

# Wastewater Treatment Division **Productivity Initiative** 2009 Annual Report



King County Department of  
Natural Resources and Parks

June 2010



**King County**

King County Department of Natural Resources and Parks  
**Wastewater Treatment Division**

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*Pictured on front cover: West Point Treatment Plant*

## Executive Summary

### Background

The King County Wastewater Treatment Division's (WTD) Productivity Initiative Pilot Program is a 10-year program that was conceived as an opportunity for a traditional utility to be managed and operated more like a private business. It established year-by-year goals for reducing costs and annual savings targets. The commitments of the program include incentive payments to employees for meeting and exceeding the targets, as well as no involuntary layoffs during the life of the program.

Annual targets for each year in the 10-year program (2001 to 2010) were established using the 2000 wastewater operating budget as a baseline. The program also includes a mechanism for adjusting yearly targets for factors beyond the control of the division, such as inflation.

When the target is met, any additional allowable savings are shared equally (50/50) between ratepayers and employees. Half of the savings are returned to ratepayers in the form of decreased capital and operating costs, and stable sewer rates. The other half is returned to wastewater treatment program employees in the form of a financial incentive. (The Division Director and Deputy Division Director are not eligible for any financial distributions from the Productivity Incentive Fund because of their role in making the final division-level decisions on the program).

### 2009 Results

Wastewater program employees generated positive productivity results during 2009, the ninth year of the pilot program. The results marked the seventh time in the past nine years of the 10-year pilot program that employees achieved an established productivity target for the operating program and earned a financial incentive for their work. Since 2001, division employees have saved more than \$72.6 million for ratepayers.

The unadjusted 2009 productivity target was \$77,721,583. After adjustments were applied, the adjusted target equaled \$86,185,745. The target adjustments account for changes in conditions that are largely outside the control of the program such as the cost of energy, or new programs and facilities not anticipated when the program was conceived. Actual expenditures in 2009 were \$84,549,365, leaving an under-expenditure of \$1,636,380, which means the 2009 target was not only met but exceeded.

After verifying the target was exceeded, we then determine the employee savings eligible for the Incentive Fund and review them for approval. The Incentive Fund Committee (IFC) approved \$2,523,611 in employee savings for 2009. Although the employee savings are greater than the amount the target was exceeded by, only the difference between the target and the final expenditure can be counted for savings in the program. In addition, the savings must be adjusted by any penalties that apply. As a result, the final approved savings amount for 2009 is \$1,500,015.

Under the pilot program provisions, the approved savings are shared equally between ratepayers and employees, each receiving \$750,008. Consistent with the IFC recommendation, WTD will distribute a cash payout of 75 percent of the approved savings of \$562,506, which translates to an individual cash payout of \$514.92 (after taxes) for employees earning a "full share." The remainder of the \$750,008, after subtracting the cash payout of \$562,506, is \$187,502, which will be deposited in the "Rainy Day Fund."

### **Reviewing the success of the program**

While the pilot program continues until April 2011, efforts are now underway to comprehensively review the Productivity Initiative's success over the years. Before the pilot program sunsets, WTD will report to the King County Executive on the overall program results. The program work will continue during the review process.

In 2009, the division assembled a Comprehensive Review (CR) Team to lead this effort and develop a report. The CR Team is being assisted by the Technical Review Committee, a committee of employee members representing WTD's labor unions. Together, these groups have already conducted an employee survey and facilitated focus group discussions with all wastewater program work groups. Stakeholder interviews are currently being conducted with various individuals – both inside the wastewater program and within the county government – who interacted with the pilot program on various levels, including elected officials, labor organizations, Department of Natural Resources and Parks (DNRP) management, King County Executive Auditor's Office, and the King County Office of Management and Budget.

In addition to the division's internal review, King County Ordinance 14941 requires the county auditor to supervise an independent third party review of the Productivity Initiative. WTD and the King County Executive Auditor's Office are coordinating their efforts.

### **Outlook for 2010**

Some external and internal forces that are likely to impact how the division achieves productivity goals over the next year include more stringent environmental regulations, sustained economic decline, population growth, and aging facilities. The division has developed strategic initiatives that will help us prepare for and mitigate these changing dynamics for the least impact on productivity.

In the last few years, WTD implemented a new organization structure and a new project management system, which have helped achieve more predictable results with our projects. Other initiatives to improve our business practices and operations now underway include: an energy plan to optimize power usage; implementation of a strategic asset management plan to better manage our assets; and continuation of the Maintenance Best Practices program.

The final success of the pilot program will depend, as it has in the past, on the efforts of individual wastewater program employees. With the results earned in 2009, employees have demonstrated that they are motivated to be recognized and rewarded for outstanding performance that also benefits our ratepayers and makes our entire organization function more smoothly.

I'm appreciative of the ongoing support of our elected officials, labor organizations, DNRP management, King County Office of Management and Budget, and our talented and committed employees in making this program a success.

Sincerely,



Christie J. True  
Division Director

## Overview of Productivity Initiative Pilot Program

### Program Goals

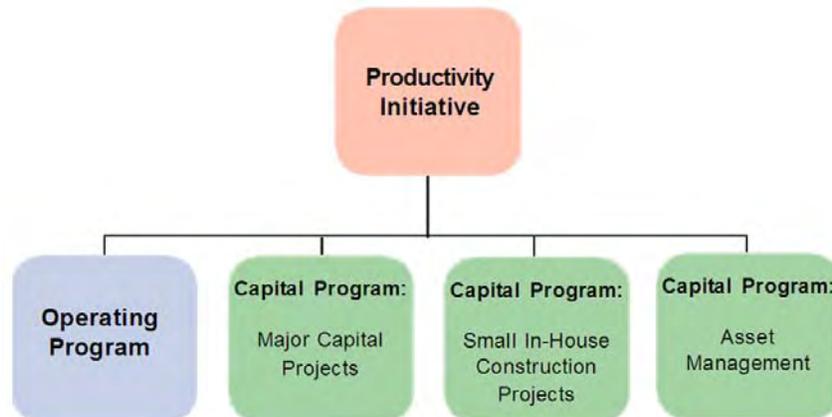
The Productivity Initiative was developed in 2000 and approved by the King County Executive and Council as a pilot program for the operating program in 2001. The pilot program was conceived as an opportunity for a traditional utility to be managed and operated more like a private business. For wastewater treatment employees, this means providing the same high-quality services to the public that King County has always provided, and doing it with the best and most appropriate technology, human resources, and fiscal planning found in the business world today. To the public, this means the Wastewater Treatment Division (WTD) is committed to being more efficient, reducing costs, and meeting the county's obligation to protect public health and the environment.

The pilot program identifies specific levels of service, cost reductions, and efficiencies over the period 2001 to 2010 that will result in an estimated \$75.9 million savings for ratepayers, while maintaining levels of service to these same customers. Savings are achieved by undertaking an intensive review of current business practices, identifying and implementing cost saving practices, working to increase employee involvement in business decisions, and ensuring that the wastewater program receives the best possible services from its partner agencies within and outside the county.

The Productivity Initiative links management decisions about employees with labor, and it requires that management and labor cooperate to identify new ways of getting business done, meet the bottom line, protect public health and safety, and allow employees to share in the financial rewards and risks of operating the program more like a private business.

### Components of Pilot Program

The pilot program began with the operations program. Since the program was launched, it has expanded to include three pilot programs within the capital program: Major Capital Projects Pilot, Small In-House Capital Construction Projects Pilot, and Asset Management Pilot.



### ***Operating Program Pilot (active since 2000)***

Annual productivity targets are developed with incorporated planned savings. These planned savings must be met to achieve the target. Employees generate documented savings which reduce annual operating expenditures. If operating expenditures are below the target, ratepayers share in 50 percent of the savings, while the other 50 percent goes to the Incentive Fund, which captures a portion of the savings that employees have generated by exceeding targets.

***Major Capital Projects Pilot (active since 2005)***

All capital projects over \$1 million are eligible to participate. Participation is decided on a case-by-case basis. A target budget (cost at completion) is set by an external, independent, third-party for each eligible capital project. Staff is challenged to deliver the capital project at a lower cost than the target budget.

***Small In-House Capital Construction Projects Pilot (active since 2005)***

Under certain conditions, savings created by doing work in-house rather than by outside contractors, can be documented and applied to the Incentive Fund. An independent estimate is required as part of any proposal by in-house staff to do the work at a lower cost than using an outside contractor.

***Asset Management Pilot (active since 2006, additions made in 2009)***

Using a suite of assets at WTD's South Treatment Plant, maintenance, refurbishment, and replacement decisions are based on reducing overall costs by balancing maintenance and repair, replacement, and refurbishing costs to extend the useful life of an asset. Savings in this pilot can occur only when staff successfully extends the useful life of equipment beyond the anticipated replacement date.

**For more information**

Details regarding the pilot program, including directive ordinances, all annual reports, program components, committees, forms, and policies, please visit the King County intranet at: <http://wtdweb/www/wtd/pi/productivity/index.htm>.

## 2009 Financial Results: Operating Program

### Background on Annual Targets

The annual operating targets for the pilot program were established by HDR, Inc., the consultant that worked with the wastewater program to develop the pilot program in the late 1990s. The baseline was established using WTD's 2000 Operating Program Budget.

HDR recommended that the wastewater program reduce its baseline budget incrementally over five years (2000 to 2005) to achieve a 12 percent reduction. The level of savings achieved by implementing planned savings actions would then be sustained during the remaining years of the pilot program (2006 to 2010). These reductions on the baseline budget became the target to be used during the pilot program. In their view, this would position King County's wastewater program to compare favorably with what a private contractor would charge to run the county's wastewater operations.

### Adjustment Process

Both an unadjusted target and an adjusted target are reported annually. The unadjusted targets for the 10 years of the pilot program were established when the program was developed, as described above. The unadjusted target is subject to an annual adjustment process, detailed in Appendix C-7 to the Pilot Plan approved by the council.

The target adjustments account for changes in conditions that are outside the wastewater program's control, such as county-wide cost-of-living increases, increased loading at the treatment plants, and changes in commodity and energy prices.

### Accounting for New Work

In 2009, the wastewater program continued to use an identification and review process developed in 2005 to identify and account for new work. "New work" is defined as work that is beyond the scope of services that was committed to in the pilot plan and is either:

- Required by changes in fiscal policy
- Required by changes in county policy or procedure
- Required because of a change in law or new permit requirements
- Directed from outside WTD or the Environmental Lab

In addition, new work must be work not taken on solely at the discretion of WTD or the Environmental Lab. New work that is documented and implemented without adding new resources (i.e., done by existing staff), can be counted towards savings achieved by the Productivity Initiative. In addition to the target adjustments, the pilot program allows the annual targets to be adjusted for any new work not captured in the initial development of the pilot program, such as new facilities, as well as work imposed on the program by directives originating from outside the program.

After being identified as new work by section managers, a project is approved as new work under the above definition by WTD management, WTD Finance, and Department of Natural Resources and Parks Finance. (Please see the 'Determining New Work' chart online at: <http://wtdweb/www/wtd/pi/productivity/pdfs/DeterminingNewWork.pdf>). Section analysts establish new time codes, and employees begin tracking time and expenditures related to the new work. WTD conducts an annual review of what and when new work should be added to the "base work."

## 2009 Results

The target adjustments account for changes in conditions that are largely outside the control of the program such as the cost of energy, or additional revenue. Actual expenditures in 2009 were \$84,549,365 leaving an under-expenditure of \$1,636,380, which means the 2009 target was not only met but exceeded.

### Target and Adjustments - 2009 Results

Unadjusted target	\$77,721,583
Adjusted target	\$86,185,745
Actual expenditures	\$84,549,365
Under-expenditure	\$1,636,380

## Program Savings

During the first five years of the program the division implemented programs and practices to achieve the targeted savings (also referred to as 'planned savings'). These were the efficiencies and savings designed to reduce the budget by 12 percent.

When the target is not just met but exceeded, WTD must demonstrate that specific employee-generated-savings activities have occurred in order for the savings to go towards employee incentives or payout. In other words, when the savings surpass the target, WTD must demonstrate how the target was exceeded by employee-driven actions. The following sections document examples of specific employee-driven activities that occurred in 2009.

### 2009 Short-Term Salary Savings

Salary savings result from temporary staffing vacancies. If a work group is able to accomplish the scheduled work of the vacant position, they may document how they accomplished the work, deducting any costs such as back-fill upgrades or the cost of temporary resources. The savings from each vacant position during the year is discussed at the Incentive Fund Committee (IFC) before being approved for inclusion in the savings calculations. Not all vacancies are eligible for inclusion and many eligible vacancies are reduced to a reasonable percentage of the work accomplished. WTD staff saved over \$1.7 million in labor costs in 2009 by their flexibility and creativity in covering extra workloads.

Section	Savings
Environmental Lab	\$442,198
Finance and Administration	19,877
Environmental & Community Services	226,479
East	766,650
West	273,270
Resource Recovery	24,214
Total	\$1,752,688

### Employee Savings Actions

These are actions that employees undertook to save operating expenses –initiated by employee ideas or suggestions. While many of these savings are generated each year, there are a few items that continue to provide savings over several years. Savings resulting from employee actions totaled \$981,020.

<b>Section</b>	<b>Expense*</b>	<b>Labor **</b>	<b>Total Savings</b>
Environmental Lab	\$0	\$0	\$0
Asset Management	\$31,696	--	\$31,696
East	\$285,168	\$365,785	\$650,953
West	\$245,690	\$52,681	\$298,371
<b>Total</b>	<b>\$562,554</b>	<b>\$418,466</b>	<b>\$981,020</b>

\* Expense savings = materials, supplies, energy, chemicals, contracts, etc.

\*\* Labor savings = value of the time made available through efficient practices and use for additional work, but does not directly contribute to the Incentive Fund, which means \$562,554 is used to calculate total eligible savings for Incentive Fund.

Examples of cost saving items that have continued from prior years include, but are not limited to:

- Dissolved Air Flotation Thickeners (DAFT) polymer dosage: Converted the polymer dosing strategy for the DAFT operations at South Plant to a “feed-forward” control strategy, resulting in savings of polymer, electricity, and gas. 2009 savings = \$61,767.
- Hypochlorite use reduction: Reduced hypochlorite use was achieved in South Plant’s disinfection process by installing a mixer, reconfiguring the contact channel, and optimizing chlorine residual analyzer locations. The average hypochlorite dose was reduced as well as the variability in doses, allowing for further lowering of hypochlorite doses. 2009 savings = \$96,770.
- Reduction of service vehicles: An audit of vehicle usage at South Plant resulted in a reduction of six vehicles and their return to the county Fleet Division. Efficiencies were gained by more careful planning of necessary trips through carpooling to outlying areas, transfer of vehicles between workgroups, etc. 2009 savings = \$31,437.

Examples of cost saving items that are new in 2009 include:

- Digester Cleanings to Cedar Hills Landfill: Building a rotary screen and concrete channel at West Point improved the screening of trash and allow the cleanings to sit and dewater, producing a cleaner product. WTD staff coordinated with King County Solid Waste Division to have the cleanings used as top cover for Cedar Hills Landfill, resulting in a savings on disposal costs. 2009 savings = \$55,517.
- Summer Youth Employment Program: WTD Human Resources took the initiative to procure summer maintenance labor through Worksource, at no cost. The program provides temporary employment to youths-at-risk and is funded by federal stimulus. WTD’s six participants filled the positions WTD usually hires in the summer for maintenance of the plants 80 acres and off-site facilities. HR had to negotiate with the union that represented these positions in order to take advantage of the Worksource labor. 2009 savings = \$30,832.
- Planned Maintenance Optimization Project: This project reviews and optimizes maintenance actions through several strategies including: extending the frequency between actions, bundling like-maintenance actions together according to location, and transferring appropriate actions to Operations staff. 2009 savings = \$78,569.

## 2009 Financial Results: Capital Program

### Major Capital Projects Pilot

All wastewater capital projects with budgets of more than \$1 million are eligible to participate in the Major Capital Pilot Program.

### Methodology

A project target budget (i.e., cost at completion) is set by an external independent third party for each participating capital project. If the wastewater treatment program completes the project for less than the target budget, a portion of the savings is eligible for the Incentive Fund. There is no financial penalty if the program does not meet the target budget under the terms of the capital pilot program plan.

WTD originally contracted for target-setting services with two outside consultants. These consultants are not eligible to provide any other consulting services on assigned projects. Targets are set following completion of a project's predesign report, between the 30 percent and 60 percent design completion milestones. All project data is given to the consultant, who then independently determines what it would cost for a "well run" agency to complete the same project. This cost becomes known as the target budget. No adjustments can be made to the target budget throughout the life of a project except for inflation. At the end of each fiscal year, the Engineering News Record's Construction Cost Index is utilized to determine the amount of annual project spending attributable to inflation. After subtracting such spending from a project's final cost, the revised figure will be measured against the target budget to see if savings were realized.

Project management staff gained flexibility in managing and controlling projects by the use of consultant/contractor incentives and alternative delivery methods. The concept is to link project performance to consultant and contractor performance by using creative incentives. Examples include completing work within contract budget, sharing unused contract contingency, achieving early project completion, using report cards, etc.

Savings (if realized) are calculated by subtracting the final project cost from the target budget. Any resulting savings are split between ratepayers (83 percent) and pilot program participants (17 percent). The split was developed on the basis of a 50/50 split between ratepayers and people responsible for achieving savings: employees, consultants, and contractors. Employees (the only group eligible for a share of the savings) would receive one third of the 50 percent share, or approximately 17 percent of the total savings.

Determining savings can only occur once the project has been closed out. There are no provisions for intermediate measures or payouts.

### Results

There was no activity in the Major Capital Projects Pilot in 2009.

During 2009 WTD management recognized challenges with the Capital productivity program and ability to implement productivity on the capital side. Cost, scheduling, and staff resource issues with the independent consultant services required as part of the structure of the pilot program resulted in the decision to not pursue the identified projects in 2009. Consequently, the planned projects (major capital and small capital) were not added to the program.

There are three major capital projects originally selected to participate in the program: Brightwater Treatment Plant and Conveyance System, Carnation Treatment Plant, and

Bellevue Pump Station. In 2005, the wastewater program contracted with two consultants to establish savings targets for each project. The status of each project is as follows:

- The success of generating productivity savings for construction of the Brightwater Treatment Plant and Conveyance System, by completing the entire project for less than the productivity financial target, will not be known until the project is closed out, however, current projections indicate that Brightwater's target cost is being exceeded, and thus savings would not be achieved. In 2009, tunnel construction delays resulted in a declaration of emergency and contractor change by the County executive. The Productivity Initiative methodology does not allow the target budget to be revisited or altered due to material changes or contractor issues.
- A major change in the project scope of the Carnation Treatment Facility, made after the original target was established, eliminated the possibility of coming in under the productivity target and creating productivity savings. The program does not allow the target cost to be revisited or altered due to material changes. This project was completed in 2008 and the facility is now part of operations.
- Costs for completing the Bellevue Pump Station and Force Main project continue to run higher than the target estimate. The high bid for constructing the Force Main eliminates the possibility of the project coming in under the productivity target and creating productivity savings. The bidding climate at the time the Force Main contract was bid (2006) was highly volatile, only one bid was received for the work, and high risk was indicated as the justification for the cost increase.

## **Small In-House Capital Construction Projects Pilot**

### **Methodology**

Small in-house capital construction projects are eligible to participate in the pilot project if they meet the following specific criteria:

- The total cost of labor, equipment, and supplies is less than \$25,000 for a single trade or craft, or \$70,000 for two or more trades or crafts.
- Wastewater program employees must submit a bid that is more competitive than an independent estimate to perform the same work.
- If the in-house bid is more competitive, then the difference may be eligible for the Incentive Fund. If the *actual costs* of the project after the project is completed are greater than the independent estimate, then the difference between the estimate and the actual cost borne by WTD must be paid to the wastewater operating budget from the Incentive Fund.

Any resulting savings from performing an eligible small capital construction project in-house would be eligible for the Incentive Fund.

### **Results**

There was no activity in the Small In-House Capital Construction Projects Pilot in 2009. No projects were identified that were more cost-efficient to do in-house, as opposed to being performed by contractors, after the cost of obtaining an independent construction estimate was factored into the employee bid.

## Asset Management Pilot

### Objectives

- Reduce overall cost of doing business by making sound 'repair versus replacement' decisions.
- Maintain level of service and reliability of the system to meet or exceed permit requirements and industry standards for a 'well-run' similar wastewater utility.

### Methodology

Started in 2006, the Asset Management Pilot was first applied to 153 selected assets at South Plant. Staff identified each asset's condition, age, and service level. In addition, rebuild and replacement intervals and costs were calculated. Once this interval was reached, the asset was evaluated to determine if the scheduled rebuild or replacement could be deferred. The assessment results were used to determine whether rebuilding or replacing an asset would be the most cost-effective without undue risk or a reduction in service levels.

Guidelines, based on lowest lifecycle costs, were developed to determine when actions deliberately taken and documented by staff resulted in costs lower than the target repair or rebuild cost. These guidelines are intended to clarify the decision-making process for participants and external stakeholders that review the program.

In addition, the lowest life cycles cost analysis ensures that efforts to extend asset life do not unduly increase Operations and Maintenance (O&M) costs. This analysis is an essential part of a feedback loop that balances O&M and capital costs, and provides transparency between the operations and capital portions of the pilot program.

### ***Raw Sewage Pumps added***

In 2009, Raw Sewage Pumps (RSPs) were removed from the original 153 pilot assets, leaving 140 original pilot assets and a second set of assets, comprised of 135 Raw Sewage Pumps – which were added for tracking cost savings based on the same principles.

### ***Determining Savings***

Planned annual costs are calculated and documented based on the established rebuild and replacement intervals. The planned costs are compared against actual rebuild and replacement costs. The difference between the planned and actual costs establishes the amount of money deferred from a single year.

These deferred costs reduce the total amount of money borrowed in a given year. The actual savings applied to the pilot program is determined by calculating the reduction in interest associated with the deferred expenditures.

### Results

In 2009, the asset management pilots (original and RSPs) saved a combined total of \$208,369 (\$9,453 and \$198,916, respectively). The 2009 Asset Management Pilot results are shown in Appendix 1 on page 22.

## Summary of Productivity Initiative Savings

In 2009, total employee-generated savings resulted in over \$2.5 million in savings.

Eligible savings from Employee Savings Actions*	\$562,554
Short-Term Salary Savings	\$1,752,688
Capital program savings (Asset Management pilots)	\$208,369
<b>Total Employee-generated Savings:</b>	<b>\$2,523,611</b>

*\*The Labor savings reported on page 8 does not directly contribute to the Incentive Fund, which means the eligible amount of \$562,554 is used to calculate total eligible savings for Incentive Fund.*

Although the employee savings are greater than the amount the target was exceeded by, only the difference between the target and the final expenditure can be counted for savings in the program (under-expenditure).

<b>Total Employee-generated Savings:</b>	<b>\$2,523,611</b>
<b>Under-expenditure*</b>	<b>\$1,636,380</b>
<b>Maximum Eligible Savings for Incentive Fund*:</b>	<b>\$1,636,380</b>

*\*The total employee-generated savings are reduced to the actual under-expenditure. In 2009, for the first time in the history of the Productivity Initiative Pilot Program, employee-generated savings exceeded the difference between the productivity annual target and actual expenditures.*

In addition, the savings must be adjusted by any penalties that apply. As a result, the final approved savings amount for 2009 is \$1,500,015. The approved savings are shared equally between ratepayers and employees, each receiving \$750,008.

<b>Maximum Eligible Savings for Incentive Fund:</b>	<b>\$1,636,380</b>
<b>Penalty deduction – NPDES* 1/12</b>	<b>(136,365)**</b>
<b>Penalty deduction - Safety 5%</b>	<b>0***</b>
<b>Approved savings for Incentive Fund</b>	<b>\$1,500,015</b>
<b>Employee share (50%)</b>	<b>\$750,008</b>
<b>Ratepayer share (50%)</b>	<b>\$750,008</b>

*\*National Pollution Discharge Elimination System (NPDES) Permits are issued by the Washington State Department of Ecology (DOE) for any discharges of wastewater or stormwater to state water bodies ( rivers, lakes and the Puget Sound). NPDES permits stipulate specific limits and conditions of allowable discharge.*

*\*\* Incentive Fund eligibility guidelines require that any contributions should be reduced by one-twelfth for each month in any given year in which an NPDES permit violation occurs as evidenced by issuance of a Notice of Penalty or Administrative Order by DOE. DOE issued a Notice of Penalty after a sewage spill was occurred at West Point in Dec 2009, due to operator error.*

*\*\*\* Incentive Fund eligibility guidelines require that the wastewater program not exceed an average of 22 time-loss accidents per rolling three-year period. Actual experience for 2007-2009 was 21 resulting in no penalty.*

## Results Since 2001

As of 2009 (and since 2001), ratepayers have enjoyed \$67,591,391 in planned savings through the Productivity Initiative. In addition, ratepayers also received \$5,057,787 of the employee-generated savings (50 percent of the eligible implemented employee savings ideas, salary savings, and capital program savings). This means division employees have saved more than \$72.6 million for ratepayers to date. *(Please see the following table).*

## 2005 to 2009 Comparison of Productivity Initiative Results

	2001-4 (total for these years)	2005*	2006*	2007	2008	2009	Total (since 2001)
Operating expenditures without productivity <sup>1</sup>		\$76,779,813	\$82,131,582	\$84,292,176	\$88,811,364	\$96,142,914	
Less: operating business plan savings	\$21,121,558**	\$8,797,620	\$8,983,589	\$9,207,761	\$9,523,695	\$9,957,169	\$67,591,391
Productivity operating expenditure target		\$67,982,193	\$73,147,993	\$75,084,414	\$79,047,389	\$86,185,745	
Less: actual operating expenditures		\$65,233,984	\$71,449,761	\$75,666,677	\$77,498,207	\$84,549,365	
Under (over) expenditure target		\$2,748,209	\$1,698,232	(\$582,263)	\$1,549,182	\$1,636,380	
Documented operating savings		\$1,445,306	\$1,644,352	\$0	\$1,485,970	\$2,315,242	
Minus: Penalties			\$137,029	N/A	\$209,306	\$136,365	
Plus: capital savings		\$0	\$37,600	\$65,964	\$83,826	\$208,369	
Ratepayer share (50%)	\$2,390,570**	\$722,653	\$772,461	(\$258,150)***	\$680,245	\$750,008	\$5,057,787
Payment to employees (after administrative expenses)		\$617,283	\$689,692	\$0	\$142,919	\$472,730	
<b>Total Ratepayer Savings to date (2009):</b>							<b>\$72,649,178</b>

\*\*This table includes previously-reported amounts for the years of 2005 and 2006. It does not include corrected amounts for the years of 2005 and 2006 based on audit findings and corrections detailed in the 2007 annual report.

<sup>1</sup> Operating expenditures without productivity is the amount that was estimated to be the actual expenditures of WTD if the division had not implemented the Productivity Initiative. From this amount, reduced expenditures based on operating business plan savings were estimated to establish the productivity operating expenditure target.

\*\*These numbers are combined total results for years 2001, 2002, 2003, and 2004. For details, please see the "2001 to 2009 Comparison of Productivity Initiative Results" table on page 15 of the 2008 annual report.

\*\*\*WTD did not achieve target in 2007, therefore the over-expenditure is split between the ratepayers and the employee Incentive Fund for this year (as specified in the pilot plan). For a full detail of the 2007 results, please see the 2007 annual report.

## Incentive Fund Activity

The Incentive Fund, which captures a portion of the savings that employees have generated by meeting and exceeding target budgets, addresses two primary objectives.

The first objective is to create a pool of money that can be drawn upon to fund over-target costs that are the responsibility of the wastewater program. If the wastewater program does not meet its annual adjusted budget target, the difference must be made up from funds taken out of the Incentive Fund. The second objective is to create an incentive for wastewater program employees to reduce costs below the annual budget target costs. In addition to the minimum annual payouts to employees of 25 percent of the funds assigned, distribution of the funds may include:

- Investment in employees through training and other employee development programs
- Awards and recognition
- A reserve fund, functions as a “Rainy Day Fund” to address possible shortfalls in meeting budget targets
- Other activities consistent with achieving the goals of the pilot program

### 2009 Incentive Fund

The approved savings are shared equally between ratepayers and employees, each receiving \$750,008. Consistent with the IFC recommendation, WTD will distribute a cash payout of 75 percent of the approved savings of \$562,506, which translates to an individual cash payout of \$514.92 (after taxes) for employees earning a “full share.”

The remainder of the \$750,008, after subtracting the cash payout of \$562,506, is \$187,502, which will be added to the previous Incentive Fund balance (\$315,585). (This is also referred to as a contribution to the “Rainy Day Fund” – see above).

The following table shows the Incentive Fund balances from 2001 to 2009.

2001	\$562,979	2006	\$356,404
2002	\$587,048	2007	(\$194,599)
2003	\$603,839	2008	\$315,585
2004	\$319,749	<b>2009</b>	<b>\$503,087</b>
2005	\$369,104		

## 2009 Balanced Scorecard Results

### Overview

WTD uses a Balanced Scorecard (BSC), a performance measurement tool often used in private business, to measure its overall performance. Balanced scorecards were developed in the 1990s as tools for businesses and organizations to evaluate performance, beyond just financial measurements, by providing performance feedback from multiple perspectives. WTD uses the scorecard as a management tool – to monitor how well the programs and strategies developed as part of the Productivity Initiative are working. The scorecard ensures that pilot program decisions take into account different perspectives, including financial performance, business practices, customer focus, and employee management. These four areas of performance are measured by four corresponding quadrants of the scorecard.

In 2001, WTD management identified performance indicators in each of the four quadrants and began collecting data so that year-to-year comparisons could be made during the 10 years of the pilot program. The targets are set to be very aggressive and comparable to results reflecting the performance of the best wastewater programs in the nation.

A performance measurement system such as this allows a public utility to align its service levels with operational and financial performance. With it, a utility can get feedback needed to guide planning efforts. The four quadrants and their key measures are shown and described on the following pages.



## How Ratings are Applied to Measurements

A green rating is achieved when the performance-to-target ratio is equal to or greater than 100 percent; a measure is rated yellow when the performance-to-target ratio is 90-99 percent; and a measure receives a color rating of red when its performance-to-target ratio is less than 90 percent. However, any performance for environmentally critical measures that falls below 100 percent of target will receive a color rating of red.

- '**Green**' indicates that the target was satisfactorily met. A green rating is only achieved when performance is at 100 percent of the target.
- '**Yellow**' indicates performance was within 90-99 percent of established target. For environmentally-critical measures, such as NPDES compliance, there is no yellow rating. For those measures, a rating of red is given for any performance falling below target.
- '**Red**' means performance has fallen below 90 percent of established target. For critical measures in which performance must be maintained at or above 100 percent, red indicates failing to meet 100 percent of target.

## 2009 Summary of Overall Results

In 2009, three of the four quadrants of the Balanced Scorecard were rated **yellow**: Financial Performance, Business Practices and Customer Focus. The Employee Management quadrant was rated **green**. There were several measures in each quadrant with green ratings, however in order for the entire quadrant to be rated **green**, all measures in the quadrant must meet their established targets. Summaries of performance results in each quadrant are provided on the following pages.

### **Financial Performance Results**

The Financial Performance quadrant of the BSC includes measures that indicate the overall financial health of WTD and the efficiency with which the division provides services to its customers and stakeholders.

The Financial Performance quadrant was rated **yellow** overall. In 2009, the wastewater program met its targets for several key financial measures, including the annual productivity operating expenditures, debt service coverage ratio, and sewer rate comparisons to other agencies. The measure comparing the sewer rate increase to an inflation adjusted rate, the annual accomplishment rate measure for capital expenditures, and the inflation based target for WTD's efficiency measure, which is the cost per pound of pollutants removed in the wastewater treatment process, did not meet targets in 2009.

The drop in the capital accomplishment rate is due to the delay in Brightwater tunneling efforts. Brightwater's accomplishment rate was 80 percent in 2009 while all other capital projects (in the Project Planning and Delivery (PPD) section) had a 96 percent accomplishment rate (based on the adopted plan). The factor most likely to be driving up the total cost per pound of pollutants is the operating expenditures. In 2009 there were two extraordinary expenses influencing the total overall operating expenses – legal costs and planning and emergency preparations for the Green River Flooding / Howard Hanson Dam. In total, the productivity operating expenditures were 9 percent higher in 2009 over the previous year. This coupled with slightly lower overall pounds of pollutants, perhaps related to a weakened economy and decreased levels of industrial activity, are the most likely reasons for the 10.7 percent increase in cost per pound of pollutants treated compared to 2008.

### ***Business Practices Results***

The Business Practices quadrant of the BSC includes four categories of measures that are key to WTD's business practices: permit compliance, operational performance, resource recovery, and effluent non-degradation. Included in these categories are measures of WTD's compliance with its NPDES and other permits, its stewardship of public health and water quality (in terms of keeping down sewer overflows and conducting sediment cleanups), resource reclamation efforts, and maintaining high standards for the quality of treated wastewater effluent.

The Business Practices quadrant was rated **yellow** overall. In 2009, WTD achieved 100 percent compliance with its NPDES permits for effluent quality, 100 percent compliance with its reclaimed water permits, and had no violations of its NPDES stormwater construction permits. WTD also met or exceeded minimum targets for several key measures related to energy conservation, environmental cleanup, resource recovery and environmental quality of treated wastewater effluent. However, the division continued to fall below target for recovery of digester gas for reuse due to the offline cogeneration system at West Point while a new Waste-to-Energy project is being implemented. Additionally, WTD fell slightly below 100 percent compliance on its air quality permit at South Plant, and had one permit violation resulting in a fine related to an untreated spill. In addition to this permit violation, a variety of other mechanical failures contributed to exceedance of the maximum target for avoidable overflows. The high number of non-wet weather related sanitary sewer overflows in 2009 contributed to a red rating for this measure. A third of the overflows were all attributed to ongoing challenges with managing the bypass gates at West Point. The gate controls are sensitive and can cause the gates to open due to small operator errors or a variety of mechanical or electrical signals, resulting in diversion of sewer flows around secondary treatment. Eleven of the overflows were in the conveyance system, most of which occurred due to unrelated and unpredictable mechanical causes. Three of these incidents occurred at one facility, caused by leaking vacuum relief valves on parallel force mains. There were no construction related overflows or spills in 2009.

### ***Customer Focus Results***

The Customer Focus quadrant of the BSC includes measures that look at how component agencies view the quality and value of their contract services with WTD. This quadrant also looks at how neighbors to WTD facilities, both residential and business, view WTD as a neighbor. A contract customer survey is sent out annually to customers and a 'Near Neighbor Survey' is administered every other year. Questions in the contract customer surveys are rated on a scale of 1-5, with 1 being poor and 5 being excellent. The target established for these measures is 4, a rating of very good. The results of the Near Neighbor Survey are calculated as a percentage of neighbors and businesses who view the West Point and South Treatment Plants as good neighbors. The target established for this measure is 75 percent.

The Customer Focus quadrant was rated **yellow** overall. The contract customer survey reflected continued improvement in local agency satisfaction with the Metropolitan Water Pollution Abatement Advisory Committee (MWPAAC) process, with the score increasing from 3.67 in 2008 to 3.94 in 2009. This measure had been rated red prior to the implementation in 2008 of improvements to the quality of meetings and the quality of WTD manager communications with local agencies. The customer satisfaction rating has remained consistent from 2007 to 2009, with a rating of 3.92. The quality of contract services rating improved from a red rating in 2008 to yellow in 2009. The overall response rate to the annual customer feedback survey dipped from a high of 62 percent in 2008 to 50 percent in 2009, however still met target and maintained a green rating.

The Near Neighbor Survey was administered in 2009, and the combined percentage of neighbors for West Point and South Plant who view WTD as a good neighbor was 67.7 percent, giving this measure a yellow rating consistent with prior results last reported in 2007.

***Employee Management Results***

The Employee Management quadrant of the BSC includes measures tied to results from an employee survey conducted every other year. Measures from the survey include overall satisfaction with jobs and employee ratings of respectfulness in the workplace and employee satisfaction with workplace safety. The employee survey was not conducted in 2009, therefore data for survey related measures is not reflected in the overall quadrant color rating.

The Employee Management quadrant also includes measures for the employee retention rate, percentage of employees with professional certifications or licenses, and a safety measure that looks at the percentage of employees with time loss injuries that are able to return to transitional duty or regular duty within three days of medical release.

For 2009 the Employee Management quadrant was rated **green**. Measures related to employee retention, percentage of employees with professional licenses and certifications, and rate of transfer of employees with time-loss injuries to transitional duty assignments were all rated green in 2009.

## Balanced Scorecard

DNRP GOAL	WTD 2009 BALANCED SCORECARD REPORT	2009 Target	2009 Data	2008 Data
Fiscal and Economic Goal	<b>FINANCIAL PERFORMANCE QUADRANT</b>			
	Operating cost per lb. of pollutants (BOD & TSS) removed NTET*	< \$0.3551	\$0.3914	\$0.3537
	Productivity Operating Budget NTET*	< \$86,185,745	\$84,549,365	\$77,498,207
	Total debt service coverage ratio	≥1.15	1.33	1.23
	Sewer rate compared with other agencies NTET*	<75% of highest comparable rate	45.9% of highest comparable rate	40% of highest comparable rate
	Annual rate increase compared with inflation NTET*	< inflation rate	\$31.90 (24% higher than CPI adjusted rate)	\$27.95 (9% higher than CPI adjusted rate)
	Accomplishment rate on capital expenditures (based on adopted plan)	≥90% average PPD & BW	88%	95.00%
Environment Goal	<b>BUSINESS PRACTICES QUADRANT</b>			
	<b>Permit Compliance Measures</b>			
	% compliance with NPDES permit effluent limits	100%	100%	100.00%
	# of NPDES Permit Violations Resulting in Enforcement Actions - Treatment and Conveyance NTET*	0	1	1
	# of NPDES Construction Stormwater Permit Notices of Violation NTET*	0	0	0
	% compliance with air quality permit	100%	92.3%	97.50%
	% compliance with reclaimed water permits	100%	100%	99.82%
	<b>Operational Measures</b>			
	# acres of sediments cleaned up***	21.1 acres	21.1 acres	14.3 acres
	Achieve 2% energy conservation (normalized) per year (from 2007)	≥2% reduction	-2.5%	-3.9%
	# of avoidable sanitary sewer overflows NTET*	≤7	18	6
	% of CSOs to total flow NTET*	<3.00%	0.32%	1.30%
	<b>Resource Recovery Measures</b>			
	% digester gas recovered for reuse	≥75%	63%	65.72%
	% biosolids recycled	100%	100%	100%
	Reclaimed water (million gallons)	≥260.00	309.50	274.2
	<b>Effluent Non-Degradation Measures</b>			
% of BOD/COD NPDES limit NTET*	<80.00%	42.30%	43%	
Fecal Coliform annual geometric mean (Coliform forming units) NTET*	<175	14	13	
Total suspended solids mg/L NTET*	<24 mg/L	11 mg/L	13 mg/L	
People and Communities Goal	<b>CUSTOMER FOCUS QUADRANT</b>			
	Component agency response to survey	≥50%	50%	62%
	Quality of contract services rated by local sewer agencies (1-5)	≥4	3.63	3.31
	Customer service satisfaction by local sewer agencies (1-5)	≥4	3.92	3.92
	Component Agency satisfaction with MWPAAC process (1-5)	≥4	3.94	3.67
	Good neighbor survey (residents and businesses who view WTD as a good neighbor)	≥75%	67.70%	no 2008 data**
	<b>EMPLOYEE MANAGEMENT QUADRANT</b>			
	% employees retained	≥91%	92.80%	93%
	% of employees with certifications/licenses	≥33%	36.18%	34.07%
	Safety- % of time loss claims transferred to transitional duty assignments within 3 working days of medical release	≥80%	100%	100%
	Safety-employee satisfaction with workplace safety (1-5)	≥4	no 2009 data**	3.94
	Overall satisfaction with job (1-5)	≥4	no 2009 data**	3.44
	Employee rating of respectful workplace (1-5)	≥4	no 2009 data**	3.85
<b>LEGEND</b>				
Met target (100% performance to target ratio)				
Near target (90-99% performance to target ratio)				
Needs attention (below 90% performance to target ratio)				

NOTES: \*NTET=Not to Exceed Target \*\*The Near Neighbor and Employee Surveys are conducted every other year.

\*\*\*The target for this measure is a cumulative target for acres cleaned up over a two-year period from 2008 to 2009. In 2008 14.3 acres were cleaned and in 2009 6.8 additional acres were cleaned to meet the total target of 21.1 acres.

## **Report from Executive Office of Management and Budget**

*In a report dated May 21, 2010, the Internal Auditor from King County's Finance and Business Operations agreed that WTD's 2009 Productivity Initiative Pilot Program results appear to be reasonable in comparison to results from prior years. This was also confirmed by the Office of Management and Budget in a separate review.*

### **Purpose**

At the request of WTD's Finance Manager, the Finance and Business Operations Division (FBOD) and Office of Budget and Management (OMB) reviewed WTD's Productivity Initiative Pilot Program results for the year 2009. The purpose of the examination was to:

- evaluate whether or not adjustments to the budget forecast were consistent with the design and intent of the pilot program,
- evaluate the overall reasonableness of the target and actual expenditure totals as compared to prior years.

### **Scope**

FBOD and OMB discussed 2009 Productivity Initiative results with the WTD Finance Manager and staff responsible for preparing the analysis. They examined documents reporting claimed savings for reasonableness, compared current and prior year target adjustments for consistency of method and application, and compared actual performance to prior years.

The scope of the examination was limited to an assessment of whether or not the target adjustments, target totals, and actual totals appeared reasonable and consistent with stated program intent, the original agreement, goals, and prior year results. Because of time constraints, Executive OMB did not trace report totals to underlying accounting records

### **Conclusion**

In the opinion of FBOD and OMB, their review of targets, expenditures and savings appeared reasonable in comparison to prior years.

*Dan Lawson, Internal Auditor, King County Executive Office of Management and Budget  
May 21, 2010.*

### **WTD Response**

WTD concurs with FBOD's and OMB's recommendations.

## Appendix 1: Asset Management Pilot Annual Productivity Summary

Year	Planned Repair / Replace		Actual Repair / Replace		Difference Repair / Replace		Total Savings	Int. Rate	Total Productivity savings	50% payout
2006	\$425,487	\$377,499	\$86,175	\$0*	\$339,312	\$377,499	\$716,800	5.25%	\$37,600	\$18,800
2007	\$290,700	\$1,397,672	\$328,297	\$0*	-\$37,597	\$1,397,672	\$1,360,075	4.85%	\$65,964	\$32,982
2008	\$562,149	\$1,625,615	\$612,086	\$0*	-\$49,937	\$1,625,615	\$1,575,678	5.32%	\$83,826	\$41,913
2009 (Pilot)	\$847,689	\$1,427,084	\$631,243	\$1,460,574	\$216,446	(\$33,490)	\$182,956	5.167%	\$9,453	\$4,727
2009 (RSPs**)	\$0	\$5,166,554	\$33,579	\$0*	(\$33,579)	\$5,166,554	\$5,132,975	5.167%	\$198,916 <sup>1</sup>	\$99,458
Total for 2009 (2009 Pilot + 2009 RSPs):									\$208,369 <sup>2</sup>	
Total to date (since 2006 through 2009):									\$395,759	

\*No equipment replacements conducted this year.

\*\*Raw Sewage Pumps (RSPs) – In 2009, RSPs were removed from the original Asset Management (AM) Pilot asset list and added to a newly-created second set of assets – comprised of 135 RSPs. These were added for tracking cost savings based on the same principles as the original AM Pilot asset list.

<sup>1</sup> The 2009 Total Productivity Savings for the RSPs shown in this table is 75% of their actual Total Productivity Savings, based on the allocation recommended by the Productivity Initiative Fund Committee.

<sup>2</sup> This is the 2009 Asset Management total. This figure is also the total capital savings for 2009 since there were no results in 2009 for Major Capital or Small In-house Capital.