



Progress Report on Implementation in 2002 Near-Term Action Agenda for Salmon Habitat Conservation Green/Duwamish and Central Puget Sound Watershed (WRIA 9)

April 4, 2003

The Near-Term Action Agenda (NTAA: <http://dnr.metrokc.gov/Wrias/9/NTAA/index.htm>) completed in May 2002 by the WRIA 9 Steering Committee called for annual progress reports on implementation of its recommendations.

This document is the first annual progress report on NTAA implementation. Its scope has been expanded somewhat to encompass all habitat-related activities, whether inspired by the NTAA or not. With this modified scope, this report is intended to:

- Record progress toward a healthier watershed for fish and people.
- Be a resource for people looking for others who have done or are doing similar things. This should help in coordinating related actions and should encourage the spread of good ideas.
- Remind people that the NTAA can be both a useful guide to and justification for action.

Criteria and Caveats:

- Activities are listed if they occurred in the Green/Duwamish and Central Puget Sound Watershed (WRIA 9) or could benefit WRIA 9 salmonid populations.
- Activities listed occurred at some point in 2002.
- Entries quantify accomplishments where possible.
- Activities listed focus primarily on habitat (hatchery and harvest management are not addressed in the NTAA but see the last page for some information reported on hatchery activities).

- Partners were encouraged to report on implementation steps including:
 - planning,
 - seeking funding,
 - increasing staff time,
 - construction/purchase, and
 - any other activity that will result in changes benefiting salmon habitat as recommended in the NTAA.
- Some activities listed here were not necessarily inspired by NTAA. (The NTAA was completed in March 2002 and published in May 2002.)
- Each activity has been associated with the NTAA recommended action most relevant to the activity.
- Some partners were not explicit about whether an action was begun or took place in 2002. Actions known to have begun prior to 2002 or that were otherwise reported in the NTAA were not included. Otherwise, partners were given the benefit of the doubt.
- Local government actions initiated prior to 2002 generally are not reported here because they were listed in Appendix A of the Near-Term Action Agenda. Being aware of these additional actions will help the reader have a more accurate sense of the level of efforts being expended to protecting and restoring salmon habitat across the watershed. (See “Possible Changes for 2003 Annual Progress Report”)

Partners Who Provided Information on 2002 Activities:

Local Governments: Cities of Algona, Auburn, Burien, Covington, Des Moines, Enumclaw, Federal Way, Kent, Maple Valley, Normandy Park, Renton, SeaTac, Seattle, Tacoma, Tukwila, King County

Other Governments/Agencies: Army Corps of Engineers, Washington State Department of Fish and Wildlife, Washington State Department of Ecology, Washington State Parks (Saltwater State Park), King Conservation District, Green River Flood Control Zone District, Port of Seattle

Non-profit/Volunteer Groups: Mid-Sound Regional Fisheries Enhancement Group, People for Puget Sound, Puget Soundkeeper Alliance, Trout Unlimited, Duwamish River Cleanup Coalition, Environmental Coalition of South Seattle, Green/Duwamish Watershed Alliance/I'M A PAL, Cascades Conservation Partnership, Middle Green River Coalition, Fauntleroy Watershed Council, Vashon-Maury Island Land Trust, Vashon-Maury Island Audubon Society

Possible Changes for 2003 Annual Progress Report:

This report was developed by Watershed Coordination Services staff at the direction of the WRIA 9 Steering Committee. In the course of development and upon review of the draft report by the Steering Committee at its March 2003 meeting, several suggestions to improve the next annual report emerged:

- Some jurisdictions completed NTAA actions prior to 2002. These are not recorded here but it may be worth identifying this in the next annual report so readers have a good understanding of how much is being done across the watershed. Possible approach for the 2003 report: “Check box if action was completed prior to 2003.” Alternatively, some jurisdictions have on-going activities that began prior to the NTAA but which are fulfilling the NTAA recommendations. It may be desirable to record these similarly.
- Some respondents provided information about plans for implementation in 2003; while potentially illuminating, they were not included here to avoid mixing up accomplishments with planned activities. However, listing them in next year’s report (perhaps in a separate column) might provide useful information to others planning similar efforts.
- Ask respondents to indicate how the NTAA influenced their action: source of idea, used to support funding request, confirmed wisdom of choice, no effect, etc.
- Ask respondents to indicate when they became involved in the WRIA 9 cooperative planning/implementation effort and/or when they began using the NTAA to help plan their activities.

Readers are encouraged to contact Watershed Coordination Services staff if they:

- See any errors or corrections that should be made to this 2002 report
- Wish to provide information for the 2003 annual report
- Have suggestions for improvements to the format of the report

Comments should be directed to Dennis Clark, Public Outreach Coordinator, (206) 296-1909, dennis.clark@metrokc.gov.

Action or Study Number	Action Description	Steps Taken to Implement in 2002	Implementer	Notes*
Watershed Wide Actions (WW)				
WW 1	Develop an inventory of currently productive fish habitat based on the Reconnaissance Assessment and additional research, and identify the habitat-forming processes associated with that habitat.	This was identified as Strategic Assessment Task 3. Forum and Technical Committee allocated KCD funds to support high priority research. (In 2003, the Technical Committee will carry out needed research.)	Forum Technical Committee WRIA 9 Staff	
WW 1	Develop an inventory of currently productive fish habitat based on the Reconnaissance Assessment and additional research, and identify the habitat-forming processes associated with that habitat.	City completed a detailed wetland/stream inventory in 2002.	Auburn	
WW 1	Develop an inventory of currently productive fish habitat based on the Reconnaissance Assessment and additional research, and identify the habitat-forming processes associated with that habitat.	City was lead in completing a limiting factors analysis for Mullen Slough (Auburn and King County were partners)	Kent	

* When it is noted that an action is a “high” or “medium” priority for an organization, this is in relation to other NTAA actions, not necessarily other, non-salmon priorities.

Action or Study Number	Action Description	Steps Taken to Implement in 2002	Implementer	Notes*
WW 1	Develop an inventory of currently productive fish habitat based on the Reconnaissance Assessment and additional research, and identify the habitat-forming processes associated with that habitat.	<p>Parks began doing a habitat survey of shoreline parks.</p> <p>Other work was undertaken as part of Seattle’s Urban Blueprint including fish utilization study of the Puget Sound nearshore portion of Seattle and fish studies in the Duwamish under the Superfund work.</p>	Seattle	
WW 1	Develop an inventory of currently productive fish habitat based on the Reconnaissance Assessment and additional research, and identify the habitat-forming processes associated with that habitat.	Port began preparing a harbor-wide aquatic habitat inventory, including the Duwamish estuary. The inventory will be used to prepare a habitat restoration plan, in coordination with agencies and WRIA planning. Completion scheduled for 2004.	Port of Seattle	<p>Information should help WRIA planning efforts</p> <p>This action is a high priority for the Port</p>
WW 1	Develop an inventory of currently productive fish habitat based on the Reconnaissance Assessment and additional research, and identify the habitat-forming processes associated with that habitat.	In 2000-2001, Audubon co-sponsored a water-typing survey of all Vashon-Maury streams with Washington Trout. In 2002, Audubon made several large maps of the stream types and put one in the Vashon Library and one in the Vashon-Maury Island Land Trust so they can be found and consulted easily by the public.	Vashon-Maury Island Audubon Society	

Action or Study Number	Action Description	Steps Taken to Implement in 2002	Implementer	Notes*
WW 2	Protect habitat and habitat-forming processes identified in WW Action 1 or where other efforts have identified important habitat.	City is continuing efforts in the development of a Sensitive Areas Ordinance. Completion and adoption is scheduled for early 2003.	Auburn	
WW 2	Protect habitat and habitat-forming processes identified in WW Action 1 or where other efforts have identified important habitat.	Jenkins Creek Park transferred to City in 2002; City intends to protect fish habitat value of Jenkins Creek. Small and simple project budget approved for 2003.	Covington	
WW 2	Protect habitat and habitat-forming processes identified in WW Action 1 or where other efforts have identified important habitat.	Lakota Creek stabilization project in design phase.	Federal Way	This action is a high priority for the City
WW 2	Protect habitat and habitat-forming processes identified in WW Action 1 or where other efforts have identified important habitat.	Habitat protection is considered in conditioning development permits.	Seattle	
WW 2	Protect habitat and habitat-forming processes identified in WW Action 1 or where other efforts have identified important habitat.	King County has acquired over 250 acres along the Green River and key tributaries. King County assisted the cities of Enumclaw and Covington in securing funding for over 120 acres of riparian habitat.	King County Enumclaw Covington	

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WW 2	Protect habitat and habitat-forming processes identified in WW Action 1 or where other efforts have identified important habitat.	The Port’s harbor-wide restoration plan noted in WW1 has the goal of meeting port facility needs coincident with the aquatic habitat restoration objectives of agencies and jurisdictions concerned with migratory fish in WRIA 9. The harbor-wide plan includes an element stipulating that port-owned property, including approximately 15 miles of shoreline and adjacent intertidal area in the Duwamish Waterway be protected for potential fish and wildlife habitat restoration actions. The Port identified approximately 10.6 acres of potential intertidal restoration area as of 2002.	Port of Seattle	Complements the long-term restoration goals of WRIA 9 agencies, jurisdictions, and nonprofits
WW 2	Protect habitat and habitat-forming processes identified in WW Action 1 or where other efforts have identified important habitat.	MSRFEG built livestock exclusion fence along 160 feet of Newaukum Creek (at west end of Mahler Park in Enumclaw).	Mid-Sound Regional Fisheries Enhancement Group.	
WW 2	Protect habitat and habitat-forming processes identified in WW Action 1 or where other efforts have identified important habitat.	Group launched effort to protect Sawmill Creek basin in the Upper Green River Subwatershed. Conducted surveys and tours of the basin and began fundraising campaign.	Cascades Conservation Partnership	

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WW 2	Protect habitat and habitat-forming processes identified in WW Action 1 or where other efforts have identified important habitat.	Purchased 35 acres for permanent protection in the Shinglemill Salmon Preserve on Vashon Island.	Vashon-Maury Island Land Trust Vashon Park District	
WW 2	Protect habitat and habitat-forming processes identified in WW Action 1 or where other efforts have identified important habitat.	Purchased 30 acres in the headwaters of the Judd Creek Watershed. Judd Creek is the largest fish bearing creek on Vashon Island. Preservation of the watershed also will protect a cross-Island wildlife corridor.	Vashon-Maury Island Land Trust	
WW 2	Protect habitat and habitat-forming processes identified in WW Action 1 or where other efforts have identified important habitat.	Completed purchase of 35 acres around Christensen Pond, which lies at the headwaters of a salmon stream, Christensen Creek. Audubon studied the pond and developed a baseline description of it, including wetland features, and plants and wildlife.	Vashon-Maury Island Land Trust Vashon-Maury Island Audubon Society	
WW 2	Protect habitat and habitat-forming processes identified in WW Action 1 or where other efforts have identified important habitat.	ACOE planned for gravel replenishment and large woody debris projects in 2003 just below the Tacoma Diversion Dam. These projects will be used as demonstration sites for other similar projects.	U.S. Army Corps of Engineers	
WW 3	Determine fish use and habitat priorities within jurisdictions.	See Miller Creek Basin Plan below for WW Action 11.	Burien	
WW 3	Determine fish use and habitat priorities within jurisdictions.	Fish habitat assessment conducted as part of Lakota Creek study and design.	Federal Way	Action is a high priority for

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				the City
WW 3	Determine fish use and habitat priorities within jurisdictions.	See Miller Creek Basin Plan below for WW Action 11.	Normandy Park	
WW 3	Determine fish use and habitat priorities within jurisdictions.	City was lead in completing a limiting factors analysis for Mullen Slough (Auburn and King County were partners).	Kent	
WW 3	Determine fish use and habitat priorities within jurisdictions.	Completed a fish distribution report for streams within City limits in 2002.	Renton	This action is a high priority for the City
WW 3	Determine fish use and habitat priorities within jurisdictions.	Seattle's Urban Blueprint was reviewed by a variety of groups and comments were provided to the City. (Comments will be incorporated and the Blueprint updated by end of June 2003.)	Seattle	
WW 3	Determine fish use and habitat priorities within jurisdictions.	King County prepared a document titled: "Last Best Places in the Green River Watershed" that identifies important fish and wildlife habitat in need of protection.	King County	Directly related to identifying acquisition priorities that result in open space acquisition referenced in WW2.
WW 3	Determine fish use and habitat priorities within jurisdictions.	Consistent with the harbor-wide restoration plan noted above, the Port began working	Port of Seattle	This action is a high

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		to balance potential water-dependent development uses and activities with aquatic habitat restoration actions. This results in protecting areas with high priority (or potential) for aquatic habitat restoration. Work expected to continue 2003-2004.		priority for the Port
WW 4	Apply existing incentives (and where necessary, develop new incentives) for protection of salmon habitat in WRIA 9.	City received a grant from Puget Sound Action Team to look at incentives to overcome disincentives inherent in the Shoreline Management Act. City planned workshop with a variety of jurisdictions. (Workshop occurred in February 2003.)	Seattle	
WW 4	Apply existing incentives (and where necessary, develop new incentives) for protection of salmon habitat in WRIA 9.	County has worked with several landowners to implement Small Habitat Restoration Projects.	King County	
WW 4	Apply existing incentives (and where necessary, develop new incentives) for protection of salmon habitat in WRIA 9.	Ecology's Water Right Acquisition Strategy may be used/applied to obtain existing out of stream diversion water rights and transfer the water via the Trust Water Rights program to enhance instream flows. http://www.ecy.wa.gov/programs/wr/instream-flows/wacq.html	Washington State Department of Ecology	

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WW 5	Identify existing educational and outreach materials for promoting salmon conservation messages and make them available for use by all on a website or on loan.	<p>City installed 10 stream/watershed identification signs on city creeks (signs provided through KCD grant).</p> <p>City cooperated with King County in placing nearshore interpretive sign at Seahurst Park (sign provided through KCD grant).</p>	Burien WRIA 9 staff King County	
WW 5	Identify existing educational and outreach materials for promoting salmon conservation messages and make them available for use by all on a website or on loan.	City cooperated with King County in placing nearshore interpretive sign at Redondo Boardwalk and Des Moines Beach Park (signs provided through KCD grant).	Des Moines King County	
WW 5	Identify existing educational and outreach materials for promoting salmon conservation messages and make them available for use by all on a website or on loan.	<p>City installed 9 stream/watershed identification signs on city creeks (signs provided through KCD grant).</p> <p>City cooperated with King County in placing nearshore interpretive sign at Marine View Park (sign provided through KCD grant).</p>	Normandy Park WRIA 9 staff King County	
WW 5	Identify existing educational and outreach materials for promoting salmon conservation messages and make them available for use by all on a website or on loan.	City identified locations for stream/watershed identification signs on city creeks (signs provided through KCD grant). (Signs to be installed in 2003.)	Maple Valley WRIA 9 staff	

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WW 6	Encourage people to contribute personally to salmon conservation through high-visibility, enticing outreach efforts focused on the theme of lawn and garden care.	“City Currents” city newsletter carried article on natural yard care.	Des Moines	
WW 6	Encourage people to contribute personally to salmon conservation through high-visibility, enticing outreach efforts focused on the theme of lawn and garden care.	City contributed to annual water education festival focusing on elementary students held at Highline Community College; reached 1,500 students	Kent Covington Water District Others	
WW 6	Encourage people to contribute personally to salmon conservation through high-visibility, enticing outreach efforts focused on the theme of lawn and garden care.	Shoreline Master Plan approved in 2002. Plan proposes outreach program to discourage use of pesticides and fertilizers. In all plats, City notes that the property is in a sensitive area and discourages use of pesticides and fertilizers.	Maple Valley	
WW 6	Encourage people to contribute personally to salmon conservation through high-visibility, enticing outreach efforts focused on the theme of lawn and garden care.	City conducted outreach programs for its pre-existing Salmon Friendly Gardening program.	Seattle	

Action or Study Number	Action Description	Steps Taken to Implement in 2002	Implementer	Notes*
WW 7	Improve enforcement of existing regulations that protect salmon and salmon habitat.	<p>City got water quality inspection and enforcement program up and running (120 inspections, 40 notices of correction).</p> <p>Macroinvertebrate sampling conducted on Lakota and Joe’s Creeks.</p> <p>Best management practices poster created and distributed to all restaurants.</p>	Federal Way	This action is a high priority for the City
WW 7	Improve enforcement of existing regulations that protect salmon and salmon habitat.	City has increased enforcement activities in cases of code violations.	Kent	
WW 7	Improve enforcement of existing regulations that protect salmon and salmon habitat.	<p>City obtained expertise of King County wetland people in evaluating proposed land use, resulting in decision by developer to forego development.</p> <p>Lake Wilderness Lake Management Advisory Group formed; this formalized an informal process to address water quality.</p>	Maple Valley	
WW 7	Improve enforcement of existing regulations that protect salmon and salmon habitat.	<p>Department of Design, Construction, and Land Use Site Development Team began visiting all sites with ground disturbance to better assess existing conditions and requirements prior to permit applications submittal:</p> <p>http://www.cityofseattle.net/dclu/news/preapp.htm</p>	Seattle	

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WW 7	Improve enforcement of existing regulations that protect salmon and salmon habitat.	Three enforcement staff funded by King County’s Rural Drainage Program. Critical Areas Ordinance (mostly developed in 2002) has newly proposed enforcement language on critical area violations and corrective action required.	King County	
WW 8	Evaluate adequacy of existing regulations to protect riparian buffers and improve them where necessary to maintain functions that protect fish habitat.	City conducted a “gap analysis” with regarding to the Endangered Species Act listings of chinook salmon and bull trout; the analysis identified areas the City may need to address (analysis addressed more than riparian buffers).	Burien	
WW 8	Evaluate adequacy of existing regulations to protect riparian buffers and improve them where necessary to maintain functions that protect fish habitat.	Evaluated all City regulations in 2002 for adequacy of protection.	Federal Way	This action is a high priority for the City
WW 8	Evaluate adequacy of existing regulations to protect riparian buffers and improve them where necessary to maintain functions that protect fish habitat.	City completed evaluation of best available science that will be used in update. City purchased high elevation aerial photos to support revision of Critical Areas Ordinance. (CAO revision planned for 2003.)	Normandy Park	
WW 8	Evaluate adequacy of existing regulations to protect riparian buffers and improve them where necessary to maintain functions that protect fish habitat.	City continued efforts in the development of a Sensitive Areas Ordinance. (Completion and adoption is scheduled for early 2003.)	Auburn	

Action or Study Number	Action Description	Steps Taken to Implement in 2002	Implementer	Notes*
WW 8	Evaluate adequacy of existing regulations to protect riparian buffers and improve them where necessary to maintain functions that protect fish habitat.	City had consultants under contract to update of Critical Areas Ordinance. (CAO revision planned for 2003.)	Kent	This is a high priority for the City
WW 8	Evaluate adequacy of existing regulations to protect riparian buffers and improve them where necessary to maintain functions that protect fish habitat.	Shoreline Master Plan approved in 2002. Plan expanded buffers and setbacks. Permits required for more activities, such as dock replacement, than in the past.	Maple Valley	
WW 8	Evaluate adequacy of existing regulations to protect riparian buffers and improve them where necessary to maintain functions that protect fish habitat.	City began reviewing existing stream buffer standards and developing new stream buffer standards ordinance for adoption as part of the City (2003-2004) Comprehensive Plan Update for GMA.	Renton	This action is a high priority for the City
WW 8	Evaluate adequacy of existing regulations to protect riparian buffers and improve them where necessary to maintain functions that protect fish habitat.	City began reviewing its Environmentally Critical Areas ordinance.	Seattle	
WW 8	Evaluate adequacy of existing regulations to protect riparian buffers and improve them where necessary to maintain functions that protect fish habitat.	County in process of updating Critical Areas Ordinance for compliance with GMA, ESA and the Clean Water Act. Addresses wetlands and Fish and Wildlife Conservation Areas, taking into account Best Available Science. Public review draft completed in December 2002.	King County	

Action or Study Number	Action Description	Steps Taken to Implement in 2002	Implementer	Notes*
WW 9	Promote the use of alternative shoreline protection techniques.	Shoreline Master Plan approved in 2002. Plan promotes “softer” techniques and preservation/restoration of riparian vegetation.	Maple Valley	
WW 9	Promote the use of alternative shoreline protection techniques.	<p>City worked with willing homeowners to do experimental projects. City works with homeowners that are applying for shoreline exemptions for work on existing bulkheads that need repair and requires alternative protection where appropriate. Seattle also worked with the Corps of Engineers in an attempt to develop a programmatic for residential bulkheads</p> <p>Seattle Parks is committed to soft shore protection at Lincoln Park (in conjunction with COE), Lowman Beach, and Cormorant Cove.</p>	Seattle	
WW 9	Promote the use of alternative shoreline protection techniques.	In 2002, printed and distributed award winning special King County-specific edition of the Puget Sound Shoreline Guidebook to every residential property owner on the marine shorelines of King County. Booklet teaches residents about the importance of natural nearshore processes such as erosion, and provides resources to help landowners better manage their land.	King County	

Action or Study Number	Action Description	Steps Taken to Implement in 2002	Implementer	Notes*
WW 9	Promote the use of alternative shoreline protection techniques.	<p>The Aquatic Habitat Guidelines collection was created by a consortium of public agencies to assist property owners, planners, designers and regulators protect and restore marine, freshwater and riparian fish and wildlife habitat. The content and organization of information is based on a set of guiding principles developed by professional resource managers, engineers and other practitioners. These guidelines provide “how to” guidance that, while scientific in approach, can be understood and used by volunteers, planners, designers and managers of aquatic restoration projects and facilities. Each guideline is based on current best science and technical practice surveyed in topical state-of-the-knowledge white papers or a thorough literature search. Content includes background science and literature; policy issues; site and vicinity environmental-assessment processes; project-design processes, standards and details; and case studies. Technical-assistance materials produced under the Aquatic Habitat Guidelines program include documents in printed, compact-disc and web-page format, as well as training and outreach workshops.</p> <p>Website: www.wa.gov/wdfw/hab/ahg.</p>	<p>Washington Department of Fish and Wildlife, Washington State Department of Transportation, Washington Department of Ecology, the U.S. Army Corps of Engineers, and the U.S. Fish and Wildlife Service</p>	

Action or Study Number	Action Description	Steps Taken to Implement in 2002	Implementer	Notes*
WW 9	Promote the use of alternative shoreline protection techniques.	Port completed three projects in 2002 that used alternative designs for dock construction and structural stabilization of shoreline areas, replacing existing structures such that aquatic habitat is improved. A total of approximately 4 acres of shoreline habitat was improved.	Port of Seattle	This action is a high priority for the Port
WW 10	Evaluate and improve erosion and sediment control programs to reduce sediment entering salmon-bearing streams.	See also WDFW, WSDOT, WSDOE, et al. entry for WW 9		
WW 10	Evaluate and improve erosion and sediment control programs to reduce sediment entering salmon-bearing streams.	City reorganized staff to place these responsibilities in the hands of construction inspection personnel. The City bought 2 turbidimeters to support staff in their duties.	Auburn	
WW 10	Evaluate and improve erosion and sediment control programs to reduce sediment entering salmon-bearing streams.	City hired a consultant to evaluate erosion and sediment control programs; implementation of consultant recommendations began.	Kent	Report may be of interest to neighboring cities
WW 10	Evaluate and improve erosion and sediment control programs to reduce sediment entering salmon-bearing streams.	Developed a handout to contractors who are constructed single family homes on existing platted lots to educate them about erosion control measures. (City erosion and sediment control standards, inspection and enforcement will be reviewed as part of WW 11 in 2003.)	Renton	

Action or Study Number	Action Description	Steps Taken to Implement in 2002	Implementer	Notes*
WW 10	Evaluate and improve erosion and sediment control programs to reduce sediment entering salmon-bearing streams.	<p>City updated the Stormwater, Grading and Drainage Code and expects to do so again. Seattle DCLU also inspected Best Management Practices during construction to make sure that they are appropriately installed and functioning correctly. Seattle began preparing a new Drainage Comprehensive Plan that may affect stormwater standards to increase erosion controls. The Natural Systems program at High Point in West Seattle is focused on reducing pollution and sedimentation in streams by increasing groundwater infiltration.</p> <p>http://www.cityofseattle.net/util/NaturalSystems/default.htm http://www.ci.seattle.wa.us/util/SEASStreets/</p> <p>Seattle Parks used Best Management Practices and standard operating procedures that are consistent with the Tri-County Regional Road Maintenance Program Guidelines, to minimize sediment/erosion, contain pollutants and maximize habitat improvements. Training staff is underway.</p>	Seattle	

WW 10	Evaluate and improve erosion and sediment control programs to reduce sediment entering salmon-bearing streams.	Minor technical changes made to the erosion and sediment control standards (K.C.C. 16.82). Application of a clearing limit of 35% was applied to Rural Area zoned areas. This extended seasonal disturbance limitations to April 30.	King County	
WW 11	Adopt stormwater standards that protect salmon.	Worked on completing permit application for NPDES Phase II.	Burien	
WW 11	Adopt stormwater standards that protect salmon.	Stormwater code and standards adopted in 2002 with salmon habitat protections.	Covington	
WW 11	Adopt stormwater standards that protect salmon.	Completed design of stormwater retrofit project for Pacific Highway South.	Des Moines	
WW 11	Adopt stormwater standards that protect salmon.	NPDES Phase II permit application begun (will be submitted in March 2003). City began conducting a study on potential for low impact development.	Federal Way	This action is a high priority for the City
WW 11	Adopt stormwater standards that protect salmon.	The cities and the county, in cooperation with the Port of Seattle and WSDOT, worked on the Miller Creek Basin Plan. Plan addresses both stormwater control and fish habitat. Effort includes field research, hydrologic models, and identification of potential water quantity and quality improvements to aid in habitat restoration.	Burien Normandy Park SeaTac King County Port of Seattle	
WW 11	Adopt stormwater standards that protect salmon.	Worked on completing permit application for NPDES Phase II.	SeaTac	
WW 11	Adopt stormwater standards that protect salmon.	Underway, but slow progress. These efforts have no capital budget and rely on city staff to complete.	Enumclaw	

WW 11	Adopt stormwater standards that protect salmon.	City adopted new surface water design manual in May 2002; it is based on the King County 1998 design manual and replaces the City's 1993 version.	Kent	
WW 11	Adopt stormwater standards that protect salmon.	Sensitive Lake Treatment Standard (from KC Surface Water Design Manual) adopted for new development and modifications to storm drain systems that drain into a lake.	Maple Valley	
WW 11	Adopt stormwater standards that protect salmon.	City began redoing its Drainage Comprehensive Plan and revising its Stormwater, Grading and Drainage Code.	Seattle	
WW 11	Adopt stormwater standards that protect salmon.	Improved stormwater standards were included in the overall update in response to the ESA, Clean Water Act and Growth Management Act. County proposed 65/10 standard in rural areas (65% forest retention and 10% impervious surface limitations). Lowered drainage review thresholds and thresholds for new impervious surfaces requiring a flow-control facility or best management practices.	King County	
WW 12	Develop programs and protocols for the maintenance of stormwater systems and facilities to reduce entry of sediment and other pollutants to salmon streams.	Inspection of 300 private storm water facilities completed in 2002.	Federal Way	This action is a high priority for the City
WW 12	Develop programs and protocols for the maintenance of stormwater systems and facilities to reduce entry of sediment and other pollutants to salmon streams.	Protocol for stormwater system maintenance adopted in 2002; addresses sediment.	Covington	

WW 12	Develop programs and protocols for the maintenance of stormwater systems and facilities to reduce entry of sediment and other pollutants to salmon streams.	Stormwater systems and facilities addressed through roads maintenance Best Management Practices; see WW Action 13 below.	Kent	
WW 12	Develop programs and protocols for the maintenance of stormwater systems and facilities to reduce entry of sediment and other pollutants to salmon streams.	Underway, but slow progress. These efforts have no capital budget and rely on city staff to complete.	Enumclaw	
WW 12	Develop programs and protocols for the maintenance of stormwater systems and facilities to reduce entry of sediment and other pollutants to salmon streams.	City began maintenance program to systematically maintain stormwater system. This shifted from reactive approach to preventative inspection and maintenance. First year (2002) of effort identified several biofiltration swales that were clogged with sediment. City cleaned them out.	Maple Valley	
WW 12	Develop programs and protocols for the maintenance of stormwater systems and facilities to reduce entry of sediment and other pollutants to salmon streams.	City increased its emphasis on source control and hired new inspectors to assist businesses identify areas for improvement.	Seattle	
WW 12	Develop programs and protocols for the maintenance of stormwater systems and facilities to reduce entry of sediment and other pollutants to salmon streams.	Maintenance standards for stormwater systems are contained in the King County Surface Water Design Manual. The manual was being updated in 2002 to reflect ESA, Clean Water Act and Growth Management Act requirements.	King County	

WW 12	Develop programs and protocols for the maintenance of stormwater systems and facilities to reduce entry of sediment and other pollutants to salmon streams.	Ecology conducted outreach via stormwater workshops in the basin and prepared educational material in preparation for Ecology’s Phase II Stormwater permits for cities under 100,000 person populations. Applicable cities are to apply for the permit by March 2003.	Washington State Department of Ecology	WSDDOE contact is Lisa Olson at 425-649-7037.
WW 12	Develop programs and protocols for the maintenance of stormwater systems and facilities to reduce entry of sediment and other pollutants to salmon streams.	Worked with City of Seattle staff on development of large capital project (fire training center) to minimize site impacts and drainage impacts on nearby streams.	Green/ Duwamish Watershed Alliance/ I’M A PAL	
WW 13	Review road maintenance practices and adopt written operating procedures to reduce potential impacts to salmon and salmon habitat.	City reviewed WSDOT road maintenance manual and began using.	Des Moines	
WW 13	Review road maintenance practices and adopt written operating procedures to reduce potential impacts to salmon and salmon habitat.	Reviewed in 2002 with recommendation that City adopt Tri-County Road Maintenance Plan in 2003.	Federal Way	This action is a high priority for the City
WW 13	Review road maintenance practices and adopt written operating procedures to reduce potential impacts to salmon and salmon habitat.	City is implementing the Tri-County roads maintenance Best Management Practices and is formalizing and documenting its practices.	SeaTac	
WW 13	Review road maintenance practices and adopt written operating procedures to reduce potential impacts to salmon and salmon habitat.	Work near completion. A maintenance manual has been developed. Adaptive management philosophy will help keep the manual updated.	Auburn	
WW 13	Review road maintenance practices and adopt written operating procedures to reduce potential impacts to salmon and	City is implementing the Tri-County roads maintenance Best Management Practices.	Kent	

	salmon habitat.			
WW 13	Review road maintenance practices and adopt written operating procedures to reduce potential impacts to salmon and salmon habitat.	City adopted Tri-County Regional Road Maintenance guidelines.	Maple Valley	
WW 13	Review road maintenance practices and adopt written operating procedures to reduce potential impacts to salmon and salmon habitat.	City adopted in 2002 and is following the Road Maintenance BMP standards developed by the Tri-County effort.	Renton	
WW 13	Review road maintenance practices and adopt written operating procedures to reduce potential impacts to salmon and salmon habitat.	City developed a program that substantially adopts the Tri-County Road Maintenance Program. Seattle Transportation began developing an environmental management program and added 1 FTE to its environmental staff.	Seattle	
WW 13	Review road maintenance practices and adopt written operating procedures to reduce potential impacts to salmon and salmon habitat.	County is implementing the Regional Road Maintenance ESA Program Guidelines on its road maintenance projects.	King County	
WW 13	Review road maintenance practices and adopt written operating procedures to reduce potential impacts to salmon and salmon habitat.	A road assessment of stream adjacent roads on Tacoma Water lands identified in the Forest Road Inventory of RMB-1 (Howard Hanson) as having the potential to deliver sediment to typed streams was conducted in June 2002. Twenty road segments were evaluated, covering 13.68 miles. Of these 20 road segments, a total of 8.59 miles (63%) were found to be delivering water to the adjacent stream. The Road Sediment Reduction Plan (RSRP, 11/4/02) recommended various remedies and priority for minimizing road sediment	Tacoma (in Upper Green River sub-watershed)	

		delivery to the adjacent stream. Remedies on the Northside Road were completed in 2002 (Southside Road will be done in 2003.) These activities are performed pursuant to the terms of the Tacoma Habitat Conservation Plan.		
WW 14	Review parks and grounds maintenance procedures and adopt written best management practices that protect salmon and salmon habitat.	City revised standards, policies and procedures in 2002 for 2003 adoption.	Covington	
WW 14	Review parks and grounds maintenance procedures and adopt written best management practices that protect salmon and salmon habitat.	<p>City completed audit of all city-owned facilities (parks and others) to find ways to conserve water.</p> <p>Best Management Practices identified in 2001 began to be implemented in 2002; Best Management Practices address activities such as vehicle washing and pesticide use.</p> <p>Began drafting integrated pest management (IPM) program (to be completed in 2003); scope covers Kent and areas outside of Kent (such as Maple Valley) where Kent well fields; in cooperation with Covington Water District and Water District 111.</p>	Kent	Should be of interest to Maple Valley, Covington, and unincorporated King County in Middle Green
WW 14	Review parks and grounds maintenance procedures and adopt written best management practices that protect salmon and salmon habitat.	<p>City has a pesticide reduction program for all departments with property or road ROW responsibilities.</p> <p>http://www.ci.seattle.wa.us/environment/pesticides.htm</p>	Seattle	

		<p>Seattle Parks developed a pesticide free parks program. http://www.ci.seattle.wa.us/environment/documents/PesticideFreeParks1.pdf</p> <p>Parks began overall pesticide reduction activities. http://www.ci.seattle.wa.us/parks/horticulture/pesticide.htm</p> <p>Parks has Environmental Stewardship Programs for the golf courses, including a pesticide reduction goal and proposed water testing.</p> <p>Parks has Landscape, Horticulture and Forestry Best Management Practices that protect salmon and salmon habitat.</p>		
WW 14	Review parks and grounds maintenance procedures and adopt written best management practices that protect salmon and salmon habitat.	County was in the process of writing site management guidelines for all county ecological lands that include maintenance recommendations.	King County	
WW 14	Review parks and grounds maintenance procedures and adopt written best management practices that protect salmon and salmon habitat.	Port implemented work practices at all Port properties requiring complete “organic” landscape practices, including no use of any pesticides or manufactured fertilizer. This is complemented with use of native vegetation and limited (to term of establishment) water/irrigation use. The Port began to replace landscape lawn and ornamental plantings with native trees and shrubs, reducing water use and	Port of Seattle	This is a high priority action for the Port

		<p>maintenance costs. These policies cover 45 acres of grounds; two sites completed in 2002.</p>		
WW 15	<p>Develop a comprehensive, WRIA-wide process to identify, develop, and prioritize projects that benefit salmon and carry out the WRIA 9 strategy.</p>	<p>Watershed Coordination Services staff and others began work on the Habitat Work Schedule. Project information will be requested in a separate process. The Green/Duwamish Ecosystem Restoration Project is an existing WRIA-wide prioritization of some projects and is moving forward (see WW Action 18).</p>	WRIA 9 staff	
WW 16	<p>Create combined naturalist and stewardship activities across WRIA 9.</p>	<p>City was one of three partners to host a project through the Forum-sponsored stewardship+naturalist effort. City provided staff and equipment.</p>	Des Moines WRIA 9 staff	
WW 16	<p>Create combined naturalist and stewardship activities across WRIA 9.</p>	<p>Stream Teams developed for all Puget Sound creeks.</p> <p>Conducted three stewardship events collecting trash, removing invasive plants and planting native trees at Lakota Creek in partnership with Decatur High School..</p> <p>Steel Lake Management Committee formed.</p>	Federal Way	<p>This action is a high priority for the City</p>

WW 16	Create combined naturalist and stewardship activities across WRIA 9.	<p>Continued tree planting program involving elementary and high school students (joint program with King County and others).</p> <p>Hired Washington Conservation Corps crew for 2002, which carried out weed control, erosion repair, and restoration of stream buffers.</p>	Kent	
WW 16	Create combined naturalist and stewardship activities across WRIA 9.	<p>Seattle began new Creeks Stewardship and BackYard Stewardship programs to augment the pre-existing naturalists programs.</p> <p>http://www.ci.seattle.wa.us/parks/Environment/index.htm</p> <p>http://www.cityofseattle.net/util/urbancreeks/creeksteward.htm</p> <p>http://www.cityofseattle.net/util/urbancreeks/backyard.htm</p> <p>The ProParks Levy included \$1.1 million for environmental stewardship for 2002. Parks provided volunteer opportunities for creekside renovation and stewardship.</p>	Seattle	
WW 16	Create combined naturalist and stewardship activities across WRIA 9.	<p>County was one of three partners to host a project through the Forum-sponsored stewardship+naturalist effort. County provided staff and plants. (See also WW 17 entry for King County.)</p>	King County WRIA 9 staff	

WW 16	Create combined naturalist and stewardship activities across WRIA 9.	Port and City of Seattle were one of three partners to host a project through the Forum-sponsored stewardship+naturalist effort. Port and City provided staff and equipment. Port provided plants and fencing material.	Port of Seattle City of Seattle WRIA 9 staff	
WW 16	Create combined naturalist and stewardship activities across WRIA 9.	The Port held five volunteer events in 2002. These involved native plant installation and stewardship at port habitat restoration sites.	Port of Seattle	This is a high priority action for the Port
WW 16	Create combined naturalist and stewardship activities across WRIA 9.	As part of an annual program, Saltwater State Park staff introduced 500 local children to salmon habitat provided at the park and involved them in volunteer restoration activities.	Washington State Parks	
WW 16	Create combined naturalist and stewardship activities across WRIA 9.	MSRFEG and TU volunteers distributed salmon carcasses into the Green River and Newaukum Creek for nutrient enhancement.	Mid-Sound Regional Fisheries Enhancement Group Trout Unlimited	
WW 16	Create combined naturalist and stewardship activities across WRIA 9.	Trout Unlimited, Cities of Kent and Federal Way, and other local partners, put on Kent Fishing Derby and Steel Lake Fishing Derby in Kent and Federal Way respectively. Derbies included presentations by WRIA 9 staff regarding salmon habitat conservation and stewardship, reaching over 1,000 children and adults.	Trout Unlimited Kent Federal Way WRIA 9 staff	

WW 16	Create combined naturalist and stewardship activities across WRIA 9.	DRCC implemented a comprehensive public education, outreach, and involvement program that has reached over 10,000 Seattle area homes about Duwamish pollution issues and cleanup plans associated with the Lower Duwamish Superfund listing. Hosted nine free boat tours of the Duwamish.	Duwamish River Cleanup Coalition	
WW 16	Create combined naturalist and stewardship activities across WRIA 9.	Carried out a variety of education, assessment, monitoring, and restoration activities on Fauntleroy Creek to improve habitat for coho. Also focused on Fauntleroy Cove in the nearshore by talking with WSDOT about ferry facilities construction impacts on habitat.	Fauntleroy Watershed Council	
WW 16	Create combined naturalist and stewardship activities across WRIA 9.	PSA awarded \$30,000 for water quality education in the Highline School District (activities will occur in 2003).	Puget Soundkeeper Alliance	
WW 16	Create combined naturalist and stewardship activities across WRIA 9.	Planted 500 Western red cedars in the Shinglemill Salmon Preserve.	Vashon-Maury Island Land Trust	
WW 17	Encourage the restoration of riparian buffers.	See also WDFW, WSDOT, WSDOE et al. entry for WW 9.		
WW 17	Encourage the restoration of riparian buffers.	Small project completed on Massey Creek as part of WW Action 16 (above). City worked with volunteers to fence and plant natives along Des Moines Creek in Des Moines Beach Park.	Des Moines	

WW 17	Encourage the restoration of riparian buffers.	<p>City removed invasive plants from private and public storm water facilities.</p> <p>Began developing restoration plans for Lakota Creek.</p>	Federal Way	This action is a medium priority for the City
WW 17	Encourage the restoration of riparian buffers.	City has focused mitigation for habitat loss in riparian buffer areas (e.g., 3 acres for mitigation to mitigate for 1 acre of wetland, which the City encouraged to be focused on Mill Creek).	Kent	
WW 17	Encourage the restoration of riparian buffers.	Under 2002 Shoreline Master Plan, new development and redevelopment may require reestablishment of riparian vegetation as permit condition.	Maple Valley	
WW 17	Encourage the restoration of riparian buffers.	<p>The Creek Stewardship program and the Backyard Stewardship Program (described in WW 16) and ECA codes also restored riparian buffers.</p> <p>Parks Urban Forestry program developed vegetation management plans and implemented forest restoration along creeks, streams and shorelines. Parks' volunteers worked to restore native plants and improve waterways.</p>	Seattle	
WW 17	Encourage the restoration of riparian buffers.	City restored habitat adjacent to several outfalls.	Tukwila	
WW 17	Encourage the restoration of riparian buffers.	County planted over 3,000 trees on approximately 20 acres with the Green River riparian buffers on county-managed land.	King County	

WW 17	Encourage the restoration of riparian buffers.	The Green/Duwamish ERP projects will include buffer restoration as one element of the proposed work. Several projects, will focus upon buffer restoration including Newaukum Creek restoration and the volunteer revegetation projects. Preliminary design and planning are in process for these projects.	U.S. Army Corps of Engineers	This action is a high priority for the City
WW 17	Encourage the restoration of riparian buffers.	Ecology's creation of and planning for implementation of the Total Maximum Daily Load for the Green/Duwamish. Ecology considering including restoration of riparian buffers to address water temperature issues.	Washington State Department of Ecology	
WW 17	Encourage the restoration of riparian buffers.	Port has installed additional/supplemental native riparian vegetation at three sites in 2002.	Port of Seattle	
WW 17	Encourage the restoration of riparian buffers.	Planted 25 foot-wide riparian buffers on 4,700 linear feet worth of Newaukum Creek restoration projects. Also completed six acres of wetland restoration.	Mid-Sound Regional Fisheries Enhancement Group	
WW 18	Implement Phase 1 of the Ecosystem Restoration Project.	Design agreement completed between USACE and King County as local sponsor with support from local jurisdictions. Design and engineering work began for early Phase I projects and will continue into 2003. (Funding for 2003 construction has not been budgeted at the Federal level. Work will continue in 2003 for a 2004 budget appropriation..)	U.S. Army Corps of Engineers WRIA 9 jurisdictions WRIA 9 staff	

WW 19	Evaluate fish passage barriers at the local jurisdiction level.	Miller Creek Basin Plan field work revealed no fish passage problems in City other than possibly on Salmon Creek. Basin Plan examining whether to improve fish passage on Salmon Creek by daylighting portions of the creek.	Burien	
WW 19	Evaluate fish passage barriers at the local jurisdiction level.	Fish passage barriers assessed for Lakota Creek.	Federal Way	This action is a high priority for the City
WW 19	Evaluate fish passage barriers at the local jurisdiction level.	Miller Creek Basin Plan field work revealed no fish passage problems on Miller/Walker Creeks, which are only significant streams in City.	Normandy Park	
WW 19	Evaluate fish passage barriers at the local jurisdiction level.	City completed a detailed wetland/stream inventory in 2002. The development of a management plan is scheduled for 2003.	Auburn	
WW 19	Evaluate fish passage barriers at the local jurisdiction level.	Designed six culvert replacements that will improve flood flow and fish passage (construction in 2003 and beyond).	Kent	
WW 19	Evaluate fish passage barriers at the local jurisdiction level.	City identified six passage barriers on Jenkins Creek. One barrier removed.	Maple Valley	
WW 19	Evaluate fish passage barriers at the local jurisdiction level.	If a City or private project involves a stream crossing, the existing or proposed new crossing is reviewed to make sure that it is fish passable.	Renton	
WW 19	Evaluate fish passage barriers at the local jurisdiction level.	Fish barrier inventory done for major Seattle creeks.	Seattle	

WW 19	Evaluate fish passage barriers at the local jurisdiction level.	Conducted a Forest Road Inventory (FRI) in Road Management Block 2 on 51 miles of roads on Tacoma Water land (7,952 acres). Collected data will be furnished to the State DNR for the second of two Road Maintenance and Abandonment Plans (RMAP). These activities are performed pursuant to the terms of the Tacoma Habitat Conservation Plan.	Tacoma (in Upper Green River sub-watershed)	
WW 19	Evaluate fish passage barriers at the local jurisdiction level.	County was identifying and prioritizing fish passage barriers throughout unincorporated King County. County removed approximately 25 barriers in 2002 (not all in WRIA 9).	King County	
WW 19	Evaluate fish passage barriers at the local jurisdiction level.	Two projects were currently in final design – the Howard Hanson Dam fish passage projects and Sweeney Creek culvert removal. (Sweeney Creek is scheduled for construction in 2003.)	U.S. Army Corps of Engineers	This action is a high priority for the City
WW 19	Evaluate fish passage barriers at the local jurisdiction level.	MSRFEG applied for funding during Salmon Recovery Funding Board Round 4 to fund this activity across much of the Green/Duwamish watershed.	Mid-Sound Regional Fisheries Enhancement Group.	
WW Study 1	Monitor habitat restoration projects to determine fish response and apply the information to future projects.	Monitoring is included in City habitat restoration projects. City began developing a city-wide monitoring plan and Salmon Scorecard (due to Council in fall 2003).	Seattle	
WW Study 1	Monitor habitat restoration projects to determine fish response and apply the information to future projects.	All County riparian restoration projects were actively monitored by the Resource Coordinator and Basin Steward.	King County	
WW Study	Monitor habitat restoration projects to	Green River Flood Control Zone District	Green River	

1	determine fish response and apply the information to future projects.	projects were monitored for fish utilization by the King County Green River Basin Program. Baseline monitoring occurred at several sites and construction phase monitoring of fish use was carried out at Pipeline and Desimone sites in 2002.	Flood Control Zone District (King County, Auburn, Kent, Renton, Tukwila, et al.)	
WW Study 1	Monitor habitat restoration projects to determine fish response and apply the information to future projects.	Monitoring plans are being developed for the first projects proposed for ERP.	U.S. Army Corps of Engineers	This action is a high priority for the City
WW Study 1	Monitor habitat restoration projects to determine fish response and apply the information to future projects.	Port has collected fish use information at four sites in 2002. Together with additional aquatic habitat information, this performance data will guide the location and design of future aquatic habitat restoration projects. Work will continue in 2003.	Port of Seattle	
WW Study 1	Monitor habitat restoration projects to determine fish response and apply the information to future projects.	MSRFEG, with help from TU volunteers, monitored a smolt trap on Newaukum Creek to evaluate fish use of the North Fork following restoration activities.	Mid-Sound Regional Fisheries Enhancement Group Trout Unlimited	
WW Study 1	Monitor habitat restoration projects to determine fish response and apply the information to future projects.	In 2002, PPS staff and volunteers monitored the following Duwamish restoration projects: <ul style="list-style-type: none"> • Turning Basin (Duwamish) • Hamm Creek estuary • Puget Creek estuary • Terminal 105 • General Services Administration 	People for Puget Sound	
WW Study	Monitor habitat restoration projects to	Continued visual observation and water	Green/	

1	determine fish response and apply the information to future projects.	quality monitoring of Hamm Creek watershed, which has several restoration projects. Also monitored “bio check boom.” Broader stewardship and monitoring included regular contact with local businesses, residents, and schools.	Duwamish Watershed Alliance and I’M A PAL	
WW Study 2	Identify which factors are limiting to salmon populations by subwatershed.	This was identified as Strategic Assessment Task 3. (This will be done as research results are made available in 2003/2004.)		
WW Study 2	Identify which factors are limiting to salmon populations by subwatershed.	The Seattle Urban Blueprint (2001) identified key areas of focus for salmon recovery in each of our aquatic environments. This work was positively reviewed by the NMFS Science Center, U of W scientists and others.	Seattle	
WW Study 2	Identify which factors are limiting to salmon populations by subwatershed.	Kent was lead in completing a limiting factors analysis for Mullen Slough (Auburn and King County were partners).	Kent Auburn King County	
WW Study 2	Identify which factors are limiting to salmon populations by subwatershed.	WRIA 9 juvenile salmonid survival studies in the Lower Green and Duwamish (RM 13, RM 7, and RM 2) were carried out by King County in 2002. A draft 2001 report was completed in January 2003.	King County	
WW Study 2	Identify which factors are limiting to salmon populations by subwatershed.	ACOE is evaluating limiting factors in the Duwamish – draft report is available.	U.S. Army Corps of Engineers	This action is a high priority for the Corps
WW Study 2	Identify which factors are limiting to salmon populations by subwatershed.	Volunteers conducted stream monitoring in the smaller urban streams flowing into the lower Duwamish River and the western slopes of West Seattle, SeaTac, Burien, Normandy Park, and Des Moines.	Trout Unlimited	

WW Study 2	Identify which factors are limiting to salmon populations by subwatershed.	Group obtained a grant from the WRIA 9 Forum to accelerate and expand gathering of data on the invertebrates (bugs) in the Green River and its tributaries. With the 2002 grant, TU volunteers began to process their specimens in a more timely, cost-effective fashion. This helps fill a data gap described in the WRIA 9 Reconnaissance Assessment Report.	Trout Unlimited	
WW Study 3	Develop a research framework for assessing juvenile salmonid survival in WRIA 9.	Draft framework for Juvenile Salmonid Survival Studies completed. (Final due in 2003.)	Seattle and others	
WW Study 4	Support the Green/Duwamish Water Quality Assessment.	King County's implementation of the Green WQA was ongoing. Data were and are being collected on several parameters of interest to WRIA 9, including water temperature, dissolved oxygen, and benthic macroinvertebrates. A report entitled "Green/Duwamish Water Temperature Report" was completed in June 2002. A dissolved oxygen study was and is ongoing in Mill Creek/Mullen Slough sub-basin and benthic monitoring occurred at approximately 80 sites in the Green River basin in late summer 2002.	King County	
WW Study 5	Conduct an assessment of large woody debris in WRIA 9.	This was identified as Strategic Assessment Task 3. (This will be done in 2003/2004.)		
WW Study 6	The WRIA 9 Planning Work Group, WRIA 9 Technical Committee, Central Puget Sound Water Suppliers Forum, and other appropriate agencies should work together to understand and	Central Puget Sound Initiative grant applied for. Multiple partners assisted in development of grant application.	Auburn Seattle Tacoma Tukwila King County	

	evaluate the water budget for people and fish in the WRIA.		WRIA 9 staff	
WW Study 7	Develop mechanisms to increase collaboration and coordination in scientific work directed toward salmon recovery.	This was identified as Strategic Assessment Task 8. Technical Committee subcommittee formed to address this issue. Fred Goetz, ACOE held research coordination meetings in 2002 (and 2003).	Technical Committee	
Upper/Middle Green River Subwatershed Actions (UG)				
UG 1	Endorse the re-establishment of fish passage to and from the Upper Green River subwatershed.	Tacoma Water began construction on the Green River Diversion Fish Ladder/Trap. The trap and sorting facility is under construction in 2002. The ladder will be constructed summer 2003.	Tacoma	
UG 1	Endorse the re-establishment of fish passage to and from the Upper Green River subwatershed.	ACOE is working on this through Howard Hanson Dam Second Water Supply projects.	U.S. Army Corps of Engineers	
Middle Green River Subwatershed Actions (MG)				
MG 1	Maximize retention of forest cover and minimize impervious surfaces in rural and forest production areas of the Middle Green River subwatershed.	City's clearing code adopted in 2002 provides for very stringent vegetation protection under Chapter 21A17 of city land use regulations.	Covington	
MG 1	Maximize retention of forest cover and minimize impervious surfaces in rural and forest production areas of the Middle Green River subwatershed.	County worked on several Transfer of Development Rights proposal with the intent to preserve a significant amount of timber production land in the Middle Green. King County has proposed a 65/10 standard in rural areas that would require 65% forest retention and limits on impervious surfaces of 10%.	King County	
MG 1	Maximize retention of forest cover and minimize impervious surfaces in rural and forest production areas of the	ACOE initiated design on Lones Levee setback project in middle Green River rural area	U.S. Army Corps of Engineers	

	Middle Green River subwatershed.			
MG 1	Maximize retention of forest cover and minimize impervious surfaces in rural and forest production areas of the Middle Green River subwatershed.	Ecology’s participation on and implementation of the Timber, Fish, and Wildlife agreement should help retention of forest cover in the Middle Green River Sub watershed.	Washington State Department of Ecology	
MG 2	Identify and pursue opportunities on agricultural lands to enhance or restore high quality salmon habitats while maintaining viable agriculture.	Mapped 2200 linear feet of Newaukum Creek for salmon habitat enhancement planning and riparian buffer enhancement planning.	King Conservation District	
MG 2	Identify and pursue opportunities on agricultural lands to enhance or restore high quality salmon habitats while maintaining viable agriculture.	ACOE initiated design on Lones Levee setback project in middle Green River rural area. Lones Levee is in Agriculture Production District land.	U.S. Army Corps of Engineers	
MG 2	Identify and pursue opportunities on agricultural lands to enhance or restore high quality salmon habitats while maintaining viable agriculture.	County continued efforts to preserve agricultural land via the Farmland Preservation Program in the Middle Green River Valley and Enumclaw Plateau. County researched, educated, and implemented best management practices that are protective of salmonids. County worked with farmers to continue implementing farm plans that provide protective buffer to salmon bearing streams.	King County	
MG 3	Supplement mainstem gravel and large woody debris.	This proposal was identified in the Ecosystem Restoration Project, but no Federal funding was provided.		
MG 4	Prevent degradation of important sources of cool, clean water in the Middle Green River subwatershed.	Central Puget Sound Initiative grant applied for. Multiple partners assisted in development of grant application.	Auburn Seattle Tacoma Tukwila	

			King County WRIA 9 staff	
MG 4	Prevent degradation of important sources of cool, clean water in the Middle Green River subwatershed.	City participating in acquisition of riparian habitat along Newaukum Creek near Big Spring Creek through the Conservation Futures Grant program. City now holds title to this property and can begin efforts to improve the habitat of this previously agricultural use.	Enumclaw	
MG 4	Prevent degradation of important sources of cool, clean water in the Middle Green River subwatershed.	Ecology's creation of and planning for implementation of the Total Maximum Daily Load for the Green/Duwamish should help prevent the degradation of both surface and ground water quality in the middle Green River sub watershed.	Washington State Department of Ecology	
MG 4	Prevent degradation of important sources of cool, clean water in the Middle Green River subwatershed.	Lobbying helped direct from \$300,000 from Conservation Futures program to Icy Creek protection. Coalition worked with Cascades Land Conservancy and Trust for Public Lands to seek other funding sources.	Middle Green River Coalition	
MG Study 1	Assess flow management alternatives in the Middle Green River.	This was identified as Strategic Assessment Task 7. Central Puget Sound Initiative grant applied for. Multiple partners assisted in development of grant application.	Auburn Seattle Tacoma Tukwila King County WRIA 9 staff	
MG Study 2	Identify gravel source areas in the Middle Green River.	ACOE through Howard Hanson Dam projects planned projects for 2003 implementation.	U.S. Army Corps of Engineers	
MG Study 3	Identify and characterize important surface and groundwater inputs to the Middle Green River.	This was identified as Strategic Assessment Task 3.	Auburn Seattle Tacoma	

		Central Puget Sound Initiative grant applied for. Multiple partners assisted in development of grant application.	Tukwila King County WRIA 9 staff	
MG Study 4	Ensure funding for the Green River fish trap for 2003-2005.	Funding good through mid 2003; implementers unclear.		
Lower Green River Subwatershed Actions (LG)				
LG 1	Incorporate recommendations that support salmon habitat needs into Mill Creek Reconnaissance and Action Plans developed in WRIA 9, with an emphasis on proposals that support juvenile chinook salmon rearing (to the extent practical within budget constraints and consistent with the goal of protection agricultural lands).	Worked continued on the Mill Creek Plan (completion due in 2003). Mullen Slough restoration activities completed in 2002 including invasive weed control and the planting of about 400 native trees. Appraisals were completed with the goal of acquiring adjacent properties.	King County Auburn Kent	
LG 2	Restore Lower Green, Elliott Bay/Duwamish, and Nearshore habitats.	Working with other jurisdictions to design and construct habitat enhancement project as part of the US Army Corps of Engineers Green/Duwamish Watershed Ecosystem Restoration Project.	Renton	
LG 2	Restore Lower Green, Elliott Bay/Duwamish, and Nearshore habitats.	In cooperation with Cascade Land Conservancy, planned major acquisition along Mill Creek Auburn within City of Kent. Applied to Salmon Recovery Funding Board for acquisition funding for Rosso nursery property funding; City is lead in joint effort with King County and Green River Flood Control Zone District.	Kent Cascade Land Conservancy	
LG 2	Restore Lower Green, Elliott Bay/Duwamish, and Nearshore	Cities identified riparian corridor restoration site along Mill Creek Auburn.	Auburn Kent	

	habitats.			
LG 2	Restore Lower Green, Elliott Bay/Duwamish, and Nearshore habitats.	Installed two riparian buffer enhancement projects, 1000 linear feet, 50,000 sq.ft. in the Black River Riparian Forest.	King Conservation District	
LG 2	Restore Lower Green, Elliott Bay/Duwamish, and Nearshore habitats.	MSRFEG worked on planning a 2,600-foot planting and in-stream restoration project for Mullen Slough. MSRFEG conducted baseline monitoring and survey/pre-design work for project.	Mid-Sound Regional Fisheries Enhancement Group	
LG 2	Restore Lower Green, Elliott Bay/Duwamish, and Nearshore habitats.	Ongoing levee and revetment repair that included improvements to fish habitat. Setback and restoration of Desimone, Pipeline, and Boeing levees that included installation of large woody debris and native vegetation.	Green River Flood Control Zone District (King County, Auburn, Kent, Renton, Tukwila, et al.)	
LG 3	Identify and pursue opportunities on agricultural lands to enhance or restore high quality salmon habitats while maintaining viable agriculture.	County continued efforts to preserve agricultural land via the Farmland Preservation Program in the Lower Green River Valley. County researched, educated, and implemented best management practices that are protective of salmonids. County worked with farmers to continue implementing farm plans that provide protective buffer to salmon bearing streams.		
LG Study 1	Conduct Lower Green River baseline habitat mapping.	This was identified as Strategic Assessment Task 3. Salmon Recovery Funding Board grant applied for.		

		(Scope of work and project initiation scheduled for 2003.)		
LG Study 2	Establish a water-quality sampling site at River Mile 21.	No action reported.		
Elliott/Bay Duwamish Subwatershed Actions (EBD)				
EBD 1	Restore Lower Green, Elliott Bay/Duwamish, and Nearshore habitats.	Feasibility studies began on several sites. Concern for salmon was kept a visible part of the waterfront seawall project and other major projects.	Seattle	
EBD 1	Restore Lower Green, Elliott Bay/Duwamish, and Nearshore habitats.	Began work late in year on creating a half acre of wetlands at Cecil B. Moses park. Undertook planning of Site 1 restoration.	King County	
EBD 1	Restore Lower Green, Elliott Bay/Duwamish, and Nearshore habitats.	Early design for Site 1/Duwamish began.	U.S. Army Corps of Engineers	
EBD 1	Restore Lower Green, Elliott Bay/Duwamish, and Nearshore habitats.	Port implemented three construction projects (totaling approximately 5.1 acres of over-water structures) in 2002, resulting in net improvements in aquatic habitat conditions. Projects included removal of approximately 2200 creosote piling, placement of clean sediment cap material, and removal of approximately 0.9 acres of over water coverage. Additional work planned in 2003.	Port of Seattle	
EBD 1	Restore Lower Green, Elliott Bay/Duwamish, and Nearshore habitats.	Provided native 600 saltmarsh/riparian plants to volunteers at three Duwamish enhancement projects (T-107/Puget Creek, Hamm Creek, Turning Basin).	King Conservation District	
EBD 1	Restore Lower Green, Elliott Bay/Duwamish, and Nearshore habitats.	In 2002, PPS staff and volunteers maintained restoration projects in the Duwamish:	People for Puget Sound	

		<ul style="list-style-type: none"> • One acre of Turning Basin habitat • Three acres of Hamm Creek estuary • Half-acre of Puget Creek estuary • Terminal 105 		
EBD 1	Restore Lower Green, Elliott Bay/Duwamish, and Nearshore habitats.	In 2002, ECOSS finished the visioning report and initial design for a Duwamish River habitat project. ECOSS conditionally awarded grant to do design/development phase in 2003.	Environmental Coalition of South Seattle	
EBD 1	Restore Lower Green, Elliott Bay/Duwamish, and Nearshore habitats.	PSA patrolled the Duwamish by boat 20-30 times. Patrols looked for violations of best management practices (e.g., sandblasting grit entering the river) and fish kills. Also took water quality samples. Monitored discharge reports of NPDES permittees. Initiated lawsuits in 2002 against two repeat violators. In 2002, conducted audit of 86 industrial stormwater permittees on river. Only 5 out of 86 stormwater permittees were found to comply with provisions of their stormwater permits.	Puget Soundkeeper Alliance	
EBD 1	Restore Lower Green, Elliott Bay/Duwamish, and Nearshore habitats.	Patrolled the Duwamish by boat looking for pollution and other illegal environmental activity.	Green/Duwamish Watershed Alliance/ I'M A PAL	
EBD Study 1	Conduct baseline habitat mapping in the Elliott Bay/Duwamish subwatershed.	<p>This was identified as Strategic Assessment Task 3. (Scope of work and project initiation scheduled for 2003.)</p> <p>Corps of Engineers' Puget Sound Nearshore study begun. Salmon Recovery</p>		

		<p>Funding Board grant applied for.</p> <p>Some bathymetry work done through Lower Duwamish Waterway Group (Duwamish Superfund).</p>		
Nearshore Subwatershed Actions (NS)				
NS 1	Restore nearshore, Elliot Bay/Duwamish, and Lower Green River habitats	<p>City completed purchase of Branson property and began park planning, which will ensure protection of nearshore habitat. City also successfully sought funding to repay City loan used to purchase property.</p> <p>Seahurst Seawall study was completed in 2002. (Army COE will remove the seawall and restore the beach in 2003.)</p>	Burien	
NS 1	Restore nearshore, Elliot Bay/Duwamish, and Lower Green River habitats	Dumas Bay riparian area restoration and public access complete.	Federal Way	This action is a high priority for the City
NS 1	Restore nearshore, Elliot Bay/Duwamish, and Lower Green River habitats	<p>Parks began redoing Luna Park to restore nearshore functions. Other nearshore projects were considered. Beach renourishment at Seacrest was under discussion with the regulatory agencies.</p> <p>Seattle Parks committed to soft shore protection at Lincoln Park (in conjunction with Corps of Engineers), Lowman Beach and Cormorant Cove.</p>	Seattle	
NS 1	Restore nearshore, Elliot Bay/Duwamish, and Lower Green River habitats	Nearshore assessment efforts continued in unincorporated King County. Five potential restoration projects were	King County	

		identified on Vashon/Maury Island. (Funding and feasible designs will be pursued in 2003.)		
NS 1	Restore nearshore, Elliot Bay/Duwamish, and Lower Green River habitats	Ecology's creation of and planning for implementation of the Total Maximum Daily Load should improve water quality in the near shore and estuary.	Washington State Department of Ecology	
NS 1	Restore nearshore, Elliot Bay/Duwamish, and Lower Green River habitats	The cities and the county, in cooperation with Port of Seattle and WSDOT, completed 70% design on stormwater and habitat projects proposed in the Des Moines Creek Basin Plan. Plan addresses stormwater control and fish habitat. (Final design and permitting planned for 2003.)	Des Moines SeaTac King County Port of Seattle	
NS 1	Restore nearshore, Elliot Bay/Duwamish, and Lower Green River habitats	Installed two wetland buffer enhancement projects, 60,000 sq.ft. at Miller Creek headwater wetland and Massey Creek headwater wetland.	King Conservation District	
NS 1	Restore nearshore, Elliot Bay/Duwamish, and Lower Green River habitats	Provided native saltmarsh/riparian plants to Des Moines Creek Park beach volunteers.	King Conservation District	
NS 2	Support the Puget Sound Nearshore General Investigation	WRIA 9 Forum allocated \$50,000 in 2002.		
NS Study 1	Conduct nearshore habitat baseline mapping	This was identified as Strategic Assessment Task 3. SRFB grant applied for. KCD funds approved by Technical Committee. (Scope of work and project initiation scheduled for 2003.)	Technical Committee	

Resource People:

If you would like to know more about the accomplishments described above, please contact the following:

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Washington State Parks (Saltwater State Park)	Johnny Johnson	seatac2@earthlink.net	(253) 661-4956
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Puget Soundkeeper Alliance	Sue Joerger	suejoerger@pugetsoundkeeper.org	(206) 297-7002
Trout Unlimited	Al Barrie	sbarrie313@aol.com	(253) 265-3153
Duwamish River Cleanup Coalition	BJ Cummings	bjcumings@pugetsound.org	(206) 954-0218
Environmental Coalition of South Seattle (ECOSS)	Charlie Cunniff	Charlie@ecoss.org	(206) 767-0432
Green/Duwamish Watershed Alliance and I'M A PAL	John Beal	stream101@aol.com	(206) 762-3640
Cascades Conservation Partnership	Demis Foster	dfoster@ecosystem.org	(206) 675-9747 ext. 203
Middle Green River Coalition	Greg Winguard	gwingard@earthlink.net	(206) 322-3061
Fauntleroy Watershed Council	Judy Pickens	Jpickens@gte.net	-
Vashon-Maury Island Land Trust	Julie Burman	Jburman@vashonlandtrust.org	-
Vashon-Maury Island Audubon Society	Rayna Holtz	RaynaHoltz@aol.com	-

Hatchery-Related Activities of Note (hatchery practices were not addressed by the Near-Term Action Agenda for Salmon Habitat Conservation but these activities were reported by partners regardless):

- Trout Unlimited - Des Moines Chapter operated a net pen at the Des Moines Marina, raising 30,000 coho and released them into Puget Sound end of April 2002. Their hatchery at the Southwest Suburban Sewer District received 125,000 coho for delayed release. Approximately 10% were lost to mortality, and about 37,500 smolts each were released into Miller Creek, Walker Creek and Des Moines Creek in January 2002.
- In March each year, Trout Unlimited, the Green River Trout and Steelhead Club, the Muckleshoot Indian Tribe, and Washington Department of Fish and Wildlife partner in the capture -- via sport fishing methods -- of wild steelhead to be transported to the Keta Creek Hatchery. They are held until ripe and then spawned. The adults are released alive back into the river. The Tribal hatchery incubates the eggs, holds the fry until 'buttoned up' and then releases them into the Green River. Some have been released in the Upper Green River sub-watershed, and the rest below the Tacoma headworks dam. Typically, about 50 adult steelhead are captured with a 35/15 female/male ratio. The release of up to 100,000 fry is the goal. In March/April, the ponds at Flaming Geyser State Park are used to hold Green River steelhead to acclimate to Crisp Creek that supplies the water to the ponds. After about four weeks, these 15,000 smolts are directly released into the Green River hopefully to return to the reach of the State Park when they return as adults rather than swim directly back to Palmer area.