Regional Wastewater Services Plan

2004 Annual Report

King County
Department of
Natural Resources and Parks
Wastewater Treatment Division

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Contents

Introduction 1
Background 1
Accomplishments 1
Brightwater Facilities 1
Conveyance Projects 2
Infiltration and Inflow 2
Combined Sewer Overflows 2
Biosolids 2
Water Reuse and Conservation 2

Brightwater Facilities 3
Predesign Process 3
Value Engineering 6
Permitting 7
Water Reuse 7
Public Involvement 7
Public Meetings 8
Other Activities 8
Water Reuse 9
Awards 9
Schedule for 2005 9

Conveyance Improvements 11
Conveyance System Improvement Program 11
Projects in Design 12
Bellevue Pump Station 12
Juanita Bay Pump Station 12
Hidden Lake Pump Station and Boeing Creek Trunk 12
Soos Creek Pump Station D 14
Projects in Construction/Underway 14
Kenmore Interceptor Flapgate Sensors 14
Pacific Pump Station 14
Projects Completed/Closed 15
North Creek Storage 15
East Side Interceptor 15
Tukwila Interceptor and Freeway Crossing 15
Odor Control 16
Phased Retrofit of West Point & South Plant 16
Existing Conveyance System Improvements 16
Brightwater Odor Control Design 17
Odor Control Design Standards 17
Odor Comprehensive Plan Development 18

Infiltration and Inflow 19
Alternatives Report 20
Needs Assessment 20
Pilot Projects 21
I/I Benefit/Cost Analysis 21
Environmental Assessment 21
Schedule for 2005 23
Pilot Projects 23
Alternatives Report 23
Standards, Procedures, and Policies 23
Conveyance System Modeling 23
Local Agency Workshops 24
Cost Effectiveness 24
Long Term Regional Program 24
Combined Sewer Overflows 25
CSO Control and Improvement 25
Year 2005 CSO Plan Update and Program Review 25
Lower Duwamish Superfund Site 26
Sediment Management Program 27
Schedule for 2005 27
Biosolids 29
Schedule for 2005 29
Water Reuse & Conservation 31
Sammamish Valley Reclaimed Water Production Facility 31
Water Conservation Program 31
Water Conservation Retrofits 32
Public Education and Outreach 32
Schedule for 2005 32
RWSP Project Information 33
Project Number 34
Appropriation and Percent Spent 34
Project Scope & Milestones 34
Schedule 34
Project Cost 34
Contract Information 35
Appendix A – Odor Complaint Summary 37

Please visit the RWSP Web site at http://dnr.metrokc.gov/wtd/rwsp/rwsp.htm

Introduction

This report describes progress made by the King County Department of Natural Resources and Parks (DNRP) in implementing the Regional Wastewater Services Plan (RWSP) for the period January through December 2004. The report begins with a summary of progress on designing the Brightwater facilities and continues with a review of progress on non-Brightwater conveyance projects. The report then summarizes the year's activities for other RWSP programs, including odor control, infiltration and inflow, combined sewer overflows, biosolids, and water reuse. The final section of the report provides project-specific information on budget, schedule, milestones, labor, and contract status for active RWSP capital projects through December 2004.

Background

In December 1999, the King County Council adopted Ordinance 13680, which updated the County's Comprehensive Water Pollution Abatement plan. This update, termed the Regional Wastewater Services Plan, is a 30-year capital improvement program designed to provide wastewater capacity for this region's rapidly growing population and preserve its aquatic resources.

Ordinance 13680 requires the King County Executive to report progress in siting and constructing new wastewater facilities annually to the King County Council and King County Regional Water Quality Committee. This annual report is presented in response to that requirement.

Accomplishments

King County DNRP completed a significant amount of work on the Regional Wastewater Services Plan in 2004. The highlights of this work are summarized below.

Brightwater Facilities

The Brightwater project remained on schedule to provide needed wastewater capacity to the regional system by the year 2010. The predesign documents and cost estimates were completed, many of the permits needed to support the project were obtained, and many new employees were hired to carry out the project's design and construction phases. The public involvement program continued to engage stakeholders and members of the public in the Brightwater design and permitting process. In addition, final design is now underway for the treatment plant and conveyance system, which will continue through mid-2006. King County DNRP also opened a project office at the Route 9 site in Woodinville in October.

Conveyance Projects

Design work continues on five major conveyance projects, including four pump stations and one interceptor. Construction began on the Pacific Pump Station, and two projects were completed in 2004, the North Creek Storage Facility and the East Side Interceptor Section 1.

Infiltration and Inflow

The Infiltration and Inflow (I/I) program released a report on the effectiveness of pilot I/I projects in October 2004. The report found that though a coordinated effort between King County and the local agencies, I/I problems can be successfully identified, targeted, and controlled.

Combined Sewer Overflows

King County continues work to develop the 2005 CSO Control Plan Update and is receiving consultant support in developing the CSO program review—a precursor to the Update. The CSO program successfully completed the cleanup of sediment at Diagonal/Duwamish, removing over 60,000 cubic yards of contaminated sediment over a 7-acre area of river bottom and replacing it with clean sediment and rock.

Biosolids

King County continued its ongoing effort of produce Class B biosolids at the regional treatment plants. King County produced approximately 125,000 wet tons of biosolids in 2004, all of which will be recycled for use in compost, forestry, and agricultural applications.

Water Reuse and Conservation

King County began work in late 2004 on a project to supply reclaimed water to the Sammamish Valley using Class A effluent from the Brightwater Treatment Plant. DNRP is now evaluating markets for this reclaimed water and has begun evaluation and predesign on the initial core conveyance system including using the Brightwater combined tunnels. In terms of water conservation, DNRP provided the King County Housing Authority with funds to retrofit 824 units with water conserving appliances. All of the Housing Authority properties in the county are now retrofitted.

Brightwater Facilities

The Regional Wastewater Services Plan identified the need for a 36 million gallon per day (mgd) treatment plant and associated conveyance facilities in the north service area by the year 2010. The locations for these facilities, collectively termed Brightwater, were identified during a four-year siting process that took place between 2000–2003.[1] The primary focus in 2004 was the completion of predesign, which included a value engineering analysis of the Brightwater facilities at preliminary design. Project staff also applied for many of the permits needed to support the project, and many new employees were hired to carry out the design and construction phases of Brightwater. In addition, DNRP continued its efforts to involve stakeholders and members of the public in the Brightwater design and permitting process. Each of these activities helped to ensure that the project remained on schedule to provide needed wastewater capacity to the regional system by the year 2010.

Predesign Process

Following adoption of the final Brightwater alternative in December 2003, DNRP began the predesign phase of the project, which refined the preliminary design presented in the Brightwater Final Environmental Impacts Statement (Final EIS). Predesign, also termed 30 percent design, evaluates more specific and substantial information relating to technology process alternatives, facility size and layout, capacity, hydrology, geology, environment, and cost. The predesign process resulted in a set of detailed design drawings that were used to refine the Brightwater construction cost estimates and develop construction bid packages. Figures 1 and 2 show the major components of the Brightwater treatment and conveyance system, respectively, at the completion of predesign in the fall of 2004.

Following predesign, DNRP prepared a technical memorandum for the King County Council as required by Ordinance 14942. The memo, released in August, presented possible phasing scenarios for the Brightwater Treatment Plant based on an analysis of storage capacity in the Brightwater conveyance system.[2] The memorandum concluded that the King County Executive has the flexibility to adjust the final Brightwater completion date between 2010 and 2012 to accommodate delays or mitigate risks without paying a premium to get back on schedule. This flexibility also allows us to take advantage of opportunities to react to market conditions, employ labor efficiently, and smooth cash flows in peak construction years.

[1] A summary of the Brightwater siting process was provided in the December 2003 RWSP Annual Report. This report can be accessed at http://dnr.metrokc.gov/wtd/rwsp/library.htm

[2] August 2004. Brightwater Facilities: Project Status, Value Engineering Analysis, Phasing Analysis. King County Department of Natural Resources and Parks, Wastewater Treatment Division.

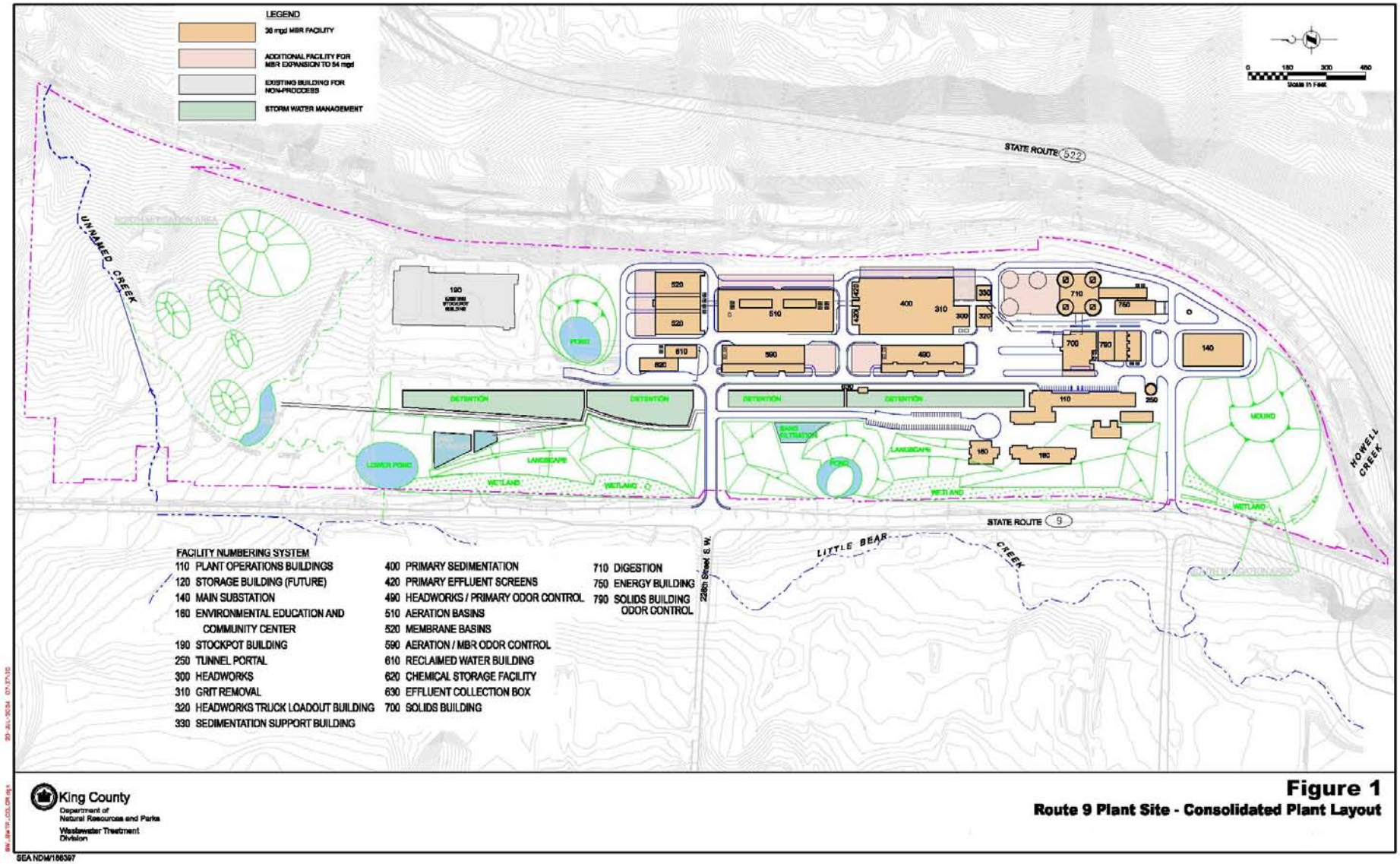


Figure 1
Route 9 Plant Site - Consolidated Plant Layout

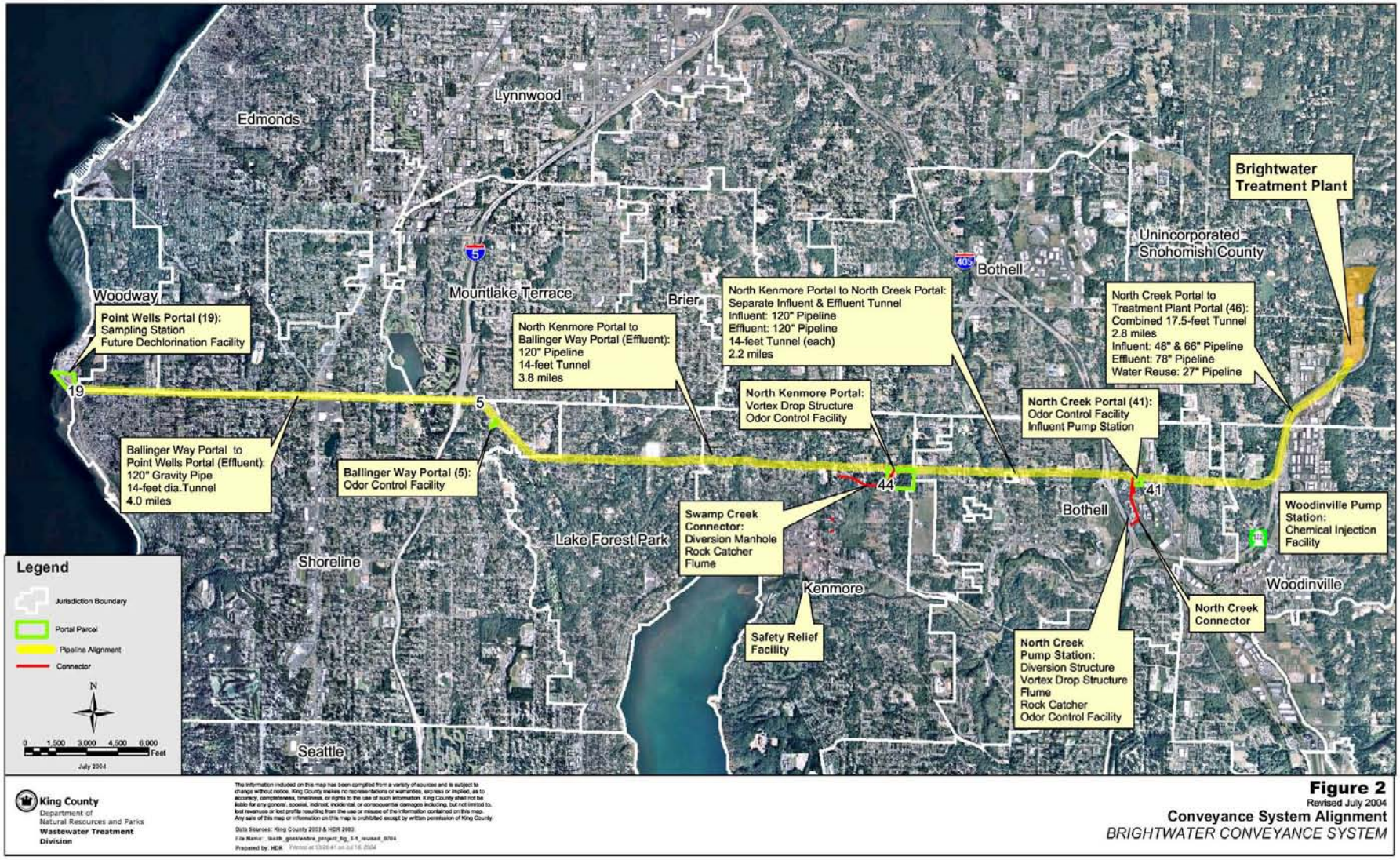


Figure 2
Revised July 2004
Conveyance System Alignment
BRIGHTWATER CONVEYANCE SYSTEM

Accordingly, the Executive will continue with the present schedule to complete Brightwater in the fall of 2010 and use the available flexibility as needed to construct Brightwater as efficiently and cost effectively as possible.

An addendum to this August memorandum was transmitted to Council in October 2004. The addendum presented the detailed predesign cost estimates for the Brightwater project based on four volumes of detailed drawings and engineering specifications.[3] The findings from the addendum are summarized in Table 1, which shows that Brightwater cost estimates increased by approximately $134 million over the estimates presented in the Final Environmental Impact Statement (Final EIS), bringing the total cost estimate for Brightwater to $1.483 billion (2004 dollars).

Table 1

Summary of Brightwater Predesign Cost Estimates[a]

Brightwater Component	November 2003 Final EIS Estimate (2003$)	October 2004 Predesign Estimate (2004$)	Difference over/(under)
Treatment Plant	$382.8	$426.5	$43.7
Conveyance System	$754.7	$869.7	$115.0
Mitigation[b]	$88.0	$88.0	$0.0
Land/ROW	$124.0	$98.9	($25.1)
Total	$1,349.5	$1,483.1	$133.7

[a] Costs are in millions of dollars; totals do not add exactly due to rounding

[b] Mitigation does not include odor control costs; they are included in the treatment and conveyance costs.

Inflation was responsible for about 95 percent of the $133 million cost increase, with commodity price increases accounting for most of the inflation. For example, mid-year (2004) prices for materials needed to construct the Brightwater facilities such as reinforcing steel, concrete, ductile iron pipe, and reinforced concrete pipe were up 42 percent from a year earlier.

Value Engineering

The October addendum also described the findings from the value engineering review that took place during predesign. Value engineering (VE) is a process to review and challenge a project's design elements, including the underlying assumptions and methodologies, to increase value within the design by improving performance, reliability, quality, safety, and reduce life-cycle costs. Between January and March 2004, a team of independent experts conducted the review at the 20 percent design stage and made recommendations for the treatment plant, conveyance system, and influent pump station. For example, VE recommendations for the treatment plant were to reduce the size of the grit and screening facilities, evaluate chemically enhanced primary clarification as an alternative to ballasted

[3] October 2004. Brightwater Facilities: Addendum to August 23 Report: Brightwater Predesign Cost Estimates. King County Department of Natural Resources and Parks, Wastewater Treatment Division.

sedimentation, and reduce the number of digesters and the size of the solids processing building. Overall, the VE process resulted in a savings of about $59 million.

Permitting

One of the primary activities undertaken by Brightwater staff in 2004 has been working with federal, state, and local agencies to secure the permits necessary to develop and construct the Brightwater facilities. As a result of these activities, DNRP expects to receive approval for all the required systemwide permits at the federal and state level in early 2005, including permits under Section 404, 402, and 401 of the Clean Water Act and Section 7 of the Endangered Species Act. These permits regulate wetlands, surface water discharges due to construction and impacts to endangered species and their habitat. In addition, DNRP recently received a hydraulic project approval permit from the Department of Fish and Wildlife and is currently working with all local agencies with jurisdiction over the Brightwater facilities to obtain the necessary demolition, grading, and building permits for constructing the Brightwater Treatment Plant and conveyance system. By the end of 2005, DNRP expects to have all its major permits for construction.

Water Reuse

DNRP began predesign work in late 2004 on a project to supply reclaimed water to the Sammamish Valley using conveyance lines from the Brightwater Treatment Plant. The Brightwater reuse project will result in a cost effective and reliable approach for conveying reclaimed water to customers in the Sammamish Valley by the summer 2011 and to potential customers along the effluent pipeline system in the future. The immediate objective of the project team is to describe where the reclaimed water conveyance lines and facilities will go and provide this detail to final design teams such that the appropriate construction documents can be developed and the facilities installed.

Public Involvement

King County DNRP continues to place a high priority on involving stakeholders and members of the public in the Brightwater design and permitting process. A number of public meetings were held in 2004 along with the continuation of ongoing activities such as quarterly newsletters, speakers' bureau, and the Web site. These and other activities are summarized as follows.

Public Meetings

Brightwater staff presented information about the Brightwater project at 35 meetings and briefings with residents, community leaders, and groups. Many other meetings were held as well.

- January–February: Brightwater staff held five meetings with immediate neighbors of conveyance pipe constructions portals to discuss local construction impacts and timelines. Some meetings were focused on neighboring business interests and others were focused on residential issues
- March–April: Brightwater staff held three large public meetings to explain the Brightwater conveyance system. Participants learned about tunneling technology and construction timelines
- June: Brightwater staff held a public meeting to provide information on refinements to the treatment plant design and meet immediate neighbors of the treatment plant site
- August: A meeting focused on treatment plant design took place at Kokanee Elementary School in Woodinville. The meeting also gave community members an opportunity to review proposed mitigation and to submit their own ideas. Brightwater staff had information booths at Bothell Riverfest, Celebrate Shoreline, Shoreline Summer Concert Series, and Kenmore Good Ol' Days community festivals
- September: Three community meetings were held in Shoreline, Bothell, and Kenmore to discuss design and mitigation in communities hosting conveyance pipeline facilities. Participants had an opportunity to review proposed mitigation measures and submit ideas
- October: Brightwater staff moved into a new project office on site, and community members were invited to see the new office and meet staff at an open house

Other Activities

- A new publication, the Brightwater Bulletin, was developed to provide pre-construction and construction details to immediate neighbors of the treatment plant site. The first edition was mailed in May 2004
- A traveling information display provided written and graphic information regarding conveyance at 11 area libraries, city halls, and community gathering spaces
- A model of the preliminary design for the treatment plant was on display at the City of Woodinville in January and February along with design questionnaires for the public
- Information about the treatment plant design was shared in a spring 2004 newsletter and on the Web page

- Brightwater staff had a booth at the annual Basset Bash in Woodinville
- A 14-minute video tape describing tunneling technology and explaining what neighbors in conveyance communities might expect during pipeline construction

Water Reuse

Brightwater staff began a siting process for locating reclaimed water control facilities to distribute reclaimed water to the Sammamish Valley and north King and South Snohomish Counties, as well as along the effluent tunnel from the Brightwater Treatment Plant.

Awards

The Brightwater public involvement program was recognized in 2004 with two awards. The first was the public involvement process during the four-year Brightwater Siting Project received the International Association for Public Participation's Core Values Project of the Year award. The second award was for the Brightwater Web site, which received the Association of Metropolitan Sewerage Agency's (AMSA) National Environmental Education Achievement Public Information and Education award.

Schedule for 2005

DNRP plans to complete 60 percent design for the treatment plant by April 2005 and 90 percent design later that year. The design schedule for the conveyance system is expected to take place as follows.

- Central Tunnel (Portal 5 to Portal 41): complete 60 percent design by May and 90 percent design by September
- East Tunnel (Portal 41 to the treatment plant): complete 90 percent design by early June
- West Tunnel (Portal 5 to Portal 19): complete 60 percent design by October

We also expect to acquire all the land for all the treatment plant, portals, and tunnel easements in 2005. In addition, there will be additional opportunities for public participation in 2005 in support of final design, permitting, and mitigation for the Brightwater facilities, including a public art open house in February and a series of meetings in May to discuss Brightwater mitigation. In terms of reuse, predesign will continue on identifying and developing the Brightwater reclaimed water distribution and control point facilities. We will also begin final design on the reclaimed water pipes in the combined tunnels.

Conveyance Improvements

Planning, design, and construction work continued on a number of conveyance projects outlined in the Regional Wastewater Services Plan. The accomplishments of the Conveyance System Improvement (CSI) program are described first, followed by an overview of conveyance projects in design, construction, and those that were completed. Schedule information for 2005 is summarized under each project description. For additional project schedule information, please refer to the RWSP Project Information section at the end of this report.

Conveyance System Improvement Program

Initial wastewater basin planning is now complete in the King County's regional basins as part of the CSI program. The focus of the program is to upgrade and improve the level of service of the regional conveyance system for the 33 local sewer agencies in King and Snohomish Counties. The CSI program integrates with the RWSP and other programs such as asset repair and replacement to provide consistency in conveyance planning system-wide and to take advantage of opportunities to address common issues, leverage resources, and minimize customer disruption.[4]

As discussed in the December 2003 *RWSP Annual Report*, the initial wastewater basin planning was completed in 2003 for ten regional basins.[5] Since then, program staff have begun reevaluating wastewater peak flows using new information on infiltration/inflow and recently updated population information from the Puget Sound Regional Council (PSRC). This revised flow information will help assess whether the planned conveyance projects are still adequate to address future capacity needs, or if additional capacity is required.

An important development related to conveyance planning was the recent reorganization in the Wastewater Treatment Division (WTD) to combine the infiltration and inflow program (described later in this report) with the conveyance planning (CSI) program. Both of these programs will be administered within WTD's Comprehensive Planning and Technical Resources Section, ensuring that I/I controls are considered in the development of future conveyance alternatives. This will help identify the most cost effect mix of I/I controls and new conveyance facilities to address future capacity needs.

[4] Visit the CSI Web site at http://dnr.metrokc.gov/wtd/csi/index.htm for more information on this program.

[5] December 2003, Regional Wastewater Services Plan Annual Report, pp. 13–19.

Projects in Design

After a working alternative for a particular conveyance project is identified during the planning process, the project starts predesign and is assigned a project number and project manager. Following predesign, which takes a project through approximately 30 percent of the design process, the project starts final design, where detailed drawings and specifications for construction are developed. There are five RWSP projects currently in design, as shown in Figure 3.

Bellevue Pump Station

This project provides needed capacity to prevent sewage overflows at the Sweyolocken Pump Station. A preferred alternative was selected to divert excess flows from the Sweyolocken Pump Station by upgrading the Bellevue Pump Station and constructing a new 5,500 linear foot, 24-inch diameter force main from the pump station to the East Side Interceptor. King County expects to complete 90 percent design by the end of 2005.

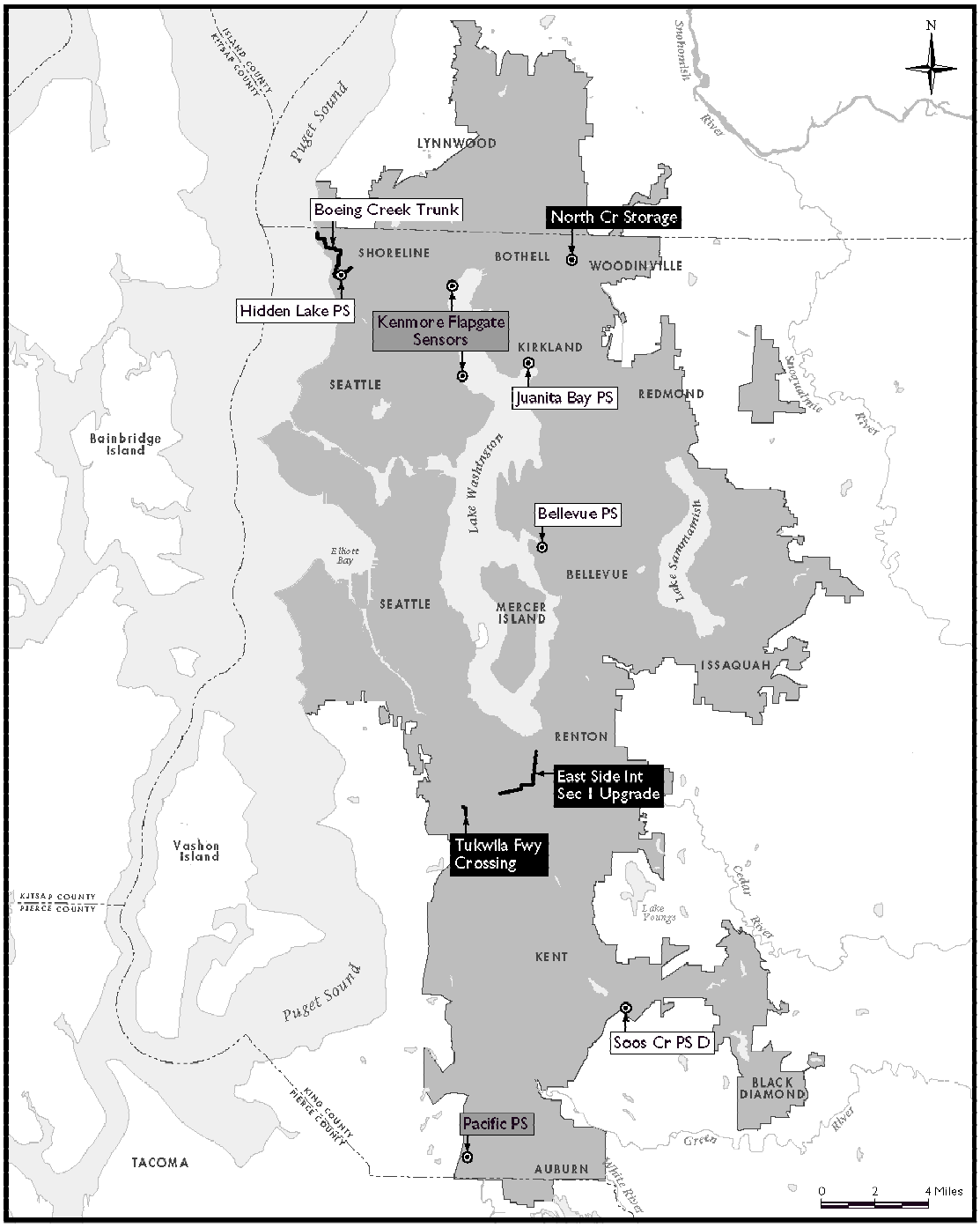
Juanita Bay Pump Station

The Juanita Bay Pump Station is an aging facility that is experiencing significant operational difficulties in conveying existing flows and has insufficient capacity to convey future flows. A new pump station is being designed to replace the existing 14.2-mgd pump station. A site for the new pump station was purchased across the street from the existing station. The environmental review and 90 percent design are complete and construction permits and easements are being obtained. Demolition of an existing maintenance building was completed in late Summer 2004 to clear the site in preparation for the pump station construction, which is targeted to begin in late spring 2005.

Hidden Lake Pump Station and Boeing Creek Trunk

The 40-year-old Hidden Lake Pump station does not have capacity to handle existing or future peak storm flows, nor does it meet current design standards of odor control, instrumentation, space, and equipment handling. Further, the pump station discharges to the Boeing Creek Trunk, which has a history of capacity, odor, and corrosion problems. This project will address these problems through phased improvements to control overflows and increase the capacity of the Boeing Creek Trunk to handle the 20-year storm. The capacity increases include a new Hidden Lake Pump station with a capacity of 5.5 mgd and a future peak capacity of 6.8 mgd built on the existing site, a 0.5 million gallon storage facility constructed upstream of the pump station, and approximately 12,000 linear feet of pipeline replacement. Future capacity needs will depend on whether a reduction of inflow and infiltration will enable us to reduce the size or need for additional facilities. The project is currently at 95 percent design.

Figure 3. Status of RWSP Conveyance Projects



RWSP Conveyance Projects

Project Location
KCWTD Service Area
Name Project in Design Phase
Name Project under Construction
Name Completed/Closed Project

King County
Department of Natural Resources and Parks
Wastewater Treatment Division

Data: King County WTD Databases
File name: 050 IRWYSPconveyai wgab

Soos Creek Pump Station D

The Soos Creek Pump Station D project will provide needed conveyance capacity in the South Green River planning area. The project includes a new 26-mgd pump station and conveyance (16,200 feet of forcemain and 5,400 feet of gravity sewer) connected to the South 277th Interceptor. Predesign for the project is underway and will be completed in March 2005; final design will continue through August 2006. Construction is expected to begin in January 2007.

Projects in Construction/Underway

Kenmore Interceptor Flapgate Sensors

The Kenmore Interceptor, also know as the Lake Line, is a gravity sewer in Lake Washington that conveys sewage from the Kenmore pump station and Log Boom Regulator into the Matthews Beach Pump Station (Figure 3). The Lake Line has a series of seven flap gates that open automatically if the line becomes filled during extreme high flows, protecting the Matthews Beach Pump Station from flooding or shutting down. This only happens on rare occasions but, until recently, it was difficult to confirm whether the flap gates had opened and discharged sewage into the Lake. To address this issue, DNRP committed to a system that can monitor the flap gates using buoys and telemetry. The county completed the design of the flap gate monitors and the components were installed in July 2001. We then began testing the monitors and developing a response sequence for use by Wastewater operations and maintenance staff, who are working with the with the City of Lake Forest Park and the nearby community on ways to keep residents informed in the event the flap gates open. The south end buoy has been operational since August 2004. The north end buoy is undergoing field bench testing and configuration; it will then be used to train offsite staff and then deployed. Training will occur in February 2005. Final deployment and system test will occur in March 2005.

Pacific Pump Station

The existing 1.6-mgd Pacific Pump Station, located in City of Pacific right-of-way, has insufficient capacity to convey existing and estimated future peak flows. This project will construct a new 3.3-mgd pump station in an industrial zoned site suggested by the City two blocks to the west of the existing station, which will then be abandoned. The new pump station will have features that the existing pump station does not, such as standby power, odor control, improved access, and equipment lifting devices. A new forcemain will not be required, as recommended by the earlier planning study, since the flow projections have been revised. Predesign for the project was completed in June 2002 and the 90 percent design was completed in April 2003. Construction bids will be advertised in January 2004. Construction Notice to Proceed (NTP) was issued in June, and shoring and excavation have begun.

Projects Completed/Closed

North Creek Storage

Construction began in November 2001 on the 6-million-gallon North Creek Storage facility. This underground facility, located at the site of the North Creek Pump Station, will store sewage flows from the Bothell-Woodinville and North Creek Interceptors during large storms, providing protection against sanitary sewer overflows into Lake Washington upstream of the Kenmore Interceptor. After the storm, the stored wastewater will be pumped back into the interceptors. The six million gallons of storage was completed and online in December 2003. Project closeout will occur by the end of 2004. The project will be under warranty until mid-2005.

East Side Interceptor

The East Side Interceptor (ESI) is the primary conveyance for wastewater from the eastside communities to the South Treatment Plant. In 1965, Section 1 of the ESI was damaged during an earthquake. The repair of the damage reduced the capacity of the pipe. This project restores the East Side Interceptor to its original design capacity of 224 mgd by constructing 1,800 feet of 72-inch pipeline around the earthquake-damaged section. The construction used a tunnel-boring machine, placing the new pipe approximately 30 feet underground. Construction began in November 2001 and was completed in February 2003. Final close-out and commissioning were completed at the end of 2004.

Tukwila Interceptor and Freeway Crossing

King County DNRP is evaluating alternatives to upgrade portions of the Tukwila Interceptor and Tukwila Freeway Crossing under the I-5/I-405 freeway near Tukwila. The working alternative will initially parallel or replace portions of the Tukwila Freeway Crossing, but before the project is ready for predesign we will assess the impacts of the Port of Seattle SeaTac airport industrial waste discharges and development proposals in the Southcenter area of Tukwila. The schedule for this project is on hold, as preliminary indications are that capacity is available and flows from the Port of Seattle flows will likely not be a factor in accelerating the schedule for this project.

Odor Control

In July 2003, the King County Council passed Ordinance 14712, amending treatment plant policy TPP-4 as originally outlined in RWSP adopting Ordinance 13680. The purpose of the amendment was to adopt a set of specific odor control policies to achieve King County's odor control goal of preventing and controlling occurrences of nuisance odors at all treatment plants and associated conveyance facilities. The ordinance also requires an annual report to council outlining the status of the odor prevention policies and projects, including a summary of odor complaints. The following discussion meets these reporting requirements. The summary of odor complaints is provided as Appendix A.

Phased Retrofit of West Point & South Plant

Revised policy TPP-4 requires the implementation of phased improvements at the West Point and South Treatment Plants to control the most significant odor sources first. To that end, WTD has undertaken projects at each plant to identify and implement changes to existing odor control systems and to install new systems.

At the West Point Plant, design on improvements to the existing odor scrubber system will continue through 2005 and modifications should be complete by the end of 2006. Changes to the division channel ventilation system are also being designed, with completion of those changes scheduled for June 2005.

At the South Plant, WTD has begun modifying the aeration basins as required by policy TPP-4, covering a portion of the basins and treating the foul air under the covers prior to its release in the atmosphere. In addition, WTD is weighing modifications to the grit structure and the return activated sludge channels against alternative odor prevention modifications to determine which would best prevent nuisance impacts. We anticipate completing design and implementation of the modifications by the end of 2005 and 2006, respectively.

Existing Conveyance System Improvements

Revised policy TPP-4 also requires that existing conveyance system facilities that pose a nuisance odor problem or that will be upgraded to have odor control systems. Table 2 shows those conveyance facilities that will be outfitted with these controls. The type of control technology and the anticipated completion dates are also provided.

Table 2. Conveyance System Upgrades with Odor Control Components

Facility	Odor Control Technology	Anticipated Completion Date
Pepcon Replacement Study	Study Only – Technology TBD	Completed
53rd Avenue Pump Station	Carbon Bed Odor Scrubber	Dec-06
Bellevue Pump Station	Carbon Bed Odor Scrubber & Chemical Injection	Oct-07
Conveyance System Improvements (Sheridan Beach Odor Control)	TBD – Project in predesign phase	Dec-06
Eastside Interceptor Chemical Injection	Chemical (Nitrate) Injection	Dec-05
Elliot Bay Interceptor Odor Study	Study Only – Technology TBD	Dec-05
Hidden Lake Pump Station	Carbon Bed Odor Scrubber & Chemical Injection	Jul-07
Interbay Pump Station Upgrade	Carbon Bed Odor Scrubber	May-09
Juanita Bay Pump Station	Carbon Bed Odor Scrubber & Chemical Injection	Dec-07
King Street Regulator Odor Control	Carbon Bed Odor Scrubber	Dec-08
Kirkland Pump Station	Carbon Bed Odor Scrubber	Dec-08
Soos Creek Pump Station & Pipeline	Carbon Bed Odor Scrubber & Chemical Injection	Jun-09
University Regulator Station	Carbon Bed Odor Scrubber	Dec-09

TBD – to be determined

Brightwater Odor Control Design

The Brightwater Treatment Plant and conveyance system will be incorporating odor control systems based on proven technologies that will comply with the High/New Plant odor prevention level referenced in Attachment A of Ordinance 14712. The plant and conveyance system designs are nearing 60 percent completion and currently incorporate chemical absorption and carbon adsorption scrubbers. Pilot studies are currently being conducted to test the feasibility of using biologically based odor scrubbers at the South Treatment Plant. If testing shows that the same level of odor control could be attained more economically with the biological systems, then they would be used at the Brightwater facilities in lieu of the chemical scrubbers.

Odor Control Design Standards

In May 2002, the Wastewater Treatment Division published a document titled *Odor Control Design Standard*. The document, developed by WTD's Odor Control Taskforce with input by engineering, operations, and management personnel, identifies acceptable design parameters and administrative procedures to ensure an appropriate system is developed that will adequately control odors. The standards outlined in the document have generated interest from the region's engineering design and public utility communities.

Odor Comprehensive Plan Development

The odor control comprehensive plan is identified as one of the top ten priorities for WTD's asset management section. A draft of the comprehensive plan has been prepared and we expect to complete the plan by the end of 2005.

Infiltration and Inflow

The regional Infiltration and Inflow Control Program is a comprehensive six-year study to identify sources of infiltration and inflow (I/I) to the regional system, establish the cost effectiveness of removing I/I, and recommend actions to control I/I in the future. The study runs through 2005, after which a long-term program will be implemented based on the recommendations of this study. The primary goal of the study is to determine the cost effectiveness of rehabilitating pipelines to remove infiltration and inflow from private and public sewers and if these improvements are more cost effective than building new conveyance facilities to handle the extra flow.[6] Several features distinguish the regional Infiltration and Inflow Control Program from other I/I control programs in the country.

- The program is voluntary. Other I/I control programs were developed in response to federal or state agency consent orders or other regulatory mandates. King County and local agencies initiated the program in an effort to increase system efficiencies and control wastewater treatment rates
- The program involves pilot projects in local systems. It is unusual for a regional wastewater agency to participate in sewer rehabilitation projects in local systems, including lateral and side sewer projects on private property served by these systems
- The program tests new assessment and rehabilitation technologies. The technical report on the pilot projects contains valuable information that agencies can use as a resource for their I/I control efforts
- The program includes a comprehensive flow monitoring effort. With over 800 flow meters installed the first year and 775 the second year, the two-year flow monitoring study enabled the county and local agencies to dramatically improve their understanding of the system

Most important, the program is being planned and implemented in partnership with the local agencies that contribute wastewater to the King County system. Since the study began, the county has conducted more than 50 meetings and workshops with the Metropolitan Water Pollution Abatement Advisory Committee (MWPAAC)—a committee composed of representatives from the local agencies. A benefit of this collaboration has been a strengthening of relationships, a better understanding of local and county needs, and a solid foundation for future collaborative projects that could enhance resource management and reduce costs for each agency and its customers.

[6] To learn more about infiltration and inflow at http://dnr.metrokc.gov/wtd/i-i/index.htm

MWPAAC has worked closely with the county and its consultant in identifying and selecting the pilot projects, developing draft standards, reviewing pilot project results, and helping to define a range of alternatives for long-term I/I control. Much of the consensus building and decision making has taken place in a series of workshops. These workshops facilitated discussion and generated valuable insights that have helped shape the development of the long-term I/I control plan.

Alternatives Report

The King County Executive will submit an Alternatives Report by March 1, 2005 to the King County Council. The report, required per RWSP Policy I/IP-2.3, will present a set of options for consideration in developing a long-range I/I control program. Other information and analyses will be included in the Alternatives Report as well.

- Draft standards, procedures and policies for rehabilitating systems
- Funding approaches for I/I reduction
- Approaches to conducting work on private property

RWSP Policy I/IP-2.3 also states that the report should include information on public opinion, obtained through surveys, regarding the program. In November a public opinion survey was conducted by telephone within the regional service area. This survey included 400 homeowners in the general service area plus 100 from three of the pilot project areas. They were asked about their role as a property owner in implementing solutions to reduce I/I, whether they preferred having voluntary and/or mandatory property owner actions, their willingness to pay to reduce I/I, and what would be acceptable community options to reduce I/I. A final summary and analyses from the survey will be included in the Alternatives Report.

Needs Assessment

King County DNRP will now conduct a regional needs assessment of its conveyance system. This assessment will project when conveyance facilities will exceed the adopted 20-year peak flow capacity standard, and estimate the costs of new facilities needed to meet the peak standard. By March 1, 2005, an analysis of flow monitoring data for the pilot projects and cost comparisons with traditional methods for providing capacity will be complete.

Pilot Projects

In October 2004 King County issued the Pilot Project Report,[7] which describes the I/I control methods employed to rehabilitate local systems, costs, the selection process for the pilot projects, rehabilitation effectiveness, individual project costs and the lessons learned. Construction of the pilot projects started mid 2003 and all were completed by January 2004. Table 3 summarizes the results of the I/I pilot projects. Results of post-rehabilitation flow monitoring, conducted in each of the pilot project basins during the winter of 2003-2004, were compared with results of pre-rehabilitation flow monitoring. Computer simulation models were developed and then calibrated to the pre and post-measured flow responses to a continuous 60-year record of storms. These models help to establish a common basis for determining I/I reduction effectiveness and to project the 20-year peak flow rates in each basin.

I/I Benefit/Cost Analysis

Work is currently underway to determine which I/I reduction efforts will be cost effective. The I/I monitoring data has been used with a computer model to estimate peak flows everywhere in the King County collection system. Future flows have been projected in each trunk and interceptor and estimates have been made for when each conveyance facility will be at capacity and when additional facilities will be brought on line. This establishes the baseline conditions for cost comparison to I/I removal. Based on I/I pilot project results, plus further analyses of alternatives and option in the Alternatives Report and Needs Assessment, DNRP will make conclusions as to the cost and effectiveness of I/I reduction efforts in various combinations of the 775 mini-basins in the County service area. This will result in developing a recommended cost-effective (benefits greater than costs) I/I Program for Council consideration.

Environmental Assessment

County staff from the Water and Land Resource Division's Science Section, Hydrologic Assessment Group, prepared an assessment of potential environmental benefits and impacts of I/I removal as required in RWSP Policy I/IP-1. The report concludes that infiltration removal will likely have a small benefit to groundwater recharge, but depending upon the quantity of I/I flows removed from the system there may be flooding, erosion, and/or slope stability impacts. Information from the Pilot Projects related to removal efficiencies will help quantify potential volumes of water directed to downstream drainage systems or infiltrated to ground water. The report recommends reviewing proposed I/I rehabilitation projects on a case by case basis for potential impacts during the SEPA and permitting process.

[7] October 2004. Pilot Project Report. King County Department of Natural Resources and Parks, Wastewater Treatment Division.

Table 3

Summary of Infiltration and Inflow Pilot Project Results

						20 Year Peak I/I [b]				
	Mains	Manholes (MH)	Laterals (L)	Side Sewers (SS)	% of Basin Improved [a]	Pre-Rehab (gpad)	Post-Rehab (gpad)	Reduction %	Construction Cost	Total Cost
Auburn	o	o	o	o	11% of mains	8,900	8,900	NMR	$ 384,700	$ 749,400
Brier	o	o			23% of mains	10,100	5,000	50%	$ 472,700	$ 820,400
Kent			o	o	100% of L and SS	12700	3100	76%	$ 1,080,700	$1,446,900
Kirkland	o	o	o		25% of mains	11,000	7,900	28%	$ 838,200	$1,190,400
Lake Forest Park	o	o			35% of mains	22,500	7,100	23%	$ 790,400	$1,228,900
Manhole Project [c]		o				17,800	16,300	23%	$ 200,800	$ 660,200
Mercer Island	o				70% of mains	8,200	5,200	37%	$ 815,800	$1,218,600
Redmond	o	o	o		36% of mains	1,000	1,000	NMR	$ 840,100	$1,273,400
Ronald			o	o	72% of L and SS	18,200	4,800	74%	$ 1,077,300	$1,531,400
Skyway	o	o	o	o	100% of mains	63,200	8,400	87%	$ 1,395,200	$1,883,900

NOTES:

NMR = no measurable reduction.

[a] The column titled "% of Basin Improved" refers to the percentage of the identified elements of the sewer system that were rehabilitated during the pilot project.

[b] The 20-year peak pre-rehabilitation I/I rate is a model-predicted rate; the I/I rates used to select the pilot projects were the measured I/I rates for the maximum storm observed during the flow monitoring period.

[c] The pre- and post-rehabilitation flows shown for the Manhole Project are the combined flows for all three basins in the project. The 23 percent reduction occurred in the Northshore basin; here was no measurable reduction in the Coal Creek and Val Vue basins.

Schedule for 2005

Pilot Projects

Warranty inspection of the pilot projects will be done in early 2005 when the ground is wettest and any I/I coming through the rehabilitated area can be most easily identified. Due to the variety of rehabilitation techniques used, the County asked for extended warranty periods of 12 to 24 months for the various rehabilitation techniques. Results from this work will be summarized into an addendum to the Pilot Project Report.

During the 2004–2005 winter season the program staff will continue to monitor the pilot basins to measure changes in I/I levels. This second year of post-construction monitoring will provide a full season of wet weather data for analysis.

Alternatives Report

Work on this Alternatives Report will continue through the first three months of 2005. Representatives from King County and the local agencies will continue meeting to discuss the report and the future program. The King County Executive is scheduled to present this report to the Council in March 2005.

Standards, Procedures, and Policies

Based on what was learned from the Pilot Projects, the MWPAAC Engineering & Planning (E&P) Committee reviewed the draft regional design standards, procedures, and policies for new construction, rehabilitation of existing sewer systems, and sewer system maintenance. In 2005, the Committee wants to discuss whether these standards and procedures should be implemented as guidelines or standards.

Conveyance System Modeling

The baseline of conveyance facilities required through 2050 has been derived using all the I/I monitoring data collected and modeling performed to date. This set of new facilities (based on planning assumptions agreed upon with the E&P Committee) form the basis for the benefit-cost analysis to determine cost effective I/I reduction projects. The benefit-cost analysis is underway and will continue during the first half of 2005. The analysis will provide a list of I/I reduction projects that result in a lower total cost than merely conveying and treating the non-reduced I/I that is projected. The results of this analysis will be used in developing the King County executive's recommended plan.

Local Agency Workshops

No full program workshops are anticipated for the first half of 2005; however, MWPAAC's E&P Committee will continue to meet with staff and consultants to continue its collaborative efforts on developing the long-term program.

Cost Effectiveness

As information becomes available on the cost-effectiveness of I/I control, the County will assess the benefits of I/I control measures versus identified conveyance improvements. If I/I measures are deemed more cost-effective in specific areas of the system then staff must determine if related conveyance projects might be delayed, reduced in scope, eliminated, or broken into phases. Council action on an I/I program is necessary before actual I/I rehabilitation projects could be implemented.

Long Term Regional Program

By December 31, 2005, the County Executive will submit to the County Council a plan for a long-term Regional I/I Control Program. The plan will identify target I/I levels for local systems. It also will identify long-term I/I control measures to meet these targets and to serve as cost-effective alternatives to planned conveyance projects. This long-term Program is required in RWSP Policy I/IP-2.4.

Combined Sewer Overflows

The primary work effort for the Combined Sewer Overflow (CSO) Control program in 2004 has been to lay the groundwork for future combined sewer overflow control projects and to progress in the technical work of the 2005 CSO Update. This work includes coordinating with the City of Seattle on their CSO Plan and continuing our response to the Environmental Protection Agency's Superfund listing of the Lower Duwamish Waterway. We are also moving forward with our sediment management plan. Each of these activities is described in more detail below.[8]

CSO Control and Improvement

This project will implement 21 combined sewer overflow control projects identified in the Council-approved Regional Wastewater Services Plan between the years 2005 and 2030. Combined sewer overflows are discharges of dilute wastewater to receiving waters that occur primarily during large storms when excess rainfall exceeds the capacity of the pipelines. These discharges can contribute pathogens, organic material, sediments, and chemicals to local waterbodies. The County owns 38 CSO outfalls which are located along Lake Washington, the Ship Canal, the Duwamish River, Elliott Bay, and Puget Sound.

Discussions continued with the City of Seattle and Washington Department of Transportation on stormwater management for the Alaskan Way Viaduct and Seawall Replacement project. The Draft Environmental Impact Statement was issued, recommending that traditional "Best Management Practices" for stormwater management be implemented for the project, rather than treating separated stormwater along with combined sewage at an accelerated County CSO treatment facility at Connecticut/Royal Brougham. To review and supplement the technical work supporting the DEIS decision, the City of Seattle is conducting a feasibility study of the two original alternatives, along with several new variations. The study will be completed by early spring 2005.

Year 2005 CSO Plan Update and Program Review

This project is reviewing the CSO Control Program and adjusting the program as needed to meet on-going regulatory requirements and County business needs. The review will provide formal opportunities to assess the impact of new regulations and initiatives affecting the CSO Plan such as Total Maximum Daily Loads (TMDLs), Endangered Species Act (ESA), and proposed Superfund listings. The CSO Plan Update is required by the Department of Ecology and the NPDES permit for West Point. The Update will assess progress to date, status of current projects, and description & schedule for CSO projects scheduled for completion in the next five

[8] To learn more about CSOs, please visit the Web site at http://dnr.metrokc.gov/wtd/cso/index.htm

years. These projects, as currently scheduled, include the Murray CSO storage tank, the Barton pump station, the South Magnolia CSO storage tank, and the North Beach CSO storage tank and pump station.

As part of the 2005 Update process, King County is required to conduct a program review, which has several objectives.

- Maximize use of existing CSO control facilities
- Identify the public and environmental health benefits of continuing the CSO control program
- Ensure projects are in compliance with new regulatory requirements and objectives such as the ESA and the Wastewater Habitat Conservation Plan
- Analyze rate impacts to ensure that the program review will honor and be consistent with long-standing commitments
- Assess public opinion
- Integrate the CSO control program with other water/sediment quality improvement programs for the region

Any program changes recommended by the Executive, Regional Water Quality Committee, and the King County Council will be addressed in the Plan Update that follows the program review. Final planning for the first CSO control projects under the RWSP will begin following the late 2005 completion of the program review and Plan Update process.

Lower Duwamish Superfund Site

King County DNRP is partnering with the City of Seattle, the Port of Seattle, and Boeing-in coordination with EPA and Ecology-under a consent agreement to prepare a remedial investigation and feasibility study (RI/FS) for the Lower Duwamish Waterway Superfund Site. The agreement gave DNRP the opportunity to shape the process and to implement any clean ups earlier than would occur under a traditional Superfund approach. King County DNRP is continuing to meet the consent agreement. It has completed the Phase 2 work plan and is completing the field studies needed to complete the remedial investigation. Work is also starting on the feasibility study that will outline alternatives for the final cleanup of the Site. The partnership has committed to moving forward on four of the early action sites which will get those portions of the waterway cleaned up years earlier. We are also participating in two of those early action sites at Diagonal/Duwamish CSO and Slip 4.

The cleanup of contaminated sediment at Diagonal/Duwamish was successfully completed in February 2004. King County oversaw the removal of about 60,000 cubic yards of sediment over a 7-acre area of river bottom in the Duwamish industrial area. The dredged area was covered with 3 to 6 feet of clean sediment and rocks for new fish habitat, helping to restore a vital area of the river environment. In addition, lessons learned during this project will lead to further improvements in best

management practices for dredging. Some followup work is being completed at the site this winter. The study for cleanup of Slip 4 has started and the alternatives analysis should be completed by the fall of 2005.

DNRP worked with the City of Seattle and Port of Seattle to secure a state grant for the portion of this work done in the 2003-2005 biennium and will be pursuing funds for the 2005-2007 biennium.

Sediment Management Program

King County is responsible for cleaning up sediment contamination related to combined sewer overflows under the federal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the state Model Toxics Control Act (MTCA). King County's plan is to comply with these regulations and meet the following objectives.

- Remediate sediments in a timely, efficient, and economical manner
- Prevent harm to public health
- Limit future liability

King County has begun the first of the cleanup sites in front of the old Denny Way outfall structure. This 3-year project will clean up the remaining contaminated sediment in the nearshore area adjacent to the Denny outfall. Cleanup is also underway at the Lander and Hanford CSOs, with dredging at Hanford nearly complete. DNRP is currently negotiating cost share responsibilities with the Port of Seattle, the City of Seattle, and others.

Schedule for 2005

The first major accomplishment of the CSO Control Program in 2005 will be the completion of the Henderson/Martin Luther King and Denny Way/Lake Union CSO Control Projects by early spring. Denny will control the largest CSO in the County's system, decreasing annual overflow volumes nearly 500 million gallons per year—a third of the remaining CSOs – as well as control the City of Seattle's CSOs to Lake Union. Henderson will control the last County CSO discharge to Lake Washington, as well as at Norfolk near the turning basin of the Duwamish River, where a contaminated sediment remediation has been completed. Efforts to increase collaboration and coordination with the City of Seattle on CSO control will continue, including recommendations for stormwater management and other joint project opportunities. These opportunities will be incorporated in the amendment of the CSO Control Plan to be completed in 2005.

Biosolids

King County continued its ongoing effort of produce Class B biosolids at the regional treatment plants. King County produced approximately 125,000 wet tons of biosolids in 2004, all of which was recycled for use in compost, forestry, and agricultural applications.[9] In addition, new high-solids centrifuges are scheduled for installation at the South Treatment Plant by the end of 2004. These new facilities are projected to reduce the amount of biosolids produced in 2005 to 110,000 wet tons.

Schedule for 2005

King County DNRP will continue producing Class B biosolids at its regional treatment facilities. Staff will continue to investigate cost-effective means to achieve Class A biosolids at these facilities Design work will be initiated on the West Point Digestion System Improvements project. This 3-year project is intended to increase the stability of the digestion system and decrease the potential for digester upsets. In addition, new high-solids centrifuges were installed at the South Treatment Plant at the end of 2004 and operation will be initiated in early 2005. These new facilities are projected to reduce the amount of biosolids produced in 2005 to 110,000 wet tons.

[9] Please visit http://dnr.metrokc.gov/WTD/biosolids/ for more information on biosolids recycling

Water Reuse & Conservation

The goal of the King County's Water Reuse program is to use reclaimed water to meet the water resource needs of this region's residents and environment. The primary implementation effort to date has been the planning and preliminary design of the Sammamish Valley Reclaimed Water Production Facility. This project has recently been cancelled in favor of reuse capabilities at the Brightwater plant, as described below. This section also describes the efforts to date under King County's five-year water conservation program.

Sammamish Valley Reclaimed Water Production Facility

The approved Regional Wastewater Services Plan identified policy direction to guide the development of reclaimed water; namely, to actively pursue and to accelerate the development of a water reuse program; and to investigate recycling and reusing reclaimed water as a significant new source of water.

In 2004, DNRP reduced the scope of the Sammamish Valley Reclaimed Water Production Facility. The facility was planned to produce approximately 1.5 million gallons of reclaimed water throughout the summer irrigation season to irrigate nearby farms and recreational venues. The facility was projected to cost approximately $35.1 million. DNRP began working on the revised scope in the later part of 2004 and then stopped work per council direction. DNRP subsequently began predesign work on a project to supply reclaimed water to the Sammamish Valley using conveyance lines from the Brightwater Treatment Plant. Predesign will evaluate marketing and distribution of reclaimed water as well as the design of dedicated reclaimed water pipes in the Brightwater combined tunnels. See the Brightwater discussion earlier in this document for more details on the Brightwater reclaimed water project.

Water Conservation Program

Under the Regional Wastewater Services Plan, the King County Council decided to implement a water conservation program to provide a holistic approach in water resource management and to reduce impacts to the wastewater system.[10] Specifically, the RWSP policy calls for King County to "support regional water supply agencies and water purveyors in their public education campaign on the need and ways to conserve water through pilot projects that support homeowner water conservation, emphasizing strategies and technologies that reduce wastewater." Water conservation minimizes the loss of potable water into the wastewater stream, thus decreasing the demand for this valuable resource from fish-bearing streams and

[10] For more information about King County's Water Conservation Program, call (206) 296-8361.

decreasing the baseflow of wastewater to treatment plants. Water conservation projects are being implemented as a form of "demand management" under the RWSP. The program has committed $300,000 per year for a five-year program through 2005. The program focuses on implementation of water conservation retrofits that result in substantial water conservation savings and public education.

Water Conservation Retrofits

In 2004, King County continued its efforts to install water conserving fixtures in King County parks, pools, the Youth Services Center, and animal shelter facilities. These fixtures included toilets, urinals, faucets, faucet aerators, and timed showers. The fixtures are projected to save over 4,000,000 gallons per year, which will amount to considerable savings in energy, water, and sewer charges to these facilities.

The Millionaire Club and The Compass Center also received water conserving washing machines, toilets, and faucet aerators. These non-profits provide hygiene centers and other job finding assistance for homeless and unemployed individuals.

The King County Housing Authority was provided with funds to retrofit 824 units with water conserving appliances. This completes the work with the housing authority and means that all of their properties in the county are now retrofitted.

Public Education and Outreach

The water conservation program again contributed to the Water Conservation Coalition of Puget Sound's Regional Public Awareness Campaign. Bert the Salmon water conservation baseball cards were handed out at a variety of events and venues. King County's water conservation Web site[11] continued to provide a resource.

Schedule for 2005

Public education and water conservation retrofits will continue in 2005. Highlights of the 2005program will be the completion of water conserving retrofits at King County Park facilities, Harborview Medical Center, King County Public Health facilities and the King County Jail. We will again particpate in the Regional Public Awareness Campaign of the Water Conservation Coalition of Puget Sound. This is the last year of this capital program, so projects will be completed by the end of the year.

[11] The water conservation Web site can be accessed at http://dnr.metrokc.gov/wtd/waterconservation/

RWSP Project Information

This section provides additional information for each RWSP capital project as required by Ordinance 14018 in the 2001 Budget Proviso; namely, the year-to-date budget and staffing status. The projects are organized in the following tabs as shown in the Table 4.

Table 4. RWSP Capital Improvement Projects

Project	Project Number
Tab 1 - Treatment Improvements	
Brightwater Treatment Plant	423484
Brightwater Conveyance	423575
Tab 2 - Conveyance Improvements	
RWSP Conveyance System Improvements	423373
Soos Creek Pump Station D and Pipeline D	423583
North Creek Storage	423519
Tukwila Interceptor/Freeway Crossing	423520
Hidden Lake/Boeing Trunk Upgrade Improvement	423365
Juanita Bay Pump Station Modifications	423406
Pacific Pump Station	423518
Bellevue Pump Station	423521
Tab 3 – Infiltration & Inflow	
RSWP Local System I/I Control	423297
Tab 4 - Combined Sewer Overflow	
CSO Plan Update	423441
Sediment Management Program	423368
Tab 5 - Water Reuse	
Sammamish Valley Water Reuse Satellite Facility	423528
Water/Wastewater Conservation Program	423523

Table 4 shows that there are 15 RWSP capital projects in various phases of design, construction, and completion. An example of the information provided for each project is shown in Figure 4, including the project's scope, milestones, schedule, budget, and contract status. Each of these fields are described in more detail below and are consistent with the reporting requirements for Regional Wastewater Services Plan projects per Ordinance 13680 and by proviso in Ordinance 14018.

Project Number

Each wastewater capital project is assigned a six-digit number such as 423413. The first two numbers (42) identify this as a wastewater project (as opposed to a transit project or roads project). The third number (3) identifies the project as a capital project (as opposed to operating) and the last three numbers are sequential numbers reflecting the order the projects were assigned in a particular year.

Appropriation and Percent Spent

The appropriation is the project budget for the year; that is, the amount of money the King County Council authorized to be spent on the project that year. The "Percent Spent" number reflects how much of the budget has been spent as of the reporting period. However, projects in construction have their entire construction contract amount appropriated in the first year of construction, even if it's a multi-year construction project. As such, the percent spent value for these projects will be very low early in the project life.

Project Scope & Milestones

The project scope gives a brief overview of the project as described by the project manager. In general, the narrative describes the project and its purpose. The project milestones identify timeframes for important achievements in the project lifecycle. The milestones listed for projects in this document are primarily for the year 2003.

Schedule

The project schedule information includes a start date and an end date for the project phases that are appropriate for that project. There are six phases for construction projects: planning, predesign, final design, implementation, closeout, and land acquisition.

Project Cost

Project costs are provided for contracts, staffing, and permits & right-of-way (ROW) expenditures. The costs come from the IBIS financial reporting system and are reported both year-to-date and life-to-date for the month indicated.

Contract Information

There are generally four types of contracts associated with wastewater capital projects as identified by the first letter in the contract number: 'P' denotes a professional services contract, 'E' denotes an engineering & architectural services contract, 'T' denotes a technical consultant services contract, and 'C' denotes a construction services contract. The information provided for each contract is the total paid by project as of the report date and the contract amount. In some cases, a contract may support several projects, such as on call services, so the project may use only a portion of the contract amount.

Figure 4. Project Information Sheet

Project No. and Title
423519 North Creek Storage Facility

Council District: 01
Project Manager: Dittmar, David

2004 Adopted Budget: $2,741,944
Percent Spent: 32%

Phase: Construction (CM Support)

Appropriation:
A20420 Conveyance Pipelines and Storage - New Facilities &

Project Scope
Construction began in November 2001 on the 6-million-gallon North Creek Storage facility. This underground facility, located at the site of the North Creek Pump Station, will store sewage flows from the Bothell-Woodinville and North Creek Interceptors during large storms, providing protection against sanitary sewer overflows into Lake Washington upstream of the Kenmore Interceptor. After the storm, the stored wastewater will be pumped back into the interceptors. The six million gallons of storage was completed and online in December 2003. Project closeout will occur by the end of 2004. The project will be under warranty until mid-2005.This project is a part of the Regional Wastewater Services Plan.

Schedule Phase	Start	Finish
1 Planning	6/18/1999	6/18/2000
2 Predesign	6/5/2000	9/1/2000
3 Final Design	9/2/2000	11/1/2001
4 Implementation	11/2/2001	12/31/2004
5 Closeout	1/1/2005	7/1/2005
6 Land Aquisition		

Project Cost Type of Project Cost	Year to Date NOV-04	Life to Date NOV-04
OWNER FURNISHED	($6,637)	($6,637)
PERMITING & OTHER	$4,234	$2,426,986
RIGHT OF WAY	$0	$80,000
STAFF LABOR COSTS	$155,459	$1,211,189
CONSTRUCTION	$454,931	$20,335,367
ENGINEERING	$248,940	$4,257,496
Total Project Cost:	$869,986	$28,476,517

Current Contract Information

Contract Number and Title	Total Paid by Project	Contract Amt
C13008C/NORTH CREEK STORAGE FACILITY PROJECT	$19,071,964	$1,869,673
E06017E NORTH CREEK STORAGE FACILITY PROJECT	$2,467,109	$2,501,717
P03013P/CM SVCS FOR THE NORTH CREEK STORAGE FACILITY PROJECT	$1,258,351	$1,902,819
P93013P ON-CALL MANAGEMENT, PROFESSIONAL AND TECHNICAL SERVICES FOR	$31,692	$1,600,000

Appendix A – Odor Complaint Summary

Location	Date	Complaint	Resolution
West Point Treatment Plant			
4600 Lawton Lane W.	4/2/04	Resident sensed odor outside approximately one mile from West Point Treatment Plant.	Complainant location 1 mile east of plant, wind direction (NNE) should send any odor away from complainant. Suspect that it is a local sewer issue. Designated as a non-county complaint.
West Point Treatment Plant	7/28/04	Complainant reported odors from north beach area, as well as odors in the past from the south beach area.	Odors potentially from digester foam. Discussed ongoing odor control strategy with complainant. The odor problem was apparently temporary in nature and the source could not be positively identified. No further action taken.
West Service Area Offsite			
University Regulator	12/15/03	Complaint stated that odors were emanating from intake of ventilation system located directly across the street from regulator.	Carbon sample collected from scrubber, pH result slightly low. Pending upgrade to the odor control system should alleviate the problem. No action at this time.
4926 So. 107th Street	12/29/03	General odor complaint filed by neighboring business.	Address not served by KC sewer system. Complainant was concerned about odors emanating from neighbors property (septic system). Referred to KC Dept. of Public Health, designated as a non-county complaint.
McAleer Trunk and Odor Control Unit	1/07/04	General odor complaint filed by Ms. Hamel.	Power outage due to snow/rain caused OCU to be off-line. Odors likely caused by the increased flows at Ballinger pump station. Warned complainant that additional odors existed until power restored.
McAleer Odor Control Unit	1/26/04	Complaint filed by the City of Lake Forest Park.	Carbon in the odor control unit has been changed to control odors.
2507 NW 202nd St, Shoreline	3/21/04	General odor complaint filed by Mr. Irwin.	Odor source traced to the Chevron Plant located near the Richmond Beach pump station. Designated as a non-county complaint.
North Portal	5/1/04	General odor complaint filed by nearby resident (Mr. Mass).	Investigation did not reveal any odors. Verified that all odor control units were operating properly at Matthews, Pepcon unit in operation. The odor problem was apparently temporary in nature and the source could not be positively identified. No further action taken.
Matthews Beach Pump Station	6/8/04	Complainant called when operators were pumping down and hosing wet well at Kenmore.	Kenmore Pump Station wet well unusually greasy and septic. Odor control unit operating at Matthews but it may have been temporarily overwhelmed by the severely odorous wastewater that resulted from the wetwell cleaning. No further action taken.
West Seattle FM Drop Structure	7/6/04	Complaint filed by worker near 60th & S. Spokane St.	Carbon in unit spent, replaced media on 7/8/04
14th Avenue SW, 7900 block, Highland Park	7/17/04	complaint in an area with city of Seattle sewer lines; complainant noticed that odors were chemical-like, not sewer.	Directed him to city of Seattle and for future odors to call the Puget Sound Clean Air Agency. Designated as a non-county complaint.
12532 Riviera Place	7/20/04	General odor complaint filed by resident near Riviera Place (Ms. Hayes).	Odors created when raw sewage pump at Matthews didn't start when called upon, resulting in high levels in the wet well and conveyance system, thus pushing air out the collection system. All odor control equipment in operation at time of investigation. The pump was repaired which should solve the problem.

Location	Date	Complaint	Resolution
Matthews Pump Station	7/22/04	General odor complaint filed by resident near Mathews Pump Station (Mr. Cass).	Odors created when raw sewage pump at Matthews didn't start when called upon, resulting in high levels in the wet well and conveyance system, thus pushing air out the collection system. All odor control equipment in operation at time of investigation. The pump was repaired which should solve the problem.
3637 Thorndyke Ave W.	7/23/04	General odor complaint filed by resident near 3637 Thorndyke (Ms. Birkenkaph).	Inspection of the EBI junction structure conducted the previous day. Facilities group will verify that the cover was sealed after the inspection.
Logboom Regulator	7/27/04	General odor complaint filed by resident on Beach Drive (Ms. White).	Upon investigation, no odors sensed around the area and the odor control unit working properly. Patrons in the park also did not sense any odor. The odor problem was apparently temporary in nature and the source could not be positively identified. No further action taken.
Lake City Regulator	8/3/04	Rotten egg odors sensed upon investigation, emanating from odor control unit stack.	Adjusted Phoenix canister unit water regeneration cycle from 48 to 24 hours.
West Seattle Bridge – west end	8/9/04	Complainant unsure if odor was wastewater.	Upon further investigation, odor source was the steel mill nearby.
2415 SW Myrtle Street, Highland Park area	8/10/04	Complaint via Puget Sound Clean Air Inspector.	Initially thought that there were no KC manholes or lines within area of complaint, but reviewing one-line diagrams source could be from Delridge Interceptor. No odors reported at time of investigation, but above-ground drainage into a nearby creek from construction work could have resulted in odors near the complainant's property. Notified city of Seattle sewer.
Manhole 11-53, upstream of Kenmore P.S	8/12/04	Manhole cover has been sealed previously, but KC staff has been in manhole recently; flow metering equipment may be installed.	Replaced missing plug in cover and will look into ways of providing a good seal if manhole is routinely opened for data collection.
Richmond Beach/Edmonds Interceptor manholes	8/17/04	Complainant walks along street and noticed odors becoming stronger and manhole covers missing plugs.	Operator replaced missing plugs from manholes 09-13. Another potential source of odors could be that the city of Edmonds has a bypass pumping operation that discharges into KC manhole 11.
Bifurcation Structure hatches, Commodore Way	8/20/04	Complainant at 3030 Commodore Way reported obnoxious odors out of hatches in the street.	Upon investigation, no odors sensed by the operator ensured the hatches were sealed to prevent odor leaks.
Homes along 3100-3200 block of Commodore Way	8/23/04	General odor complaint from resident at 3640Commodore Way lead to a further investigation based on complaint received on 8/20/04 with respect to the bifurcation structure/Commodore Way	Investigation revealed that some homes along W. Commodore Way are connected to the old Ft. Lawton Tunnel and that recent West Point power outages have increased wet well levels, possibly causing sewage to back-up into tunnel. The problem was apparently temporary in nature and no further action was taken.
Lake City Regulator	8/31/04	Complainant and operator sensed sewage odors at her work site, located across the street from the Lake City Regulator Station.	The Phoenix and deep bed carbon unit were both in operation at the time of complaint. It was not clear if the odors were from the Regulator Station or local sewer. The problem was apparently temporary in nature and no further action was taken.
Lake City Regulator	9/2/04 & 9/4/04	Resident near 7th & 40th called in both complaints.	Upon investigation, there were no odors sensed inside/outside of pump station. Potential problems with Phoenix odor control unit. Experiencing problems with the Phoenix odor control unit; canisters changed out. No other odor complaints from Lake City since the change-out.
Lake City Regulator	9/7/04	Resident near the Lake City Regulator called in a general odor complaint.	Experiencing problems with the Phoenix odor control unit; canisters changed out. No other odor complaints from Lake City since the change-out.

Location	Date	Complaint	Resolution
2871 29th Ave W.	10/26/04	Homeowner having odor problems for 2 years. Had RotoRooter clean local sewer line 75 feet from house, but odors persisted.	Source of odor found to be from his roof vents. Designated as a non-county complaint.
19014 22nd Ave NE, Lake Forest Park	11/09/04	Homeowner sensed odors coming out of toilet every so often.	Operator suggested homeowner to seek out a plumber to clean out the line in his house. Designated as a non-county complaint.
South Treatment Plant			
South Treatment Plant	4/20/04, 4/23/04, 4/27/04	All three complaints from offices located east of 7th Avenue gate.	No treatment plant odors sensed by KC responders at complaint sites, though some workers standing outside sensed "garbage" type odors. Could sense "ammonia" odors outside 7th Avenue gate. All odor control units were in operation, biofilter running and prechlorination in service.
South Treatment Plant	5/4/04	Odor complaint received via Puget Sound Clean Air Agency; they responded to citizen providing information regarding recent inspection and future odor control upgrades at the plant.	KCDNRP-WTD communications also sent a formal reply to the complainant. Without specific complaint information it was difficult to investigate the source of the complaint. The odor problem was apparently temporary in nature and the source could not be positively identified. No further action taken.
South Treatment Plant	7/13/04	Complainant stated that odors were sensed all day inside Boeing building 25-01. Odors were entering via HVAC/air conditioning unit. Odors were quite strong morning of 7/13.	No odors sensed upon investigation. Odor improvement project underway at the South Treatment Plant that should alleviate this type of problem. No further action taken at this time.
South Treatment Plant	7/13/04	Complaint via call and KC website. Complainant lives quite a distance north of the plant, but took a plant tour in May and is convinced that odors sensed were from aeration tanks.	No odors sensed at residence at time of investigation. Formal response written and sent out by Mike Fischer.
7603 South 128th St. / South Treatment Plant	8/19/04	Complainant sense odors inside house; positive that odors are coming from aeration basins.	Investigation at time of complaint revealed no odors sensed at residence.
South Treatment Plant	10/19/04	Two Boeing employees relayed concerns about health effects associated with odors to Boeing Industrial Hygienist. Requested information regarding STP emissions monitoring, types of emissions and if STP provides Public Outreach for complaints.	Provided flyer (dated 12/13/02) regarding STP wastewater emissions. John Phillips contacted Boeing and explained WTD's Public Outreach program.
South Treatment Plant	10/26/04	Complaint called in from Boeing Training Center. Complainant did not sense odor at time of complaint; just wanted to inform plant that he sensed the odors off and on, at various times. Stronger than normal odors sensed from the aeration basin area	Cleaning aeration basin diffusers at the time of the complaint which may have released odors. Odor improvement project planned for 2005 – 2006 should alleviate this problem. No further action at this time.
South Treatment Plant	10/26/04	Complaints called in from KC DDES building (Oaksdale Ave.)	No odors sensed at complainant site upon investigation. Stronger than normal odors sensed from the aeration basin area (cleaning diffusers at the time).
South Treatment Plant	11/26/04	Complainant noticed odors on 11/19 but did not call plant until 11/26.	Reviewed operator logs on 11/19 and no unusual plant activities documented. Operations performed odor investigation at the two locations where complainant sensed odors (Grady Way and Interurban, Skyway near home), no odors detected at either location.

Location	Date	Complaint	Resolution
South/East Service Area Offsite			
Bellevue Pump Station	12/22/03	Complainant (Hopelink Center) has previously called about sewage / manure odors sensed next to the pump station	No odors sensed upon investigation, Verified that the pepcon odor control unit was operating properly. No further action taken.
Bunker Trail Lift Station #4	1/23/04	General odor complaint filed by Mr. Huggins.	Currently adding chemical (AQUIT) at BT-1, but high H2S still being measured at BT-4. Neighbor is appreciative of what we're doing, though getting frustrated that the problem is not solved. Additional chemical injection methods to be tested.
North Creek Force Main Discharge	3/18/04	Nursery workers sensed odors north of scrubbers that control odors from the force main discharge.	Specialty carbon testing ongoing at site. Midas carbon low H2S exhaust (8 ppb), regular caustic-impregnated carbon 35-43 ppb. Revalved air duct system so all foul air can go through Midas carbon until scrubber containing spent carbon is changed out (3/23/04).
256th St & 116th Ave, Kent	3/31/04	Received call from the Puget Sound Clean Air Agency about odors in Soos Creek neighborhood.	Initial investigation did not detect odors and thought to be part of the Soos Creek Water and Sewer District. Later confirmed that the odor was emanating from manhole (Kent-Cascade line, force main discharge) that King County took ownership of a few years ago. Manhole sealed.
York Force Main Discharge Structure	4/08/04	General odor complaint filed by nearby resident (Ms. Green).	Slight sewage odors detected at discharge structure upon investigation. High H2S recorded from OCU exhaust, with high inlet readings (>50 ppm). Readings from North Creek FM Discharge peaked at 176 ppm. Carbon changed, as well as increasing hypochlorite dosage at the York pump station.
City University-NE 1st and 119th	4/07/04 & 4/12/04	Initial complaint (4/7) via the city of Bellevue from the security guards at City University.	Investigation revealed no odors and odor control unit operating normally (operator and security guard could not sense odor). For the second complaint (4/12), operators did not notice odors at time of investigation. Carbon sampled gathered, still had plenty of H2S adsorption capacity; H2S exhaust at 10 ppb. Visited site next two days, slight "carbon" odor sensed. Met with security guards on 4/15, brought them down to OCU site. The odor from the exhaust was not what they smelled when they complained. They stated that it was like a "dead animal/body" odor. Designated as non-county complaints.
Medina Force Main Discharge Structure	4/30/04	Complaint received via the City of Bellevue.	Routine check of scrubber found H2S exhaust levels high (900 ppb).Carbon changed out.
Vashon Treatment Plant	5/6/04	Complainants routinely sense odors on a weekly basis (Thursdays), typically the day in which the plant dewaters sludge. The odors generated from this process are very strong.	The pending plant upgrade will address the dewatering odor problem. No further action taken.
Wilburton Siphon Inlet Structure	5/6/04 & 5/7/04	General odor complaint filed by Ms. Stuart.	Found generator tripped to the skid-mounted odor control unit upon investigation; reset but tripped again. Replaced fuse on panel board. Generator tripped out again, resulting in second complaint. Generator repaired to correct problem.
Heathfield Pump Station	7/1/04	Resident near the pump station noticed odors but her husband did not notice any odors	Operator did not notice any odors upon investigation. The carbon in the odor control unit was changed out the week before. The problem was apparently temporary in nature and no further action was taken.
11256 137th Ave., Renton	7/12/04	Complainant lives next door to a septage hauler.	The hauler routinely dumps raw sewage into a 4,000 gallon holding tank; very strong odors are generated every time the hauler pumps the sewage. Gave complainant phone number to the Puget Sound Clean Air Agency to file an air quality complaint. Designated as a non-county complaint.

Location	Date	Complaint	Resolution
Heathfield Pump Station	7/26/04	Complainant sensed odors from 1000-1200 hours, but phoned in complaint at 1700 hours.	Complainant did not sense odors at time of call, so off-site staff did not investigate. Carbon odor control unit operating normally (exhaust 0 ppb H2S). Slight "musty" odors detected from dry well exhaust. Odor was apparently temporary in nature and the source was unidentifiable. No further action at this time.
Holmes Point Flushing Structure	7/31/04	Odors sensed from around the hatch and valve stem access plug.	Operator readjusted hatch latches, cleaned and tightened the valve stem plug.
Medina Discharge Structure OCU (Wilburton Siphon Inlet)	8/2/04	The complaint was called in from City University but WTD facilities were not identified as the odor source.	Operator sensed slight odors from the carbon unit exhaust, but no odors next to the railroad tracks. The carbon in the unit was last changed in May 2004. H2S readings from exhaust on 8/3 were 30 – 40 ppb. Informed complainant the carbon in unit was relatively new and to call the plant when he senses odors again. No further action taken.
Vashon Bunker Trail Lift Station #4	8/2/04	Complaint about general odors received via phone message from Mr. Huggins.	Experimenting with daily Microcat addition at time of complaint. Ceased Microcat on 8/11 and changed pumping cycle on 8/12. Lower average H2S readings and odor complaints called in after pump cycle change. No complaint since Microcat injection ceased. No further action taken.
Medina Discharge Structure OCU (Wilburton Siphon Inlet)	8/9/04	General odor complaint received from 1190 NE 1st Street.	Odor control unit in operation at time of investigation, though could sense odors. Operator suspects that carbon needs to be changed. Will gather H2S exhaust readings. Carbon was changed to prevent odor emissions.
9201 NE Juanita Bay Drive, Condos	8/10/04	Complainant lives in condo across the street from Juanita Bay Pump Station.	No odors sensed around station. Sensed odors next to decayed vegetation at end of beach next to her unit (25-36 ppb H2S). Told her that was the source of odor and not the responsibility of King County.
Manhole near Cranmar Creek Siphon Inlet Structure	8/10/04	General odor complaint from resident near siphon inlet structure.	Investigation revealed that plugs were removed from manhole located 75 feet away from structure. Caulked and resealed manhole.
9727 NE Juanita Drive, unit #302	8/13/04	General odor complaint from resident near siphon inlet structure.	Same as complaint on 8/10, decayed vegetation was source of odor. Designated as a non-county complaint.
Beulah Cove Neighborhood, Vashon Island	8/16/04	General odor complaint from resident near Beulah Cove.	Sensed decayed vegetation odors from beach area at time of investigation (29-35 ppb H2S). Operation normal at Beulah Cove treatment trains; no odors sensed around that area. To be proactive, all passive carbon units will be changed there, as well as installing passive carbon canisters at the vents of the vault. Electrician working at station noticed strong rotting vegetation odor on 8/20; left message for complainant to walk down to beach area and sense odors himself. Designated as a non-county complaint.
Medina Discharge Structure OCU (Wilburton Siphon Inlet)	8/17/04	Complainant positive that odor source was carbon scrubber, and mentioned that odors have been sensed the past 3 months.	Sampling of the scrubber exhaust 8/16 showed > 100 ppb H2S, so carbon change was scheduled for 8/18. Refilled with Midas specialty carbon.
Wetland puddle near 277th Street	8/18/04	Initial complaint was about odors emanating from a wetland area.	Could not find puddles/wetland where odor was coming from. Some odors sensed from manholes along 277th St. Interceptor. Manhole caulked and sealed.

Location	Date	Complaint	Resolution
802 45th St. NE, Auburn	8/30/04	General odor complaint from resident in the apartment complex. Odor source was landscape ponds in the apartment complex.	Informed complainant about the pond odors. Designated as a non-county complaint.
17206 97th Pl. SW, Vashon Island	8/31/04	Complainant lives housing just south of the plant. She stated odors (dead meat, solid waste and sulfurous whiffs) have been occurring 3-4 hours daily for several weeks. She also related stories of plumbing problems, and years ago had a sewage back-up problem.	Upon investigation, did not sense any odors around apartment complex, and no other neighbors have contacted the plant. During the second investigation, dewatering at the plant occurred; this process would sometimes elicit a complaint but none were called in. The pending plant upgrade will address the dewatering odor issue. Designated as a non-county complaint.
Manhole intersection of 34th St. and 97th St., Mercer Island	8/31/04	Received complaint from a city of Mercer Island employee.	Odors coming from vents on manhole which were caulked and sealed.
Cedar River Interceptor, Manhole R10-32	10/7/04	Complainant sensed odors while walking on trail between 7th and 10th Street	Identified source of odor from manhole R10-32Sealed and plugged manhole.

Project No. and Title

423484 Brightwater Treatment Plant

Council District: N/A

Project Manager: Hummel, Stan

2004 Adopted Budget: $64,279,836

Phase: Final Design 60%

Precent Spent: 52%

Appropriation:

A20220 Brightwater Treatment Plant- New Facilities & Improvements

Project Scope

This project will site, design, and construct a new 36-mgd wastewater treatment facility as described in the 1999 Council-adopted Regional Wastewater Services Plan. The new treatment plant is a key element of the County's strategy to provide necessary capacity to meet wastewater demand and comply with federal and state regulations in the years ahead. If this facility is not constructed, the county's sewer customers would face wastewater capacity problems by approximately 2010. NOTE: The December 2004 YTD total for this project reflects a reapportionment of money to the Brightwater conveyance project for work done on Brightwater in previous years. This reapportionment ensures that the LTD costs are correct.

Schedule

Phase	Start	Finish
1 Planning	1/1/2003	1/30/2003
2 Predesign	1/31/2003	8/10/2005
3 Final Design	8/11/2005	6/30/2011
4 Implementation	5/1/2006	6/1/2010
5 Closeout	1/1/2012	7/1/2012
6 Land Aquisition		12/31/2004

Project Cost

Type of Project Cost	Year to Date JAN-05	Life to Date JAN-05
CONSTRUCTION	$20,522	$518,212
ENGINEERING CONTRACTS	$187,733	$38,002,561
MISC SERVICE &	$16,658	$5,074,073
OTHER CAPITAL CHARGES	$0	$2,838
OWNER FURNISHED	$0	$34,384
PERMITING & OTHER	$6,691	$1,703,265
Total Project Cost:	$25,528,988	$123,424,433

Current Contract Information

Contract Number and Title	Total Paid by Project	Contract Amt
2002-01/SNOHOMISH COUNTY - BRIGHTWATER PROJECT	$736,165	$1,011,174
C38138C/PreConstruction Phase for the Brightwater Treatment Plant	$341,591	$1,424,428
COK12902/BRIGHTWATER ENVIRONMENTAL IMPACT STATEMENT	$20,000	$20,000
COLFP112902/BRIGHTWATER ENVIRONMENTAL IMPACT STATEMENT	$20,000	$20,000
Contract for Technical Services-2004	$70,213	$44,000
COS112102/BRIGHTWATER ENVIRONMENTAL IMPACT STATEMENT	$20,000	$20,000
COW110602/WOODINVILLE AGREEMENT/BRIGHTWATER DEIS	$16,217	$18,000
E03030E/WO BASED MULTIDISCIPLINARY ENVIRONMENTAL SERVICES	$4,187	$250,000
E13035E/ENGRG. SVCS FOR BRIGHTWATER TREATMENT PLANT	$23,913,170	$4,146,700
E23002E/ARCHITECTURAL, LANDSCAPE ARCH & INTERIOR DESIGN	$4,219,767	$4,440,618
E23007E/GEOTECHNICAL SERVICES FOR THE BRIGHTWATER CONVEYANCE SYS	$36,322	$1,168,455
E33019E/WO MECH & ELECTRICAL DESIGNS SVCS	$2,224	$500,000
E33021E/QA/QC Design Review Services for WTD	$24,294	$500,000
OVWSD12502/BRIGHTWATER ENVIRONMENTAL IMPACT STATEMENT	$20,000	$20,000
P03012P/RWSP PROGRAM MANAGEMENT SERVICES DEVELOPMENT	$3,500,000	$1,104,635
P13009P/WASTEWATER TREATMENT EAST AND WEST SECTIONS SPACE PROGRAM	$7,302	$215,684
P93006P PHASED HABITAT CONSERVATION PLAN FOR KC	$289,626	$3,813,216
P93012P SITE SELECTION AND MITIGATION FOR NEW REGIONAL WASTEWATER	$11,383,527	$1,274,892
P93013P ON-CALL MANAGEMENT, PROFESSIONAL AND TECHNICAL SERVICES FOR	$731	$1,600,000
POE081302/BRIGHTWATER ENVIRONMENTAL IMPACT STATEMENT	$20,000	$20,000
PROFESSIONAL SERVICES	$5,000	
SUQUAMISH AGREEMENT/BRIGHTWATER DEIS	$11,061	$39,887
T01129T/LEGAL SUPPORT SERVICES FOR NTF	$1,853,335	$2,400,000
T01130T/LEGAL SUPPORT SERVICES FOR NTF SITING	$1,583,443	$1,150,000
T01145T/REAL ESTATE BROKER SUPPORT SVCS FOR NORTH TREATMENT FAC.	$15,165	$24,000

Project No. and Title

423575 Brightwater Conveyance

Council District: 14 CountyWide -

Project Manager: Sreibers, Gunars

2004 Adopted Budget: $55,330,380

Phase: Final Design 60%

Appropriation:

Precent Spent: 89%

Project Scope

The King County Wastewater Treatment Division is making major improvements to its sewage treatment system as part of the approved Regional Wastewater Services Plan. These improvements are needed to handle rapid population growth and support our mission to protect public health and the environment.

One project is the Brightwater Treatment Facilities. This project is responsible for the design and construction of the conveyance facilities associated with Brightwater. The conveyance system is comprised of:

- An influent pipeline for carrying untreated wastewater
- An effluent pipeline that carries treated wastewater from the treatment plant to a marine outfall.
- Conveyance structures and facilities (both above- and below-ground).
- Most of the pipelines will be installed in tunnels. Most of the construction activity will be below ground and at construction portals, thereby minimizing above-ground construction activity along streets.

Schedule Phase	Start	Finish
1 Planning	5/2/2000	5/2/2001
2 Predesign	5/3/2001	7/14/2004
3 Final Design	7/15/2004	12/31/2011
4 Implementation	8/1/2006	9/1/2010
5 Closeout	1/1/2012	7/1/2012
6 Land Aquisition		

Project Cost Type of Project Cost	Year to Date JAN-05	Life to Date JAN-05
CONSTRUCTION	$0	$1,258
ENGINEERING CONTRACTS	$857,122	$43,783,255
MISC SERVICE &	$8,479	$4,380,892
OTHER CAPITAL CHARGES	$0	$40,374
OWNER FURNISHED	$0	$87,580
PERMITING & OTHER	$2,140	$621,135
Total Project Cost:	$1,104,888	$65,212,872

Current Contract Information

Contract Number and Title	Total Paid by Project	Contract Amt
Agreement/Mitigation-Lake Forest Park Water District	$88,640	$862,000
E23006E/ENGRG SVCS FOR THE BRIGHTWATER CONVEYANCE SYSTEM	$10,675,924	$1,163,537
E23007E/GEOTECHNICAL SERVICES FOR THE BRIGHTWATER CONVEYANCE SYS	$11.700.842	$1.168.455

Project No. and Title

423373 CONVEYANCE SYSTEM IMPROVEMENTS

Council District: All

Project Manager: Wharton, Laura

2004 Adopted Budget: $7,831,754 **Phase:** Planning

Precent Spent: -5%

Appropriation:

A20420 Conveyance Pipelines and Storage - New Facilities & Improvements

Project Scope

The Conveyance System Improvement (CSI) project develops planning-level scopes, schedules, and budgets for all new conveyance projects. Beginning in 1999, the CSI program identified and prioritized ten planning areas in the wastewater service area. Starting in the highest priority areas, teams of county staff and consultants evaluate the area's conveyance needs, identify a range of alternatives, and specify a working alternative to address the needs. The focus of the program is to upgrade and improve the level of service of the regional conveyance system for the 33 local sewer agencies in King and Snohomish Counties. Initial wastewater basin planning is now complete in the King County's regional basins as part of the CSI program. NOTE: The December 2004 YTD total for this project reflects a reapportionment of money to the Brightwater conveyance project for work done on Brightwater in previous years. This reapportionment ensures that the LTD costs are correct.

Schedule Phase	Start	Finish
1 Planning	1/1/2001	12/31/2007
2 Predesign	6/30/2001	12/31/2007
3 Final Design	1/1/2002	12/31/2007
4 Implementation	1/1/2004	12/31/2020
5 Closeout	1/1/2021	7/1/2021
6 Land Aquisition	1/1/2003	12/31/2008

Project Cost Type of Project Cost	Year to Date JAN-05	Life to Date JAN-05
CONSTRUCTION	$0	$775,420
ENGINEERING CONTRACTS	$169,558	$8,289,673
MISC SERVICE &	$211,849	$3,257,415
OWNER FURNISHED	$0	$29,023
PERMITING & OTHER	$100	$29,414,221
STAFF LABOR COSTS	$27,792	$5,563,626
Total Project Cost:	$409,299	$47,329,378

Current Contract Information

Contract Number and Title	Total Paid by Project	Contract Amt
AGREEMENT #1/TECH SUPPORT FOR THE DEVELOPMENT OF REGIONAL	$74,908	$75,000
AGREEMENT #2/DEVELOP GEOLOGIC DATABASE & GEOLOGIC INTERPRETATIONS	$844,496	$845,843
C03009C/WEST DIV. CORROSION REPAIRS 2000-2001	$4,765	$400,000
C03051C/WEST DIVISION MECHANICAL CONSTRUCTION 2000-2001	$67,305	$458,000
C03114C/DIVING INSPECTION AND REPAIRS	$13,637	$300,000
C13004C/SEWER REPAIR - 2001-2002	$9,647	$100,000
C13123C/EAST & WEST MECHANICAL CONSTRUCTION	$863	$500,000
C83075C DIVING INSPECTION AND REPAIR	$18,637	$250,000
C83161C/MISCELANEOUS PIPE REPAIRS	$161,538	$750,000
C93180C WEST DIVISION - CIP - ELECTRICAL 2000	$17,237	$400,000
C93200C WEST DIVISION CIVIL/STRUCTURAL CONSTRUCTION 2000	$17,845	$400,000
E23033E/SOOS CREEK AREA PUMP STATION D AND PIPELINE 3	$76,506	$1,810,263
E83004E CONVEYANCE SYSTEM IMPROVEMENT PROJECT, PROJ MANAG AND	$4,868,094	$5,024,612
E93018E CIP ELECTRICAL & ELECTRONICS EMGINEERING SUPPORT SERVICES	$503	$475,000
P03012P/RWSP PROGRAM MANAGEMENT SERVICES DEVELOPMENT	$4,046,350	$1,104,635
P23002P/WO BASED COMMUNITY RELATIONS SVCS FOR WTD CIP	$9,814	$200,000
P820042P PROFESSIONAL CONSULTANT SERVICES	$400	$25,000
P93013P ON-CALL MANAGEMENT, PROFESSIONAL AND TECHNICAL SERVICES FOR	$19,546	$1,600,000
T00943T/ON-CALL COMMUNITY RELATIONS SUPPORT FOR PROJECTS IN THE CIP	$45.891	$200.000

Project No. and Title

423583 Soos Creek Pump Station D and Pipeline D

Council District:

Project Manager: Dittmar, David

2004 Adopted Budget: $1,490,747 **Phase:** Planning

Appropriation:

Precent Spent: 41%

Project Scope

The Soos Creek Pump Station D project will provide needed conveyance capacity in the South Green River planning area. The project includes a new 26-mgd pump station and conveyance (16,200 feet of forcemain and 5,400 feet of gravity sewer) connected to the South 277th Interceptor. Predesign for the project is underway and will be completed in March 2005; final design will continue through August 2006. Construction is expected to begin in January 2007.

Schedule

Phase	Start	Finish
1 Planning	1/1/2004	1/1/2004
2 Predesign	1/2/2004	7/2/2005
3 Final Design	7/3/2005	12/30/2008
4 Implementation	1/2/2007	12/30/2010
5 Closeout	12/31/2010	6/30/2011
6 Land Aquisition	8/1/2002	12/31/2003

Project Cost

Type of Project Cost		Year to Date JAN-05	Life to Date JAN-05
ENGINEERING CONTRACTS		$0	$490,436
MISC SERVICE &		$658	$6,890
STAFF LABOR COSTS		$14,386	$132,534
Staff Labor LTD Hours	2,046		
Total Project Cost:		$15,043	$629,860

Current Contract Information

Contract Number and Title	Total Paid by Project	Contract Amt
E23033E/SOOS CREEK AREA PUMP STATION D AND PIPELINE 3	$547.543	$1.810.263

Project No. and Title

423519 North Creek Storage Facility

Council District: 01

Project Manager: Dittmar, David

2004 Adopted Budget: $2,741,944

Precent Spent: 32%

Phase: Construction (CM Support)

Appropriation:

A20420 Conveyance Pipelines and Storage - New Facilities & Improvements

Project Scope

Construction began in November 2001 on the 6-million-gallon North Creek Storage facility. This underground facility, located at the site of the North Creek Pump Station, will store sewage flows from the Bothell-Woodinville and North Creek Interceptors during large storms, providing protection against sanitary sewer overflows into Lake Washington upstream of the Kenmore Interceptor. After the storm, the stored wastewater will be pumped back into the interceptors. The six million gallons of storage was completec and online in December 2003. Project closeout will occur by the end of 2004. The project will be under warranty until mid-2005.This project is a part of the Regional Wastewater Services Plan.

Schedule

Phase	Start	Finish
1 Planning	6/18/1999	6/18/2000
2 Predesign	6/5/2000	9/1/2000
3 Final Design	9/2/2000	11/1/2001
4 Implementation	11/2/2001	12/31/2004
5 Closeout	1/1/2005	7/1/2005
6 Land Aquisition		

Project Cost

Type of Project Cost	Year to Date JAN-05	Life to Date JAN-05
CONSTRUCTION	$799	$20,338,202
ENGINEERING CONTRACTS	$0	$4,257,496
MISC SERVICE &	$95	$172,287
OWNER FURNISHED	$0	($6,637)
PERMITING & OTHER	$1,685	$2,428,650
RIGHT OF WAY	$0	$80,000
Total Project Cost:	$3,827	$28,484,355

Current Contract Information

Contract Number and Title	Total Paid by Project	Contract Amt
C13008C/NORTH CREEK STORAGE FACILITY PROJECT	$19,071,964	$1,869,673
E06017E NORTH CREEK STORAGE FACILITY PROJECT	$2,457,109	$2,501,717
P03013P/CM SVCS FOR THE NORTH CREEK STORAGE FACILITY PROJECT	$1,258,351	$1,902,819
P93013P ON-CALL MANAGEMENT. PROFESSIONAL AND TECHNICAL SERVICES FOR	$31.692	$1.600.000

Project No. and Title

423520 Tukwila Interceptor/Freeway Crossing

Council District: 05

Project Manager: Peterson, Bob

2004 Adopted Budget:

Phase: Planning

Precent Spent:

Appropriation:

A20420 Conveyance Pipelines and Storage - New Facilities & Improvements

Project Scope

King County DNRP is evaluating alternatives to upgrade portions of the Tukwila Interceptor and Tukwila Freeway Crossing under the I-5/I-405 freeway near Tukwila. The working alternative will initially parallel or replace portions of the Tukwila Freeway Crossing, but before the project is ready for predesign we will assess the impacts of the Port of Seattle SeaTac airport industrial waste discharges and development proposals in the Southcenter area of Tukwila. The schedule for this project is on hold, as preliminary indications are that capacity is available and flows from the Port of Seattle flows will likely not be a factor in accelerating the schedule for this project.

Schedule

Phase	Start	Finish
1 Planning	12/31/2003	12/31/2004
2 Predesign	1/1/2005	11/25/2005
3 Final Design	11/26/2005	12/31/2007
4 Implementation	1/1/2008	7/31/2009
5 Closeout	8/1/2009	12/31/2009
6 Land Aquisition	1/1/2004	12/31/2005

Project Cost

Type of Project Cost		Year to Date JAN-05	Life to Date JAN-05
MISC SERVICE &		$0	$935
STAFF LABOR COSTS		$374	$58,850
Staff Labor LTD Hours	972		
Total Project Cost:		$374	$59,785

Current Contract Information

Contract Number and Title	Total Paid by Project	Contract Amt

Project No. and Title

423365 HIDDEN LAKE PS/BOEING CREEK TRUNK

Council District: 01

Project Manager: Dittmar, David

2004 Adopted Budget: $3,949,568

Phase: Final Design 60%

Precent Spent: 33%

Appropriation:

A20520 Conveyance Pump Station - New Facilities & Improvements

Project Scope

The 40-year old Hidden Lake Pump station does not have capacity to handle existing or future peak storm flows, nor does it meet current design standards of odor control, instrumentation, space, and equipment handling. Further, the pump station discharges to the Boeing Creek Trunk, which has a history of capacity, odor, and corrosion problems. This project will address these problems through phased system improvements to control overflows and increase the capacity of the Boeing Creek Trunk to handle the 20-year storm. The capacity increases include a new Hidden Lake Pump station with a capacity of 5.5 mgd and a future peak capacity of 6.8 mgd built on the existing site, a 0.5 million gallon storage facility constructed upstream of the pump station, and approximately 12,000 linear feet of pipeline replacement. Future needs in the area will depend on whether a reduction of inflow and infiltration will enable us to reduce the size or need for additional facilities. Predesign was completed in February 2003 and the project is currently at the 95 percent design level

Schedule Phase	Start	Finish
1 Planning	6/1/1998	6/13/2000
2 Predesign	6/13/2000	3/14/2004
3 Final Design	3/15/2004	12/30/2006
4 Implementation	1/1/2004	9/30/2007
5 Closeout	10/1/2007	4/1/2008
6 Land Aquisition	8/1/2003	9/1/2003

Project Cost Type of Project Cost	Year to Date JAN-05	Life to Date JAN-05
CONSTRUCTION	$0	$102,192
ENGINEERING CONTRACTS	$0	$3,273,551
MISC SERVICE &	$0	$141,100
PERMITING & OTHER	$0	$33,816
RIGHT OF WAY	$10,700	$17,133
STAFF LABOR COSTS	$30,984	$629,963
Total Project Cost:	$41,684	$4,197,754

Current Contract Information

Contract Number and Title	Total Paid by Project	Contract Amt
C33004C/EAST AND WEST CIVIL/STRUCTURAL 2003	$571	$500,000
C33060C/WW MISC. PIPE REPAIR AND RESTORATION	$52,933	$500,000
C83161C/MISCELANEOUS PIPE REPAIRS	$3,585	$750,000
E03036E/HIDDEN LAKE PUMP STATION	$3.211.858	$2.944.625

Project No. and Title

423406 JUANITA BAY PS - MODIFICATIONS

Council District: 11

Project Manager: Okuda, Chris

2004 Adopted Budget: $5,292,263

Phase: Final Design 60%

Precent Spent: 47%

Appropriation:

A20520 Conveyance Pump Station - New Facilities & Improvements

Project Scope

The Juanita Bay Pump Station is an aging facility that is experiencing significant operational difficulties in conveying existing flows and has insufficient capacity to convey future flows. A new pump station is being designed to replace the existing 14.2-mgd pump station. A site for the new pump station was purchased across the street from the existing station. The environmental review and 90 percent design are complete and construction permits and easements are being obtained. Demolition of an existing maintenance building was completed in late Summer 2004 to clear the site in preparation for the pump station construction, which is targeted to begin in late spring 2005.

Schedule

Phase	Start	Finish
1 Planning	1/1/1999	1/3/2000
2 Predesign	1/1/2001	6/13/2004
3 Final Design	6/14/2004	10/31/2007
4 Implementation	12/1/2003	7/30/2007
5 Closeout	7/31/2007	1/31/2008
6 Land Aquisition	3/1/2002	12/31/2004

Project Cost

Type of Project Cost	Year to Date JAN-05	Life to Date JAN-05
PERMITING & OTHER	$0	$12,381
RIGHT OF WAY	$60	$1,515,937
STAFF LABOR COSTS	$18,834	$934,222
CONSTRUCTION	$0	$15,746
ENGINEERING CONTRACTS	$17,495	$5,233,037
MISC SERVICE &	$0	$44,759
Total Project Cost:	$36,389	$7,756,082

Current Contract Information

Contract Number and Title	Total Paid by Project	Contract Amt
E03037E/JUANITA BAY PUMP STATION AND FORCE MAINS UPGRADE	$5,059,126	$6,575,152
E83040E PROFESSIONAL SERVICES FOR CORROSION ENGINEERING	$8,353	$300,000
P83003P AGREEMENT FOR PROFESSIONAL CONSULTANT SERVICES	$8,982	$100,000
P93013P ON-CALL MANAGEMENT. PROFESSIONAL AND TECHNICAL SERVICES FOR	$33.138	$1.600.000

Project No. and Title

423518 Pacific Pump Station

Council District: 07

Project Manager: King County

2004 Adopted Budget: $530,187

Precent Spent: 78%

Phase: Construction Bid & Award

Appropriation:

A20520 Conveyance Pump Station - New Facilities & Improvements

Project Scope

The existing 1.6-mgd Pacific Pump Station, located in City of Pacific right-of-way, has insufficient capacity to convey existing and estimated future peak flows. This project will construct a new 3.3-mgd pump station in an industrial zoned site suggested by the City two blocks to the west of the existing station, which will then be abandoned. The new pump station will have features that the existing pump station does not, such as standby power, odor control, improved access, and equipment lifting devices. A new forcemain will not be required, as recommended by the earlier planning study, since the flow projections have been revised. Predesign for the project was completed in June 2002 and the 90 percent design was completed in April 2003. Construction bids will be advertised in January 2004. Construction Notice to Proceed (NTP) was issued in June, and shoring and excavation have begun.

Schedule Phase	Start	Finish
1 Planning	12/31/2001	12/31/2002
2 Predesign	4/29/2001	2/29/2004
3 Final Design	3/1/2004	11/15/2006
4 Implementation	6/1/2004	11/1/2006
5 Closeout	11/2/2006	5/2/2007
6 Land Aquisition	12/1/2005	1/1/2005

Project Cost Type of Project Cost	Year to Date JAN-05	Life to Date JAN-05
ENGINEERING CONTRACTS	$4,702	$1,357,983
MISC SERVICE &	$108	$61,452
PERMITING & OTHER	$0	$24,492
RIGHT OF WAY	$0	$9,300
STAFF LABOR COSTS	$17,741	$396,822
CONSTRUCTION	$169,261	$292,832
Total Project Cost:	$191,812	$2,142,880

Current Contract Information

Contract Number and Title	Total Paid by Project	Contract Amt
E03006E/ENGINEERING SERVICES FOR PACIFIC PUMP STATION	$1,323,628	$1,351,537
E83040E PROFESSIONAL SERVICES FOR CORROSION ENGINEERING	$254	$300.000

Project No. and Title

423521 Bellevue Pump Station

Council District: 06

Project Manager: Namini, Shahrzad

2004 Adopted Budget: $770,440

Phase: Predesign 30%

Precent Spent: 61%

Appropriation:

A20520 Conveyance Pump Station - New Facilities & Improvements

Project Scope

This project will upgrade the hydraulic capacity, electrical systems, and control systems for the Bellevue Pump Station. It will also construct a new 5,500 ft long, 24-inch diameter forcemain from the Bellevue Pump Station to the Eastside Interceptor (ESI), thereby reducing the hydraulic load on the Sweyolocken Pump Station. The new forcemain will require a new discharge structure at the ESI just upstream of the Wilburton Siphon inlet structure. The project provides needed capacity to avoid raw sewage overflows downstream at the Sweyolocken Pump Statiion. A planning assessment of the alternatives to "off-load" flow from Sweyolocken was conducted during 2000. King County expects to complete 90 percent design by the end of 2005. This project is part of the Council-approved Regional Wastewater Services Plan.

Schedule

Phase	Start	Finish
1 Planning	1/1/2003	12/31/2003
2 Predesign	1/1/2004	8/25/2004
3 Final Design	8/26/2004	7/1/2008
4 Implementation	1/1/2006	6/30/2008
5 Closeout	7/1/2008	12/31/2008
6 Land Aquisition		2/1/2006

Project Cost

Type of Project Cost		Year to Date JAN-05	Life to Date JAN-05
ENGINEERING CONTRACTS		$69,063	$413,305
MISC SERVICE &		$35	$29,075
PERMITING & OTHER		$193	$829
RIGHT OF WAY		$0	$2,000
STAFF LABOR COSTS		$14,088	$270,466
Staff Labor LTD Hours	4,086		
Total Project Cost:		$83,378	$715,675

Current Contract Information

Contract Number and Title	Total Paid by Project	Contract Amt

Project No. and Title

423297 RWSP Local System I/I Control

Council District: All

Project Manager:

2004 Adopted Budget: $4,755,018

Phase: Planning

Appropriation:

A20700 Inflow & Infiltration

Precent Spent: 96%

Project Scope

This project is a five-year regional program to reduce infiltration and inflow (I/I) into the County's wastewater system from local component agency sewers. This program, part of the Council-approved Regional Wastewater Services Plan, is based on a cooperative partnership between King County and its 33 local component agencies. The program is designed to (1) meter and identify I/I sources in local sewer systems; (2) conduct pilot I/I rehabilitation projects in order to identify cost effective I/I removal techniques for this region; (3) regionally evalute control solutions and their benefit; and (4) ultimately design a long-term enforcable control program to reduce I/I coming from local sewer systems. King County's wastewater system is running out of capacity not only because of new flows generated from population growth, but also because of excessive infiltration and inflow. I/I is the water that enters the sewer system during storms from sources such as leaky sewer pipes, roof drain connections, storm drains and leaking manholes.

Schedule Phase	Start	Finish
1 Planning	1/1/2000	12/31/2005
2 Predesign	4/1/2002	11/26/2003
3 Final Design	11/27/2003	3/31/2003
4 Implementation	4/1/2003	12/31/2004
5 Closeout	1/1/2005	12/31/2009
6 Land Aquisition		

Project Cost Type of Project Cost	Year to Date JAN-05	Life to Date JAN-05
STAFF LABOR COSTS	$61,062	$4,391,034
CONSTRUCTION	$0	$5,417,102
ENGINEERING CONTRACTS	$167,437	$23,955,005
MISC SERVICE &	$413	$646,638
OWNER FURNISHED	$0	$26,073
PERMITING & OTHER	$0	$1,865,036
Total Project Cost:	$228,912	$36,300,887

Current Contract Information

Contract Number and Title	Total Paid by Project	Contract Amt
C33042C/AUBURN I/I PILOT PROJECT	$384,737	$353,618
C33043C/BRIER I/I PILOT PROJECT	$372,684	$425,359
C33045C/KIRKLAND I/I PROJECT	$838,189	$794,618
C33046C/LAKE FOREST PARK I/IPILOT PROJECT	$790,420	$801,893
C33047C/I/I PILOT PROJECT	$815,800	$740,556
C33048C/REDMOND I/I PILOT PROJECT	$840,108	$916,284
C33060C/WW MISC. PIPE REPAIR AND RESTORATION	$1,210	$500,000
C33120C/MANHOLE I/I PILOT PROJECT	$200,823	$231,990
E83043E ENG'N SUPPORT FOR REGIONAL I/I CONTROL PROGRAM	$149,935	$149,935
E93051E REGIONAL INFILTRATION / INFLOW CONTROL PROJECT	$23,440,239	$2,785,607
P32001P/AUDIT SERVICES FOR KC CONTRACT E93051E	$24.582	$25.000

Project No. and Title

423515 CSO Control & Improvement

Council District: 4,5,8,10

Project Manager: Huber, Karen

2004 Adopted Budget: $172,010

Phase: Planning

Precent Spent: 76%

Appropriation:

A20620 Combined Sewer Overflow Control - New Facilities & Improvements

Project Scope

This project will implement 21 combined sewer overflow projects identified in the Council-approved Regional Wastewater Services Plan between the years 2004 and 2031. Combined Sewer Overflows (CSO) are pressure relief points in the conveyance lines in areas where both sewage and storm water are conveyed in a single pipe. Overflows of dilute wastewater occurs from these points to local waterbodies during bigger storms. The County owns 37 such overflows which are located along Lake Washington, the Ship Canal, the Duwamish River, Elliott Bay, and Puget Sound. CSO can contribute pathogens, organic material, sediments and chemicals to local waterbodies. Between now and 2008, work will occur on the following CSO control projects: Murray and Magnolia will complete design and be in construction; Barton and North Beach will complete predesign; If the County agrees to accelerate Ballard as a joint project with the City of Seattle, the project will complete predesign in 2008. This project is part of the Council-approved Regional Wastewater Services Plan.

Schedule

Phase	Start	Finish
1 Planning	10/1/2005	10/2/2005
2 Predesign	10/3/2005	8/18/2007
3 Final Design	8/19/2007	12/31/2011
4 Implementation	1/9/2008	12/31/2015
5 Closeout	1/1/2016	7/1/2016
6 Land Aquisition		

Project Cost

Type of Project Cost		Year to Date JAN-05	Life to Date JAN-05
ENGINEERING CONTRACTS		$0	$10,586
MISC SERVICE &		$0	$3,092
PERMITING & OTHER		$0	$1,500
STAFF LABOR COSTS		$1,278	$339,997
Staff Labor LTD Hours	6,425		
Total Project Cost:		$1,278	$355,175

Current Contract Information

Contract Number and Title	Total Paid by Project	Contract Amt
T01352T/WRITING & EDITING SERVICES ON A WO BASIS	$10.586	$240.000

Project No. and Title

423368 Sediment Managment Plan

Council District: 4,5,8,10

Project Manager: Stern, Jeff

2004 Adopted Budget: $2,947,557

Phase: Planning

Precent Spent: 54%

Appropriation:

A20650 Combined Sewer Overflow Control - Remediation

Project Scope

This project addresses sediment contamination cleanups required under federal CERCLA and state MTCA regulations. The overall objectives of the SMP are to repair potential environmental damage in a timely, efficient and economical process, to prevent harm to public health, and to limit future liability. This project will implement the County's participation in the Lower Duwamish Waterway site MOA and Administrative Order on Consent and clean up the other contaminated sites under MTCA voluntary cleanup authority. This project is part of the Council-approved Regional Wastewater Services Plan.

Schedule

Phase	Start	Finish
1 Planning	12/19/2000	12/31/2007
2 Predesign	6/1/2002	10/19/2004
3 Final Design	10/20/2004	12/31/2008
4 Implementation	10/31/2004	3/30/2010
5 Closeout	3/31/2010	9/30/2010
6 Land Aquisition		

Project Cost

Type of Project Cost	Year to Date JAN-05	Life to Date JAN-05
PERMITING & OTHER	$0	$96,034
STAFF LABOR COSTS	$48,816	$1,646,502
ENGINEERING CONTRACTS	$0	$1,273,656
MISC SERVICE &	$37	$1,562,144
OWNER FURNISHED	$0	$5,412
Staff Labor LTD Hours 29,694		
Total Project Cost:	$48,852	$4,583,748

Current Contract Information

Contract Number and Title	Total Paid by Project	Contract Amt
33090009 LAKE WASH STUDIES RESEARCH AGREEMENT	$419,656	$1,549,735
D27460D LAKE WASHINGTON ECOSYSTEM RESTORATION AND FLOOD DAMAGE	$20,000	$103,000
E83034E YEAR 2000 CSO PLAN UPDATE	$289,495	$963,350
MOA/TEACH ASSISTANCE FOR LOWER DUWAMISH WATERWAY REMEDIAL	$5,000	$5,000
MOA/TECH ASSIST./LOWER DUWAMISH WATERWAY REMEDIAL	$5,000	$5,000
P03014P/DISCHARGE MODELING FOR CONTAMINATED SEDIMENT CLEANUP	$63,383	$63,828
P23009P/SEDIMENT MANAGEMENT TECHNICAL SERVICES	$99.936	

Project No. and Title

423528 Water Reuse Satellite Facility

Council District: 03

Project Manager: Komorita, John

2004 Adopted Budget:

Phase: Cancelled

Appropriation:

A20920 Water Reuse - New Facilities

Precent Spent:

Project Scope

The Sammamish Valley Water Reuse Facility has been cancelled in favor of developing the reclaimed water facility at the Brightwater Treatment Plant.

Schedule

Phase	Start	Finish
1 Planning	1/2/2001	10/28/2001
2 Predesign	11/1/2001	9/24/2003
3 Final Design	9/25/2003	6/5/2006
4 Implementation	6/1/2006	7/1/2008
5 Closeout	7/2/2008	12/31/2008
6 Land Aquisition		

Project Cost

Type of Project Cost	Year to Date JAN-05	Life to Date JAN-05
CONSTRUCTION	$0	$50,692
ENGINEERING CONTRACTS	$0	$3,829,687
MISC SERVICE &	$0	$246,269
OWNER FURNISHED	$0	$92,929
PERMITING & OTHER	$0	$34,748
STAFF LABOR COSTS	$43	$535,382
Total Project Cost:	$43	$4,789,707

Current Contract Information

Contract Number and Title	Total Paid by Project	Contract Amt
C03067C/EAST DIVISION MECHANICAL CONSTRUCTION 2000-2001	$45,611	$400,000
E03016E/ON-CALL ENGINEERING SUPPORT FOR THE WASTEWATER TREATMENT	$36,105	$500,000
E13030E/ENGRG SVCS FOR SAMMAMISH VALLEY RECLAIMED WATER PRODUCTION	$3,746,960	$5,083,821
P83003P AGREEMENT FOR PROFESSIONAL CONSULTANT SERVICES	$8.014	$100.000

Project No. and Title

423523 RWSP Water/Wastewater Conservation Program

Council District: All

Project Manager: Sullivan, Jo

2004 Adopted Budget: $309,000

Phase: Planning

Precent Spent: 70%

Appropriation:

A20920 Water Reuse - New Facilities

Project Scope

Under the Regional Wastewater Services Plan (RWSP), the King County Council implemented a water conservation program in 2001 to provide a holistic approach in water resource management and to reduce impacts to the wastewater system. $300,000 per year was earmarked to fund the program for five years, beginning in 2001. The current components of the program include a partnership with the King County Housing Authority to maximize water conservation in low-income residences by retrofiting their laundry facilities with water conserving washing machines and retrofitting approximately 400 multi-family units with low-flow toilets. A second partnership has been established with the King County Department of Health and Human Services Housing Rehabilitation Program to retrofit approximately 60 of their qualified homes undergoing rehabilitation with low-flow toilets. This will save water and establish an interagency cooperative agreement. Program staff are also participating in the Water Conservation Coalition of Puget Sound in order to bring King County into the regional water conservation community and network with water districts that are interested in partnerships.

Schedule Phase	Start	Finish
1 Planning	1/1/2003	12/31/2005
2 Predesign		
3 Final Design		
4 Implementation		
5 Closeout		
6 Land Aquisition		

Project Cost Type of Project Cost	Year to Date JAN-05	Life to Date JAN-05
ENGINEERING CONTRACTS	$0	$231,132
MISC SERVICE &	$0	$896,157
OWNER FURNISHED	$0	$60,868
PERMITING & OTHER	$0	$0
STAFF LABOR COSTS	$787	($135,974)
Staff Labor LTD Hours 89		
Total Project Cost:	$787	$1,052,183

Current Contract Information

Contract Number and Title	Total Paid by Project	Contract Amt