

Thornton Creek Five-Year Action Agenda Progress/Status

January 1, 2007 – December 31, 2007

Agenda #	Plan Reference*	Plan Page #	Recommendation	Status	Implementing Sponsor	Budget Year	Progress
<b>Stormwater Management</b>							
<b>Stormwater Objective A: Increase groundwater recharge (infiltration) and reduce the amount of impervious surface.</b>							
1	Storm A1.	3-3	Use USGS surface and subsurface geologic maps showing infiltration areas when examining drainage plans.	Y	SPU, DPD, USGS, Shoreline	Ongoing	Planners are using the University of Washington GIS layer showing infiltration potential when examining plans.
2	Storm A2.	3-3	Research and promote infiltration techniques.	Y	SPU, DPD, Shoreline	2007 & 2008	<p>The City of Seattle's Stormwater, Grading, and Drainage Control Code (SMC 22.808) and associated technical requirements are being revised. Adoption is expected in early 2008. The updated code provides guidance on infiltration assessment and technologies, and states a preference to use infiltration technologies where appropriate.</p> <p>The residential Rainwise program kicked off in 2007, with the intent of providing information and guidance to homeowners interested in reducing runoff rates and volumes from impervious areas on their properties. A raingarden manual was developed in collaboration with the Puget Sound Partnership.</p>
3	Storm A3. a)	3-4	Develop strategies for reducing impervious surface on existing public and private land.	Y	SPU, SDOT, DPD, Shoreline	2007 & 2008	<p>The revised stormwater code provides guidance on porous pavement design for vehicular access roads, driveways and sidewalks. SDOT's Right-of-way manual updates (2008) will define where porous sidewalks allowed and which materials can be used.</p> <p>SPU is reducing nearly 3 acres of impervious surface at the headwaters of Thornton Creek with the Thornton Creek Water Quality Channel project. SPU is monitoring Seattle's first porous street as well as many porous concrete sidewalks that were installed as part of High Point Redevelopment project. Evaluation of the porous residential street with SDOT will help define if future porous streets will be permitted within Seattle.</p> <p>Infiltration testing, and working through repair and restoration protocols at various porous concrete sidewalk applications has allowed SPU to better respond to citywide concerns on the new materials.</p>
4	Storm A3. b)	3-4	Design and evaluate stormwater infiltration technology, including technologies that allow for partial infiltration.	P	SPU	2007 & 2008	The revised stormwater code provides guidance on infiltration technologies. Hydraulic monitoring at the Broadview green grid in NW Seattle, and at High Point in SW Seattle will be used by SPU to better evaluate and predict performance of bioretention designs.
5	Storm A3. c)	3-4	Revise the Land Use Code and Critical Areas Code based on information available from research conducted in Storm A, B.	Y	DPD	As identified	The new Environmentally Critical Areas Code was adopted by Council on March 27, 2006. The new regulations went into effect on May 9, 2006.
6	Storm A3. d)	3-4	Target Natural Drainage System improvements to right-of-ways in unimproved areas draining to key creek systems for infiltration, detention and treatment of stormwater runoff.	Y	SPU, SDOT	2007	Completed Pinehurst Natural Drainage System project, targeting peak flow reduction, total volume reduction and water quality treatment from a 59-acre subbasin of Kramer Creek. See Action Item #2

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7	Storm A3. e)	3-4	Purchase additional public property in targeted areas to improve groundwater recharge and stormwater treatment.	N-T	SPU	TBD	The Natural Drainage project at Pinehurst provides infiltration and stormwater treatment. No property purchases are required.
8	Storm A4	3-6	Incorporate policies to promote pervious surfaces into new Neighborhood Design Guidelines	P	DPD, Neighborhood groups	TBD	DPD will be revising citywide neighborhood design guidelines in 2007 and will consider this recommendation in its review.
9	Storm A5.	3-7	Integrate creative alternatives to traditional sidewalks, curbs and gutters into drainage projects when technically feasible to promote creek health.	Y	SPU	Ongoing	The Natural Drainage System chapter of the new Right-of-Way Improvement Manual (now complete) provides guidance. SPU provided technical assistance and review to encourage the telescoping bioretention system at the Northgate north parking lot, construction winter/spring 2006/07. The Stormwater Manual revisions are in progress, which will provide more detailed guidance for natural drainage facilities to achieve stormwater detention and water quality treatment goals.
10	Storm A6	3-8	Assess the impact of stormwater contributions to sanitary sewer overflows in this watershed and develop disconnect program if impact significant.	N- \$,R,T	SPU	TBD	Not a priority at this time due to budgetary, regulatory and technical constraints; problems will be addressed on a case by case basis.
11	Storm A7.	3-8	Identify alternatives to infiltration facilities when it is incompatible with development or site conditions cannot accommodate it.	Y	SPU, SDOT	TBD	As part of the Stormwater Code update, the On-Site Flow Control team is currently evaluating potential infiltration, natural system and other flow control options to include in the next Flow Control Manual Update. The team is evaluating both private, on-site options as well as right-of-way opportunities. Alternatives will be presented in the documents.
<b>Stormwater Objective B: Increase detention throughout the watershed on both private and public properties.</b>							
12	Storm B1	3-9	Increase on-site detention for new construction and redevelopment to the extent possible.	Y	DPD, SPU	TBD	Seattle updated codes to increase detention in 2001. The Flow Control Manual is being updated to include more Natural Drainage System options and better guidance. Any modifications to the current requirements for on-site detention will be incorporated in the City of Seattle's Updated Stormwater Code.
13	Storm B2.	3-9	Improve existing and create new regional detention facilities.	N-\$,T	SPU, SDOT	TBD	Additional detention above Meadowbrook Pond and other flood-prone areas has been considered. Improvements/additions can only occur after a careful cost/benefit analysis, a holistic view of the area's existing facilities, and in comparison with other project proposals.
14	Storm B3	3-11	Incorporate surface detention during Lake City Civic Core redevelopment.	N-\$,T	SDOT, WSDOT, DON, Parks, SPU	TBD	No work is planned at this time due to budget constraints and limited opportunities. SPU and the community have made efforts to coordinate with property owners and other agencies to explore future possibilities.
15	Storm B4	3-11	Create a flood easement program	N-R	SPU, DPD	TBD	SPU is currently not planning work at this time due to regulatory constraints.
16	Storm B5	3-12	Evaluate and optimize the frequency of private drainage system inspections.	P	SPU	2008	Inspections have not occurred frequently enough to allow for an analysis of cleaning frequency by land use. Many more years of data will be

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							needed to allow this analysis. However, current staffing levels and work plan priorities do not allow for full inspection levels. An additional inspector is anticipated late in 2008 to help increase inspection frequency and develop a program to comply with NPDES requirements.
<b>Stormwater Objective C: Improve public stormwater conveyance system.</b>							
17	Storm C1.	3-12	Evaluate and where appropriate improve maintenance to public stormwater conveyance system.	Y	SPU	Ongoing	SPU has analyzed, developed, and implemented schedules for maintenance and investments in the catch basin infrastructure. Priority areas include critical sites (i.e., those that tend to fail in a rain event), water quality protection and infrastructure stability (e.g., steep slope areas).
18	Storm C2	3-13	Map the existing storm drains, ditches and culverts in Shoreline	Y	City of Shoreline	Done	Shoreline completed the mapping in December 2003.
19	Storm C3.	3-13	Improve local stormwater collection systems.	Y	SPU	Ongoing	The Flood Control & Local Drainage Program – within SPU's Drainage and Wastewater CIP Fund - is managed to support the improvement of the local drainage systems throughout the City. Many localized flooding sites listed in the Comprehensive Drainage Plan are on "Winter Watch" to determine flood frequency, duration and magnitude.
<b>Stormwater Objective D: Improve the process of evaluating, selecting, designing, implementing, and managing, capital investments.</b>							
20	Storm D1.	3-14	Study flows in Thornton Creek.	Y	SPU	Ongoing	King County and SPU have been developing a creek flow data management system based on a King County-developed database. The database is more adapted to measuring creek flows than older systems.  In several locations on Thornton Creek, improved flow monitoring equipment has been installed to increase data accuracy.
21	Storm D2	3-14	As part of SPU staffed TCWOC meetings, review Capital Improvement Projects and other relevant projects.	Y	SPU, Parks, SDOT, TCWOC	Ongoing	Presentations were given on SPU, SDOT, and Parks CIP projects, including site visits on private and public properties in both Seattle and Shoreline during the July 2007 (annual) watershed tour.
22	Storm D3/ Monit A4	3-15 9-4	Evaluate and report on effectiveness of creek restoration projects in the watershed; adapt or modify as necessary.	Y	SPU	Ongoing	Numerous creek restoration projects were implemented and maintained along Thornton Creek. SPU monitors the Jackson Park Golf Course Detention Pond project, the Lake City Way fish ladder, the Littlebrook Culvert, and the Homewood Park projects on an annual basis, consisting of one field visit by SPU staff during the summer. Intermediate checks are done on a case-by-case basis. Projects through SPU's Aquatic Habitat Grant Program required recipients to sponsor baseline monitoring and post-project monitoring.
23	Storm D4.	3-15	Continue funding drainage capital improvement projects, implementing improved selection and design criteria.	Y	SPU	Ongoing	The Pinehurst project is complete and is being monitored and maintained. The Thornton Creek Water Quality Channel project is under implementation. Significant projects such as these will be considered within SPU's budget to address water quality and stream flows in the watershed.
24	Storm D5.	3-16	Update stormwater manuals regularly as required by Seattle's MS4 NPDES permit.	Y	SPU	Ongoing	Seattle is revising its Stormwater Code, which will be adopted in 2008. The detention, treatment, and pollution prevention requirements will be based on an assessment of legal requirements, available options, existing

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							conditions, life-cycle costs, and anticipated benefits. The code updates will be coordinated with a new NPDES permit for discharges from the City's Municipal Separate Storm Sewer System and the Stormwater Management Manual for Western Washington.
<b>Stormwater Objective E: Improve private management of stormwater and runoff.</b>							
25	Storm E1 A	3-17	Require detention or infiltration for developments meeting applicability thresholds.	Y	SPU, DPD	Ongoing	The NPDES Permit, Stormwater Code & Manuals require water quality and/or detention systems when triggered.
26	Storm E1 B	3-17	Promote water conservation.	Y	SPU	Ongoing	The Saving Water Partnership and Natural Yard Care programs provide outreach, education, and discounts on mulch, soaker hoses and water wands for water conservation.
27	Storm E2	3-17	Evaluating whether to study options to provide financial incentives to private property owners. Evaluate and develop programs to create financial incentives to businesses and/or homeowners to better manage surface water runoff.	P	SPU — Resource Planning	2008	The Seattle City Council approved a drainage rate credit program in 2006 for properties that incorporate stormwater management, which will be implemented in 2008. The Rainwise program will complement this program by providing residents with "how to" materials for managing surface water runoff.
28	Storm E3	3-18	Educate homeowners and businesses on the importance of keeping storm drains and ditches free of leaves and inlets trash through outreach programs.	Y	SPU	2005-07	Articles were published in Fall Curb Waste and Conserve newsletters to all customers requesting citizens to remove debris from drains or call these into the city. SPU implemented the "Adopt-a-Drain" program to encourage neighbors to work with SPU crews to keep drains clear of debris.  The curbside yard waste program was extended to all additional set outs of green waste and branches due to fall windstorm events.
29	Storm E4.	3-18	Coordinate Fall Clean-up Program on public property	Y	SPU	2005-07	SPU encouraged citizens to pickup debris from city street drains and to compost these materials. SPU announced a citywide Fall Clean-up event. Adopt-a-Street groups in all parts of city obtained information about how they can help keep drains clear of debris and who to call. The Seattle Mayor's Clean and Green Program provided for cleanups on public properties, including leaf pickup and drain stenciling.
30	Storm E5.	3-19	Develop pilot to promote water re-use through rainwater cisterns and/or gray water systems.	Y	SPU, DPD	2007, 2008	Small demonstration project rainwater cisterns were placed in Ballard/Fremont area in 2004. Follow-up demonstrations are planned as part of the Lakewood RainCatcher project. See Action item #2  Cisterns are also proposed as technology in the drainage rate credit program described in Action Item #27.  DPD drafted a detailed Client Assistance memo, "Rainwater Harvesting for Beneficial Use," which will be finalized and distributed in 2008.
<b>Non-Point Pollution</b>							
<b>Non-Point Pollution Objective A: Improve existing non-point pollution prevention programs.</b>							
31	NP A1.	4-5	Review the existing non-point pollution	Y	SPU	Ongoing	Brochures, other outreach and education programs on reducing and

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			programs in Seattle to ensure they are being applied to the Thornton Creek watershed.				preventing nonpoint pollution are available to residents and are implemented in the Thornton Creek watershed.
32	NP A2.	4-6	Meet the requirements of existing and future NPDES permits.	Y	SPU, SDOT	Ongoing	The City of Seattle began implementing the new Phase I Municipal Stormwater Permit, which was issued by Ecology in February 2007.
33	NP A3	4-6	Brief the Watershed Oversight Council during the development of the stormwater management program and stormwater code for the NPDES permit for Seattle.	Y	SPU ,TCWOC	2003-2007	Several TCWOC members participated in stormwater code meetings and received updates at regularly scheduled TCWOC meetings in 2007.
<b>Non-Point Pollution Objective B: Improve water quality</b>							
34	NP B1	4-7	Monitor coliform exceedances.	P	SPU	TBD	Thornton Creek is listed for TMDL 303 (d) list of impaired waterbodies for fecal coliform. The Microbial Source Tracking DNA/RNA investigation, produced in 2006 identifies potential sources of fecal coliform in Thornton Creek and will be reviewed and considered for implementation by SPU. SPU is currently working with Ecology on fecal issues in several creek watersheds.
35	NP B2.	4-7	Identify breaks, leaks and illicit sewer connections as identified that discharge into Thornton Creek.	Y	SPU	Ongoing	Illicit connections to the storm drain system are identified through several programs - business inspections, private drainage system inspections and surface water quality complaint investigations. When found, inspectors work with property and business owners to terminate and re-plumb the illicit connection. In 2007, one illicit connection was discovered and corrected.
36	NP B3.	4-8	Collect additional information on locations and frequency of exceedance of State standards for water temperature and dissolved oxygen.	Y	Regional Agency, SPU	2007	SPU is developing a city-wide monitoring program to assess monitoring needs related to various waterbodies.
37	NP B4	4-8	Study intergravel temperature and dissolved oxygen in areas where adult salmon are spawning in the watershed.	N-T	Regional Agency, SPU	TBD	SPU technical staff are evaluating feasibility of conducting this type of study.
38	NP B5	4-9	Determine methods to measure turbidity throughout Thornton Creek.	Y	Regional Agency, SPU	In use	Methods are available and in use.
39	NP B6	4-9	Continue program to periodically sample Thornton Creek for levels of phosphorus and nitrogen.	N-T	Regional Agency, SPU	TBD	SPU technical staff are researching the feasibility of this type of program.
40	NP B7	4-9	Continue monitoring and periodically review the literature for standards for metals.	Y	TCWOC, King County, DOE	Ongoing	In November 2006, the Department of Ecology updated the "Water Quality Standards for Surface Waters of the State of Washington," which includes references to metal standards.
41	NP B8.	4-10	Continue periodic monitoring of the benthic index of biological integrity (B-IBI).	Y	King County, SPU	Ongoing	Volunteers collect B-IBI information as part of monitoring efforts. The BIBI data from Thornton Creek for 2005 is available for review. Thornton Creek is sampled every other year, and 2006 was the year for the south end creeks. The data for Thornton from 2007 should be available in summer 2008.

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42	NP B9.	4-10	Fund a research study to determine the impact of sediment contamination on the biological productivity in Thornton Creek.	N-\$	Regional agency, King County	TBD	This study has not been produced.
43	NP B10	4-10	Determine and rank the potential non-point pollutants in the watershed and their sources.	P	SPU	TBD	Will be considered as part of SPU's water quality monitoring program. Not yet developed.
<b>Non-Point Pollution Objective C: Reduce pollutant discharges from public facilities.</b>							
44	NP C1	4-11	Eliminate the use of Diazinon on public properties.	Y	Seattle departments, WSDOT	n/a	The use of Diazinon virtually ended in the City of Seattle in 2000 and was not used at all beyond December 2004.
45	NP C2	4-11	Determine what pesticides and herbicides are being used by public agencies in the Thornton Creek watershed and reduce use over time.	Y	Seattle departments	Ongoing	Parks, SPU, and SDOT adhere to the City's aggressive "Pesticide Reduction Strategy" and citywide best management practices. Parks uses a database to track all pesticide use on park land.
46	NP C3. A	4-11	Reduce non-point pollution caused by maintenance activities on public property including promoting integrated pest management and reducing pesticides and fertilizers.	Y	Seattle departments	Ongoing	The Stormwater Code is in final draft form and will be available for public review in 2008 and adopted by the end of the year. This update brings Seattle's code current with state requirements in protecting stormwater. See Agenda item #45. Integrated pest management and pesticide/fertilizer reduction are part of the new stormwater NPDES Permit.
47	NP C3. B	4-11	Train maintenance staff in non-point pollution reduction goals and techniques.	Y	Seattle departments, Shoreline	Ongoing	Maintenance and road crews are trained in both Seattle and Shoreline on nonpoint pollution reduction techniques and requirements. The new stormwater NPDES permit contains specific training requirements that will be implemented during the permit term including training for basic spill response.
48	NP C3. C	4-11	Set targets for reducing all pesticides per City reduction goals, and commit to eliminating Tier 1 pesticide use".	Y	Seattle departments	Done	The targets were set in the Pesticide Reduction Program, and the City committed to eliminate Tier 1 pesticide use.
49	NP C4.	4-13	Evaluate current street cleaning methods in terms of their impact on pollution of Thornton Creek.	Y	SDOT	Ongoing	SDOT is implementing procedures prescribed in the NPDES Stormwater permit and Regional Road Maintenance ESA Guidelines. A street sweeping pilot has been completed by SPU related to water quality (not in the Thornton Creek Watershed). SPU staff will be recommending next steps in terms of application feasibility.
50	NP C5.	4-13	Fund a research study to evaluate the effectiveness of devices installed to treat stormwater runoff from streets and parking lots.	Y	SPU	Ongoing	SPU monitors selected natural drainage system projects with the University of Washington. These projects provide flow and water quality treatment for stormwater runoff within the public right of way.  In addition to UW monitoring efforts, SPU initiated block scale monitoring of the bioretention swale system at the High Point redevelopment project. That monitoring data will likely support the use of similar facilities in future projects.

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51	NP C6.	4-13	Identify additional potential road treatment sites based on drainage characteristics, traffic volume, and land use.	P	SPU	TBD	SPU is starting to evaluate road impacts and potential approaches for water quality protection. Effort starting at city-wide level and will most likely target selected known arterial street improvements.
52	NP C7	4-14	Support and promote use of public transit systems and other alternative modes of transportation.	Y	SDOT	Ongoing	SDOT continues to support and promote public and alternative modes of transit.
53	NP C8.	4-14	Incorporate water quality improvements into CIP projects.	Y	SPU	Ongoing	All SPU drainage CIPs are considered for water quality improvements. Funding decisions are based on water quality objectives and asset management review .
54	NP C9.	4-14	Remove trash and sediments from detention ponds.	Y	SPU	Ongoing	The Meadowbrook dredging project was successfully completed in 2005. As part of the maintenance program, trash debris and other large items are removed when the actions will effectively reduce flooding potential and improve water quality.
<b>Non-Point Pollution Objective D. Reduce pollutant discharges from businesses.</b>							
55	NP D1	4-15	Conduct an outreach and inspection program for priority commercial, multifamily, industrial, institutional and government-owned sites within the watershed.	Y	SPU	Ongoing	Inspections in Thornton Creek Watershed were conducted over a period of 2-3 years in 2006, and were presented to the TCWOC. Over 250 businesses were inspected and brought into compliance with the City's Stormwater Code. Future inspections yet to be scheduled.
56	NP D2	4-16	Require source control best management practices (BMP's) be applied as appropriate to all construction sites in the watershed.	Y	DPD	Ongoing	The current and updated Stormwater Codes require construction sites to utilize source control best management practices.
57	NP D3	4-16	Develop and implement a program to address pollutant discharge from mobile business.	Y	SPU	2007, 2008	SPU worked with Resource Venture to address need for mobile business outreach. This group assists Seattle businesses in improving environmental performance. Mobile businesses were surveyed in 2007. Most mobile businesses self reported proper disposal of washwater. Further work is anticipated in 2008 for either outreach or fact sheet development.
<b>Non-Point Pollution Objective E. Reduce pollutant discharges from residential properties.</b>							
58	NP E1	4-17	Encourage the discontinuation of Diazinon use on private property.	Y	King County, SPU	Ongoing	The Local Hazardous Waste Management Program, SPU's Green Gardening Program, Natural Lawn & Garden Hotline and Natural Yard Care Programs continued to educate home gardeners and landscape professionals on alternatives to the use of diazinon and other pesticides. These audiences were informed that the sale of diazinon is banned.
59	NP E2	4-17	Continue and improve where possible existing programs to inform the public about non-point pollution and how they can reduce it.	Y	SPU	Ongoing	SPU partnered with Channel 11 to create, produce and air a new Bert-the-Salmon cartoon "Be in Tune with the Environment" about keeping cars tuned, specifically in relation to changing oil. Also, aired the Bert the Salmon cartoon about reducing pollution from car washing  SPU supported the Puget Soundkeeper Alliance to produce "The Seattle Urban Watersheds Pledge" about ways for citizens to reduce nonpoint pollution.

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							SPU reprinted the four flyers originally produced by the Water Quality Consortium on tips for reducing pollution from car washing, changing the oil, pet waste, and fertilizing the lawn.  SPU developed updated pet waste brochure and coordinated with Parks to install pet waste bags and signs in several parks.
60	NP E3	4-18	Complement the regional non-point pollution messages by targeting the Thornton Creek watershed.	Y	SPU	2007	SPU held four workshops on the "5 Steps to Natural Yardcare."
61	NP E4	4-18	Explore the feasibility of developing a Thornton Creek watershed incentive program to encourage activities to decrease non-point pollution throughout the watershed's residential areas.	P	SPU	TBD	This incentive program idea needs future evaluation before it can be developed.
62	NP E5	4-19	Continue existing programs to inspect, repair, and replace on-site septic systems.	O	King County Health Dept.	Ongoing	King County is continuing these efforts.
63	NP E6	4-19	Promote lower use of pesticides, herbicides and fertilizers.	Y	SPU	Ongoing	See E3 (Agenda Item #60) above. SPU sponsored NW Natural Yard Days in spring and fall each year.

**Habitat**

**Habitat Objective A: Prevent harm to existing natural habitat.**

64	Habitat A1.	5-4	Restrict development in riparian corridors and wetlands.	P	DPD	Done	The New Environmental Critical Areas code (2006) has appropriate limits on development in proximity to wetlands and in riparian corridors. New Environmentally Critical Areas Code was adopted by Council on March 27, 2006. The new regulations went into effect on May 9, 2006.
65	Habitat A2.	5-4	Help streamside property owners control erosion and improve habitat.	Y	DPD, SPU	Ongoing	DPD continued development of client assistance memos for creek riparian owners, with input from SPU. The Creek Steward Program has worked with a handful of residents in the watershed and planted 24 shrubs in bac yards.
66	Habitat A3	5-5	Encourage builders to retain areas of native vegetation on their site and to use natural techniques to manage storm water.	Y	DPD	Ongoing	The 2006 Environmental Critical Areas code and tree protection ordinance require and encourage the maintenance of vegetation barriers to manage stormwater. The Seattle Green Factor requirements in Commercial zones will improve natural stormwater management. Revisions to Multifamily Code requirements and new tree protection requirements in 2007 incorporated additional mechanisms for natural stormwater management.
67	Habitat A4	5-5	Conduct fish and wildlife surveys.	Y	SPU	Ongoing	2007 marked the 9th consecutive year of Fall salmon spawning surveys and the 7th consecutive year of Spring adfluvial cutthroat surveys conducted by Wild Fish Conservancy (formerly Washington Trout) for SPU. These surveys are part of ongoing work to document the numbers of adult salmon and adfluvial cutthroat trout entering the Thornton Creek system. 2007 also marked the 7th consecutive year of smolt trapping conducted

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							<p>by SPU counting outmigrating juvenile salmon from Thornton Creek. This project, along with annual fall salmon spawning surveys, is part of an ongoing effort to monitor salmon production and usage of Thornton Creek.</p> <p>Strategic pre-project monitoring to evaluate performance of future stream restoration work conducted by the US Fish &amp; Wildlife Service (USFWS) for SPU continued in 2007. Ongoing monitoring work was performed at various sites within the Thornton Creek watershed. These sites include the NE 95th &amp; Sand Point Way NE natural area, Knickerbocker site at NE 100th St &amp; 20th Ave NE, and the North &amp; South fork confluence at 10718 35th Ave NE. Fish were sampled to determine species diversity, biomass, abundance, population size, and age class structure. In addition to fish sampling, physical habitat characteristics were also collected. Information will be used to evaluate project success. The USFWS also began tagging juvenile cutthroat trout in 2007 to study the movement of cutthroat trout within Thornton Creek and between Thornton Creek and Lake Washington.</p>
68	Habitat A5	5-6	Develop a central contact to coordinate wetland expertise in the watershed.	N-R	Seattle Departments, King County	TBD	No central contact designated. Each agency has its own experts.
69	Habitat A6	5-6	Publicize opportunities for private land-owners to receive credit and assistance to conserve private open space.	O	King County	Ongoing	King County continues to publicize such opportunities.
<b>Habitat Objective B: Improve migration corridors for fish and wildlife.</b>							
70	Habitat B1.	5-7	Remove fish passage barriers.	Y	SPU, Parks	Ongoing	SPU incorporated fish passage into a sewer repair project along the South Branch of Thornton Creek. The sewer crossing is located near NE 107th St and 11th Ave NE, downstream of the confluence with Victory Creek. SPU considered a community proposal to remove a fish barrier in 2007, and provided recommendations for improving its quality and competitiveness against other SPU projects.
71	Habitat B2.	5-8	Look for collaborative ways between public and private property owners to enhance and promote connectivity of migratory corridors for wildlife within the watershed.	P	SPU, Parks	TBD	SPU and Parks are looking into strategic investments to connect and improve migratory corridors. Property acquisition and creek restoration are implemented when funding allows. The SPU Aquatic Habitat Matching Grant provides private property opportunity for linking to public natural area connectivity.
<b>Habitat Objective C: Improve the quality of habitat for fish and wildlife.</b>							
72	Habitat C1.	5-8	Develop guiding principles for in-stream restoration done by Seattle or community groups.	Y	SPU and other agencies	2007	SPU completed a Science Framework for Ecological Health, which serves as a roadmap for making improvements in Seattle's streams.
73	Habitat C2	5-10	Host a Thornton Creek Watershed Urban Fish Workshop.	N-\$, T	Homewaters Project	TBD	The Homewaters Project could lead this type of workshop if funding is allocated.
74	Habitat C3	5-10	Improve Thornton Creek stream flows.	Y	SPU	Ongoing	SPU completed work on the Jackson Park Detention Ponds, and the

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							<p>Pinehurst project to improve flows. SPU partnered with the community to broaden the floodplain in Maple Leaf Reach and improve the riparian area.</p> <p>SPU is designing projects in the Northgate area that will include natural drainage strategies that: remove pollutants from stormwater, reduce peak flows and/or infiltrate stormwater runoff.</p>
75	Habitat C4.	5-11	Improve in-stream conditions on public land.	Y	SPU	Ongoing	SPU completed Thornton Creek Park 6, Kramer Creek and Jackson Park Golf Course projects. SPU is also planning floodplain reconnection projects at Knickerbocker, and the confluence. Great strides were made in public/private instream projects such as Maple Leaf Reach and the North Fork Restoration Project.
76	Habitat C5. A	5-11	Inventory and assess riparian habitat.	Y	SPU	Ongoing	SPU published the State of the Waters Report, which complements the Riparian Assessment and earlier reports. A presentation to the TCWOC was scheduled for January 2008.
77	Habitat C5. B	5-11	Enhance and maintain areas with good riparian habitat.	Y	SPU	Ongoing	Three restoration projects were awarded Aquatic Habitat Matching Grants on both public and private property in Thornton Creek. The project in Victory Creek restored an entire city block. Also see Agenda items #75 and #79.
78	Habitat C6	5-12	Encourage native plant use through programs.	Y	SPU, Parks, GSP	Ongoing	Seattle's Green Seattle Partnership (SPU and Parks are partners) and Parks Adopt-A-Park program both support natural area restoration projects use native plants. Parks developed landscape areas also are considered opportunities for native plantings. SPU conducted two Naturescaping workshops attracting over 250 people from around Seattle.
79	Habitat C7.	5-14	Increase the number of trees and understory shrubs	Y	Parks, SPU, DPD, SDOT	Ongoing	<p>The Green Seattle Partnership developed a 20 year strategic plan for the restoration of 2500 acres of park forest land by 2025.</p> <p>A Mayor's Executive Order now requires that 2 trees be planted for every one removed on developed public property.</p> <p>The City's Urban Forest Management Plan defines program goals for managing vegetation, resource management tools and the relationship to the community.</p> <p>SPU supported creekside stewards and riparian habitat plantings at numerous sites in the watershed, on both public and private land.</p> <p>SPU launched the "watershed climate action grants", which invest \$150k/year into improving publicly-owned riparian forests.</p>
80	Habitat C8	5-15	Remove and control noxious weeds and invasive plants on public property in conjunction with ecosystem or landscape restoration efforts.	Y	Citywide	Ongoing	The City and community volunteers contribute to the control of noxious weeds adjacent to Thornton Creek on public property.
81	Habitat C9	5-16	Develop programs to reuse trees that are cut down.	Y	TCA with Parks and SPU	Ongoing	Parks obtains logs through forestry operations, and those that are not fit for sale are returned to park landscapes as mulch. Those that have commercial value are sold to the highest bidder.

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82	Habitat C 10	5-17	Develop North Seattle Community College programs to protect wildlife.	Y	NSCC, Homewaters		Homewaters and NSCC have developed birding trails and restored several wetland sites on campus.
<b>Habitat Objective D: Protect and restore habitat</b>							
83	Habitat D1	5-17	Continue to purchase wetland and creek-side property for habitat value.	P	Parks, SPU	TBD	Improvements were made on public property and through partnerships with private property owners. However, no purchases were made in 2007.
84	Habitat D2.	5-18	Restore, create or re-create wetland habitat	P	Parks	TBD	No new wetlands were created or restored in 2007 in this basin.
85	Habitat D3	5-18	Develop a program to accept land donations to Seattle Parks Departments.	Y	Parks	Ongoing	The Parks Foundation has been established to accept donations to the Seattle Parks and Recreation. Parks can commit to accepting land on a case-by-case basis.
86	Habitat D4	5-19	Establish a Thornton Creek Conservancy to seek funding for purchase of property along the creek corridor and near local wetlands	O	Thornton Creek Alliance		This organization has not been created due to budget limitations. However, citizens, non-profits and governmental agencies are seeking or providing funding on a regular basis.
<b>Habitat Objective E: Improve access for humans to appropriate natural sites</b>							
87	Habitat E1	5-19	Inventory and evaluate trails on Parks land within the Thornton Creek Watershed	P	Parks	TBD	Parks will continue to inventory and evaluate many of the trails, and will use this information to do trail maintenance. Parks is in the process of checking park maps for accuracy and confirming with district staff as to what trails should be listed on maps.
<b>Education and Stewardship</b>							
<b>Education and Stewardship Objective A: Increase basic awareness of and appreciation for Thornton Creek and its watershed.</b>							
88	Ed/Stew A1. A	6-2	Create and produce a brochure, which describes the watershed.	Y	SPU, Homewaters Project	2006-07	The Homewaters Project updated the Thornton Creek brochure with input from the TCWOC and others, and is now distributing it.
89	Ed/Stew A1. B	6-2	Install welcome signs and creek crossing signs.	O	TCWOC, SDOT		SDOT will consider producing and installing signs.
90	Ed/Stew A1. C	6-2	Creatively use murals about the watershed through public private partnerships.	O	TCWOC, Thornton Creek Alliance		No action being taken at this time. Citizens may choose to apply for grants to produce murals.
91	Ed/Stew A2	6-3	Work with King County Envirostars to develop a stormwater component.	O	SPU, TCWOC, KC		The EnviroStars program does not have a stormwater component. The Business and Industry Resource Venture, a free resource conservation service for the commercial sector provides advice on stormwater pollution prevention.
92	Ed/Stew A3	6-4	Conduct educational outreach by meeting with community groups, businesses, service providers.	O	TCWOC, SPU, Homewaters Project		Educational outreach is ongoing through the Homewaters Project, SPU's Natural Yardcare program, the Creek Steward Program, and Watershed/Community Councils.

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93	Ed/Stew A4	6-6	Promote the "Master Home Environmentalist" program and incorporate additional watershed friendly tips.	O	WA Toxics coalition		The Washington Toxics coalition has invested in educating citizens on salmon recovery and reducing pesticide use. However, the Master Home Environmentalist program does not specifically include watershed-friendly tips.
94	Ed/Stew A5	6-7	Promote appreciation for and care of local wildlife, plants, parks and open spaces. Use a variety of techniques. Brochures, signs, newsletter, websites.	Y	TCWOC, TCA Parks, SPU, Homewaters Project	Ongoing	Websites, mailings, programs, brochures, and newsletters are being used together to build appreciation for wildlife, plants, and green space.
95	Ed/Stew A6	6-8	Encourage residents to explore and learn about the watershed.	Y	SPU, Homewaters Project	Ongoing	Homewaters Project provides three annual Long Walks for citizens to explore the North and South Forks of Thornton Creek, and the Thornton Creek Watershed Guide encourages citizens to get out and walk the stream.
<b>Education and Stewardship Objective B: Integrate watershed education into school programs at all levels. Maintain and improve existing programs</b>							
96	Ed/Stew B1.A	6-8	Fund a part-time City staff Watershed Educator responsible for coordinating outreach and education within the watershed.	Y	SPU, Parks	Ongoing	This body of work is split between the Homewaters Project, the SPU Creek Steward Program, and the Parks Department.
97	Ed/Stew B1.B	6-8	Fund selected Thornton Creek education and outreach programs through the Homewaters Project.	Y	SPU	Ongoing	In its eighth year of funding, the Homewaters Project has been extended through June, 2008. Teachers and students benefit from their support through various programs. Their website is continually improved and updated, and citizens contact Homewaters regularly about Thornton Creek.
98	Ed/Stew B1.C	6-8	Provide on-going funding for additional Thornton Creek Project positions.	Y	SPU	Ongoing	The "Thornton Creek Project" no longer exists. It became the Homewaters Project in 2002. See Action Item #102.
99	Ed/Stew B1.D	6-8	Convene a watershed education co-ordination group of community and school educators	Y	Homewaters Project, SPU	Ongoing	Homewaters convened an Education Advisory Task force to inform development of watershed education programs now delivered in Seattle public schools, and continues to monitor and participate in watershed education through the Seattle School District.
100	Ed/Stew B2	6-12	Encourage and support watershed-related learning experiences in schools.	Y	SPU, Homewaters Project	Ongoing	Homewaters Project continues to support a Green Mapping program and the Water & Community GIS based program to students in 8 <sup>th</sup> -12 <sup>th</sup> grades. Copies of the Thornton Creek Watershed Guide were distributed to inform teachers and students about watersheds.
101	Ed/Stew B3	6-12	Provide support for educators who connect their students with the watershed.	Y	SPU, Homewaters Project	Ongoing	The Homewaters Project works with the School District to implement the Land and Water program for 4th and 5th graders. Land and Water is a successful, ongoing program.
102	Ed/Stew B4	6-13	Review regularly and modify the Salmon-in-the-Classroom program.	Y	SPU, Homewaters Project	Ongoing	Popular field trips, as part of the Homewaters Land and Water program, include a visit to the Macroinvertebrate station and discussion and observation of salmon habitat.
103	Ed/Stew B5	6-13	Integrate elements of watershed education into drivers' education courses.	N-T	Homewaters Project, SPU	2005	No action is being taken at this time.

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					and School District		
<b>Education and Stewardship Objective C: Provide learning opportunities for the general public</b>							
104	Ed/Stew C1	6-14	Continue and expand existing programs offering learning opportunities.	N-\$	SPU		No programs were expanded in 2007.
105	Ed/Stew C2	6-16	Package existing information in accessible and friendly formats.	Y	SPU, Homewaters Project, TCWOC, and TCA	Ongoing	The sponsors have friendly, accessible materials and are continually looking for new and creative opportunities to package and distribute information.
106	Ed/Stew C3	6-17	Document Watershed History	Y	SPU, Homewaters Project	Ongoing	Homewaters Project continues to provide community access to current and historical Watershed information via their website, including the new Virtual Tour of Thornton Creek. Watershed information is distributed widely through "The Source" and the e-newsletter "Meanderings".
107	Ed/Stew C4	6-18	Educate developers about the Thornton Creek Watershed and their role within it.	Y	DPD, w/ support from SPU, TCWOC	Ongoing	DPD educates developers through the permitting process.
108	Ed/Stew D1.A	6-18	Promote Stewardship by sponsoring work parties and community stream restoration projects.	Y	SPU, Parks	Ongoing	In 2007, SPU worked with 15 site stewards, three elementary schools, a local church and Seattle Pacific University on long and short term restoration projects. These projects involved 353 volunteers giving 1429 hours of their time. 140 local youth have been involved in these efforts, on top of the volunteer count above. 21 volunteers gave 51 hours to help sample macroinvertebrate populations as part of SPU's monitoring efforts.  7 volunteers monitor spawning salmon at 10 sites within the watershed through SPU's and King County's Salmon Watcher program.  Parks' Adopt-A-Park program sponsors site stewards and work parties in natural areas adjacent to creeks.
<b>Education and Stewardship Objective D: Promote Stewardship</b>							
109	Ed/Stew D1.B	6-18	Improve existing programs such as adopt-a-creek program, block watch program, volunteer monitoring opportunities, adopt-a park program, and reforestation plans.	Y	SPU, Parks, Seattle Police Department, Shoreline	Ongoing	The programs are improved as part of regular program management and as resources allow.
110	Ed/Stew D2	6-19	Use a variety of programs to encourage individual residents to make their yards, pets, and wildlife interactions friendlier to wildlife.	O	WDFW, Seattle Audubon	Ongoing	Seattle Audubon and Washington Department of Fish & Wildlife have ongoing programs dedicated to encouraging residents to preserve wildlife.
111	Ed/Stew D3	6-20	Promote business support and recognition programs.	Y	SPU	Ongoing	SPU financially supports the Resource Venture, an education and outreach team that assists Seattle businesses in improving environmental performance. The Resource Venture promotes pollution prevention awareness and provides technical assistance to businesses with high risk pollutant-generating activities to help minimize impacts of stormwater

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							pollution.
<b>Regulation and Enforcement</b>							
<b>Regulatory Objective A: Improve enforcement of existing regulations</b>							
112	Reg/Enf A1.A	7-2	Assure proactive enforcement of existing watershed-related Stormwater, and Drainage Control Code regulations.	P	DPD, SPU		All businesses in the Thornton Creek watershed that engage in any of eight high risk pollution generating activities were inspected 2004-6. No inspections were made in 2007, as other watersheds were targeted.
113	Reg/Enf A1.B Reg/Enf A2	7-2 7-3	Assure proactive enforcement of existing watershed related Critical Areas, Stormwater, Grading and Drainage Control Code and Land Use regulations.	Y	DPD	Ongoing	The DPD Site Team enforced the regulations, and were alerted by TCWOC members on specific issues.
114	Reg/Enf A3	7-4	Advertise ways to report environmental problems.	Y	TCWOC, SPU, Shoreline	Ongoing	TCWOC staff produced a comprehensive list of environmental hotlines for Thornton Creek residents. The water quality hotline's phone number was published in Curbwaste and Conserve mailings to all Seattle customers, and was in SPU's @your service. A new magnet was produced and distributed.
115	Reg/Enf A4	7-4	Revive the Interagency Water Quality Trouble Call/Emergency Response Network.	Y	King County	Ongoing	King County refers citizens to the water quality hotline.
<b>Regulatory Objective B: Strengthen land use and development regulations</b>							
116	Reg/Enf B1.B	7-5	During Stormwater Drainage codes updates, review watershed studies and findings and modify codes as appropriate.	Y	SPU	2005-07	Completed watershed studies (or similar) were reviewed as part of the Stormwater Code update. Pertinent information will be used, as appropriate, to analyze various options to modify existing code and, in turn, recommend final changes for submittal to Ecology.
117	Reg/Enf B1.A	7-5	Review and modify the Environmental Critical Areas (ECA) and Land Use codes to provide additional stream and wetland protection based on watershed studies and findings.	Y	DPD	2003-04	The new Environmentally Critical Areas Code was adopted by Council on March 27, 2006. The new regulations went into effect on May 9, 2006.
118	Reg/Enf B2	7-6	Restrict development in riparian corridors and wetlands.	Y	DPD	2003-04	See Action Item #117
119	Reg/Enf B3.	7-6	Identify opportunities to daylight piped or culverted streams.	Y	SPU	2007	Opportunities to daylight streams have been identified through the Watershed Assessment, the Comprehensive Drainage Plan, the Restore Our Waters initiative, SPU planning efforts, and in response to Resolution #30850.
120	Reg/Enf B4	7-7	Revise Design Review Guidelines to include environmental concerns.	P	DPD	2008	DPD will consider this recommendation as it revises citywide design guidelines.
121	Reg/Enf B5	7-8	Involve citizens in the review of notification procedures relating to development of new code or revisions to existing codes, and to development projects.	Y	DPD	Ongoing	This is an ongoing and standard practice in DPD.

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122	Reg/Enf B7	7-9	Continue to use citizen review committees to review city codes affecting surface water and water quality.	Y	DPD	Ongoing	This is an ongoing and standard practice in DPD.
123	Reg/Enf B8 Storm A3	7-9	Modify City policies, codes, regulations, procedures and designs to promote infiltration where appropriate	Y	DPD, SPU	Ongoing	Major new zoning initiatives such as the Neighborhood Business District Strategy, new zoning for neighborhood commercial business districts, and new multifamily zoning requirements incorporate the new Seattle Green Factor, a menu of landscaping strategies intended to increase the amount of urban landscaping. The green factor, in addition to landscaping, encourages vegetated walls, green roofs and permeable paving. Seattle includes infiltration technologies in Stormwater Manuals, and SPU's Natural System Program also promotes infiltration.
124	Reg/Enf B9	7-10	Address short plat and subdivision impacts in the Thornton Creek watershed	Y	DPD	Ongoing	DPD tracks short plat and subdivision development and addresses watershed impacts on a case-by-case basis.

## Implementation

### Implementation Objective A: Provide watershed oversight.

125	Imp A1	8-5	Establish a Thornton Creek Watershed Oversight Council.	Y	SPU	2003	The Seattle City Council adopted a resolution in October 2004 to formally establish the Thornton Creek Watershed Oversight Council.
126	Imp A2	8-6	Develop and Sustain the Thornton Creek Oversight Council	Y	SPU	2003 on	SPU and TCWOC recruited, TCWOC nominated and then SPU appointed TCWOC members and officially formed the TCWOC May 2005. Bylaws were adopted and the Chair elected September 2005. The TCWOC meets on a bimonthly basis. TCWOC re-elected the TCWOC chair and revised their bylaws to include alternates. New members and alternates joined TCWOC in 2007.
127	Imp A3 (A)	8-7	Establish SPU as the lead agency for the Thornton Creek Watershed Action Plan.	Y	SPU, Shoreline	Done	SPU is the lead agency.
128	Imp A3 (B)	8-7	Establish City of Shoreline as co-lead agency for the Thornton Creek Watershed Action Plan.	Y	Shoreline	Done	Shoreline is the co-lead agency.
129	Imp A4	8-8	Provide staff to coordinate and support the Action Agenda	Y	SPU	2003 on	SPU continues to staff the Watershed Oversight Council, and to coordinate support of the Action Agenda.

### Implementation Objective B: Improve coordination and plan integration.

130	Imp B1.	8-9	Coordinate and integrate the Watershed Action Plan with other existing and future plans, such as the Comprehensive Drainage Plan.	Y	SPU	Ongoing	Implementing priority actions in the Thornton Creek watershed is incorporated into the City of Seattle's adopted CDP, as well as the City of Seattle's Restore Our Waters Initiative.
131	Imp B2. (A)	8-10	Improve coordination between Seattle, Shoreline, King County, and within agencies and cities concerning the watershed, including water quality and quantity, restoration, protection, habitat, and related or similar issues.	Y	SPU, SDOT, Parks, Shoreline, King County	Ongoing	All agencies with jurisdiction in the watershed seek to improve coordination. Many of the agencies are represented at the Thornton Creek Watershed Oversight Council meetings where issues can be brought to the table for discussion and coordination

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132	Imp B2. (B)	8-10	Develop a formal agreement between Seattle and Shoreline, such as an Inter-local Agreement, that states the manner in which these two governments will work together, and sets forth mutual expectations of ways the Thornton Creek watershed will be protected.	N-R	Seattle, Shoreline		Although Seattle and Shoreline coordinate on many watershed programs and issues, no formal agreements exist.
133	Imp B3	8-11	Improve coordination between agencies and citizens	Y	SPU, TCWOC	Ongoing	TCWOC connects citizens with sources of information and assistance involving DPD and SPU in instances involving tree cutting, bank failures, dumping material in the creek, creek blockage, beaver damage, and facilities conditions. Ongoing coordination is provided by the TCWOC Coordinator. TCWOC also arranges to have presentations from implementing agencies in Seattle and Shoreline.
<b>Implementation Objective C: Track and report progress.</b>							
134	Imp C1	8-11	Report to the Watershed Oversight Council annually	Y	SPU	Ongoing	The first annual report covering July 2003 through December 2004 was completed in October 2005. The second report covering 2005-2006 was completed in March 2007. This report for 2007 will be finalized in 1 <sup>st</sup> Quarter 2008.
135	Imp C2	8-11	Lead agency (Seattle, see A3 above), with the assistance of co-lead agency (Shoreline) should develop and consistently update a project management tool to track and monitor status of implementation of recommendations in this Plan.	Y	SPU	Ongoing	This matrix is serving as a tracking tool, in addition to an annual list of priorities updated bi-monthly by the TCWOC.
136	Imp C3	8-12	Create annual watershed report card.	N-\$, T	TCWOC, SPU	TBD	The report card content has not been determined yet, nor a budget assigned for gathering and distributing information.
137	Imp C4	8-12	Support an On-line Library of information about the Thornton Creek Watershed	Y	SPU, Homewaters Project	Ongoing	The Homewaters Project's online library for the Thornton Creek watershed is continually improved and maintained.
138	Imp C5	8-13	Provide coordination among City technical staff to improve management of streams and wetlands.	Y	SPU, DPD	Ongoing	SPU staff provides coordination among City expertise (natural resources, engineering and ESA team.) A wetlands specialist is on the DPD site team.
<b>Implementation Objective D: Update this Plan regularly.</b>							
139	Imp D1	8-14	Track progress of action agenda implementation	Y	SPU	Ongoing	Tracking is done through this matrix as well as presentations to TCWOC.
<b>Monitoring</b>							
<b>Monitoring Objective A: Monitor the health of the watershed to assure the Plan recommendations are having the desired effect.</b>							
140	Monit A1.	9-2	Develop and support a voluntary, coordinated watershed-wide Monitoring Panel. SPU recommends that TCWOC	P	TCWOC, SPU	TBD	As part of regularly scheduled TCWOC meetings, City staff present monitoring programs for questions. A subcommittee has not yet been convened for this purpose.

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			develop a subcommittee and invite appropriate expertise.				
141	Monit A2	9-3	The Monitoring Panel will develop recommendations to improve existing monitoring programs by sharing data, coordinating research and analysis, sponsoring monitor training, and improving protocols.	N-\$, T	TCWOC, SPU	TBD	Recommendations may be considered in light of the new NPDES permit, but has been limited by budget and technical constraints.
142	Monit A3	9-4	Establish baseline information for the Thornton Creek watershed.	Y	SPU, King County	Ongoing	The Seattle State of the Waters Report (2007) summarizes baseline data for hydrology, water quality, physical habitat and biota for Seattle's major streams, including Thornton Creek. The Watershed Assessment was completed for Thornton Creek, with the exception of ongoing biological surveys (spawning surveys, smolt trapping, coho pre-spawn mortality, benthic invertebrates). King County performed monthly sampling for temperature, dissolved oxygen, nutrients, fecal, alkalinity at creek mouth; bacteria and temperature at Matthews Beach; for metals at six storm events; and annual sampling at the mouth. Seattle performed nutrient testing of detention pond performance at Jackson Park Golf Course (continued quarterly for three years, ending in 2007.)
143	Monit A4 Storm D3.	9-4 3-15	Evaluate and report on effectiveness of creek restoration projects in the watershed; adapt or modify as necessary.	P	SPU	Ongoing	Effectiveness has been measured on a project-by-project basis. SPU is working on the development of a city-wide monitoring program, which will include receiving waters. The first phase of city-wide recommendations are expected in Summer 2008.
144	Monit. A5	9-5	Provide technical information on request for community restoration efforts.	Y	SPU	Ongoing	SPU sponsors projects that involve working with the community, including monitoring work, and all monitoring data is publicly available.
145	Monit A6	9-5	Support Citizen Monitoring and Data Gathering for benthic invertebrates, fish	Y	SPU	Ongoing	Citizens sampled seven sites on Thornton Creek in the fall of 2007. Samplers attended the training by SPU and participated in the sampling. Sampling on Thornton Creek will be conducted again in fall 2009.
146	Monit A7	9-6	Develop an Index of Watershed Integrity (IWI) for Seattle's creeks. Use this index to help the public understand the "state of the creek" in Thornton Creek.	Y	SPU	2007	SPU's Ecological Framework and State of the Waters Report, released in late-2007, may be used to measure Thornton Creek health.

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