



**King County**  
**Water and Land Resources Division**  
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September 1, 1999

Megan White, Manager  
Water Quality Program  
Washington State Department of Ecology  
Post Office Box 47600  
Olympia, WA 98504-7600

RE: Annual Report for NPDES Permits WASM13001, WASM23001, and WASM33001

*Megan*  
Dear Ms. White

I am writing to report on the status of King County's stormwater management program (SWMP) as required under condition S10 of our National Pollutant Discharge Elimination System (NPDES) Municipal Stormwater General Permits (numbers WASM13001, WASM23001, and WASM33001), which were issued on July 5, 1995. This report focuses on compliance activities for calendar year 1998, which marked significant progress towards resolution of outstanding SWMP approval issues, in addition to ongoing excellence in all the reported programs.

For this report, I have included a narrative piece that briefly addresses the report elements enumerated in the permits. I have also included a variety of reporting tables that provide more detail on the status of the programs described in our SWMP. While I am aware that Ecology prefers calendar year reports to be submitted by March 31 of the following year, the response demanded by the Endangered Species Act (ESA) listing of chinook salmon in February of this year has necessitated a shift of resources to address the many permitting and consultation issues raised by the listing. In addition to the need to shift NPDES staff to ESA compliance in the short term, the realities of our financial reporting system further make it difficult to provide complete calendar year financial analysis in March. The final numbers for the Water and Land Resources Division are frequently not available until late March or early April. The official numbers for King County as a whole are often unavailable until summer. Consequently, it is difficult if not impossible for the County to provide a complete calendar year report, including the financial analysis, by March 31 of the following year.

Further, in May of 2000, the County is scheduled to switch to new accounting software. The magnitude of this change could delay reporting of final 1999 numbers. The final numbers for 2000 may similarly be delayed. As a result, while substantive reporting information about our NPDES programs may be available by the end of March in following years, the financial analysis may not be.

While calendar year financial reporting is not feasible on the schedule that Ecology has requested, mid-year to mid-year reporting is not feasible at all for a number of NPDES programs. I trust that we will be able to work together over the next months to arrive at a mutually agreeable solution to this reporting problem.

Please do not hesitate to call me at (206) 296-6585, or Luanne Coachman, Program Analyst, at (206) 296-8381 to discuss this report and the appended materials.

Sincerely,



Nancy Hansen  
Manager

NH:pra13

cc: Ed O'Brien, Washington State Department of Ecology  
Luanne Coachman, Program Analyst, Regional Water Resources Services, King County

# NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM MUNICIPAL STORMWATER PERMIT PROGRAM ANNUAL REPORT FOR CALENDAR YEAR 1998

King County  
September 1, 1999

## PROGRESS ON ADDRESSING EXCEPTIONS TO SWMP APPROVAL

A Washington State Department of Ecology letter of August 1, 1997, partially approved King County's stormwater management program (SWMP). Exceptions to the approval included the County's proposed revised Surface Water Design Manual (SWDM) and the County's actions to control phosphorous in Lake Sammamish.

### Lake Sammamish (the Lake)

#### *Water Quality*

Water quality goals for Lake Sammamish are based on the assumption that the Lake is phosphorus limited and control of phosphorus loading to the lake will control primary productivity and water clarity. An empirical goal of 22  $\mu\text{g/L}$  mean annual volume-weighted total phosphorus (VWTP) is used to meet the chlorophyll-*a* goal of 2.8  $\mu\text{g/L}$  and Secchi clarity of 4.0 meters. We are currently investigating whether a summer epilimnion VWTP will provide a better management tool for maintaining the summer chlorophyll-*a* and Secchi goals for the Lake.

The VWTP for 1998 was 12  $\mu\text{g/L}$  (Figure 1), substantially lower than the 22  $\mu\text{g/L}$  target. Synoptically, the summer mean Secchi disk transparency (6.0 m) and summer mean chlorophyll *a* concentration (2.5  $\mu\text{g/L}$ ) were better than the target goals. Water quality in Lake Sammamish was excellent during the summer of 1998.

During the late summer and early fall of 1997, an extensive, toxic bloom of *Microcystis aeruginosa* covered much of the Lake. This bloom occurred even though the Lake met the water quality goals during this period. During the late summer of 1998, a bloom of *Microcystis aeruginosa* did not occur, however a sample was collected and analyzed for toxicity. Mouse bioassay tests indicated the cyanobacteria was not toxic. Subsequent strain analysis done at the University of Washington indicated that while the cyanobacteria species was the same (i.e., *Microcystis aeruginosa*), the specific strain was different and non-toxic. In an effort to examine potential environmental factors that influence the production of toxins, a graduate student is investigating this issue in Lake Sammamish with the support of King County, Seattle University, and the University of Washington.

The obvious question is why was the water quality in Lake Sammamish so much better in 1998 than recent years. The most probable reason is *el Niño*. Summer primary productivity is dependent on addition of phosphorus to the stable upper photic zone of the lake (i.e., epilimnion) by a combination of external loading during storm events and internal loading from the hypolimnion. The large toxic bloom observed in 1997 occurred after a significant late summer rainfall event that discharged into a very stable epilimnion. In comparison, during the summer of 1998, there was little rain and subsequently little external loading from the watershed or a mechanism for mixing hypolimnetic water into the epilimnion and photic zone. These conditions likely resulted in the low VWTP measured in the lake and the corresponding low primary productivity and lack of a fall algal bloom.

While County policies were not responsible for the weather, the summer of 1998 does show that limiting external phosphorus loading to the Lake can result in excellent water quality. All of the management policies in the Lake Sammamish watershed are designed to reduce external loading by controlling discharge of non-point source pollution to the Lake and associated streams. If these policies are continued and are successful, we should be able to meet the long-term water quality goals for Lake Sammamish.

***Progress Towards Requirements for Ecology Approval***

To gain approval of the Lake Sammamish portion of the SWMP, King County was charged with making commitments to both the goals of the 1996 Lake Sammamish Water Quality Management Plan (LSWQMP) and a long-term strategy to achieve them. The County's short term responsibilities were adoption of a 1998 strategy for achieving the LSWQMP goals and adoption of best management practices (BMPs) for phosphorous control consistent with the Sensitive Lake Protection Standards of the proposed revisions to the SWDM.

On November 24, 1997, the King County Council (the Council) passed Ordinance No. 12926 adopting the King County budget for 1998. This ordinance included funding for the County's 1998 strategy for achieving the goals of the LSWQMP. Specific funded elements included a Lake Sammamish Program Manager, a Basin Steward, a dedicated erosion control inspector for construction sites in the drainage basin, and funds and staff to continue implementation of the forest conservation and non-point source control programs.

On January 26, 1998, the Council passed Ordinance No. 12992 adopting sensitive lake protection standards for the Lake Sammamish drainage basin. These were consistent with the standards in the proposed revisions to the SWDM as requested by Ecology.

On January 26, 1998, the Council also passed Motion No. 10388 authorizing the King County Executive to negotiate an interlocal agreement (ILA) with the other Lake Sammamish jurisdictions that would achieve a long-term strategy and commitment to meet the LSWQMP goals. However, after several drafts and a series of negotiations, the jurisdictions were not able to reach agreement. Then, on November 3, 1998, the proposal to incorporate the City of Sammamish was approved at the polls. As a result of this incorporation, which became effective on August 31, 1999, King County will control only a small percentage of the basin in the urban growth area.



Although the cities of Bellevue, Redmond, and Issaquah, and King County will continue to manage the Lake under the protocols developed in response to an existing interlocal as described in the SWMP (efforts will be made to include the City of Sammamish as well), the County's ability to influence the water quality of the Lake, and to dedicate resources to that effort, will be extremely limited. Accordingly, Ecology's efforts to achieve effective commitments to maintaining the water quality in the Lake would appear to be better directed towards the cities. With adoption of phosphorous controls for the portion of the basin within its jurisdiction, with 65 percent forest retention required in the unincorporated portion of the Issaquah Creek Basin (93.4 percent of the rural area that drains to the Lake), with continued participation in the existing framework for managing the Lake (see below for the 1998 management activities), and with passage of the updated Surface Water Design Manual (see below), the County is doing what is reasonably possible to maintain the water quality of Lake Sammamish. King County therefore respectfully requests that Ecology no longer withhold approval of the Lake Sammamish portion of its SWMP.

#### ***Implementation of Lake Sammamish Management Program***

During 1998, King County implemented the Lake Sammamish Management Program as follows:

1. **Forest Conservation Program** – This program was integrated into the King County forestry program and will continue to be implemented by the County's Department of Natural Resources Resource Lands Section and the Department of Development and Environmental Services. The regulatory (65 percent forest retention on all rural zoned lands) and incentive (both the current use taxation and education) elements of the program are being implemented by a King County forester. The GIS database, detailing all forested parcels, turnover rates, and parcel sizes was completed.
2. **Non-point Source Control Program** – The emphasis for this program was the completion of several educational tools, including a water steward's manual, The Sammamish Swing (copy included in the Appendix), a lakeside living video, and the shoreline stewardship demonstration project. Distribution of these materials throughout the watershed is being led by two non-profit community groups, Save Lake Sammamish and the Pomegranate Center. Door-to-door education and surveys for best management practices continued for the second year. Analysis of the survey data will allow future targeting of different populations. Traditional planting events, workshops, and the Issaquah Salmon Days emphasis on the whys

and wherefore of phosphorus as a pollutant also continued. Newspaper coverage of the Lake and its condition occurred intermittently throughout the year. A website was set up to describe the state of the Lake and what folks can do to assist lake management and to augment the monitoring information on the existing website. Two research projects were initiated in conjunction with the University of Washington and Seattle University to analyze two areas of poor information: sediment sources and sinks and transport in Issaquah Creek and the risk factors that lead to blue green algal blooms and toxicity.

3. Regulatory Compliance and Enforcement – the King County Erosion Control program continued with a dedicated inspector in the unincorporated portion of the basin. A major emphasis of the year was to develop a stable development fee basis for this program, which was successfully adopted in November 1998 as part of the 1999 King County Budget adoption.
4. Enhanced Operations and Maintenance – no changes were made in maintenance practices for detention and water quality facilities in the basin in 1998. The University of Washington is continuing research to evaluate increased pollutant removal for roadside ditches using alternative maintenance practices. Such practices will be changed if new information becomes available.
5. Lake Protection Standards – 50 percent phosphorus removal standards for new development were adopted for the unincorporated parts of the basin in January 1998. These standards have been implemented since that time and were superseded by adoption of the 1998 King County Design Manual in 1998. King County will receive a \$250,000 federal grant to further evaluate the feasibility and cost-effectiveness of sub-regional treatment facilities as an alternative or addition to on-site treatment for the lake basin.
6. Public Ownership and Shoreline Access – King County has purchased and is developing the East Lake Sammamish Trail. Citizens, the King County Land Trust, and King County Parks are also evaluating possible shoreline parcel acquisitions in conjunction with the trail development. King County and the City of Issaquah are cooperating to develop a publicly owned riparian corridor from Lake Sammamish State Park to the Taylor Mountain site purchased by the County in 1997 in upper Issaquah Creek (headwaters of Holder and Carey Creeks).

The three short-term programmatic actions identified for King County action—an erosion control program, a source control program, and implementation of the 50 percent phosphorus standards for new development—have all been incorporated into the County's ongoing management of the Lake. Four of the eight capital projects identified as short term actions—Valley Growers Nursery, Sunset Quarry, Weowna Creek, and Idylwood Creek—were constructed or completed during 1997 or 1998. The Interpace Project is scheduled for 1999 completion by King County; the Issaquah State Hatchery project was put on hold due to cost concerns and pending further analysis. Final decisions regarding treatment of this source of phosphorus are pending until the sub-regional treatment feasibility analysis and the Hatchery Master Plan are completed and funding availability is clearer; the Kelly Ranch and Bianca Mine sites are being evaluated by the City of Issaquah for mitigation in conjunction with the development of East Village.

In addition, King County committed staff and budget resources to working during 1999 to develop a regional watershed fee and program to provide stable funding and staff support to protect and restore regional surface waters including Lake Sammamish. This commitment is critical given the lack of adequate public dollars for full implementation of such programs.

The Lake Sammamish Forum Coordinator position, vacant as of October 1998 was filled in 1999 by Loren Reinelt from the City of Issaquah. The Lake Sammamish Project Manager position, also vacant as of October 1998 was filled in 1999 by Deb Lester.

Also in 1998, the Lake Sammamish Water Quality Report, prepared under an Ecology grant, was completed. The Report and its technical appendix summarize a series of phosphorous control research projects. The Appendix also summarizes the Adaptive Management Strategy for the Lake which is the basis for continued cooperation and implementation among the four jurisdictions that share the basin.

#### **The Surface Water Design Manual (SWDM)**

On June 1, 1998, the Council adopted Ordinances No. 13189, 13190, and 13191 revising King County's earlier surface water management regulations. These ordinances took effect on September 1, 1998. The County has prepared a manual to guide implementation of the ordinance. This manual was adopted as a public rule in September 1998.

The manual is consistent with the draft reviewed earlier in 1998 by Ecology for compliance with Special Condition S7.B.8.a of the above referenced permits. The County has received the Ecology letter of July 21, 1998, sent during the comment period on the public rule, that includes a summary of the actions Ecology believes King County must take before they can approve the County's compliance with S7.B.8.a. Discussions with Ecology about compliance have continued into 1999. Because a proposed new site alterations ordinance (adding a county-wide clearing permit and paving permit) will likely not be reviewed by Council until January 2000 at the earliest, we do not expect final approval of the SWDM portion of the SWMP before the summer of 2000.

*The following discussion focuses on the elements of the annual report required by the above referenced permits.*

#### ***S10 (B) 1: STATUS OF IMPLEMENTING THE COMPONENTS OF THE SWMP***

All the requisite components of a SWMP are in place in King County, with the exceptions noted above. Although there are some minor changes in the timing or magnitude of some of our compliance activities, our program today continues to be substantially the same as that described in our approved SWMP.

***S10 (B) 2: NOTIFICATION OF RECENT OR PROPOSED ANNEXATIONS OR INCORPORATIONS RESULTING IN A... DECREASE IN PERMIT COVERAGE AREA***

From January 1, 1998 to December 31, 1998, King County lost 5,380 acres to annexations and incorporations. That number increased by at least an additional 13,500 acres with the incorporation of the City of Sammamish on August 31, 1999. Recent annexations and incorporations have removed Lake Sawyer and the majority of Swamp Creek from our permit area. With the incorporation of the City of Sammamish, we lose jurisdiction over a substantial portion of the area draining to Lake Sammamish, as well as Pine Lake, Beaver Lake, and Laughing Jacobs Creek. Information about the specific recent and proposed annexations and incorporations is shown on a map included in the Appendix.

The 1998 losses to annexations and incorporations were consistent with projections. King County will lose an estimated \$1,040,000 in surface water fee revenues with the incorporation of Sammamish.

***S10 (B) 3 & 4: DIFFERENCES BETWEEN PLANNED AND ACTUAL EXPENDITURES FOR THE REPORTING PERIOD & REVISIONS TO THE REMAINING YEARS OF THE FISCAL ANALYSIS***

King County's detailed fiscal analysis is included in the Appendix. In summary, the County's planned spending for NPDES stormwater related activities in 1997 was \$41,187,613. Actual spending for 1997 was \$43,687,182—an increase of 6.07%. The planned spending for 1998 was \$40,999,081. The total adopted by Council was \$41,726,006—an increase of 1.77%. A report on the difference between adopted and actual spending for 1998 will be included in the 1999 report.

***S10 (B) 5: FOR THE FOURTH-YEAR REPORT...***

This material will be sent under separate cover.

***S10 (B) 6: A SUMMARY DESCRIBING COMPLIANCE ACTIVITIES, INCLUDING THE NATURE AND NUMBER OF OFFICIAL ENFORCEMENT ACTIONS, INSPECTIONS, AND TYPES OF PUBLIC EDUCATION ACTIVITIES***

**Enforcement Actions & Inspections--R/D facilities**

The spreadsheet below identifies the total number of retention/detention (R/D) inventories and assessment activities for 1996 through 1998.



|                          | INVENTORY<br>TOTALS<br>(as of 1/5/99) | WORK<br>PROGRAM                 | INSPECTION TOTALS |      |      |
|--------------------------|---------------------------------------|---------------------------------|-------------------|------|------|
|                          |                                       |                                 | 1996              | 1997 | 1998 |
| <b>RESIDENTIAL</b>       |                                       |                                 |                   |      |      |
| <b>2-Year Bond</b>       | 78                                    | 2-Year M/D Bond<br>Inspections  | 93                | 160  | 225  |
|                          | 1,170                                 | Inspections<br>(Unincorporated) | 902               | 683  | 833  |
|                          |                                       | Special Use<br>Permits          | 35                | 33   | 53   |
| <b>Total</b>             | 1,248                                 | New Facilities<br>Inventoried   | 43                | 66   | 87   |
| <b>COMMERCIAL</b>        |                                       |                                 |                   |      |      |
| <b>Unincorporated D9</b> | 748                                   |                                 |                   |      |      |
| NPDES Facilities         | 414                                   | NPDES<br>Inspections            | 48                | 118  | 38   |
| <b>Total</b>             | 1,162                                 | New Facilities<br>Inventoried   | 20                | 32   | 38   |

*The following text includes responses to questions raised by Ecology's review of the Annual Report submitted in 1998:*

**How many residential R/D assessments were accomplished in 1997?**

683 in unincorporated King County and 254 in incorporated cities.

**Have about 2/3rds of the 1,200 residential R/D facilities been inspected in 1996 and 1997?**

More than 2/3rds of the facilities in unincorporated King County are assessed every year. The formula used to determine annual assessment work program is based upon whether the facility was inspected last year, whether maintenance was required in the previous year, and whether a complaint regarding the facility was received the previous year. We start at 1/3rd of the facilities, then add facilities that meet additional factors. Facilities in cities that we contract services are inspected annually.

**Is the County able to perform an assessment at every site at least every three years as planned?**

Yes, the minimum assessment criterion is that every site is assessed once every three years. The actual residential assessments were 902 in 1996, 683 in 1997, and 833 in 1998.

**Are you gathering sufficient data that you will be able to decide whether the three-year cycle is appropriate?**

Yes. The Phased Assessment program began in 1995. We have four years of data that has proven the phased maintenance approach is effective. Because we assess problem facilities more than once every three years they are maintained more often. The assessments of the non-problem facilities have shown that three-year periodic maintenance is satisfactory to keep maintenance needs under required maintenance thresholds.

**Was the County able to inspect all new residential systems 4x/yr?**

The Maintenance/Defect Bond (M/D) Program requires quarterly assessments. Depending upon what quarter the new facility was entered into the (M/D) program determines how many times a facility is inspected that year. We did not accomplish a full quarterly inspection in 1996 or 1997 due to the high volume of storm related complaint response requirements. We did accomplish the full quarterly inspection program for 1998. We anticipate being able to complete the full inspection in 1999.

**Were the 124 regional facilities inspected?**

The entire inventory of Regional Facilities is inspected every year. The actual number of Regional Facilities in the inventory is 120.

**How many commercial conveyance facilities have been inspected?**

We have inventoried and inspected 414 commercial conveyance facilities since the beginning of the NPDES program. The annual assessments (NPDES inspections) for 1996, 1997, and 1998 are indicated on the above table.

**Enforcement Actions & Inspections--KCC 9.12 Activities**

| INVESTIGATION TYPE                      | CARRY OVER | NEW (in '98) | CLOSED (in '98) | OPEN |
|---|------------|--------------|-----------------|------|
| COMPLAINTSM<br>(quick response)         | 18         | 72           | 73              | 15   |
| REVIEWSY<br>(more complex response)     | 95         | 31           | 26              | 121  |
| SITE CONSULTATIONSZ<br>(for businesses) | 219        | 26           | 28              | 213  |
| ENFORCEMENTSP<br>(violations issued)    | 29         | 0            | 4               | 25   |

**M Complaints (quick response):** All water quality complaints that are received by WLR are reviewed by a Senior Engineer to see if an initial quick visit by a technician may be sufficient to solve the problem. If so, a technician visits the site and collects all pertinent information. If the problem is a simple problem or one that can be resolved with a little bit of information or education by the technician the complaint can then be closed. If the Senior Engineer determines the complaint is more involved at the time of the initial review, an Engineer investigates the problem as a **Review**.

If a technician visits the site and finds more involved issues at the site, or if the individual or business where the complaint originates needs more detailed, technical information the complaint is "turned into" a **Review**.

**Y Reviews:** (Handled by an Engineer.) These problems often require writing letters to the property or business owner where the water quality problem is occurring and explaining in more detail KCC code 9.12, or outlining additional ways to correct the water quality problem. A review often requires additional research to find the source, potential impacts, and severity of the water quality problem. A review also may require

coordination with other agencies such as DOE, KC Health, Hazardous Waste, Solid Waste, Roads, or others.

- Z Site consultations:** An engineer visits a business site with the owner/property manager. All BMPs that are required for the site to achieve compliance with KCC 9.12 are discussed and an implementation schedule is agreed upon. Once the owner/property manager feels that all BMPs are in place, the engineer revisits the site, and if the site is in compliance, the file is closed and the business is referred to the Businesses for Clean Water program for recognition.
- β Enforcements:** These cover a variety of problems. The first step in the process is a Notice of Violation that explains the specific violation and the steps necessary to correct the Violation. Once the violation is corrected, a Release of Violation letter is sent. The types of violations we see vary and involve both business and residential properties.

#### **Enforcement Actions and Inspections--Erosion and Sedimentation Control**

The Erosion Control Inspection & Enforcement Program is based out of the King County Department of Development and Environmental Services. The program is being increased from one (1) engineer in 1998 to a total of four (4) engineers. The scope of the program is also increasing. The current program was started to enhance the inspections of permitted activities for Erosion/Sediment Control compliance (ESC) in the Lake Sammamish Drainage area. The expanded program will expand out into the County to serve a wider area. Enhanced ESC inspection areas include the Green River, Cedar River, Sammamish River, Bear Creek, and the Snoqualmie River Basins. The program will still have duties in the Lake Sammamish Drainage basin, but with the incorporation of the City of Sammamish, these duties will be limited. In addition to ESC enforcement, the program will also be working to enforce the County's Endangered Species Act (ESA) implementation.

The program serves three main functions. The first enhances ESC inspections on permitted activities. These include permitted activities from clearing and grading, short plats, subdivisions, commercial, and residential. The second provides technical assistance for activities through guidance on BMP use at specific construction sites and more general training for the development community, county staff, and the public. The third pursues enforcement actions on sites that are in violation of King County Drainage Manual (Appendix C & D of 1998 Manual) and other regulations as they apply to water quality and ESA issues for both permitted and non-permitted activities.

#### **Public Involvement Activities**

With the listing of Puget Sound chinook as a threatened species under the Endangered Species Act, public involvement activities continue to emphasize hands-on habitat restoration and water quality protection but have also expanded to include broader education efforts around fish and water quality.

Native plantings, including a record-breaking Sammamish ReLeaf planting held in October 1998, continue to attract large numbers of participants. The ReLeaf effort, coordinated with three local cities, drew more than 1,000 volunteers who planted 13,000 trees and shrubs at four sites on a single day. Native plant salvages and the Habitat Partners site maintenance program

are going strong, perhaps reflecting increased citizen awareness of the threats to salmon and the role that volunteers can play in saving salmon habitat.

In addition to these hands-on activities, the Public Involvement work program has focused on general education about salmon and water quality. In the fall of 1998, a brand new educational program—the Cedar River Salmon Journey—was kicked off in partnership with several local agencies. The program trained 22 dedicated citizens who then served as volunteer naturalists on three fall Saturdays to 1,600 visitors at salmon spawning sites along the Cedar River. And, starting late in 1998, the newly created ESA Speakers' Bureau had already spoken to 300 citizens by year's end.

The numbers for 1998 citizen participation are included in the appendix of this report. Also in the appendix is a copy of Water and Land Resource Division's *Downstream News*, an ongoing public education vehicle sent to 9,000 teachers, citizens, community groups and others that promotes volunteer opportunities and educates about salmon and water quality.

To follow-up on the *Public Education and Involvement Draft Strategic Plan* submitted in the last report, the following planned outreach efforts have been recently launched to respond to the listing of chinook salmon as an endangered species.

◆ **Salmon/ ESA Speakers' Bureau**

Trained staff and volunteer speakers present information about salmon, the Endangered Species Act, and how people can help protect salmon. Targeted audiences include business organizations, service clubs, community groups, schools and others. It is estimated that 3,500 people will be reached in 1999.

◆ **Public Workshops/Meetings about ESA**

Public events designed specifically to inform people about salmon and the Endangered Species Act response efforts and collect public input for salmon conservation planning efforts. It is estimated that 1,000 people will be reached in 1999.

◆ **Salmon Information Center Clearinghouse**

A collaborative project to provide a convenient central toll-free phone number and website where citizens can get answers to questions about salmon and the ESA and find out how to get involved. The Salmon Information Center will be promoted in all salmon-related communications (advertising, newsletters, brochures, etc.) by Tri-county and other partners. Partners include King County, the Tri-county ESA response effort, Seattle, the State of Washington, and others.

◆ **Salmon Information Television**

A collaborative project to produce and distribute educational programming about salmon and the ESA response efforts via a network of over a dozen local municipal and educational cable channels. Programming will include short educational Public Service Announcements as well as longer studio shows. Partners include King County, Seattle, Bellevue, the University of Washington, and the Tri-county ESA response effort. Estimated outreach is 500,000 households

◆ **Salmon Advertising Campaign**

A collaborative project to raise awareness about the salmon crisis and local ESA response efforts, using advertising on major broadcast TV, radio and print media. Partners include King County, Elgin DDB, and the Tri-county ESA response effort. Reaches over 500,000 citizens

◆ **Salmon Educational Materials**

Fact sheets, brochures, newsletters, and other educational materials designed specifically to inform citizens and stakeholders about salmon, the ESA, and ESA response efforts. Includes materials targeted toward students like "The Fish Who Could Climb Mountains" (an insert in the Seattle's Child family of newspapers) as well as more technical fact sheets designed for use at workshops and other events. Estimated outreach is 50,000 citizens.

◆ **Lake Stewardship Program**

Trained and supported citizen lake monitors on 43 small lakes to sample and record water quality and quantity information. Conducted quarterly workshops/tours focusing on monitoring techniques, aquatic weed identification, watershed function, and best management practices. Published and distributed quarterly *Lake Steward* newsletter to lakeside residents, providing information on water quality protection and enhancement activities. Provided technical assistance to lakeside residents, addressing water pollution and protection activities.

◆ **Hazardous Waste Management Program**

The Hazardous Waste Management Program has several efforts that aim to protect water quality by reducing residents' use of pesticides. The Natural Lawn Care Project, a cooperative effort with the City of Seattle and other local governments, uses advertising, media events, brochures and other methods to encourage people to change their lawn care methods. Natural lawn care methods will mean reduced use of pesticides, fertilizers and water.

"Grow Smart, Grow Safe," a consumer guide to lawn and garden products, was produced in 1998. The booklet rates 300 products for their effects on health and the environment, and provides information on integrated pest management approaches to problems such as bugs and weeds. It is widely distributed through nurseries, the Northwest Flower and Garden Show, workshops and other methods. A consumer web site that includes detailed information on alternative pest control methods was developed and is available at [www.metrokc.gov/hazwaste/house/](http://www.metrokc.gov/hazwaste/house/).

The Hazardous Waste Program began working with the Washington Association of Landscape Professionals on an advanced endorsement in environmental landscaping as part of WALP's Certified Landscape Technical program. The environmental test will be pilot-tested in 1999.

**Other Compliance Activities**

In addition to the documents described above, the Appendix to this report also includes information on other compliance activities continuing in the County, water-related CIP projects (improving fish passage, etc.), and mapping of the County's storm sewer system.

### ***S10 (B) 7: IDENTIFICATION OF KNOWN WATER QUALITY IMPROVEMENTS OR DEGRADATION***

A public swimming beach monitoring program was conducted in 1996, 1997, and 1998 as a cooperative effort of WLRD, KC Environmental Laboratory, and Seattle King County Public Health Department. In 1998, 21 public swimming beaches on lakes Washington, Sammamish, Five-Mile, Wilderness, Pine, Beaver, and Green Lake were sampled weekly from June through September. All bacterial data was immediately transferred to the Seattle King County Public Health Department for determinations on public health and contacts with the local jurisdictions and parks departments.

Data from the beach monitoring program was used by the SKCPHD to identify potential public health problems. Juanita Beach (King County parks) and Meydenbauer Beach (City of Bellevue) on Lake Washington and Pine Lake Beach (King County parks) were closed to swimming until monitoring showed bacterial counts back in an acceptable range. Bacterial sources were primarily goose feces, determined by RNA analysis at the University of Washington. This information was used to improve maintenance practices at the parks which contributed to the improved water quality in the public swimming areas. The City of Bellevue investigated Meydenbauer Beach, with background data from the KC Major Lakes Program and laboratory support from the KC Environmental Laboratory.

Under separate cover, to meet the fourth year reporting requirements, the County will provide a discussion of the changes to water quality that can be identified on the basis of the monitoring described in our SWMP. For this annual report, the Appendix includes a table showing the Basin Management Evaluation Program monitoring activities that are planned and have been completed.

### ***S10 (B) 8: STATUS OF WATERSHED-WIDE COORDINATION***

King County's long history of watershed-wide coordination is described at length in its SWMP. Now another chapter is underway, involving the development of watershed-based, multi-stakeholder, multi-jurisdictional salmon recovery and conservation plans in Water Resource Inventory Areas (WRIAs) in and around King County. These plans will constitute the crux of King County's long-term response to the March 16 1999 listing of the Puget Sound chinook salmon as threatened species under the Endangered Species Act (ESA). King County has lead responsibility for facilitating the development of the long-term salmon conservation plans in two WRIAs—WRIA 8 (the Cedar/Sammamish watershed) and WRIA 9 (the Green/Duwamish watershed). In addition, King County co-leads the WRIA planning effort in WRIA 7 (the Snohomish watershed), and supports the efforts in WRIA 10 (the White/Puyallup watershed).

These WRIA-based planning efforts are well underway. Steering committees—consisting of elected officials from several of the local jurisdictions within the WRIA, state and local government officials, tribal representatives, and leaders from the environmental and business communities—have been established to guide the planning processes. In addition, technical advisory committees have been formed to gather and analyze information related to salmon

population and habitat, working closely with King County staff and consultants. Their assessment of the ecosystem conditions in each WRIA, and the "factors of decline" for salmon, will constitute the foundation for subsequent planning and decision-making by the steering Committees and local jurisdictions. The "first edition" of these WRIA conservation plans is scheduled for completion in early 2001.

King County's WRIA planning efforts are closely coordinated with those in Snohomish and Pierce Counties—the most densely urbanized areas of the state, and three of the seven jurisdictions in the state covered by the NPDES stormwater permitting system—under the rubric of the Tri-County ESA Response Effort.

In addition, the Watershed Forums, described in last year's annual report, are still active, although, as a result of varying resources, two of the Forums (Central Puget Sound and Snoqualmie) have met more frequently and more regularly than the other three (Sammamish, Lake Washington, and Green). Through the Regional Needs Assessment process, the Watershed Forums identified a number of regional water resource management needs (regional water quality, flood management, and habitat improvements), including approximately \$250 million in capital expenses, and \$12 million in annual operating costs.

Efforts now are underway to more specifically address governance issues, assess project costs and feasibility, establish priorities, and to develop a long-term source of funding for regional water resource management and ESA response. In the meantime, the Forums continue to promote implementation of regional watershed activities, through three primary activities: 1) allocating King Conservation District funding; 2) providing important local government input into the WRIA planning processes described above; and 3) providing feedback on proposals for a new source of funding for regional watershed activities and ESA response.

Finally, King County continues its implementation of the six basin plans developed in the late-1980s and early-1990s, including capital improvements, enforcement of regulatory changes, and an ongoing basin stewardship program. The Appendix includes information on the status of the plans and recommendations for improved implementation made in February of 1999 as part of the County's development of a proposed 4(d) rule for the protection of chinook.

## **CONCLUSION**

The County's SWMP continues substantially as planned and disclosed in our approved submittal, although the emphasis of our management activities is shifting to, and converging on, responding to the threats to the survival of salmonids and the water quality improvements (including improved habitat elements—not just water chemistry) necessary to assure that salmonids can thrive in our waters.