

# **Puget Sound Partnership and Recovery Implementation Technical Team 2010 Three Year Work Program Review Green/Duwamish Watershed**

## Introduction

The 2010 Three-Year Work Program Update is the fifth year of implementation since the Recovery Plan was finalized in 2005. The Puget Sound Partnership, as the regional organization for salmon recovery, along with the Recovery Implementation Technical Team (RITT), as the NOAA-appointed regional technical team for salmon recovery, perform an assessment of the development and review of these work programs in order to be as effective as possible in the coming years.

These work programs are intended to provide a road map for implementation of the salmon recovery plans and to help establish a recovery trajectory for the first three years of implementation.

In April 2010, two of the fourteen watershed chapter areas submitted early three-year work program updates on accomplishments, status of actions, and proposed actions that built on the work programs since 2006. The remaining twelve watershed chapter areas submitted their three-year work program updates in May 2010, with one submitting in June 2010.

The feedback below is intended to assist the watershed recovery plan implementation team as it continues to address actions and implementation of their salmon recovery plan. The feedback is also used by the RITT, the Recovery Council Work Group, and the Puget Sound Partnership to inform the continued development and implementation of the regional work program. This includes advancing on issues such as adaptive management, all H integration, and capacity within the watershed teams. The feedback will also stimulate further discussion of recovery objectives to determine what the best investments are for salmon recovery over the next three years.

## Guidance for the 2010 work program update reviews

Factors to be considered by the RITT in performing its technical review of the Update included:

- 1) *Consistency question*: Are the suites of actions and top priorities identified in the watershed's three-year work plan/program consistent with the hypotheses and strategies identified in the Recovery Plan (Volume I and II of the Recovery Plan, NOAA supplement)?
- 2) *Pace/Status question*: Is implementation of the salmon recovery plan on-track for achieving the 10-year goal(s)? If not, why and what are the key priorities to move forward?
- 3) *Sequence/Timing question*: Is the sequencing and timing of actions appropriate for the current stage of implementation?
- 4) *Next big challenge question*: Does the three-year work plan/program reflect any new challenges or adaptive management needs that have arisen over the past year?

Watersheds were also provided with the following four questions, answers to which the Recovery Council Work Group and the Partnership ecosystem recovery coordinators assessed in performing their policy review of the three-year work program:

- 1) *Consistency question:* Are the suites of actions and top priorities identified in the watershed's three-year work plan/program consistent with the needs identified in the Recovery Chapter (Volume I and II of the Recovery Plan, NOAA supplement)? Are the suites of actions and top priorities identified in the watershed's three-year work plan/program consistent with the Action Agenda?
- 2) *Pace/Status question:* Is implementation of salmon recovery on-track for achieving the 10-year goals?
- 3) *What is needed question:* What type of support is needed to help support this watershed in achieving its recovery chapter goals? Are there any changes needed in the suites of actions to achieve the watershed's recovery chapter goals?
- 4) *Next big challenge question:* Does the three-year work program reflect any new challenges or adaptive management needs that have arisen over the past year either within the watershed or across the region?

## **Review**

*The following review consists of four components: a regional technical review that identifies and discusses technical topics of regional concern; a watershed-specific technical review focusing on the specific above-mentioned technical questions and the work being done in the watershed as reflected by the three year work plan; a regional policy review that identifies and discusses policy topics of regional concern; and a watershed-specific policy review focusing on the specific above-mentioned policy questions and the work being done in the watershed as reflected by the three year work plan. These four components are the complete work plan review.*

### **I. Puget Sound Recovery Implementation Technical Team Review**

The RITT reviewed each of the fourteen individual watershed chapter's salmon recovery three-year work program updates in May and June 2010. The RITT evaluated each individual watershed according to the four questions provided above. In the review, the RITT identified a common set of regional review comments for technical feedback that are applicable to all fourteen watersheds, as well as watershed specific feedback using the four questions. The regional review, along with the watershed specific review comments, are included below.

#### **Regional Technical Review: 2010 Three-Year Work Plans – Common Themes**

In addressing the review questions at the watershed level, as outlined above, the RITT also noted general comments common to all watersheds within the region. Four of these region-wide themes are listed below.

##### **1. H-Integration**

The work plans continue to emphasize habitat restoration projects for understandable reasons. However, salmon recovery also requires habitat protection, and hatchery and

harvest management actions. **H-integration** has been considered in a number of watersheds by assessing progress towards plan goals in all of the H's. New projects using EPA funds to specifically address habitat protection for some watersheds came about because an overview of progress in all H's showed that habitat protection had received less attention than the other H's. It is important for all watersheds to assess how the work in each H will affect and be affected by the other H's. For example, do exploitation rate ceilings in harvest management provide sufficient fish to take advantage of newly restored habitat; is progress in restoring one type of habitat negated by the loss of the same kind of habitat due to inadequate protection? These kinds of questions will be an important component of adaptive management. Therefore, it would be advantageous to address them in subsequent 3-year work plans.

A challenge that still has not been met in most watersheds is to coordinate actions in all H's to the same set of hypotheses and strategies that underlie the watershed's recovery plan chapter. For example, it should be clear how a hatchery program set up to supplement production addresses the limiting factors for that watershed in a fashion complimentary to the habitat restoration and protection work in the same watershed. It is important to keep in mind that actions in all H's are aimed at moving the populations towards recovered levels of the same set of VSP parameters. Therefore, it would be advantageous for the managers of all the H's to work with each other towards a common vision of how their actions, in combination, will achieve this recovery.

Six steps of H-integration were suggested at a Shared Strategy workshop in 2006 to help groups begin this process). Some watersheds are working through them in a systematic fashion. We continue to support these steps as useful guidance for assuring that all H's are part of each watershed's recovery plan implementation.

1. Identify the people needed to participate, covering all Hs. Bring them into the process.
2. Gain a common understanding of how the H's influence the salmon system.
3. Agree upon common goals for improving salmon.
4. Select a suite of complimentary actions covering the Hs that address the goals (these should then be placed in the work plans).
5. Document implementation of actions and expected outcomes (in work plans).
6. Monitor, report, and adjust (adaptive management!).

## 2. Adaptive Management

One of the biggest challenges that the RITT has consistently identified for implementing the Puget Sound Chinook Recovery Plan is the development of realistic, useful, and applicable **adaptive management plans** at the watershed level. The Recovery Plan identified these as the key tool for addressing the scientific uncertainties inherent in the plan, yet developing this tool remains a challenge in 2010. To help identify needs, to provide a consistent template for planning and prioritizing monitoring, to develop a process for refining short-term objectives and 10-year goals, and to increase the technical capacity of the watersheds to complete these plans, the RITT began working with three watersheds – San Juan Islands, Skagit, and Hood Canal - using the Open Standards conservation planning approach with the intent of expanding the work sequentially to

other watersheds. As this work began, however, watersheds that did not want to wait for the RITT asked that it develop a template that they could use to prepare for RITT involvement. The template will be completed by July 1, 2010. The RITT will continue to work with watersheds on developing adaptive management plans using this template under a revised timetable. Although RITT support will be available to each watershed, the process of building the adaptive management and monitoring plans will still demand time, commitment, and resources from the watershed leads, planners and implementers of actions associated with the Recovery Plan.

### **3. Climate Change**

Climate change is expected to affect the fundamental aquatic and terrestrial processes that control the quality and quantity of habitats for Pacific salmon. This change is the subject of global and regional research, modeling, and planning. For the RITT, Puget Sound Partnership, watershed groups, and other salmon recovery entities, climate change is likely to become a core issue when considering the types and designs of restoration efforts. Specific watershed-scale planning guidance regarding the effect of climate change on salmon and their habitats will require additional study. However, empirical data clearly demonstrate rising air temperatures in the Pacific Northwest during the 20<sup>th</sup> century, and regional climate models predict that this trend will continue. Resulting changes can be expected in watershed hydrology (magnitude and timing of peak and base flows), stream and ocean temperatures, ocean currents and coastal circulation, salinity gradients, sea level, and biological diversity. Salmon production is intimately linked with many of these variables.

As ecosystem processes and functions respond to climate change, adaptive strategies will need to be developed to mitigate and compensate in the implementation of salmon recovery efforts. The Puget Sound Chinook Recovery Plan and accompanying NOAA Supplement both indicate that climate change impacts on salmon need to be considered in evaluating recovery. The NOAA Supplement also identifies climate change as one of several “specific technical and policy issues for regional adaptive management and monitoring.” To this end, the RITT will work with watershed groups, Puget Sound Partnership, and other stakeholders to develop of adaptive management plans that address climate change.

The following online references synthesize various agencies’ efforts at understanding the potential impacts of climate change on natural resources in Washington State:

- University of Washington Climate Impacts Group. 2009. The Washington climate change impacts assessment: Evaluating Washington's future in a changing climate. <http://cses.washington.edu/cig/res/ia/waccia.shtml>
- University of Washington Climate Impacts Group. 2010. Hydrologic climate change scenarios for the Pacific Northwest Columbia River basin and coastal drainages. <http://www.hydro.washington.edu/2860/>

- Lawler, J.J. and M. Mathias. 2007. Climate change and the future of biodiversity in Washington. Report prepared for the Washington Biodiversity Council. <http://www.biodiversity.wa.gov/documents/WA-Climate-BiodiversityReport.pdf>
- National Wildlife Federation. 2009. Setting the stage: Ideas for safeguarding Washington's fish and wildlife in an era of climate change. [http://wdfw.wa.gov/wlm/cwcs/nwf\\_climatechange09.pdf](http://wdfw.wa.gov/wlm/cwcs/nwf_climatechange09.pdf)

For a comprehensive listing of resources regarding climate change impacts, preparation, and adaptation, see the Washington Department of Ecology website: [http://www.ecy.wa.gov/climatechange/ipa\\_resources.htm](http://www.ecy.wa.gov/climatechange/ipa_resources.htm).

#### **4. Protection of Ecosystem Functions**

An important element of recovering salmon in Puget Sound is the protection of existing habitat. Adequate protection of salmon habitat in Puget Sound continues to be an issue in all watersheds and continued degradation is noted throughout the area. While habitat restoration is relatively easy to implement by watersheds, given funding, protection of existing habitat is reliant on local regulations and their enforcement. Many regional policy drivers impact salmon habitat, including the Shoreline Management Act, Growth Management Act, National Marine Fisheries Service's Biological Opinion on the Federal Emergency Management Agency's implementation of the National Flood Insurance Program, and the Army Corps of Engineers' revised levee vegetation management policy. These regulations address many of society's concerns about the environment, but not necessarily salmon recovery first and foremost. Stakeholders in salmon recovery (e.g., the watershed groups, PSP, and RITT) need to develop ways to provide the technical input for integrating, to a greater extent, actions that promote salmon recovery into these local and regional decisions and regulations affecting salmon habitat.

#### **Watershed Specific Technical Review: Green/Duwamish Watershed**

The 2010 update to the WRIA 9 Three-Year Work Program for the Green/Duwamish and Central Puget Sound Watersheds addressed many of the concerns and questions as well as implemented numerous recommendations made by the RITT on the 2009 work program. Continued coordination with the co-managers through the H-Integration Sub-committee and advanced through the WIRA 9 Implementation Technical Committee will be necessary to fully evaluate the effectiveness from implementation of habitat restoration projects as they relate to Hatchery Programs and Harvest. In addition to H-Integration, developing a watershed adaptive management and monitoring plan will help assess and guide implementation of habitat restoration projects.

#### **RITT Questions:**

- 1) Consistency question: Are the suites of Actions and top priorities identified in the watershed's three year work plan/program consistent with the hypotheses and strategies identified in the Recovery Plan (Volume I and II of the Recovery Plan, NOAA supplement)?

The 2010 three-year update identifies capital projects that have been added, which are consistent with the watershed's strategies as well as projects that have been completed. Four projects from the King County Flood Control Zone District (KCFCZD) have been included in this year's three-year update that have not been previously included on any list. The WRIA 9 Staff are working with the KCFCZD to align these projects with the watershed's salmon recovery strategies. The three-year list is arranged and tiered by priority area and population; however, it is unclear if any of the projects are organized into suites of actions that need to be sequenced together to achieve the desired goals.

Under the sub-heading of Non-Capital actions, several important programmatic actions are listed. However, no specific programmatic actions were identified for supporting regulations that benefit salmon, such as the Shoreline Master Program updates. As a programmatic action, WRIA 9 should consider identifying strategic opportunities to engage in such regulatory updates to support habitat protection for salmon recovery. Although it is not the responsibility of the WRIA 9 to update, adopt and/or implement the regulations or guidelines in the SMP, it is important that WRIA 9 encourage local governments to protect critical salmon habitat through SMPs and Critical Areas Ordinances (CAOs). Local governments regulate shorelines within areas that have been identified in the WRIA 9 recovery plan as critical for the recovery of Chinook. However, it is unclear if these local governments were able to improve protection, maintain protection, or if they lost some of the regulatory protection through their SMP updates. Shoreline Master Program updates are one of the most effective programmatic ways a local government can protect the areas of critical salmon habitat that are identified in the WRIA 9 recovery plan.

- 2) Pace/Status question: Is implementation of the salmon recovery plan on-track for achieving the 10-year goal(s)? If not, Why and what are the key priorities to move forward?

WRIA 9 indicated they are not on pace with their intended rate of implementation. Adequate funding and capacity continue to be an issue. Despite this setback WRIA 9 continues to make progress in the transition zone, which is their primary area of focus within the watershed, through the completion of North Winds Weir and development of the Duwamish Gardens project. Further evaluation by the Watershed in 2009 has identified the need for additional efforts to be focused on the nearshore. This will alter WRIA 9's current Policy MS-1 in their recovery plan, which recommends a distribution of funds in the following way: 40% in the transition zone, 30% for rearing habitat, and 30% for spawning. The three-year update identifies several issues that are impeding or are barriers to their efforts.

In terms of advancing implementation of habitat restoration or protection as well as harvest and hatchery management goals, WRIA 9 has completed the first four steps of the six steps H-Integration process. The WRIA 9 Implementation Technical Committee has been reconvened after a hiatus due to lack of capacity, and the committee expects to complete the last two towards the end of 2010 or first part of 2011. Completing the H-Integration process will also be part of the watershed's work to develop an adaptive management and monitoring plan, in coordination with the RITT and PSP.

- 3) Sequence/Timing question: Is the sequence and timing of actions appropriate for the current stage of implementation?

WRIA 9 continues to focus implementation efforts and strategies on the transition zone as well as juvenile rearing and spawning habitat. Many of the restoration efforts identified in the three-year update focus on the creation of habitat conditions that benefit these areas. The three-year plan update provides a narrative and discusses the need for programmatic actions, but does not specifically identify the types of programmatic actions necessary to protect these areas. As local governments update their Shoreline Master Programs and Critical Areas Ordinances, WRIA 9 should consider opportunities to integrate salmon recovery information and support improved habitat protection through these regulatory processes.

The projects that were completed over the past year were on the three-year list. WRIA 9 previously adopted a project prioritization and sequencing methodology that helps to focus their efforts. As projects are completed additional projects identified by the WIRA 9 recovery plan are added to the three-year work plan. As with most of the watersheds within Puget Sound, projects in WRIA 9 are completed as funding cycles allow and as project proponents present them during these funding cycles. However, this year they took a slightly different approach and elected to focus Salmon Recovery Funding Board funding on two currently active projects. This approach will help to complete these priority projects before starting new projects. Stable, predictable funding and watershed capacity continues to be a hindrance to implementation of the WRIA 9 recovery plan.

- 4) Next Big challenges question: Does the three-year work plan/program reflect any new challenges or adaptive management needs that have arisen over the past year?

The three-year plan presented information on the status and trends of salmon populations; however, there was no information on habitat status and trends. The WIRA should explore ways to monitor change within the habitat, some broad scale methods could utilize the digitizing of aerial photographs and evaluating the changes in forest or vegetative cover as well as changes in total impervious surfaces. Although the Chinook population data was not statistically analyzed WRIA 9 concluded that total escapement appears to be consistent with estimates from previous years. This may imply that the population has remained relatively stable and/or it may be too soon within the habitat implementation process to identify trends.

As mentioned previously, stable, predictable funding is a concern, however, it is unclear if stable predicable funding would alter the current implementation strategy. Funding for capital projects should have little effect on WRIA 9 or local governments' ability to implement programmatic actions such as support for regulatory updates that can be used to protect critical habitat areas. However, maintaining or increasing capacity funds for WRIA 9, such as through the Puget Sound Acquisition and Restoration funds, could support these efforts.

Several local governments within WRIA 9 have either completed, are in the process, or will soon be updating their SMP and should use this opportunity to improve regulatory protection of habitat critical for salmon recovery. WRIA 9 and the WRIA 9 Recovery Forum should use these

opportunities to encourage these local governments to integrate salmon recovery goals and recovery strategies and projects into the SMPs.

Several new challenges that were included in WRIA 9's three-year work plan update include; procedures for reviewing aquatic habitat restoration projects in King County's Agricultural Production District as outlined in King County Code 21A.24.381, and the revision of policies concerning vegetation management on levees that are part of Public Law (PL) 84-99 program. These new challenges were considered significant enough to generate a written response from the Chair of the WRIA 9 Recovery Forum. One challenge that was not identified were the conditions surrounding the Howard Hansen Dam including the stability of the structure and delay in the operation of the Fish Passage facility until sometime in 2017. Either of these issues individually could have a potential impact on the overall effectiveness of the actions implemented in the Conservation Plan. Collectively these new challenges could significantly impact the effectiveness of actions identified in the Conservation Plan and their desired effects to improve habitat or improve the overall condition of the populations.

Several of these new challenges have the potential to affect the landscape process, which in turn impact the in-stream environment. Watersheds throughout the Puget Sound identified the degradation of riparian conditions in both the freshwater and marine environment as impeding restoration actions. Other degraded or compromised attributes include channel stability, habitat diversity, lack of large wood and conductivity with the floodplain. Together these degraded key ecological attributes can lead to the loss of habitat, increased sedimentation and mass wasting as well as increased water temperatures and decreased water quality. Upland development as well as development within the riparian buffers can degrade these key ecological attributes that are critical to the protection of the habitat Chinook and other Endangered Species Act (ESA) listed species.

The procedures for reviewing aquatic habitat restoration projects in King County's Agricultural Production District as outlined in King County Code 21A.24.381 and the revision of the Army Corps of Engineers' policies concerning vegetation management on levees that are part of Public Law (PL) 84-99 program have a potentially significant impact on WRIA 9's ability to implement projects listed in their three-year work plan. The WRIA 9 Ecosystem Forum submitted letters of concern on both topics. WRIA 9 also understands that implementing such policies and procedures outside of their watershed could have a negative impact on WRIA 9 salmon populations and the entire Puget Sound ESU. Providing protection to all populations and improving habitat throughout Puget Sound will lower the risk of extinction for all populations identified in the Puget Sound Chinook ESU.

King County Ordinance 16581, the public rule related to public safety and the placement of large wood in county rivers, has the potential to impede implementation of large woody debris (LWD) projects on the WRIA 9 three-year list and other projects in the WRIA 9 recovery plan. The WRIA 9 Ecosystem Forum also submitted a letter of concern on this topic. During the analysis that lead up to the Limiting Factors Report, LWD was determined to be critical to habitat restoration. Any ordinance or process that potentially restricts WRIA 9's ability to correct a habitat factor that limits salmon recovery could diminish the effectiveness of their recovery plan and increases the risk that recovery cannot be achieved.

Howard Hanson Dam has been a barrier to fish both up and down stream since it was constructed. After the completion of several large scale investigations and implementation of two large projects to increase the storage capacity and a third pipeline, a solution to the fish passage barrier was developed. It was initially proposed that the barrier would have been addressed by now, but due to the integrity and stability of the Howard Hanson Dam fish passage improvements may not be completed until sometime in 2017. The delay in significantly improving fish passage over and through the dam delays the overall effectiveness of some of the improvements to habitat and hatchery programs as well as changes to harvest.

## **II. Policy Review Comments**

The Recovery Council Work Group, an interdisciplinary policy team made up of lead policy staff in federal, state, local agencies, as well as a lead policy staff representative from the Northwest Indian Fisheries Commission, evaluated each of the fourteen watershed work plans. In addressing their review questions, outlined above, the interdisciplinary team noted both general comments common to all watersheds within the region, as well as significant advancements and issues needing advancement that are watershed specific and need special attention. The general and watershed specific comments follow below.

### **Regional Policy Review: 2010 Three-Year Work Plan – Common Themes**

The region wants to call attention to the significant amount of work and effort that each of the watershed groups put into updating the three-year work plan narratives and spreadsheets. Each year, the watershed groups build off of the previous year's reviews and information, incorporating this into the update. The watershed groups continue to demonstrate an increasing amount of sophistication in implementing the recovery plan, advancing strategically important projects by doing long-term planning, sequencing work, and ultimately prioritizing where funding is focused.

We look forward to continuing to work with watersheds to identify and facilitate high priority projects to move forward and to refine the process and three-year work plans.

#### **Adaptive Management and Monitoring**

Advancing monitoring and adaptive management remains a high priority both regionally and at the watershed scale. The majority of watersheds continue to indicate that this is a significant, 'next big challenge' in their areas. The NOAA Supplement has identified this gap in the Recovery Plan as a critical weakness. As part of the approval process, NOAA indicated that developing this plan was a requirement.

A coordinated monitoring and adaptive management framework that supports refinement at both the regional and watershed scales is critical to understand the pace and effectiveness of recovery actions. This framework and the resulting programs need to support an integrated approach to recovery implementation tracking, incorporate uncertainties around climate change, and develop or refine recovery plan goals where needed.

The region continues to be committed to supporting watersheds in advancing their efforts to develop and implement a monitoring and adaptive management plan in a way that acknowledges the interaction across habitat, harvest, hatchery, and hydropower management decisions. At the regional scale, several actions have been initiated to advance adaptive management, including:

1. RITT guidance on monitoring and adaptive management
2. RITT/PSP template for monitoring and adaptive management that builds a framework within which each watershed that can connect their monitoring information to other watersheds and the ESU.
3. RITT/PSP coordinated approach to support the development/advancement of monitoring and adaptive management programs in each watershed chapter area.

Significant resources are and will continue to be needed to support involvement in the development of these programs across the Puget Sound and then in the implementation of the programs via focused monitoring funds. Resources need to include having involvement from all sectors of salmon recovery working together: hatchery, harvest, habitat protection, habitat restoration, and hydropower.

#### Protecting Ecosystem Functions

Preserving options and addressing threats are critical components of recovery implementation both at the local and regional scale. Recovering salmon in Puget Sound requires effective regulatory protection of existing habitat, along with acquisition, incentives, and education and outreach programs around existing land uses. The protection of habitat through these and other approaches remains a high priority.

At this time, there are several opportunities to strengthen the nexus between habitat protection, salmon recovery, and different regulatory mechanisms.

- *Shoreline Master Programs and Critical Area Ordinances*: Local jurisdictions across the Puget Sound are working to update their shoreline master programs, through the Shoreline Management Act, and their critical areas ordinances, through the Growth Management Act. These two regulatory programs are critically important to our collective ability to protect and manage habitat since they address the management of riverine and marine shorelines, streams, wetlands, water recharge zones, and other ecologically important habitats for salmon. There is a strong need to incorporate existing information from the salmon recovery plan and implementation efforts into these regulatory updates in order to strengthen the relationship between land use management and the needs of salmon. Although the watershed groups are not the empowered entity for leading the effort to incorporate information from the salmon plan into the regulatory update, it is the responsibility of everyone involved to support local jurisdictions in adopting the regulations necessary to preserve recovery options for the future. This includes making information accessible as well as understandable within a regulatory context.
- *FEMA's National Flood Insurance Program (NFIP)*: NOAA recently issued a Biological Opinion on FEMA's NFIP, concluding that the program jeopardizes and adversely modifies designated critical habitat for salmon recovery. Since this decision in 2009, there has been a significant amount of concern and conversation about how to respond. Local jurisdictions, along with FEMA, NOAA, PSP, and others, are working to identify a

clear path forward for protecting floodplains in terms of ecosystem recovery and human health and well-being. Implementation of an agreed-upon approach to limit the impacts of development in the floodplain will require additional resources at the local and state level and need to be tracked as part of understanding the status of salmon recovery efforts.

- *Army Corps of Engineers Levee Vegetation Management Policy*: A significant amount of riparian habitat sits on top of levees within the floodplains and deltas of the Puget Sound. The Corps' policy requires the removal of vegetation over two inches in diameter. This new levee vegetation management policy removes significant amounts of vegetation, which provide salmon habitat in already degraded riparian areas. A regional response to this policy is underway and important to continue to support in order to reduce the negative impact for salmon recovery. Numerous entities, including state agencies, local governments, non-profits, tribes, and the Puget Sound Partnership, sent a letter to the Corps urging that this policy be changed to allow for retention of more trees on levees.

Additionally, there are non-regulatory mechanisms that are timely. This includes:

- *Education and Outreach*: Many of the watersheds identified education and outreach programs as an element of their work plans. Working with the public to advance a comprehensive understanding and individual actions associated with recovery is critically important. Advancing programs across the watersheds and that are mutually supportive within the watersheds will help strengthen the effort.
- *Nearshore Technical Assistance*: protection of the nearshore remains a high priority for salmon recovery across the Puget Sound. There are emerging tools and resources available, including technical work from the General Investigation for the Puget Sound nearshore, the monitoring and adaptive management template, and watershed-based prioritization approaches for nearshore. Continuing to advance the thinking around fish utilization and critical nearshore habitats will support a refined approach to protection and balancing different uses along the nearshore.

#### Focus on salmon recovery

Salmon recovery implementers continue to be pulled in many directions by other mandates. The Puget Sound Partnership and the Policy Work Group recognize that implementation of salmon recovery actions remains a high priority. Maintaining a focus on the priorities in the salmon recovery plan, as described in each watershed chapter plan, will be increasingly challenging, and will require a continued investment of time, resources and support.

#### Funding

Establishing consistent, reliable funding for capital and non-capital projects to implement the recovery plan chapters continues to be a challenge. It is critically important to fund implementation of the plan, at an adequate level, in order to keep the momentum and focus on recovery. Lack of capacity across member organizations of watershed groups remains a significant limiting factor for advancing recovery objectives. The advancement of H-integration and adaptive management objectives, in particular, call for continued funding to support ongoing coordination and participation.

#### Balancing Land Uses

The Puget Sound Partnership funded a report, *Obstacles to Implementing Important Capital Project for Salmon Recovery* (Blackmore Consulting, 08/27/09), to identify obstacles for implementing habitat restoration for salmon recovery around the Puget Sound. The report identified the following key obstacles that continue to be a challenge and require significant regional and local resources:

- Balancing working lands, primarily agriculture and working forests, with salmon recovery. This is especially important in the estuaries where both working agriculture and salmon restoration is located.
- Supporting a decision-making approach that incorporates salmon recovery needs, based on the plan, into decisions at the federal, state, and local scale. This is often difficult due to variable politics and community support but ultimately has a significant impact on our collective ability to complete capital projects on pace to achieve recovery goals

### **Watershed Specific Policy Review: Green/Duwamish Watershed**

#### **Significant Advancements:**

- Reinvigorated WRIA 9 Implementation Technical Committee, which had been on hiatus due to a lack of capacity funding. The committee is continuing work to complete the H-Integration process, initiate development of an adaptive management and monitoring plan in coordination with the RITT and Partnership, and advance project prioritization.
- The watershed is a regional leader in developing and implementing complex, sophisticated restoration and protection strategies at the landscape scale (i.e., drift cell for nearshore). This includes successfully advancing strategically important projects from feasibility and acquisition through to design and construction. Recently, the North Winds Weir project was completed, representing a roughly 18-year process to coordinate funding and partnership between federal, state, and local jurisdictions and stakeholder groups. This project was the highest priority project in the Duwamish transition zone.
- Developed and implementing a project prioritization and sequencing methodology, which guides the focus of future restoration and acquisition efforts.
- Increasing efforts to develop projects in the nearshore to restore and protect shoreline ecosystem functions, such as juvenile rearing habitat and forage fish spawning areas.
- Seeking ways to leverage other means of project implementation, such as coordinating with the King County Flood Control District and promoting cross-jurisdictional floodplain management to address the flood risk posed by potential releases from Howard Hansen Dam.
- Assessing additional possible funding mechanisms to implement watershed salmon recovery plan, which could help inform a broader regional assessment.

#### **Issues to Advance:**

- Supporting and identifying capacity Work to develop an adaptive management and monitoring framework, including working with the Puget Sound Partnership and the RITT on watershed scale adaptive management. Consider including relevant parties in process to advance complete H-Integration element of monitoring and adaptive management process as part of this effort.
- The watershed is currently struggling to maintain an effective level of effort to implement salmon recovery given reduced budgets and uncertain participation from partners in their

interlocal agreement. Continuing to work to ensure the stability of local funding for coordinating salmon recovery is critical to achieve the watershed's salmon recovery goals.

- Land use regulations and resource management policies have the potential to affect implementation of the WRIA 9 recovery plan by regulating the amount of and location of development, as well as the use and protection of resources. WRIA 9 should consider incorporating programmatic work that will help to address or influence these factors to improve the ability to implement, protect habitat restoration and protection investments, and ensure effectiveness of salmon recovery actions.
- Strategically identify near- and long-term capacity needs to continue to effectively implement salmon recovery in the watershed in the face of reduced budgets. Continue to work to secure funding to support these needs.