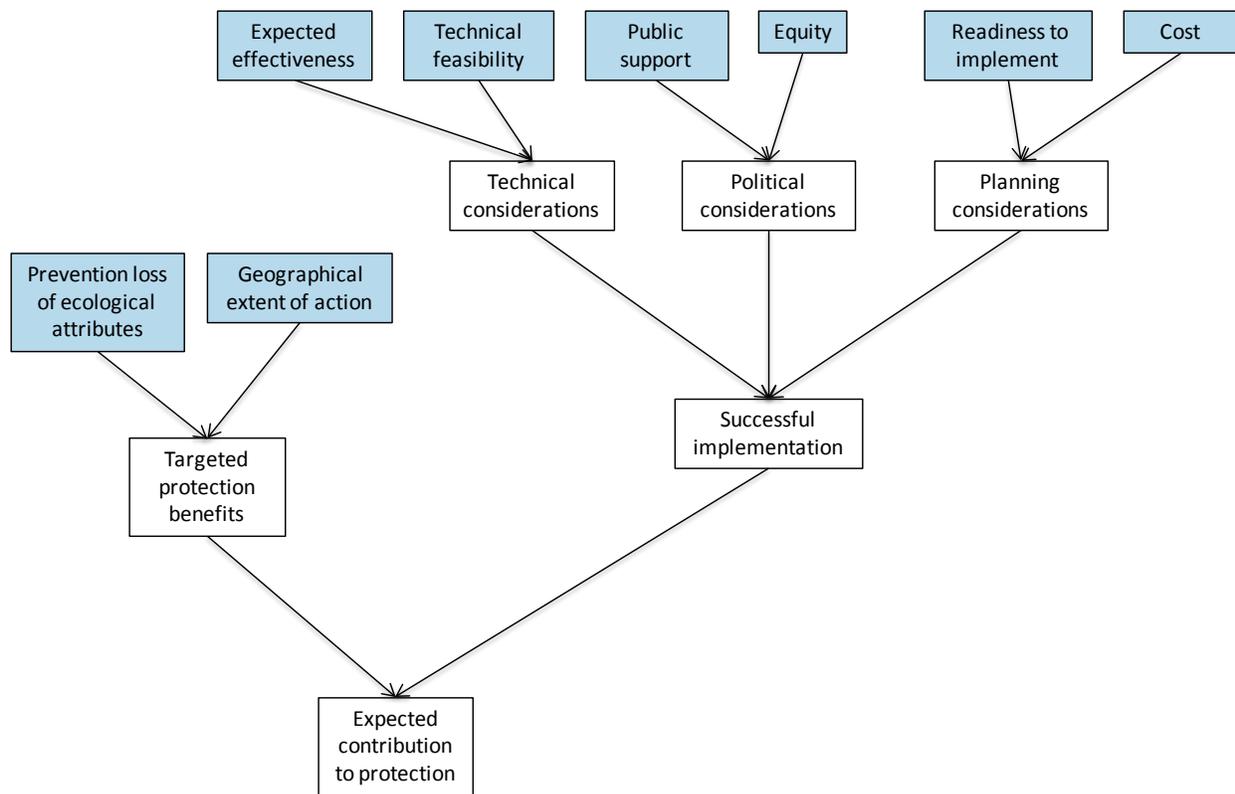
With this update, PSP beginning to create a more systematic and replicable approach to prioritization, including creating a transparent, durable framework for the prioritization process, something that can be refined and used year after year if desired, and reaching out to technical experts to gather specific information on each near-term action to inform priority setting. The ambition of this priority setting process is that it will be explicitly information based, transparent and replicable, and it will help illustrate where gaps in knowledge or uncertainty are particularly relevant to our understanding of what various actions might achieve.

### **Step 1: Creating the Prioritization Framework**

The first step in the prioritization process will be to work with a Subcommittee of the Ecosystem Coordination Board to create a framework for how information on near-term actions will be synthesized. This framework will describe the factors and criteria that will drive priority setting. It will create a relational diagram, or causal network, that will show exactly how information about each NTA will be used to set priorities.

The key work in this step will be for the ECB to reach agreement on what factors are most important and should most drive the priority setting process and what sub-factors or information define or influence each factor. For example, if contribution to recovery targets is a key factor to drive prioritization, the Subcommittee would discuss what sub-factors or information define our understanding of how a near-term action might contribute to recovery targets. These might include the expected magnitude of the contribution/result of the action and the amount of uncertainty associated with the action. In turn, the expected magnitude of a contribution might be a function of sub-factors such as the expected effectiveness and the geographic extent of the action. Uncertainty might be a function of sub-factors such as technical feasibility, readiness to implement, and public support (or lack thereof).

As a starting point for discussion, PSP has developed a draft framework that illustrates how prioritization might be accomplished.



After the basic prioritization synthesis framework is constructed, experts would work to assign weights to each of the factors and sub-factors to further refine the prioritization process. Sensitivity analyses can be performed to determine how different weighting might change prioritization results.

## Step 2: Gathering information on near-term actions

When the list of near-term actions to be prioritized is final following the public comment and comment resolution, PSP will deploy a questionnaire to technical experts to gather specific information on each near-term action. The information to be gathered will

---

### NEAR-TERM ACTIONS NOT INCLUDED IN PRIORITY SETTING

The Action Agenda presents a complete picture of Puget Sound protection and recovery. Because of this, there are some near-term actions that are not appropriate to include in the Soundwide action near-term action prioritization process. These include:

- Local actions – these have already been prioritized at the local level and are incorporated into the appropriate section of the Action Agenda. In the final list, they will be shown with their related Soundwide actions.
- Partnership management responsibilities as described in strategy section D – these are the statutorily required actions of the Partnership
- Suggestions for legislative action – these are the prerogative of the Legislature
- Actions in the funding strategy – all of these actions need to occur in the next two years.
- Science Actions – these were determined by the Science Panel and presented in the Biennial Science Work Plan

depend on the final prioritization framework developed (i.e., it will be information that allows the framework to be deployed). Information would be gathered by individuals who participated in the Interdisciplinary Teams to develop the near-term actions and other key individuals to ensure a full representation of partners, interests and expertise. ECB members or their designees could participate in the information gathering as much or as little as they wish.

Information will be gathered on all near-term actions. This will allow the Partnership to deploy the prioritization framework to the other lists if desired.

As a starting point for discussion, PSP proposes to gather the following information on each NTA.

<p><b>1. Potential contribution to ecosystem restoration by reducing priority pressures</b> (will be asked to rank for each individual pressure):</p> <ul style="list-style-type: none"> <li>• Land development</li> <li>• Loss of floodplain function</li> <li>• Urban runoff</li> <li>• Wastewater</li> <li>• Shoreline alteration</li> </ul>	<p>Very High: If effective, this action would mitigate the pressure by &gt; 75%</p> <p>High: If effective, this action would mitigate the pressure by 50-74%</p> <p>Medium: If effective, this action would mitigate the pressure by 25-49%</p> <p>Low: If effective, this action would mitigate the pressure by &lt; 25%</p> <p>NA: The action does not address this pressure.</p>
<p><b>2. Potential contribution to achievement of recovery targets</b> (will be asked to identify and rank up to 5 most related individual targets from a pull-down list)</p>	<p>Very High: If effective, this action would contribute &gt; 75% to achieving the target</p> <p>High: If effective, this action would contribute 50-74% to achieving the target</p> <p>Medium: If effective, this action would contribute 25-49% to achieving the target</p> <p>Low: If effective, this action would contribute &lt; 25% to achieving the target</p> <p>NA: The action does not address this target.</p>
<p><b>3. Expected effectiveness of the action</b></p>	<p>Very High: Good data that demonstrate that this method has been successful in multiple, similar situations</p> <p>High: Data from a limited number of tests demonstrate this method has been successful.</p> <p>Medium: Limited data or best professional judgment suggests that this method is effective but more research is necessary to verify.</p> <p>Low: Little data indicate that this method has been successful. (Note: innovative or experimental action could fall in high, medium, or low categories – they are not necessarily low).</p>
<p><b>4. Geographic extent of the benefit of the action</b></p>	<p>Very High: The effect of this action would be felt Soundwide</p> <p>High: The effect of this action would be felt in multiple Action Areas</p> <p>Medium: The effect of this action would be felt in only one Action Area</p> <p>Low: The effect of this action would be felt locally</p>

**5. Extent this action prevents loss of key ecological attributes of the main ecosystem component benefiting from the action.** Categories of ecological attributes to consider include:

- Size (e.g., abundance, geographical extent)
- Condition or quality (e.g., species composition, habitat quality or water quality, resilience)
- Role in Landscape (connectivity, hydrological regime, nutrient dynamics, etc.)

Very High: Permanently protects all categories of key ecological attributes from degradation  
 High: Protects the most important areas from loss of key ecological attributes but allows degradation of less important areas  
 Moderate: Provides some protection against loss of at least one category of key ecological attribute but does not address loss of other kind of key ecological attributes.  
 Low: Offers little protection against loss of ecological attributes  
 NA: Not applicable.

**6. Ability of the action to contribute to human well-being considering:**

- *Provisioning Services* (or the provision of food, fresh water, fuel, fiber, and other goods);
- *Regulating Services* (such as climate, water, and disease regulation as well as pollination;)
- *Habitat Services* (such as soil and floodplain formation; and nutrient cycling);
- *Cultural Services* (such as educational, aesthetic, and tribal and cultural heritage values as well as recreation and tourism).

**General question:**

Very High: Would contribute to all categories of ecosystem services  
 High: Would contribute to a total of 3 categories of ecosystem services (i.e. the number contributing to minus the number adversely affecting)  
 Medium: Would contribute to a total of 2-3 categories of ecosystem services  
 Low: Would contribute to a total of 1 category of ecosystem services

**Pull down menu for each service category:**

Positive: The action improves delivery of the service  
 Protective: The action protects/preserves delivery of the service  
 Neutral: The action does not affect delivery of the service  
 Negative: The action degrades delivery of the service

**7. Ability of the action to contribute to economic health considering:**

- Job creation
- Property values
- Future cost avoidance
- Long-term revenue generation

**General question:**

Very High: Would contribute to all aspects of economic health,  
 High: Clear positive contribution to three or more aspects of economic health.  
 Medium: Potential contribution to one to three aspects of economic health.  
 Low: No clear impact on the economy.  
 Negative: Clear negative impact to one or more aspects of economic health that would not be offset by a positive contribution.

**Pull down menu for each aspect of economic health category:**

Positive: The action improves delivery of the service  
 Protective: The action protects/preserves delivery of the service  
 Neutral: The action does not affect delivery of the service  
 Negative: The action degrades delivery of the service

<p><b>8. Relative cost</b></p>	<p><b>General question on funding status:</b>  Funded  Not funded  Partially funded (please describe)</p> <p><b>Capital costs (pull down menu):</b>  Very High: Estimated costs over \$50 Million  High: Estimated costs between \$20 Million and \$50 Million  Medium: Estimated costs between \$1 Million and \$20 Million  Low: Estimated costs less than \$1 Million</p> <p><b>Programmatic costs (pull down menu):</b>  Very High: Estimated costs over \$10 Million  High: Estimated costs between \$3 Million and \$10 Million  Medium: Estimated costs between \$500,000 and \$3 Million  Low: Estimated costs less than \$500,000</p>
<p><b>9. Technical feasibility</b></p>	<p>Very High: Technologies exist and are available.  High: Technologies are available but their application is still being perfected.  Medium: Technologies exist but they are not readily available.  Low: Technologies could be developed.  Not feasible: No technologies exist or are anticipated by 2020.</p>
<p><b>10. Readiness to implement</b></p>	<p>Very High: All resources and plans in place... ready to execute.  High: Plans are in place but resources are needed to implement.  Medium: Preliminary planning is complete; resources needed to develop detailed work plan and implementation actions.  Low: Conceptual.</p>
<p><b>11. Public support</b></p>	<p>Very High: Known, organized public support for the action  High: Public support voiced by individuals  Medium: Assumed public support for the action based on other types of actions that have been supported  Low: Neutral – no known opposition  Negative: Active or assumed opposition to all or part of the action.</p>
<p><b>12. Equity</b></p>	<p>Very High: Costs and benefits are proportionally shared  High: Benefits accrue disproportionately to a particular segment of the Puget Sound community; however that community also is responsible for a disproportionate amount of the cost of the action  Medium: Benefits accrue disproportionately to a particular segment of the Puget Sound community and costs are shared more evenly (i.e., some disproportionate impact)  Low: This action creates a disproportionate negative impact or creates a disproportionate cost on a particular segment of the Puget Sound community</p>