

Wastewater Treatment Division Productivity Initiative 2010 Annual Report



King County Department of
Natural Resources and Parks

June 2011



King County

King County Department of Natural Resources and Parks
Wastewater Treatment Division

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Pictured on front cover: The Digester 4 Cleaning Crew at the West Point Treatment Plant

Executive Summary

Background

The Wastewater Treatment Division's (WTD) Productivity Initiative Pilot Program was a 10-year program (2001 to 2010) 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. Annual targets for each year of the program were established using the 2000 wastewater operating budget as a baseline. The program also included a mechanism for adjusting yearly targets for factors beyond the control of the division, such as inflation.

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

Comprehensive Review and outlook for a Future Program

An internal comprehensive review of the program was conducted by a division team and the results were reported to the Executive in 2011. In addition, the county auditor conducted a third-party consultant review of the program, which was also transmitted in early 2011. To view the reports, please visit:

<http://www.kingcounty.gov/environment/wtd/About/Finances/PI/Library.aspx>.

Feedback from the internal review indicated WTD employees would like to continue the program, but simplify it and incorporate it more into their daily business. This input will be used as a resource for potential redesign of a new program. Whether a new program is created, as well as what it might look like, would involve union negotiations and a vote by the Council.

2010 Results

Wastewater program employees generated positive productivity results during 2010, the tenth and final year of the pilot program. The results marked the eighth time in the past 10 years that employees achieved an established productivity target for the operating program and earned a financial incentive for their work. Through the program, division employees saved ratepayers over \$83.9 million.

One of the decisions to be made at the end of the program was what to do with the remaining balance in the Incentive Fund (after any payout for 2010 results). A decision was made to retain \$28,000 for employee recognition events in 2011 and 2012 (\$14,000 per year) and pay out the remaining balance to employees.

Success of the Productivity Initiative

The Productivity Initiative has resulted in organizational and process changes for both the capital and operating programs. On the operations side, WTD held staffing to year 2000 levels, despite adding three new treatment plants to the regional system. These low staffing numbers required a commitment from staff and the labor unions to collaboratively approach the work and to adopt new methods for operating and maintaining the plants.

With the results earned through 2010, employees demonstrated they are motivated to be recognized and rewarded for outstanding performance that also benefits our ratepayers and makes our entire organization function more smoothly. The decade-long support of elected officials, labor organizations, Department of Natural Resource and Parks (DNRP) management, King County Office of Performance, Strategy and Budget, as well as our talented and committed employees, made this program a success.

Overview of the Productivity Initiative Pilot Program

Program Goals

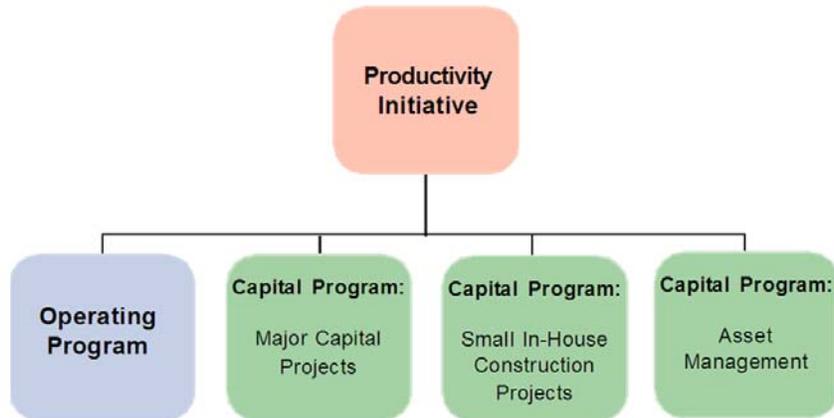
The Productivity Initiative was developed in 2000 and approved by the King County Executive and Council as a pilot program for the operating program in 2001. The pilot program was conceived as an opportunity for a traditional utility to be managed and operated more like a private business. For wastewater treatment employees, this meant 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 meant WTD was committed to being more efficient, reducing costs, and meeting the county's obligation to protect public health and the environment.

The pilot program identified specific levels of service, cost reductions, and efficiencies over the period 2001 to 2010 that resulted in an estimated \$83.9 million savings for ratepayers, while maintaining high levels of service to customers. Savings were 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 both inside and outside the county.

The Productivity Initiative linked management decisions regarding employees with labor decisions, and it required management and labor to 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 Operating Program. Since the program was launched, it was 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 were developed in 2000 with incorporated planned savings. A certain level of savings needed to be met to achieve the target. Employees generated documented savings which reduced annual operating expenditures. If operating expenditures were below the target, ratepayers shared in 50 percent of the savings, while the other 50 percent went to the Incentive Fund, which captured a portion of the savings that employees generated by exceeding targets.

Major Capital Projects Pilot (active since 2005)

All capital projects over \$1 million were eligible to participate. Participation was decided on a case-by-case basis. A target budget (cost at completion) was set by an external, independent, third-party for each eligible capital project. Staff was 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, could be documented and applied to the Incentive Fund. An independent estimate was 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 were 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 occurred only when staff successfully extended the useful life of equipment beyond the anticipated replacement date.

For more information

For 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>.

2010 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 2010, the wastewater program continued to use a 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), could be counted towards savings achieved by the Productivity Initiative. In addition to the target adjustments, the pilot program allowed 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 DNRP

Finance. (Please see the ‘Determining New Work’ chart online at: <http://wtdweb/www/wtd/pi/productivity/pdfs/DeterminingNewWork.pdf>). Section analysts established new time codes, and employees began tracking time and expenditures related to the new work. WTD conducted an annual review of what and when new work should be added to the “base work.”

2010 Results

The target adjustments account for changes in conditions that are largely outside the control of the program such as the cost of energy. Actual expenditures in 2010 were \$85,950,967 leaving an under-expenditure of \$750,129, which means the 2010 target was met by an excess of over \$750,000.

Target and Adjustments - 2010 Results

| | |
|---------------------|--------------|
| Unadjusted target | \$78,070,418 |
| Adjusted target | \$86,701,096 |
| Actual expenditures | \$85,950,967 |
| Under-expenditure | \$750,129 |

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. (An independent auditor determined that actual savings over the first five years of the program reduced the operating budget by 12.9 percent (adjusting for inflation), which means the program exceeded this goal).

When the target was not just met but exceeded, WTD needed to demonstrate that specific employee-generated-savings activities occurred in order for the savings to go towards employee incentives or payout. In other words, when the savings surpassed the target, WTD demonstrated how the target was exceeded by employee-driven actions. The following sections document examples of specific employee-driven activities that occurred in 2010.

2010 Short-Term Salary Savings

Salary savings result from temporary staffing vacancies. If a work group was able to accomplish the scheduled work of the vacant position, they documented 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 was discussed at the Incentive Fund Committee (IFC) before being approved for inclusion in the savings calculations. Not all vacancies were eligible for inclusion and many eligible vacancies were reduced to a reasonable percentage of the work accomplished. WTD staff saved over \$1.7 million in labor costs in 2010 with their flexibility and creativity in covering extra workloads. Please see the table on the following page.

| Section | Savings |
|------------------------------------|--------------------|
| Environmental Lab | \$259,095 |
| Director's Office | \$48,235 |
| Environmental & Community Services | \$147,966 |
| East | \$891,329 |
| West | \$380,708 |
| Total | \$1,727,333 |

Employee Savings Actions

These were actions that employees undertook to save operating expenses – initiated by employee ideas or suggestions. While many of these savings were generated each year, there were items that continued to provide savings over several years. Savings in 2010 resulting from employee actions totaled \$1,102,206.

| Section | Expense* | Labor ** | Total Savings |
|-----------------------------|------------------|------------------|--------------------|
| Project Planning & Delivery | \$28,422 | \$0 | \$28,422 |
| East | \$328,638 | \$410,519 | \$739,157 |
| West | \$285,481 | \$49,146 | \$334,627 |
| Total | \$642,541 | \$459,665 | \$1,102,206 |

* 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 \$642,541 is used to calculate total eligible savings for the Incentive Fund.

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

- Dissolved Air Flotation Thickeners (DAFT) polymer dosage: Operational changes in the use of polymer resulted in savings of polymer, electricity, and gas. 2010 savings = \$68,070.
- Hypochlorite use reduction: Reduced hypochlorite use was achieved in South Plant's disinfection process. 2010 savings = \$145,410.
- Digester cleanings to Cedar Hills Landfill: Building a rotary screen and concrete channel at West Point improved the screening of trash and allowed 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 the Cedar Hills Landfill, resulting in a savings on disposal costs. 2010 savings = \$77,294.

Examples of cost saving items that were new in 2010 include:

- Gate-lifter tool: An employee designed and fabricated a “gate-lifter” – a tool that prevented injuries related to lifting gates that control wastewater flow. 2010 savings = \$16,500 (yearly average cost of time loss from 2005-2009).

- Repair to Raw Sewage Pump (RSP) impeller: Staff came up with an innovative repair to a critical impeller by using a high strength epoxy in conjunction with large bolts to secure the parts together until the next scheduled overhaul. This repair not only outlasted the next scheduled overhaul, it will likely remain in place for an additional two years. 2010 savings = \$17,000.

2010 Financial Results: Capital Program

Major Capital Projects Pilot

Methodology

All wastewater capital projects with budgets of more than \$1 million were eligible to participate in the Major Capital Pilot Program. A project target budget (i.e., cost at completion) was set by an external independent third party for each participating capital project. If the wastewater treatment program completed the project for less than the target budget, a portion of the savings was eligible for the Incentive Fund. There was no financial penalty if the program did not meet the target budget under the terms of the capital pilot program plan.

Savings (if realized) were calculated by subtracting the final project cost from the target budget. Any resulting savings would have been 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 could only occur once the project was closed out. There were no provisions for intermediate measures or payouts.

Results

There was no activity in the Major Capital Projects Pilot in 2010.

Small In-House Capital Construction Projects Pilot

Methodology

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

- The total cost of labor, equipment, and supplies was less than \$25,000 for a single trade or craft, or \$70,000 for two or more trades or crafts.
- Wastewater program employees submitted a bid that was more competitive than an independent estimate to perform the same work.
- If the in-house bid was more competitive, then the difference may have been eligible for the Incentive Fund. If the *actual costs* of the project after the project was completed were 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 have been eligible for the Incentive Fund.

Results

There was no activity in the Small In-House Capital Construction Projects Pilot in 2010. 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 solution 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 were intended to clarify the decision-making process for participants and external stakeholders that reviewed the program.

In addition, the lowest lifecycle cost analysis ensures that efforts to extend asset life did not unduly increase Operations and Maintenance (O&M) costs. This analysis was 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

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 RSPs. The 135 RSPs were tracked for cost savings based on the same principles as the original pilot assets.

Determining Savings

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

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

Results

In 2010, the asset management pilots (original and RSPs) saved a combined total of \$180,743 (\$5,452 and \$175,291, respectively). The 2010 Asset Management Pilot results are shown in Appendix 1 on page 18.

Summary of Productivity Initiative Savings

In 2010, employee-generated savings totaled over \$2.5 million.

| | |
|---|--------------------|
| Eligible savings from Employee Savings Actions* | \$642,541 |
| Short-Term Salary Savings | \$1,727,333 |
| Capital program savings (Asset Management pilots) | \$180,743 |
| Total Employee-generated Savings: | \$2,550,617 |

**The Labor savings reported on page 8 does not directly contribute to the Incentive Fund, which means the eligible amount of \$642,541 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).

| | |
|--|--------------------|
| Total Employee-generated Savings: | \$2,550,617 |
| Under-expenditure* | \$750,129 |
| Maximum Eligible Savings for Incentive Fund*: | \$750,129 |

**The total employee-generated savings are reduced to the actual under-expenditure.*

In addition, the savings must be adjusted by any penalties that apply. As a result, the final approved savings amount for 2010 is \$687,618. The approved savings are shared equally between ratepayers and employees, each receiving \$343,809.

| | |
|---|------------------|
| Maximum Eligible Savings for Incentive Fund: | \$750,129 |
| Penalty deduction – NPDES* 1/12 (1 month) | (62,511)** |
| Approved savings for Incentive Fund | \$687,618 |
| Employee share (50%) | \$343,809 |
| Ratepayer share (50%) | \$343,809 |

**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 Puget Sound). NPDES permits stipulate specific limits and conditions of allowable discharge.*

*** Incentive Fund eligibility guidelines require that contributions should be reduced by one-twelfth for each month in any given year in which there is an NPDES effluent exceedance permit violation. It was determined in April 2011 that there were additional violations in 2009 for which penalties should be levied. The two additional 2009 penalties and a January 2010 penalty all occurred at combined sewer overflow (CSO) treatment facilities. The penalties were for missed effluent monitoring, exceedance of settleable solids and fecal coliform geometric mean limits, and residual chlorine levels. \$62,511 reflects only the 2010 penalty. The additional adjustments for the 2009 penalties are reflected in the corrections and footnotes on the table on page 11.*

Results Since 2001

As of 2010, ratepayers have enjoyed \$78,628,713 in planned savings through the Productivity Initiative. In addition, ratepayers also received \$5,265,231 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 \$83.9 million for ratepayers to date. Please see the following table for details.

2005 to 2010 Comparison of Productivity Initiative Results

| | 2001-4 (total for these years) | 2005* | 2006* | 2007 | 2008 | 2009 | 2010 | Total (since 2001) |
|--|--------------------------------|--------------|--------------|----------------|---------------------------|--|------------------------|---------------------|
| Operating business plan savings | \$21,121,558** | \$8,797,620 | \$8,983,589 | \$9,207,761 | \$10,028,122 ¹ | \$10,161,015 ¹ | \$10,329,048 | \$78,628,713 |
| Productivity operating expenditure target | | \$67,982,193 | \$73,147,993 | \$75,084,414 | \$79,047,389 | \$86,185,745 | \$86,701,096 | |
| Less: actual operating expenditures | | \$65,233,984 | \$71,449,761 | \$75,666,677 | \$77,498,207 | \$84,549,365 | \$85,950,967 | |
| Under (over) expenditure target | | \$2,748,209 | \$1,698,232 | (\$582,263) | \$1,549,182 | \$1,636,380 | \$750,129 | |
| Documented operating savings | | \$1,445,306 | \$1,644,352 | \$0 | \$1,485,970 | \$2,315,242 | \$2,369,874 | |
| Minus: Penalties | | | \$137,029 | N/A | \$209,306 | \$409,095 ² \$136,365 | \$62,511 | |
| Plus: capital savings | | \$0 | \$37,600 | \$65,964 | \$83,826 | \$208,369 | \$180,743 | |
| Ratepayer share (50%) | \$2,390,570** | \$722,653 | \$772,461 | (\$258,150)*** | \$680,245 | \$613,643 ² \$750,008 | \$343,809 | \$5,265,231 |
| Payment to employees (after administrative expenses) | | \$617,283 | \$689,692 | \$0 | \$142,919 | \$472,730 | \$541,538 ³ | |
| Total Ratepayer Savings to date (2010): | | | | | | | | \$83,893,944 |

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

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

***WTD did not achieve its 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.

¹ These amounts have been corrected from the previous year. For previously reported amounts, please see the 2009 annual report.

² These amounts have been corrected. It was determined in April 2011 that there were additional violations in 2009 for which penalties should be levied. The two additional 2009 penalties occurred at combined sewer overflow (CSO) treatment facilities. The penalties were for missed effluent monitoring, exceedance of settleable solids and fecal coliform geometric mean limits, and residual chlorine levels.

³ Since 2010 is the final year of the pilot program, the amount of payment to employees for 2010 includes the final fund balance (\$305,119) and current savings (\$343,809) less funds retained for employee recognition events for 2011 and 2012 (\$28,000, or \$14,000 per year - see explanation in the next section "Incentive Fund Activity").

Incentive Fund Activity

The Incentive Fund, which captured a portion of the savings that employees generated by meeting and exceeding target budgets, addressed two primary objectives. The first objective was to create a fund that could be drawn upon to fund over-target costs that were the responsibility of the wastewater program. If the wastewater program did not meet its annual adjusted budget target, the difference was made up from funds taken out of the Incentive Fund. The second objective was to create an incentive for wastewater program employees to reduce costs below the annual budget target costs. In addition to the annual payouts to employees, distribution of the funds included:

- Investment in employees through training and other employee development
- Awards and recognition (otherwise known as “Recognition” funds)
- A reserve fund, which functioned as a “Rainy Day Fund” to address possible shortfalls in meeting budget targets

2010 Incentive Fund

The approved savings are shared equally between ratepayers and employees, each receiving \$343,809. Consistent with the IFC recommendation, WTD will distribute a cash payout of 100 percent of the approved savings of \$343,809.

One of the decisions to be made at the end of the program was what to do with the remaining balance in the Incentive Fund (after any payout for 2010 results). The decision-making process on the final disposition of the Rainy Day and Incentive Funds included a formal recommendation by the IFC to the WTD Division Director, who made the final decision. This was consistent with the ordinances, motions, union contracts, and pilot plan establishing the program. A decision was made to retain \$28,000 for employee recognition events in 2011 and 2012 (\$14,000 per year) and pay out the remaining balance to employees. The total 2010 payout to the employees consists of the following:

| | |
|---|------------------|
| 100 percent payout of savings | \$343,809 |
| Plus (adjusted*) Incentive Fund balance | \$305,119 |
| Less 2011 / 2012 employee recognition funds | (\$28,000) |
| Total / Final Employee Payout: | \$620,928 |

**The adjustments for the 2009 penalties are reflected in the corrections and footnotes on the table on page 12.*

This translates to an individual cash payout of \$588.63 (after taxes) for employees earning a “full share” (as defined by the program pilot plan).

The following table shows the Incentive Fund balances from 2001 to 2010.

Incentive Fund Year-End Balances

| | | | |
|------|-----------|-------------|-------------|
| 2001 | \$562,979 | 2006 | \$356,404 |
| 2002 | \$587,048 | 2007 | (\$194,599) |
| 2003 | \$603,839 | 2008 | \$315,585 |
| 2004 | \$319,749 | 2009 | \$503,087 |
| 2005 | \$369,104 | 2010 | 0* |

**Since 2010 is the final year of the pilot program, employee recognition funds will be managed under a new program, so the reflected balance in the Incentive Fund (associated with the Productivity Initiative) is zero.*

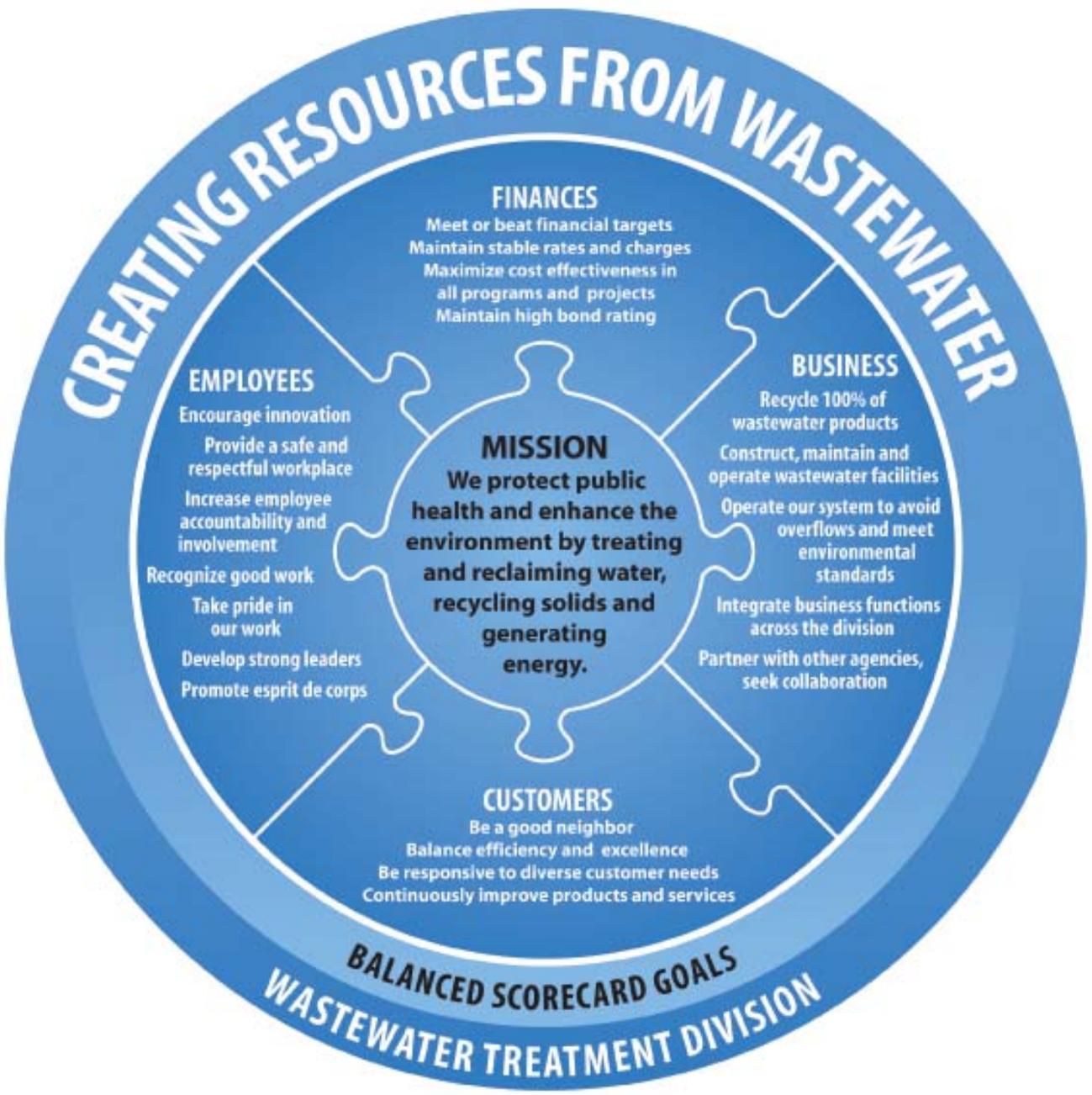
2010 Balanced Scorecard Results

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

- ‘**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. However, any performance for environmentally critical measures that falls below 100 percent of target will receive a color rating of red.

2010 Summary of Overall Results

In 2010, all four quadrants of the Balanced Scorecard were rated **yellow**. 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 2010, preliminary results show that the wastewater program will meet its targets for four of six financial measures, including the annual productivity operating expenditures, debt service coverage ratio, sewer rate comparisons to other agencies and accomplishment rate for capital expenditures. WTD did not meet the efficiency measure (the cost per pound of pollutants removed in the wastewater treatment process). WTD calculates a target rate based on inflation using a ten-year rolling cycle. The actual rate for 2010 was more than 10 percent higher than the target rate, resulting in a rating of **red** for that measure.

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.

Business Practices was rated **yellow** overall. In 2010 WTD achieved 99.9 percent compliance with National Pollutant Discharge Elimination System (NPDES) permits for effluent quality, 99.4 percent compliance with reclaimed water permits, and 94.5

percent compliance on its air quality. The division had one notice of violation for a spill in its conveyance system and did not meet the target for number of avoidable sanitary sewer overflows in a year. There were no Construction Stormwater Permit Notice Violations in 2010.

WTD performed better than the target for environmental quality of treated wastewater effluent. WTD also met or exceeded targets for two of its resource recovery measures; biosolids recycling and reclaimed water volumes. The measure for recovery and reuse of biogas did not meet targets and was rated *red*. This is due to removing cogeneration equipment that had exceeded its useful operating life from the West Point Treatment Plant. A project is currently under construction to replace the equipment by 2012, which will bring biogas utilization rates back up to target. WTD met and exceeded the energy conservation measure, achieving more than 2 percent energy conservation (normalized from 2007).

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 maintained a *yellow* overall rating and saw only very minor decreases in specific measures. Local agency satisfaction with the Metropolitan Water Pollution Abatement Advisory Committee (MWPAAC) process dipped slightly from 3.94 in 2009 to 3.92 in 2010. The customer satisfaction rating slid from 3.92 in 2009 to 3.73 in 2010. The local agency satisfaction with contract services was steady at 3.63. The overall response rate to the annual customer feedback did not change – meeting the 50 percent goal.

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 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.

The **Employee Management** quadrant was rated *yellow*. Employee retention and rate of transfer of employees with time-loss injuries to transitional duty assignments were rated *green* in 2010. The percentage of employees with professional licenses and certifications dropped from *green* to *yellow* in 2010. Employee satisfaction with workplace safety, job and a respectful workplace were all rated *yellow*.

Follow-up on Results

WTD takes ratings of *yellow* seriously, and while the standards for achieving a *green* rating are very ambitious, we are committed to achieving green ratings by:

- Examining all operating costs. (For example: Reducing the use of polymer through more-efficient dosing).
- Initiating additional training, accountability measures and capital projects to eliminate any compliance issues.
- Continuing to work closely with our component agencies to address any concerns they may have.
- Following through on any and all areas identified as less-than-satisfactory in the employee survey.

Balanced Scorecard

| DNRP GOAL | WTD 2010 BALANCED SCORECARD REPORT | 2009 Data | 2010 Data | 2010 Target | 2010 BSC Quadrant Color Rating |
|---|---|---|---|---------------------------------|--------------------------------|
| Fiscal and Economic Goal | FINANCIAL PERFORMANCE QUADRANT | | | | 0.93 |
| | Operating cost per lb. of pollutants (Biochemical Oxygen Demand (BOD) & Total Suspended Solids (TSS) removed NTET* | \$0.3914 | \$0.4043 | < \$0.3622 | 0.89 |
| | Productivity Operating Budget NTET* | \$84,549,365 | \$85,950,628 | \$86,700,757 | 1.00 |
| | Total debt service coverage ratio | 1.33 | 1.33 | ≥1.15 | 1.00 |
| | Sewer rate compared with other agencies NTET* | 45.9% of highest comparable rate | 45.9% of highest comparable rate | <75% of highest comparable rate | 1.00 |
| | Annual rate increase compared with inflation NTET* | \$31.90 (24% higher than CPI adjusted rate) | \$31.90 (31% higher than CPI adjusted rate) | < inflation rate | 0.69 |
| | Accomplishment rate on capital expenditures (based on adopted plan) | 88% | 105% | ≥90% average PPD & BW | 1.00 |
| | BUSINESS PRACTICES QUADRANT | | | | 0.96 |
| Environment Goal | Permit Compliance Measures | | | | |
| | % compliance with NPDES permit effluent limits | 100% | 99.9% | 100% | 0.99 |
| | # of NPDES Permit Violations Resulting in Enforcement Actions - Treatment and Conveyance NTET* | 1 | 1 | 0 | 0.99 |
| | # of NPDES Construction Stormwater Permit Notices of Violation NTET* | 0 | 0 | 0 | 1.00 |
| | % compliance with air quality permit | 92.3% | 94.5% | 100% | 0.95 |
| | % compliance with reclaimed water permits | 100% | 99.4% | 100% | 0.99 |
| | Operational Measures | | | | |
| | Achieve 2% energy conservation (normalized) per year (from 2007) | 2.5% | -4.6% | >2% reduction | 1.00 |
| | # of avoidable sanitary sewer overflows NTET* | 18 | 11 | ≤7 | 0.64 |
| | % of CSOs to total flow NTET* | 0.32% | 1.50% | <3.00% | 1.00 |
| | Resource Recovery Measures | | | | |
| | % digester gas recovered for reuse | 63.0% | 62.6% | ≥75% | 0.83 |
| | % biosolids recycled | 100% | 100% | 100% | 1.00 |
| | Reclaimed water (million gallons) | 309.5 | 279.1 | ≥260.00 | 1.00 |
| | Effluent Non-Degradation Measures | | | | |
| | % of BOD/COD NPDES limit NTET* | 42.3% | 42.0% | <80.00% | 1.00 |
| | Fecal Coliform annual geometric mean (Coliform forming units) NTET* | 14 | 17 | <175 | 1.00 |
| | Total suspended solids mg/L NTET* | 11 mg/L | 11 mg/L | <24 mg/L | 1.00 |
| People and Communities Goal | CUSTOMER FOCUS QUADRANT | | | | 0.95 |
| | Component agency response to survey | 50% | 50% | ≥50% | 1.00 |
| | Quality of contract services rated by local sewer agencies (1-5) | 3.63 | 3.63 | ≥4 | 0.91 |
| | Customer service satisfaction by local sewer agencies (1-5) | 3.92 | 3.73 | ≥4 | 0.93 |
| | Component Agency satisfaction with MWPAAC process (1-5) | 3.94 | 3.92 | ≥4 | 0.98 |
| | Good neighbor survey (residents and businesses who view WTD as a good neighbor) | 67.7% | 67.7% | ≥75% | 0.90 |
| | EMPLOYEE MANAGEMENT QUADRANT | | | | 0.96 |
| | % employees retained | 92.80% | 94.28% | ≥91% | 1.00 |
| | % of employees with certifications/licenses | 36.18% | 30% | ≥33% | 0.90 |
| | Safety- % of time loss claims transferred to transitional duty assignments within 3 working days of medical release | 100% | 100% | ≥80% | 1.00 |
| | Safety-employee satisfaction with workplace safety (1-5) | no 2009 data** | 3.78 | ≥4 | 0.95 |
| | Overall satisfaction with job (1-5) | no 2009 data** | 3.81 | ≥4 | 0.95 |
| | Employee rating of respectful workplace (1-5) | no 2009 data** | 3.95 | ≥4 | 0.99 |
| | LEGEND | | | | |
| 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 2 year period from 2008-2009. 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.
- **** No sediment remediation projects are planned for 2010 or 2011.
- ***** Has not been determined.

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% | \$198,916¹ | \$99,458 |
| 2010 (Pilot) | \$414,683 | \$976,234 | \$140,177 | \$1,128,500 | \$274,506 | (\$152,266) | \$122,239 | 4.467% | \$5,452 | \$2,726 |
| 2010 (RSPs**) | \$0 | \$5,306,658 | \$74,469 | \$0* | (\$74,469) | \$5,306,658 | \$5,232,189 | 4.467% | \$175,291 | \$87,646 |
| Total for 2010 (2010 Pilot + 2010 RSPs): | | | | | | | | | \$180,743 | |
| Total to date (since 2006 through 2010): | | | | | | | | | \$576,502 | |

*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.

¹The 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.