MEASURING FOR RESULTS

KING COUNTY DEPARTMENT OF
NATURAL RESOURCES AND PARKS

Fourth Annual Performance Measure Report – 2005

King County
Department of
Natural Resources and Parks

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Additional copies may be obtained by contacting:

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AGA
PERFORMANCE & ACCOUNTABILITY

DNRP's Measuring for Results report has won a prestigious national award for performance measure reporting from the Association of Government Accountants (AGA)for the past two consecutive years (2003 and 2004).

From the award:
Certificate of Excellence in Service Efforts & Accomplishments Reporting

Certificate of achievement presented to King County Department of Natural Resources and Parks for your outstanding efforts in producing a high quality service efforts and accomplishments report for fiscal years 2003 and 2004.

A Certificate of Achievement in Service Efforts and Accomplishments Reporting is presented by AGA to state and local governmental entities whose annual performance reports fulfill the Governmental Accounting Standards Board's suggested criteria for communicating results and thereby increasing public accountability.

ACKNOWLEDGEMENTS

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FROM THE DNRP MANAGEMENT TEAM

Comprehensively measuring our performance since 2003, this department continues to expand and intensify the use of performance measures within the agency. This work is serving as a model county-wide as performance measurement becomes a sustained movement in local, state and national government, and is increasingly valued by our residents and stakeholders as a tool to measure government accountability and transparency.

And for good reason – performance measurement is a vital tool for agencies, such as ours, that seek to produce excellent results with diminishing resources. Residents and businesses that care about and depend upon the wide array of environmental services that DNRP provides all benefit from our performance measurement program.

Our use of measures has improved DNRP performance in numerous ways. Recent successes include:

- Stronger feedback loops with parks visitors (including *www.parksfeedback.com*) have helped us quickly identify and remedy problems on trails, in natural areas and in other park facilities;
- More comprehensive lake and beach monitoring have pinpointed where water quality problems threatened health of swimmers and wildlife; and
- Surveys of environmental behaviors of King County residents allow us to target where residents are willing to "green up" their behavior, but lack information on specific topics.

We will continue to measure our performance and use performance information to improve the environment and quality of life in King County. We strongly believe that it is essential to communicate our approaches and results with our elected officials, cities, county residents and our own employees.

Since our first report three years ago, we have been recognized within the county and by a national peer-review panel for producing a high quality, informative report. We are particularly proud that the report was awarded a "Certificate of Excellence in Service Efforts and Accomplishments Reporting" by the Association of Government Accountants two years in a row. We take pride in our accomplishments and continue to use this information to improve our services and results for the community.

OUR APPROACH

Effective performance management relies on measuring our performance relative to our mission and goals and adjusting our management strategies accordingly. Our main reasons to measure performance are to:

- Ensure DNRP goals and targets are relevant to our customers and stakeholders;
- Assess strategies and tactics to account for the changing nature of our work;
- Budget to ensure resources are available for priority programs;

- Focus limited resources to maximize the benefits of our investments;
- Clarify the logic behind shifts in resource deployment;
- Learn and improve based on data, evidence and cause and effect relationships;
- Evaluate outcomes to reveal why programs and approaches are not achieving targets; and
- Celebrate successes and achievements to support successful strategies and motivate continued improvement.

This is the fourth-annual performance measure report produced by DNRP. For most measures we are able to see trends and track performance over time. The number of yellow and red measures reflects the high standards we have set, the long-term nature of environmental change and the reality of resource constraints.

A few major changes are important to note. This year's report has been organized into two major sections, separating indicators from performance measures. New environmental indicators have been added and some existing indicators have been improved. We have also improved key efficiency measures for each of our four divisions.

WHAT'S NEXT?
DNRP is actively refining programs and systems to ensure our resources are lined up to best achieve intended outcomes. Upcoming improvements to our performance measures will expand access to performance information and will better convey how program activities connect to departmental goals. Over time, our performance measures will help us strengthen accountability and enhance our ability to participate in regional partnerships.

We look forward to your comments on the report, our strategies, and the department's overall efforts to achieve a sustainable and livable community and a clean and healthy natural environment.

Pam Bissonnette
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Natural Resources and Parks

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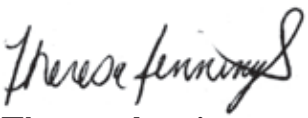


Theresa Jennings
Division Director
Solid Waste Division

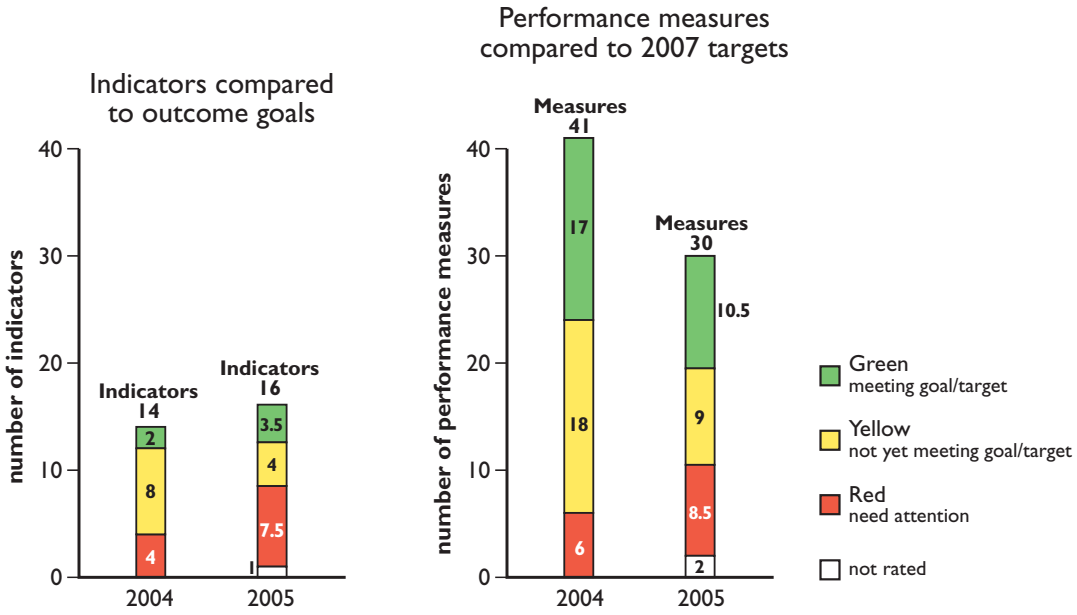
Don Theiler
Division Director
Wastewater Treatment Division

TABLE OF CONTENTS

EXECUTIVE SUMMARY

The Department of Natural Resources and Parks (DNRP) is now in its fourth year of using a results- or outcome-based performance management system to monitor progress towards accomplishing our goals. This system was developed to measure and report on the key information required to understand the condition of King County's natural environment and the results of the department's programs. DNRP uses this information to improve our performance and service delivery through a variety of approaches, including programmatic analysis, strategic business planning, and the budget process.

Out of 16 *environmental indicators*, 3.5 are currently meeting their long term outcome goals, 4 are not yet meeting or are below outcome goals, 7.5 need attention and one is not rated. Of 30 *performance measures*, 10.5 are currently meeting the 2007 target, 9 are not yet meeting or are below the target, 8.5 need attention and two are not rated. We will continue to focus resources on the 10.5 measures that are meeting targets to ensure we maintain high performance. The 9 measures that have not yet reached their 2007 targets require ongoing attention and the 8.5 red measures need significant programmatic and budget resources.



In 2005 none of the indicators improved enough so that they changed colors (either from red to yellow or from yellow to green). However, one performance measure improved enough to change its color rating:

- Entrepreneurial revenue (No. PM-24) (yellow to green)

None of the indicators declined in color rating, however one that was previously not rated is now being given a rating of red:

- Stream "flashiness" in Puget Sound Lowland Streams (formerly known as Normative flows in rivers and streams) (No. I-14)

One performance measure that was previously not rated also now receives a rating of red:

- Methane to usable energy (No. PM-9)

Performance measures that declined so that they changed colors (from green to yellow or yellow to red) from last year are:

- Volunteer hours (No. PM-14) (green to red)
- Relationship with DNRP (No. PM-19) (yellow to red)

This annual performance measure report portrays the diversity and complexity of the issues DNRP addresses. The report is designed to inform discussion on both the agency's performance and broader environmental conditions. Using the information in this report, we hope to answer some key questions:

- Are we progressing in meeting our desired outcomes and goals?
- What programs require new strategies or additional, focused attention?
- How can we best prioritize our services with reduced financial resources?

There are several key ways to look at our performance information. One level of analysis is to group each of the measures by the seven departmental goals. Another level of analysis is to look at all of the indicators and measures to assess overall performance. Lastly, by discussing the issues associated with each performance category (green, yellow, red) managers and decision-makers can focus attention, and resources, on areas that have not yet met targets or need additional attention. The summary of all indicator and measure ratings can be found as a fold-out diagram on the inside back cover.

ARE WE ACHIEVING OUR GOALS?

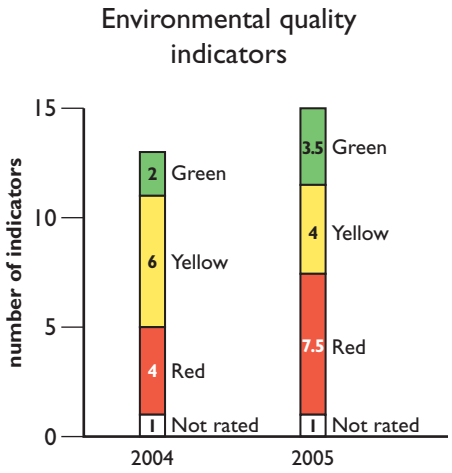
This section describes the measures and indicators in context of how we are meeting our departmental goals. By breaking out the data by individual goal, we can see areas that require more attention or those that are doing relatively well. For the performance measures in this report, we are focusing on our performance compared to our 2007 targets. Upon reaching our five-year target year in 2007, we will also assess how we are doing relative to our outcomes in more detail. For the indicators, we are focusing on how well we and the region are doing in relation to achieving long term outcome goals.

Environmental Quality

In the environmental quality goal area, we have a combination of 16 environmental indicators and 5 agency measures. Two of the indicators have two rated components each. The ratings for these indicators are broken into half number increments to reflect the different components. This year there are a total of 21 environmental quality ratings. One indicator (Climate Change) is not rated.

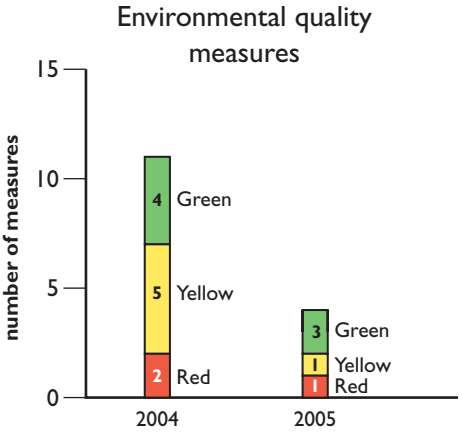
Indicators

Only 3.5 of 15 rated indicators are attaining long term outcome goals (green), while 4 are below outcome goals (yellow), and 7.5 are significantly below outcome goals (red). One indicator, climate change, is not rated. Indicators do not have short term targets established due to the limited ability of DNRP's programs to directly influence broader environmental conditions in our region. Each of these areas that are below long term outcome goals may require additional levels of effort, combined with inter-jurisdictional collaboration, and in many cases additional resources, to address these issues.



Measures

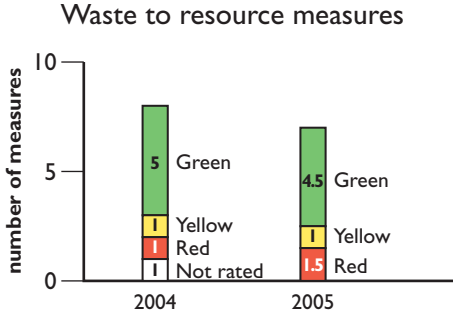
Three of 5 measures are already attaining targets (green) and one is not yet attaining targets (yellow). One measure, greenhouse gas emissions, needs attention (red). To improve performance on the greenhouse gas measure (No. PM-3), DNRP is making critical infrastructure investments that require time to implement.



There are several conclusions that can be drawn from the differences between agency performance measures and environmental indicators. One conclusion is that since DNRP has more direct control over performance measures we ought to show better results than the environmental indicators. Another conclusion is that despite relatively strong agency performance, the environment is continuing to show negative impacts due to patterns of development and activities within the county. Although these findings are not entirely surprising, given that the indicators are intended to show environmental conditions beyond the control of DNRP and even county government, it does highlight the need to work collaboratively with other jurisdictions, residents, and businesses to address these ongoing concerns. It also highlights the fact that both freshwater and marine environments need a variety of strategies such as education, capital investment, and regulations to yield positive long-term results.

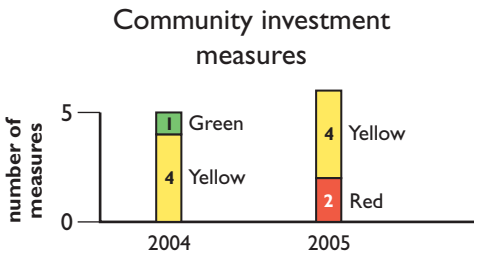
Waste to Resource

Four and a half measures are meeting 2007 targets, one is just below the target, and 1.5 measures are red and need attention. One red measure, waste disposed per employee (No. PM-11b), decreased slightly from last year but still exceeds the national benchmark. This may be a result of issues with the statewide non-residential data collection system or the decreased number of employees due to recent economic conditions, which in turn impacts the "per



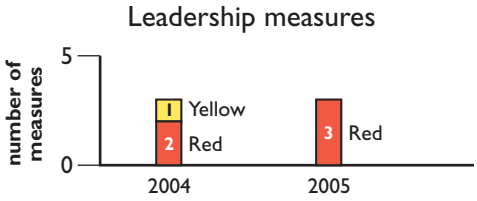
employee" rate. The other red measure, methane to usable energy (No. PM-9), will be rated red until a methane to energy conversion facility comes online in 2009.

Community Investment



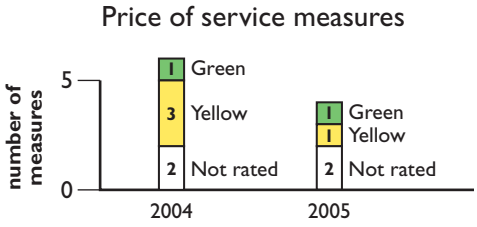
The community investment goal area has seen a slight decline over last year with one measure going from green to red and a new measure being added that is receiving a red rating. In total there are two measures designated as red, four measures designated as yellow, and no measures designated as green. The Parks volunteer measure (No. PM-14) declined significantly in 2005 largely due to the vacancy in the Volunteer Program Coordinator position for over half the year and the time needed to ramp up the program after the position was filled. Agricultural lands using best management practices increased slightly this year but remains yellow. All other Community Investment measures remained yellow.

Leadership



These three measures (Nos. PM-19-21) of local jurisdictions' perspectives about DNRP all remained below high targets. Obtaining high ratings will require additional levels of effort and potentially new strategies.

Price of Service

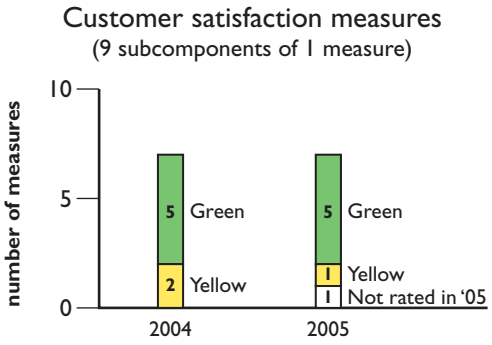


One measure met the target, one was below target, and two measures are not rated. The entrepreneurial revenue measure (No. PM-24) now only reflects data from three divisions, WLR, Solid Waste, and Parks, two of which are exceeding their annual entrepreneurial revenue targets. The new efficiency measure (No. PM-25) reflects improvements in the design of the measure for WLR and Parks, as well as some clarfications for SWD and WTD. For Parks and WLR, the measures are too new to have established targets. WTD met its target and SWD did not meet its target. DNRP has eliminated the targeted cost savings measure (No. 37 in the 2004 report) because it was not a true department wide measure, and cost savings and efficiencies are better captured in the Efficiency Measure discussed above. In contrast to all of the other measures that have five year targets projected, all of the financial targets are determined on an annual basis and projected for the "upcoming" budget year (in this case 2005).

The two non-rated price of service measures, developed to compare our rates with other jurisdictions (No. PM-22) and inflation (No. PM-23), show that our rates are generally in line with these two important benchmark references. Parks is the clear exception due to recent changes in business practices and fees adjusted to meet revenue expectations.

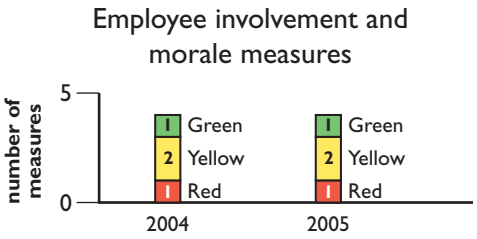
Customer Satisfaction

Customer satisfaction levels remain quite high for a variety of DNRP customer groups with the exception of WTD, which is going through contract negotiations with its service contract customers. This is likely the reason for lower than usual scores in 2005. The customer satisfaction measure has nine sub-measures (No. PM-26a-i), five of which are meeting high 2007 targets and one of which is below 2007 targets. The Parks measure was in pilot stage in 2005 and will not be rated until 2006. Two SWD measures are only surveyed biannually, and therefore do not have new data for 2005.



Employee Involvement and Morale

One employee measure is meeting its 2007 target, two are below 2007 targets, and one needs attention. The employee survey is conducted biannually therefore no new data was collected in 2005. All four divisions in DNRP continue to implement improved practices aimed at increasing ratings for these measures.



Conclusion

The department has set aggressive goals and targets because of our desire to use indicators and measures to improve our operations and the environment. In this fourth year of an ongoing process, the number of yellow and red measures and indicators shows how much work still needs to be done. In addition, the yellow and red measures show where resources should be directed to help us achieve success.

This document is to be used as a tool to assist decision-making and as the basis for informed discussion and debate about how we, as an agency, are best able to accomplish our mission and goals and meet the needs of the residents of King County.

INTRODUCTION

REPORT CONTENTS

DNRP has created a results- or outcome-based performance management system to track progress toward accomplishing our goals. This system was developed to better understand the condition of King County's environment and the results of the department's diverse programs.

This introductory section includes:

- a brief overview of the department and its responsibilities
- background information on performance management in King County
- a description of the conceptual framework for DNRP's performance management system
- definitions and a discussion of key terms: outcomes, performance measures, and indicators
- a brief description of departmental and divisional performance measurement approaches
- a detailed discussion of the rating system for evaluating our performance
- a summary of how performance measures are being used by the department.

A table on page 20 describes major changes to the report and in each of the measures or indicators, allowing readers to quickly grasp significant content differences from last year's report.

The 2005 report has been reorganized into two major sections, Indicators and Performance Measures. The two sections are intended to more clearly distinguish indicators, for which DNRP has limited direct influence over outcomes, from performance measures, for which DNRP does have direct programmatic influence over outcomes. While DNRP does not have direct control over the outcomes for many of the environmental indicators, the department feels it is still important to track progress in water quality, beneficial land uses and other environmental conditions in the region. Most of the indicators were reported on in 2004, however there are four new indicators added to the 2005 report. While indicators were assigned 5 year targets in the past, all indicators now only have long-term outcome goals. This change is due to the limited ability for DNRP to influence progress toward outcomes, and because improvements in environmental conditions are likely to take many years to achieve.

As in past years, the report is divided into subsections corresponding to each of the department's seven goals (page 12). The Indicators chapter of the report deals exclusively with the department's Environmental Quality goal. The Performance Measures chapter has measures for all seven departmental goals. For each goal, specific targets and/or outcomes are defined. Each measure or indicator explanation provides information on:

- why it is important
- how it is determined or calculated
- historical or baseline data
- the most recent available data
- 5-year targets for performance measures only (set in 2002 for 2007)
- a long-term, desired outcome based on a benchmark, regulatory standard, or percentage
- relevant observations about the data or other contextual information
- our strategy to maintain or improve performance
- this year's (2005) rating toward targets and/or outcomes
- references.

ABOUT THE DEPARTMENT

King County's Department of Natural Resources and Parks (DNRP) manages a wide variety of programs affecting King County's land, water, air, wildlife, parks and recreational areas. The department is organized into four divisions: Parks and Recreation (Parks), Solid Waste (SWD), Wastewater Treatment (WTD), and Water and Land Resources (WLR). Our 1,650 employees work on programs as diverse as solid waste disposal, wastewater treatment, river levee maintenance, farm and forestland protection, water quality protection, and public recreation.

King County's regional parks system encompasses more than 25,000 acres of regional parklands, trails, natural lands, open space, playfields, and recreational facilities. King County's parks and open space areas include regional treasures such as the 640-acre Marymoor Park, the 3,000-acre Cougar Mountain Regional Wildland Park, a 170-mile regional trail system, and the world-class King County Aquatic Center swimming and diving facility. Parks puts on regional entertainment and educational events, and operates the King County Fairgrounds, home of the King County Fair. The county also operates more than 100 recreational ballfields within parks. Parks offers a selective number of recreational programs focused on aquatics and a teen program at the White Center community center. Other recreation programs are run by non-profit partner organizations using Parks facilities, including ballfields.

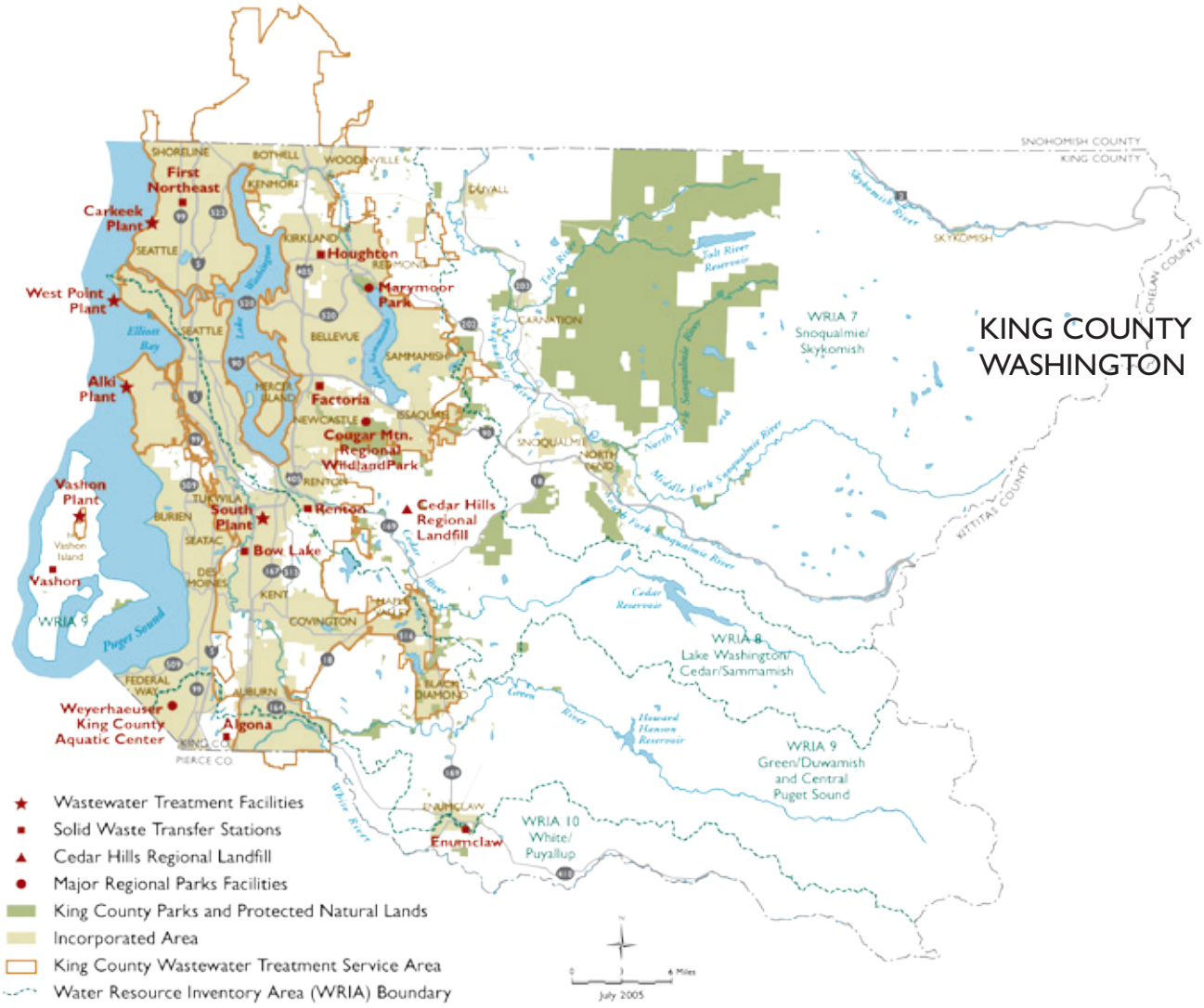
SWD provides environmentally responsible transfer and disposal services to residents and businesses in King County (except for the cities of Seattle and Milton). Public awareness and education campaigns are used to encourage conservation of resources and to promote recycling. The division's customers include non-residential and residential self-haulers as well as commercial garbage haulers. SWD runs eight transfer stations, two rural drop boxes, and the only operating landfill within King County – the Cedar Hills Regional Landfill in Maple Valley.

WLR leads the region in the implementation of comprehensive programs for flood hazard reduction, storm and surface water, water quality, groundwater protection, agriculture, small lot forestry, resource land acquisition, habitat restoration, drainage project construction, and Endangered Species Act-related watershed restoration efforts.

WTD maintains and operates the equipment and facilities that collect and treat wastewater before it is reused or released into Puget Sound. The division provides wholesale wastewater services to 18 cities, 15 sewer districts, and the Muckleshoot Utility

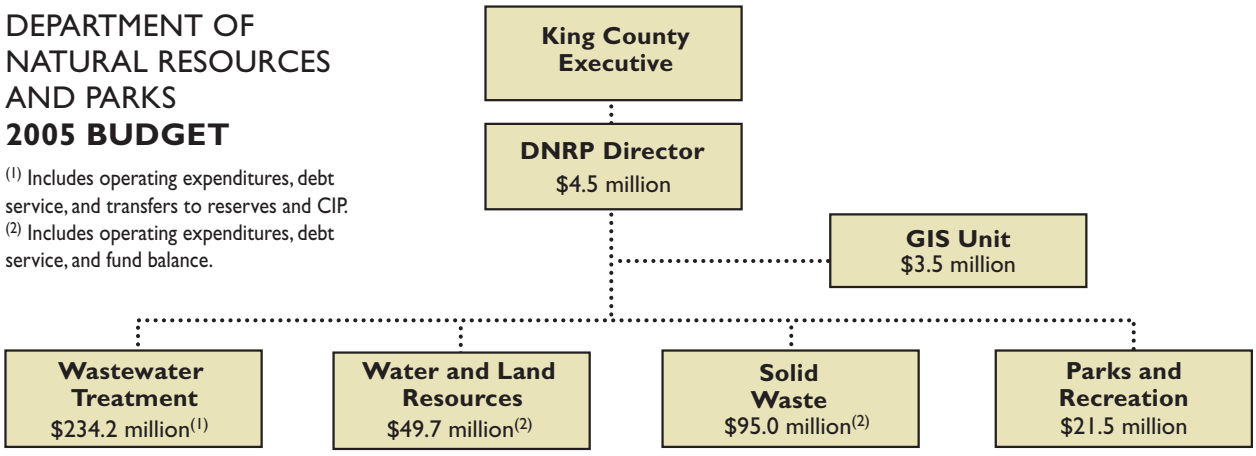
District, serving nearly 1.4 million residents and businesses in King County and parts of Pierce and Snohomish counties. WTD also recycles the byproducts of the waste water treatment process—primarily biosolids, energy, and reclaimed water—in ways that benefit the environment and ratepayers.

Detailed information about the department's and divisions' budgets is presented in Appendix 1.



DEPARTMENT OF NATURAL RESOURCES AND PARKS **2005 BUDGET**

(1) Includes operating expenditures, debt service, and transfers to reserves and CIP.
(2) Includes operating expenditures, debt service, and fund balance.



Performance Measurement in King County

King County has a long-standing interest in using performance measures to improve county operations and align programs with desired outcomes. As early as 1991, the King County Auditor surveyed all county agencies' use of performance measures. In 1995, the Metropolitan King County Council passed legislation that directed the County Executive to develop and implement a countywide performance measurement system, start the process with three key agencies, and produce annual reports for policy makers and the public.

In 1998, King County Executive Ron Sims defined a vision for the county that included being a "high performance organization." To implement that vision, in 1999 the County Executive created a team whose mission was to develop a consistent process for business planning and performance measurement for county government. The (then) Department of Natural Resources started to develop a performance management framework that would define performance measures for the departmental goals and identify how the measures would be used in a strategic planning, program evaluation, and budgeting context.

Concurrent with the County Executive's initiative, the department's divisions were pursuing their own efforts to improve their organizations, including performance measurement and management: WTD developed the Productivity Initiative, SWD created the Competitiveness Project, and WLR produced a Strategic Plan. In 2002, the department merged with the Department of Parks and Recreation to create the Department of Natural Resources and Parks. The new Parks and Recreation Division subsequently created the Parks Business Plan that serves as a strategic guide for the division's new entrepreneurial approach.

Since 1995, the county has produced an annual Benchmark Report under the auspices of the Metropolitan King County Growth Management Planning Council. While the primary focus of the Benchmark Report is to track the impacts of policies related to the Growth Management Act as implemented by all of county government (rather than any specific department) and other local jurisdictions, many of the Benchmark indicators relate to environmental outcomes that are important to DNRP. The Benchmark Report provides a broader look at countywide outcomes than DNRP's department-specific performance measures report. The Benchmark Report is also used to show the broader context of changes occurring in the economic, housing, land use and transportation sectors of the county. The most recent version is available at *www.metrokc.gov/budget/benchmrk*.

Recent Efforts

Since 2003, the County Executive and County Council have continued to focus on performance measurement. In 2003, the County Executive created an Executive Performance Measurement Initiative that resulted in every executive department developing a mix of output and outcome measures that were to be reported quarterly to the Executive and the Office of Management and Budget. These measures, collected together in the form of "The Blue Book" accompanied the Executive's 2004 and 2005 budget submittals to the County Council. The Blue Book is available at *www.metrokc.gov/budget/*. Further details on the Executive's Initiative are at *http://apps01.metrokc.gov/www/exec/perform/index.cfm*.

Starting in early 2005, a cross-departmental group of managers convened by the Executive Office began discussions about how to use performance data more effectively.

The managers' recommendation was to create a sustained, internally-focused management forum – now under the name of "KingStat" – for the Executive and departmental management teams to make policy and operational decisions based on performance data. KingStat aims to use all departmental performance measures more regularly in Executive and departmental decision-making meetings. These performance data oriented meetings will begin in 2006 and will complement ongoing efforts at both departmental and Council levels.

Concurrent with the Executive's Performance Management Initiative, the County Auditor convened a Performance Measurement Work Group that brought together managers and staff from the County Auditor, County Council, and Executive departments to create a set of guidelines to improve the quality and presentation of performance measures submitted with the annual budget business plans. Using existing departmental business plans, including DNRP's, as examples, the work group created the guidelines to reflect best practices in performance measurement. The guidelines were designed to be used by departments to ensure their performance measurement frameworks met the needs of Executive and Council reviewers and oversight functions. The guidelines simultaneously provide the Office of Management and Budget and County Council a template to review and critique departmental measures. The guidelines can be found at: *http://www.metrokc.gov/auditor/2004/PerMeasRpt.pdf*. Further work by the County Auditor on performance measurement can be found at *www.metrokc.gov/auditor/PerformanceMeasures.htm*.

DNRP'S PERFORMANCE MEASUREMENT FRAMEWORK

DNRP Vision, Mission, Goals

The primary focus of this report is a set of performance measures and environmental indicators. These performance measures and indicators are part of a single conceptual framework that aligns DNRP's vision, mission, and goals with its services.

Our vision is the future state we hope to attain by conducting our activities and core businesses.

VISION

Sustainable and livable communities –
Clean and healthy natural environment.

Our mission is the broadest statement about our purpose and why we exist.

MISSION

Be the steward of the region's environment and strengthen sustainable communities by protecting our water, land and natural habitats, safely disposing of and reusing wastewater and solid waste, and providing natural areas, parks and recreation programs.

As an organization, we need further definition of what our agency can achieve. Goals provide the next level, still broad, but specific to the department's role. These goals were developed by the department's leadership to strategically focus our services in achieving the department's mission.

GOALS

ENVIRONMENTAL QUALITY - Achieve a net gain in environmental quality by protecting and restoring the natural environment, ensuring public health and safety, and exceeding environmental standards.

WASTE TO RESOURCE - Regard the region's waste products as resources and minimize the amount of residual waste disposed.

COMMUNITY INVESTMENT - Contribute to healthy communities by providing recreation, education and sound land management.

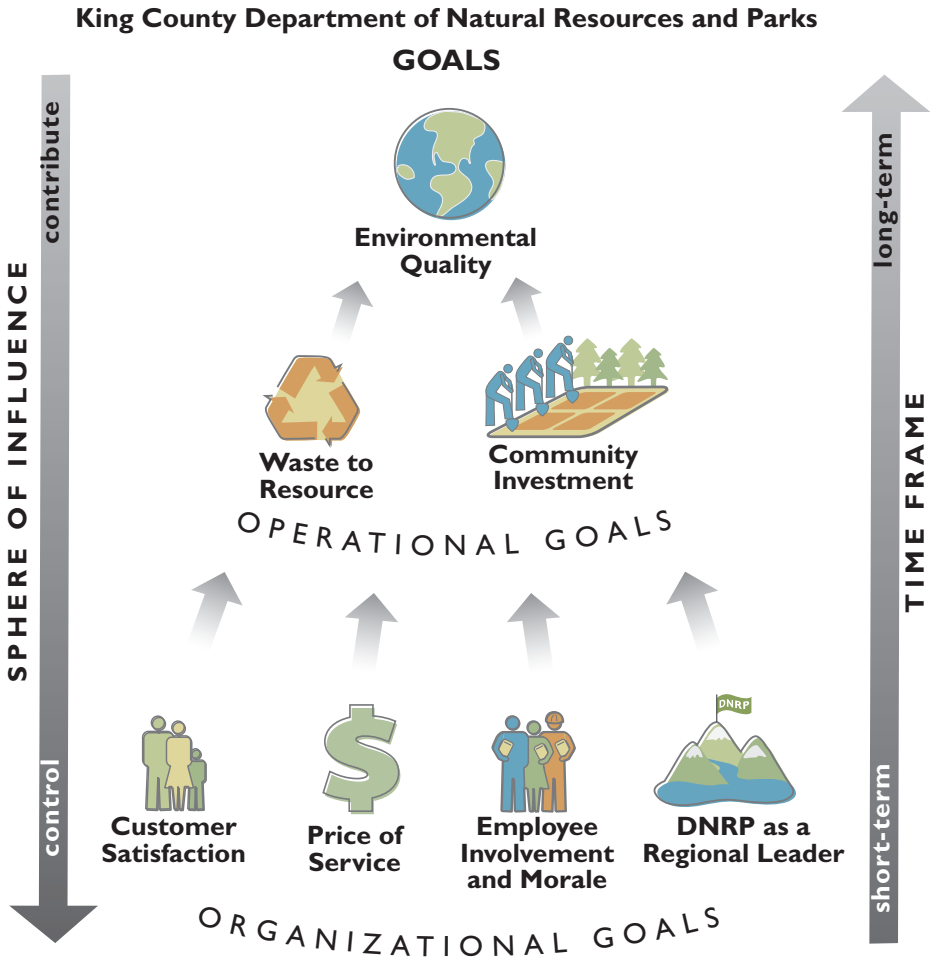
LEADERSHIP - Be a high performance regional environmental and resource management agency by providing high quality services, working in partnerships, and leading by example.

PRICE OF SERVICE - Price our services reasonably and competitively, while delivering the highest value to our citizens and maintaining safe and reliable systems.

CUSTOMER SATISFACTION - Meet the needs of our customers through valued, high quality and responsive services.

EMPLOYEE INVOLVEMENT AND MORALE - Be a forward thinking workforce where employees are engaged in our business, involved in decisions that affect them and understand their role in achieving the DNRP vision.

We have organized the **seven goals** to show how they relate to each other, how some goals are likely to take longer to attain, and how we have varying amounts of control over each goal.



Outcomes and Measures

Specific outcomes were developed based on the seven departmental goals. Each outcome is a statement of a desired condition in people, the organization, the community or the environment. Outcomes come in many forms, addressing many levels of change: from individual program outcomes focused on what a single program can achieve, to agency outcomes, and even community outcomes that result from an entire community's efforts. Many of the departmental outcomes in this report are agency-level outcomes, meaning that they require the combined efforts of more than one specific program to be attained. The environmental outcomes, by and large, are focused on community-level change requiring the combined resources of DNRP, other departments within King County, many other jurisdictions, businesses, and individual residents.

Outcomes themselves are difficult to measure, so performance measures and indicators were developed to quantify how each outcome is being achieved. Some outcomes have a single measure; others have several measures to better reflect the complexity of elements contributing to a single outcome. We have reserved the use of "indicator" for measures related to environmental conditions, which are influenced by many factors. Because many forces other than DNRP programs influence indicators, they are not truly accurate measures of DNRP's performance and are therefore no longer included in the Performance Measures chapter of the report. Still, these indicators are important to track in order to determine the overall condition of the environment we help manage. In contrast, the agency performance measures are designed to measure what DNRP is trying to accomplish as an agency (see "What is the Difference between an Indicator and a Performance Measure?" on the next page).

Performance measures help describe the effects of our work. This information is used to evaluate potential changes in service delivery and help establish an expectation for positive change. These measures provide insight into how DNRP can work more effectively and efficiently to achieve its mission and goals. The outcomes are critically important to employees, elected officials, residents, and the environment.

This report will continue to be produced annually. Appropriate adjustments and refinements to the measures, indicators and targets will be made over time. While we have tried to define measures and indicators so that they can be updated annually, we recognize at the onset that data for every measure or indicator may not be obtained each year, either because change in the measure is not likely to happen over that timeframe or the cost and level of effort required does not warrant annual data collection. Notes within each indicator or performance measure describe the frequency of data collection or other issues affecting changes.

WHAT IS THE DIFFERENCE BETWEEN AN INDICATOR AND A PERFORMANCE MEASURE?

This report distinguishes between indicators and performance measures. Why? Indicators and performance measures are both terms used to describe data associated with desired results or outcomes. However, the main difference between these two terms is the degree of control we have over them. Indicators measure the "state of" something, typically in the natural environment. Performance measures help us assess the effect of our programs.

For example, we measure water quality in Puget Sound. Although other factors, such as ocean conditions, other jurisdictions' or industrial discharges, and natural variability affect water quality, we measure ambient water quality and call it an indicator. However, water quality near a wastewater treatment plant outfall would decline if we did not meet our discharge requirements, and due to the degree of influence we have on water quality at the outfall, we call the water quality near the outfall a performance measure.

Key differences between indicators and performance measures include:

ISSUE	INDICATOR	PERFORMANCE MEASURE
Degree of control	DNRP has less control or can only influence the indicator	DNRP has higher degree of control
Outside influences	More outside influences	Fewer outside influences
Achievement	Due to number of influences and nature of interjurisdictional response, may take longer to achieve	Due to degree of control and fewer influences, may be achieved in a relatively shorter timeframe
Reporting	Reported countywide in county Benchmark Report Reported by urban-rural or incorporated-unincorporated in DNRP report due to limited programmatic reach or impact	Reported only in DNRP report
Use	Indicates the condition of the environment in relation to desired outcome goals.	Provides basis for assessment of the effectiveness or efficiency of our programs.
Strategy	Requires other jurisdictions and organizations	DNRP may be able to attain by itself, or with limited additional assistance

However, both indicators and performance measures in this report do have some things in common. They both:

- Provide trend data that can be tracked and analyzed over time
- Are important to DNRP
- Are related to DNRP's programs
- Measure desired outcomes, rather than just outputs, and therefore DNRP does not have total control over their attainment.

As an agency, we are interested in the state of the environment and want to improve its condition and achieve specific outcomes. However, this report is not a comprehensive assessment of the King County environment. We are focusing our measurement efforts on indicators that measure conditions where our programs have either a potentially positive or negative influence. Other environmental conditions, such air quality, impervious area, or land uses, are not directly within our agency's purview. The following reports offer a broader look at environmental quality, indicator, and sustainability issues:

The State of the Nation's Ecosystems: Measuring the Lands, Waters, and Living Resources of the United States. The Heinz Center (*www.us-ecosystems.org/ecosystems/report.html*).

Draft Report on the Environment. U.S. Environmental Protection Agency (*http://www.epa.gov/indicators/*).

Cascadia Scorecard: Seven Key Trends Shaping the Northwest. Northwest Environment Watch (*www. northwestwatch.org/scorecard*).

State of the Sound 2004 and State of the Sound Report Card. Puget Sound Action Team (*http://www.psat.wa.gov/Publications/StateSound2004/State_Sound_base. htm*).

Georgia Basin-Puget Sound Ecosystem Indicators Report. Georgia Basin Ecosystem Initiative Coordination Office and Washington State Department of Ecology (*http://wlapwww.gov.bc.ca/cppl/gbpsei/overview/*).

King County Benchmark Report. King County (*www.metrokc.gov/budget/benchmrk*).

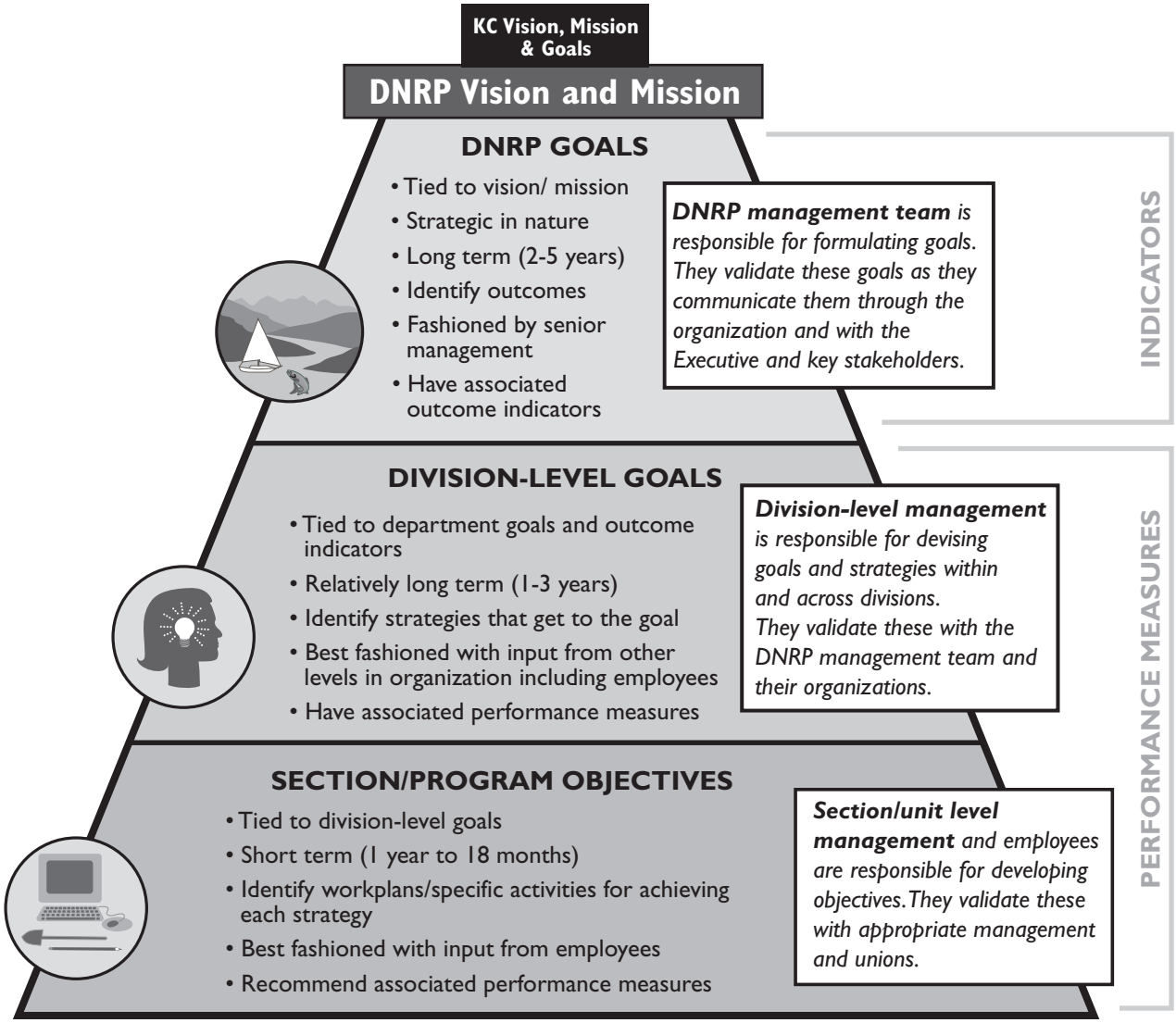
City of Seattle Environmental Action Agenda Targets/Indicators. City of Seattle(*http://www.seattle.gov/environment/Documents/eaa/2004_TargetIndicators.pdf*).

Divisions' Performance Management Approaches

Although this report focuses on department-wide goals and high level outcomes, each division within the department has its own business lines, organizational structure, and management objectives. Each division is best qualified to define the strategic approach appropriate for its work. As a result, the divisions have created performance management systems that fit within the broad departmental approach (see DNRP Performance Management Pyramid figure below). Each division uses their performance measures to drive decision-making and resource allocation. Measures with broader implications are evaluated at the department level.

Each division has developed a set of output, operational, efficiency, and outcome measures to track its progress and performance. Parks has a new weekly "dashboard" to track implementation of critical business plan strategy measures. SWD uses "OpStat" (short for Operations Statistics) to track a variety of daily and weekly measures related to effective and efficient operations at its transfer stations and the Cedar Hills landfill. WLR has a Performance Adaptive Management System that aligns quarterly outputs to the division's and department's goals. WTD has been using a Balanced Scorecard as part of its Productivity Initiative, to ensure the division maintains effective and safe operations despite attaining major cost savings over time.

DNRP PERFORMANCE MANAGEMENT PYRAMID



HOW WE EVALUATE OUR PERFORMANCE

Our goal is to use our performance management system like a "dashboard" in a car. We want to know: are we going in the right direction? how fast are we going relative to the speed limit? and is the engine close to overheating?

In order to evaluate our performance, we have developed five-year targets and long-term outcomes. The five-year targets were developed in 2002 and reflect where we want to be in 2007. The five-year targets were derived from staff and management expectations about what could be achieved in five years given expected levels of effort and funding, known program changes, and the impact of external factors such as population growth or changing revenues. These targets were designed based on current expectations with a stretch factor so that they are meant to be "realistic, yet ambitious." After 2007, new targets will be developed for 2012 and so on. Targets may also be adjusted upwards if we achieve the 2007 target early.

The long-term outcomes reflect a very long-term vision of what staff and management thought would represent the department's long-term, ultimate success. These represent extremely ambitious achievements, especially given the impacts from population growth and economic pressures in the region. For example, regulatory compliance or 100 percent attainment are clearly desired outcomes. In many cases, however, the optimal percentage is not 100 percent but a lower figure based on benchmark data, strategic planning documents, a regulatory guideline, or standard.

For each performance measure, we have current data, a 2007 target, and a long-term desired outcome. For each indicator, we have current data, and a long-term desired outcome. To aid in our measurement, we have created ratios, or percentage scores, for each measure and indicator based on how the current results or performance compares with either the target or outcome. These performance-to-target (P/T) and performance-to-outcome (P/O) ratios form the basis for our assessment. For measures where lower numbers are better, in other words, the targets or outcomes are established as not-to-exceed levels, the ratio is inverted to provide a rating value.

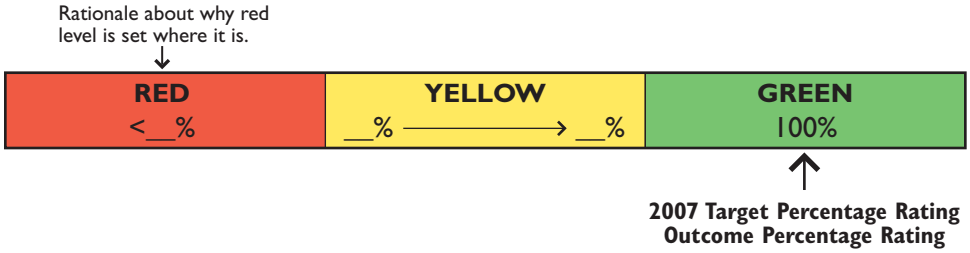
$$\frac{\text{PERFORMANCE}}{\text{2007 TARGET}} \times 100 = \text{2007 TARGET PERCENTAGE} \qquad \frac{\text{PERFORMANCE}}{\text{OUTCOME}} \times 100 = \text{OUTCOME PERCENTAGE}$$

Keeping with the driving metaphor, and using a system based on our performance management software, pbviews™, we have assigned colors to these ratios.

- **Green** indicates that we are meeting the target or outcome. Green is used only when the performance to target (or outcome) ratio equals 100 percent.
- **Yellow** indicates that we are not yet meeting the target or outcome.
- **Red** indicates that the measure or indicator needs attention. Red is used when the performance to target (or outcome) ratio is below a critical percentage or threshold value, determined on a case-by-case basis.

Given that our approach to performance management is to iteratively re-evaluate our progress and expectations, we may improve our measures, indicators, or targets based on new information, the trends in the indicators, and performance results.

Rating Chart Explanation



HOW WE USE THE MEASURES

Bob Behn, of Harvard's Kennedy School of Government, has identified eight purposes that public managers have for measuring performance:

Evaluate How well is my agency performing?

Control How can I ensure that my subordinates are doing the right thing?

Budget On what programs, people or projects should my agency spend the public's money?

Motivate How can I motivate line staff, middle managers, non-profit and for-profit collaborators, stakeholders, and citizens to do the things necessary to improve performance?

Promote How can I convince political superiors, legislators, stakeholders, journalists, and citizens that my agency is doing a good job?

Celebrate What accomplishments are worthy of the important organizational ritual of celebrating success?

Learn Why is what working or not working?

Improve What exactly should who do differently to improve performance?

DNRP is using performance measure information in many of these ways and making efforts to improve our use of measurement information throughout the organization. DNRP recognizes that some uses, such as "promote" and "control," are easier to do than others, such as "budget" and "learn."

Departmental and divisional performance measures continue to inform the department's operations and planning efforts in a number of ways:

- As key information to inform each division's strategic business planning process,
- As operational information to ensure the department and divisions are meeting effectiveness and efficiency performance targets,
- As a structured way for the agency to understand its complex mission and intersecting program areas,
- As a key reporting effort for the department's management, the county's budget office, and elected officials to assess progress towards key outcomes and operational milestones.

In addition, each divisional strategic business plan has included a set of core performance measures that are used to track each success in implementing the plans. Thus, performance measurement information is being built into each division's efforts to retool and improve for the future.

With the exception of division directors, performance measures are not used in personnel performance appraisals to evaluate individual employees. However, employee-specific work plans are expected to show a relationship to organizational business plans and their related measures.

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* Robert D. Behn. 2003. *Why Measure Performance? Different Purposes Require Different Measures*. Public Administration Review. Vol. 63, No. 5.

TABLE OF MAJOR CHANGES FROM 2004 REPORTING PERIOD

GENERAL REPORT	CHANGE MADE	RATIONALE
	Layout Change – Indicators and Performance Measures have been separated into two distinct chapters. The ratings summary chart in the back of the report has also been divided with indicators and performance measures now on separate facing pullout sheets.	DNRP does not have direct control of the outcomes for many of the environmental indicators yet feels it is still important to track progress in water quality, beneficial land uses and other environmental conditions in the region. To clearly distinguish between performance measures, for which DNRP does have direct programmatic influence over outcomes, the 2005 report will place indicators in a separate chapter at the front of the report.

PERFORMANCE MEASURE	CHANGE MADE	RATIONALE
PM-13	"Percentage of county residents engaged in positive behaviors related to household hazardous waste" (formerly measure #25) and "County residents engaged in positive behaviors related to yard care" (formerly measure #26) were replaced with the Environmental Behaviors Index, which is an index data from DNRP's Environmental Behaviors Survey of 30 positive environmental behaviors that residents could engage in.	Data for these two measures was previously gathered from a survey that is no longer administered. A new survey focusing on environmental behaviors has replaced these two measures with one. The data is richer.
PM-25 (formerly No. 39)	"Efficiency of Key Operations" measure improved in several areas. • WLR replacing existing measure with 4 efficiency measures representing Surface Water Management, Flood Management, Hazardous Waste & Noxious Weeds • Parks limiting measure to maintenance functions: # maintenance FTE's / # acres maintained	WLR's previous efficiency measure did not adequately measure costs per units of output and was also not adequately representative of the broader lines of business handled by the division. The Parks efficiency measure in 2004 did not identify specific units of outputs; this has been corrected in the changes made for 2005. WTD and SWD only needed to make some clarifications in the narrative to improve their efficiency measures.

PM-26	Including the King County GIS Center in the performance measure for customer satisfaction.	The King County GIS Center is a section within DNRP that serves internal and external customers with a full range of GIS services. GIS Center performance measures are reflected in the DNRP business planning process and should also be represented in the DNRP *Measuring for Results* report. They are being introduced with one measure for 2005 and may add other measures in 2006.
PM-37	"Percent of Cost Savings Realized" measure dropped.	This measure only represented cost savings from 2 divisions: WTD & SWD, therefore was not considered a department wide measure. Cost savings are better captured in the efficiency measure.

ENVIRONMENTAL INDICATOR	CHANGE MADE	RATIONALE
I-1	"Climate Change" is a new indicator added to the report in 2005.	Climate change is a major factor when considering the overall health of the environment. Previous versions of this document did not track or consider climate change.
I-2	The "Percentage of marine sites that meet standards and guidelines for dissolved oxygen" was replaced with the new "Puget Sound Water Quality Index."	Combines data from several indicators into an index that provides a more scientifically well rounded indicator based on the eutrophication potential in Puget Sound. The new index provides a more comprehensive view that considers more scientific parameters as to the health of Puget Sound, marine waters.
I-3	"Puget Sound Habitat Quality: Shoreline Armoring" is a new indicator added to the report in 2005.	Shoreline habitat quality is directly tied to the presence of armoring along the shoreline. This indicator gives an indication as to the general condition of marine shorelines. It is an appropriate addition to our suite of environmental indicators.

Continued on next page.

TABLE OF MAJOR CHANGES FROM 2004 REPORTING PERIOD (*continued)*

ENVIRONMENTAL INDICATOR	CHANGE MADE	RATIONALE
I-5	The "Percent of marine beach sites that meet the state standard for enterococcus bacteria" (formerly measure #6) was replaced with the new "Marine Beaches Bacteria" index.	The new index is based on the recently adapted water quality standard for fecal coliform and provides a more appropriate indicator of human health risk from direct contact with marine waters.
I-8	"Phosphorus Concentration in Large, Regional Lakes" is a new indicator added to the report in 2005.	Adds a more comprehensive indicator as to the health of large lakes, based on their eutrophication potential.
I-13	The "Percentage of acres in King County with aquatic habitat quality rated medium high or better" was replaced with "Riparian and Watershed Land Cover"	The index provides a more direct assessment of forest retention and urbanization in King County.
I-16	"Vashon-Maury Island Groundwater" is a new indicator added to the report in 2005.	This measure is important in tracking the health of groundwater – a most important resource to Vashon-Maury Island residents and to the health of the islands hydrologic system.

ENVIRONMENTAL INDICATORS

OUTCOME: DNRP is a regional partner, developing strategies that minimize increases in climate change

Climate Change

I-1

ABOUT THIS INDICATOR

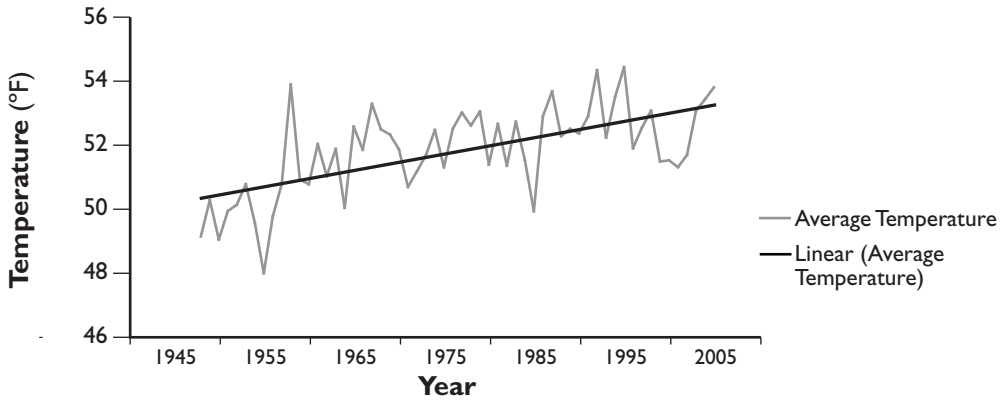
Global climate change is having an impact on local weather patterns and subsequently on aquatic resources. On average, ambient air temperatures in the Pacific Northwest have increased over the 20th century by roughly 1.5°F. Warmer temperatures have reduced snow pack levels in Washington. The downstream effect is a change in the timing and quantity of stream and river flows. Higher air temperatures and changes in wind patterns increase lake temperatures through surface heat exchange processes. (These trends are shown in Figures 1a-1c below.) Air temperatures are expected to continue increasing throughout the 21st century, with Pacific Northwest temperatures increasing another 2 to 9 degrees F over the next 80 years.

Changing local weather patterns will impact a wide variety of government, economic and environmental sectors, including wastewater treatment, stormwater and flood control, water supply, forest fire management, and salmon preservation.

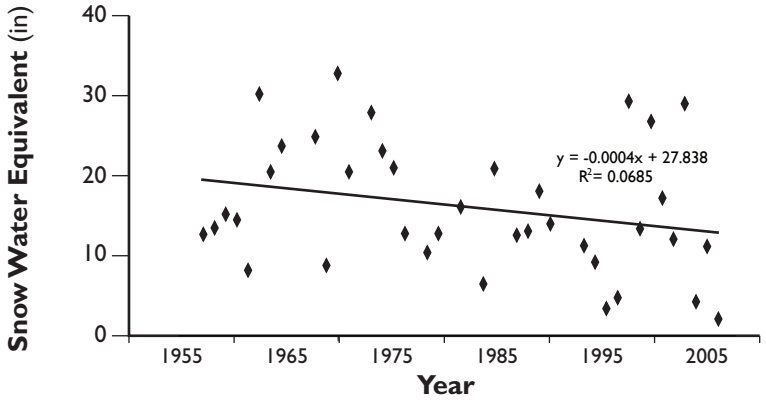
This environmental indicator tracks three different measurements, including annual average temperature measured at NOAA's weather station at Sea-Tac airport, annual spring snow pack measured at Mt. Gardner in the upper Cedar River watershed, and January water temperatures at one-meter depths from the mid-lake monitoring stations in lakes Washington, Sammamish and Union.

Viewed together these three trends provide an indication of the overall nature and pace of climate change and its effects in King County. Because climate change is influenced by so many factors many of which are beyond the county's control, an outcome goal has not been identified for this indicator. Climate change trends are an important indicator of overall environmental health with tremendous potential impact on many of the County and DNRP's programs and services.

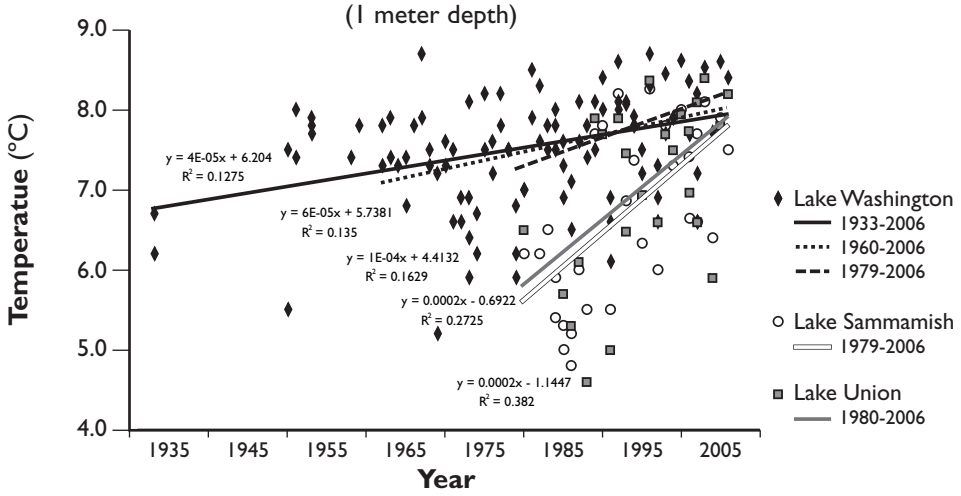
I-1a. Average Annual Temperatures at Sea-Tac Airport



I-1b. Mt. Garner April 1st Snow Pack



I-1c. January Water Temperatures (1 meter depth)



OBSERVATIONS

Average temperatures vary from year to year, ranging from a low of 47.9°F in 1955 to a high of 54.4°F in 1995. The average temperature in 2005 was 53.7°F, which is the 4th highest on record. Four of the five warmest years have occurred since 1992, and overall the average temperature has increased about half a degree F per decade, since 1948.

Snow pack depth varies from year to year, ranging from a low of 3.3 inches in 1995, to a high of 32.7 inches in 1971. On April 1, 2005 the snow water equivalent at Mt. Gardner was 2 inches, the lowest on record. The four lowest April 1st snow pack measurements on record have all occurred since 1995. On average, snow pack at Mt. Gardner has decreased a little more than one inch per decade since 1959.

Lake Washington temperatures have been measured since 1960 by the University of Washington. In 1979 King County (then Metro) began monitoring temperatures in lakes Washington, Sammamish, and Union. This is in addition to the Lake Washington data collected in 1913 and 1933.

What the data show is that lake temperatures vary annually, depending upon seasonal weather conditions (wind, precipitation, cloudiness, ambient air temperatures).

Lake	Low Water Temperature – Year Taken	High Water Temperature – Year Taken
Lake Washington	5.2°C in 1969	8.7°C in 1967 and 1996
Lake Sammamish	4.8°C in 1986	8.3°C in 1996
Lake Union	4.6°C in 1988	8.4°C in 2003

Because lake water is well mixed during the month of January, temperatures at the surface reflect temperatures throughout the water column. All of the temperatures reported below were taken in January.

From these observations we conclude that winter water temperatures have increased about 0.02°C per decade, since 1960 in Lake Washington, and about 1°C per decade since 1979 in lakes Sammamish and Union. Differences in Lake Washington are likely due to its larger volume. Lake Washington has eight times more water than Lake Sammamish and 118 times more water than Lake Union.

OUR STRATEGY

King County strives to provide regional climate protection leadership in developing strategies that minimize increases in climate change including minimizing greenhouse gas emissions from county facilities, reducing fossil fuel use in our operations, influencing positive land use practices through progressive growth management and critical areas protection policies, and in adapting to already unavoidable impacts of climate change. As part of the ongoing Major Lakes Ambient Monitoring Program, we will continue to track how the lakes respond to various activities and inputs from the watersheds through influent streams, lake nutrient cycles, ecological interactions, and seasonal or year-to-year variability in weather.

DATA REFERENCE

Lake Washington water temperature data can be found at this Web site: (*http://www.cses.washington.edu/cig/pnwc/pnwc.shtml*).

Air temperatures at Sea-Tac airport were obtained from a weather station operated by the National Oceanic and Atmospheric Administration and calculated into annual average temperatures (*http://www.ncdc.noaa.gov/oa/climate/stationlocator.html*).

April 1 snow pack levels (expressed as snow-water equivalents) have been measured since 1959 at Mt. Gardner in the upper Cedar River basin and were obtained from the National Resources Conservation Service (*http://www.wcc.nrcs.usda.gov/snotel/*).

Impacts from climate change, and methods of adapting to these impacts, were explored at a conference sponsored by King County and the University of Washington in October 2005. Conference materials are available (*http://dnr.metrokc.gov/dnrp/climate-change/conference-2005.htm*).

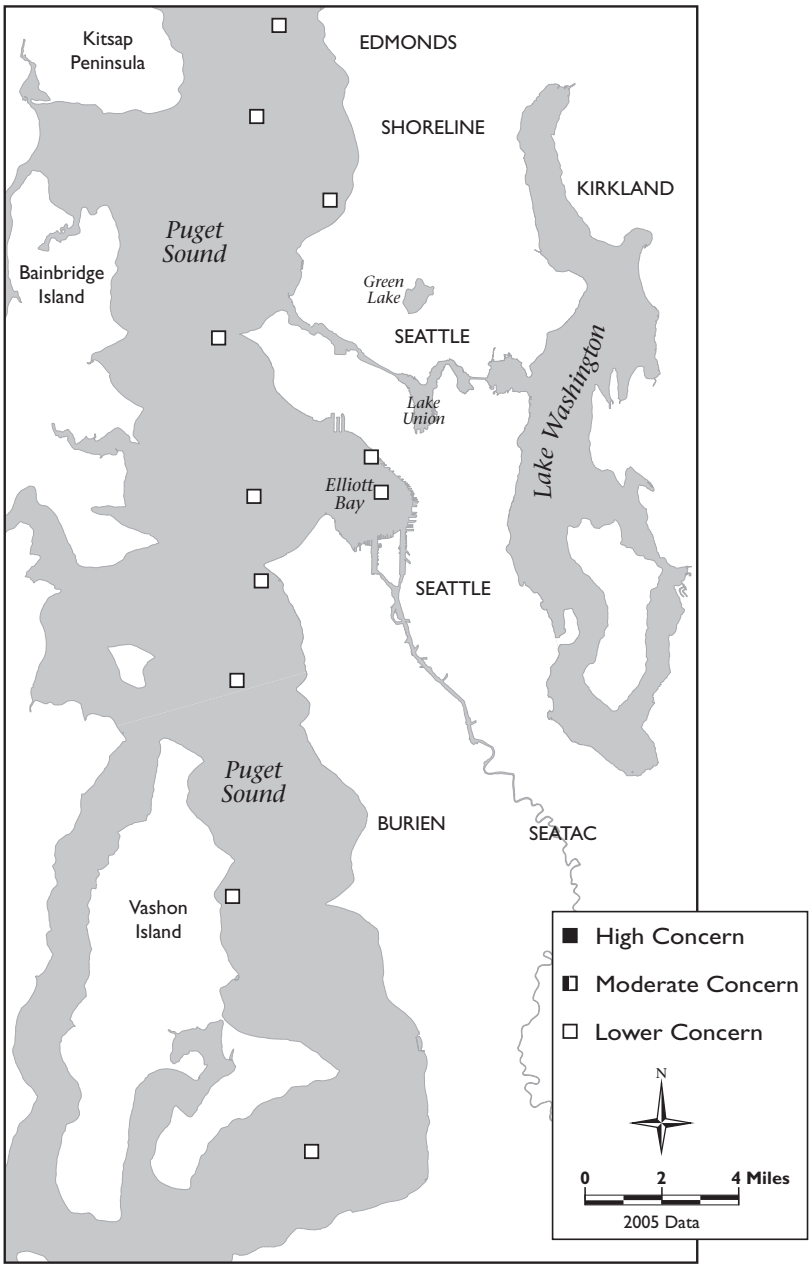
OUTCOME: Marine water and sediments are healthy for humans and aquatic species

I-2 Puget Sound Water Quality Index

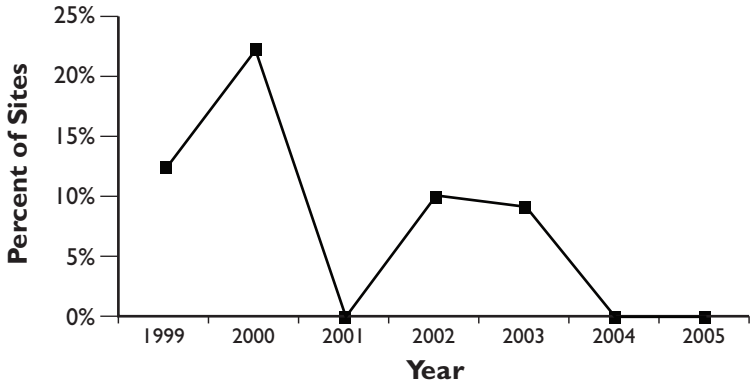
ABOUT THIS INDICATOR

King County conducts monthly monitoring of water quality at eleven offshore locations in Puget Sound. Monitoring of offshore marine waters in King County is focused on measuring seven variables for change. They include: temperature, salinity, density, dissolved oxygen, nutrients, chlorophyll, and fecal coliform bacteria in Puget Sound.

I-2a. 2005 Marine Offshore Water Quality Concern Levels



I-2b. Percent Marine Offshore Monitoring Sites at Moderate or High Water Quality Concern Levels



These variables can be used to assess eutrophication (the process by which waters rich in mineral and organic nutrients cause algae to proliferate and thereby reduce dissolved oxygen content, which is vital to fish and other desirable aquatic life), sewage waste (fecal coliform, ammonia), food available to secondary producers (chlorophyll), and marine waters' habitat quality (temperature, salinity). Analysis of these variables also determines compliance with federal and Washington State water quality standards for temperature, dissolved oxygen, and fecal coliform bacteria.

Four indicators are integrated into a modified version of the water quality index developed by the Washington State Department of Ecology to assess overall water quality. The determination of water quality concern is based upon dissolved oxygen (DO), dissolved inorganic nitrogen (DIN), ammonia, and stratification strength and persistence.

To rank these attributes for the index, two thresholds for each of the indicators has been identified as follows: 1) occurrence of low DO concentrations (<5 mg/L for 2 consecutive months, < 3 mg/L for one month); 2) consecutive months with very low surface DIN concentrations (3 months, 5 months); and 3) elevated ammonia concentrations (>0.8 mg/L, >1.6 mg/L); and 4) presence of strong density stratification (Strong-Intermittent, Strong-Persistent). If numerical values are attached to the two threshold indicator levels, then rankings of relative water quality concern can be derived. A value of "1" is assigned to the first threshold in all categories, and a value of "5" is assigned to the second threshold. A water quality level of concern based upon total points is then assigned to each station. Three water quality levels designations exist and are defined as "Lower Concern" (zero to one point), "Moderate Concern" (two to four points), and "High Concern" (five or more points).

OBSERVATIONS

2005 findings indicate that the water quality at all of the ambient and outfall offshore stations sampled is at a level of lower concern (Figure I-2a). Although, the ambient station located in Elliott Bay did experience strong-intermittent stratification, low oxygen levels were not observed. Stratification patterns have been found to be a good indicator of areas that may be sensitive to developing low dissolved oxygen conditions. Using stratification as an indicator of sensitive environments, areas where strong or persistent stratification is observed should be regarded as areas where significant nutrient loading could lower dissolved oxygen concentrations. Oxygen concentrations below 5 mg/L were observed for two consecutive months at the ambient station

located in the East Passage. This occurred in the fall as a result of the natural seasonal influx of low oxygenated Pacific Ocean water into the deep main basin of Puget Sound. Figure I-2b displays the percentage of offshore stations that have water quality of moderate or high concern for the years 1999 through 2005. The percentage of stations of moderate or high concern reached a maximum of 22 percent in 2000 and has declined to zero percent for the past two consecutive years.

OUR STRATEGY

Stratification intensity and persistence is beyond King County's influence but should be monitored as it is an important indicator of areas sensitive to possible water quality problems. Due to ambient conditions, DNRP can exert little control on improving current levels of dissolved oxygen. DNRP's strategy to prevent any decline in this indicator is to continue to operate our wastewater treatment plants and conveyance system effectively to maintain low levels of nutrients discharged into marine waters through wastewater effluent at outfall locations. Nutrient and mineral levels are also addressed by the agency through stormwater control management practices Additionally, DNRP will play an active role in the recently formed Puget Sound Partnership towards improving water quality throughout the entire Puget Sound.

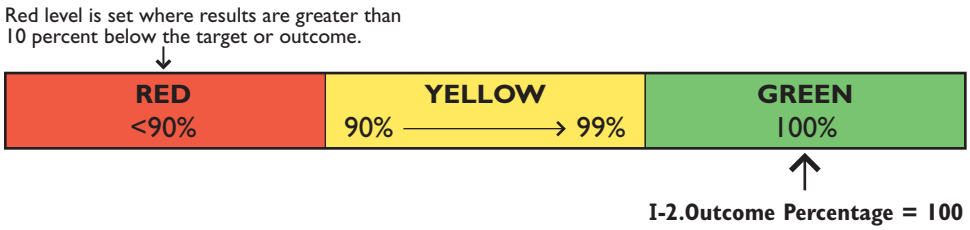
RATING

Results and Outcome

2005 Results: 100% of offshore station water quality designated at "Lower Concern" status.

Outcome: 100% of offshore station water quality designated at "Lower Concern" status.

Performance- to-Outcome Ranges and Ratings



DATA REFERENCE

Water and Land Resources Division, Science, Monitoring and Data Management Section.

OUTCOME: Marine shorelines provide high quality habitat for aquatic species

Puget Sound Habitat Quality: Shoreline armoring

I-3

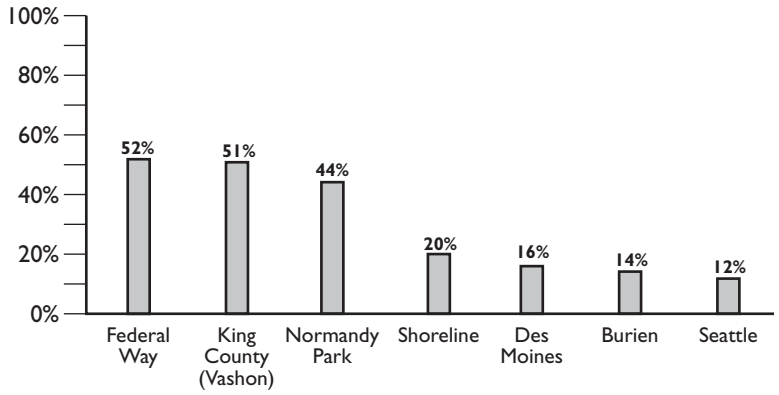
ABOUT THIS INDICATOR

Shoreline armoring can take the form of a bulkhead, sea wall, rip rap, or any other built impediment to naturally advancing tidewaters. The amount of shoreline that has been armored can be used as a general indicator of the condition of marine shorelines. When armoring is present the health of habitats at the shoreline (the near shore) or up land from the shore, declines.

Armored shorelines have fewer trees. This is because they were cut down to construct the bulkhead, to create a view corridor, or for landscaping. Those trees that do exist close to the shore are not as dense. Frequently, trees in close proximity are separated from the shoreline by houses or roads. Due to the lack of trees and tree cover, the amount of overhanging vegetation and large woody debris is dramatically lower in and around armored versus unarmored shorelines. Armoring also inhibits the ability of drift logs to accumulate on the shoreline.

Armoring restricts the delivery and movement of sediments by cutting off bluffs and inhibiting flow along the beach. Without the delivery and movement of sediments, the unique character of the shallow, inter-tidal habitat disappears. This habitat is an important feeding, nesting and resting ground for many fish, animals and plants including young salmon that feed along the shore after journeying down rivers into the Sound.

I-3a. Percent of unarmored marine shorelines by jurisdictions within King County

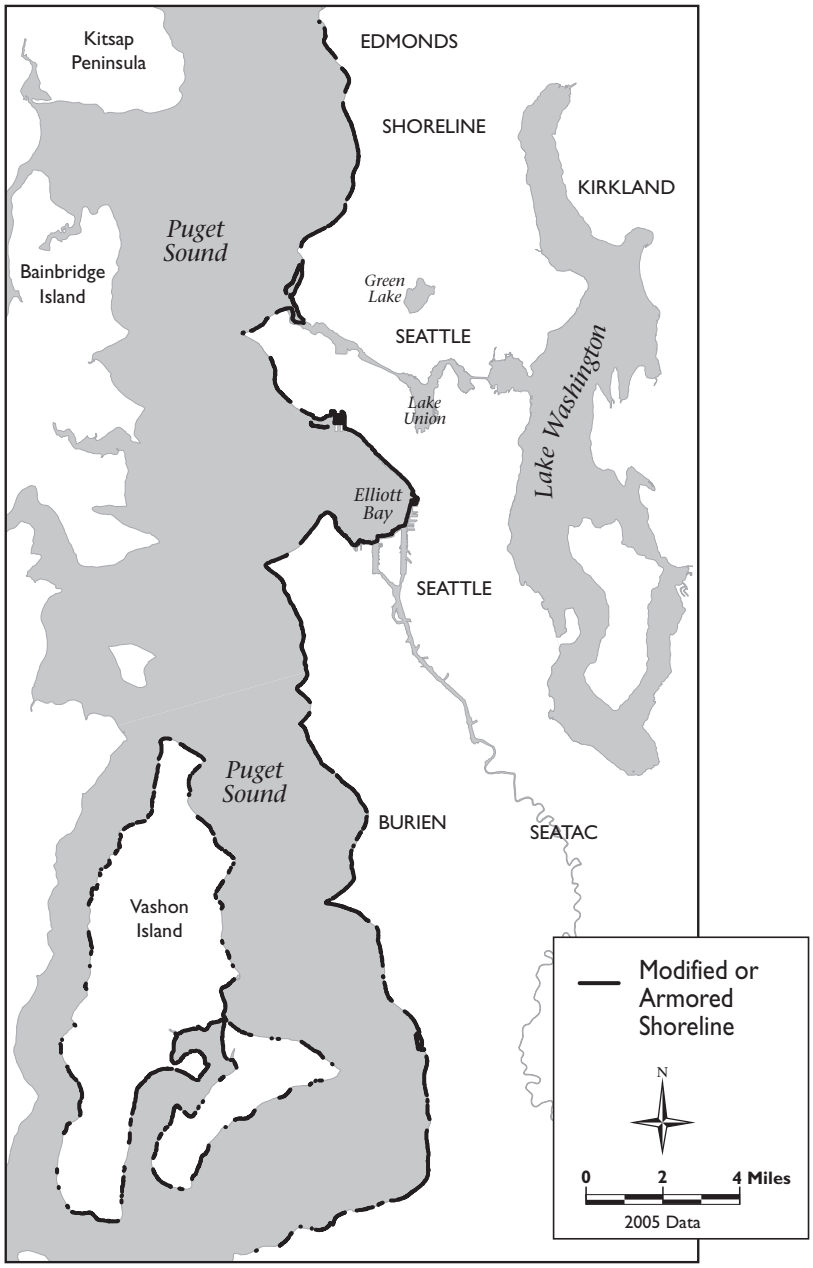


OBSERVATIONS

This is the first time comprehensive data has been available to develop this environmental indicator. Now that a baseline has been established, follow up surveys of new armoring will provide useful analysis in the future.

Conclusions from the data show that many beach feeding, sediment sources have been locked up behind armoring. To make this conclusion, all armored segments of shoreline were identified and characterized based on their historical role in sediment transport. Areas that fed the Sound with more sediment (or feeder bluffs) and those sections of armor located below the ordinary high water mark were identified.

I-3b. Puget Sound Habitat
Percent of Shoreline Armored



From this analysis specific sections of armored shoreline with the greatest impact on sediment recruitment and transport processes can be identified. It prioritizes which sections of armor are most important to restore to natural conditions.

The Central Puget Sound Basin is one of the most heavily urbanized areas within Puget Sound and the widespread distribution of marine shoreline armoring in King County is indicative of this. There is a striking contrast between how much of the mainland shoreline is armored as opposed to Vashon-Maury Islands (Figures I-3a and I-3b). The islands have less modified shoreline and more natural habitat than along most of the mainland.

OUR STRATEGY

King County is working to decrease the rate of new and currently existing shoreline armoring. Recognizing that not all armoring has the same impacts, these reductions should be focused where sediment transport/recruitment processes are restricted and are most important. Removing or preventing armoring in deeper, inter-tidal waters is also a priority.

Sixty-nine percent of King County's shoreline and 49 percent of unincorporated (Vashon-Maury Islands) King County's shorelines are armored. This high percentage of armoring has resulted in significant degradation of marine shorelines surrounding King County. Several courses of action are possible for shorelines in unincorporated King County (Vashon-Maury Islands):

- If armoring was removed on all historic feeder bluff exceptional units, it would decrease total amount of armoring in unincorporated King County (Vashon-Maury Islands) by 2.5%.
- If armoring was removed on all historic feeder bluffs, it would decrease the total amount or armoring on Vashon/Maury Islands by 13%.
- If armoring was removed on all accretion shore types modified deeper than the ordinary high-water mark, it would decrease the total amount of armoring on Vashon/Maury Islands by 3.5%.

If all of these goals were accomplished (and no new armoring was allowed), the amount of armored marine shoreline would decline to 30 percent. Creating better guidance on the appropriate location and the type of new shoreline armoring is expected in an upcoming update to King County's Shoreline Master Plan.

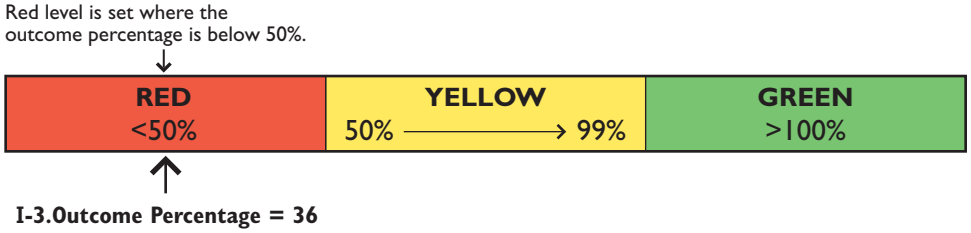
In addition, many Vashon applicants for flexibility to Critical Areas regulations through the Rural Stewardship Planning process are being provided with alternatives to bulkhead construction.

RATING

Results and Outcome

Percentage of King County shorelines armored
2005 Results: 69 percent
Outcome: <25 percent

Performance- to-Outcome Ranges and Ratings



DATA REFERENCE

Berry, H.D., J.R. Harper, T.F. Mumford, Jr., B.E. Bookheim, A.T. Sewell, and L.J. Tamayo. 2001. The Washington State ShoreZone Inventory User's Manual. Nearshore Habitat Program, Washington State Department of Natural Resources, Olympia, WA.

Higgins, K. F., Schlenger, P., and Hall J., 2005. Spatial Relationships between Beneficial and Detrimental Nearshore Habitat Parameters in WRIA 9 and the City of Seattle, 2005 Puget Sound Georgia Basin Research Conference Proceedings.

Johannessen, J.W., MacLennan, A., and McBride, A, 2005. Inventory and Assessment of Current and Historic Beach Feeding Sources/Erosion and Accretion Areas for the Marine Shorelines of Water Resource Inventory Areas 8 & 9, Prepared by Coastal Geologic Services, Prepared for King County Department of Natural Resources and Parks, Seattle, WA.

OUTCOME: Marine water and sediments are healthy for humans and aquatic species

Fecal Bacteria in Offshore Puget Sound

I-4

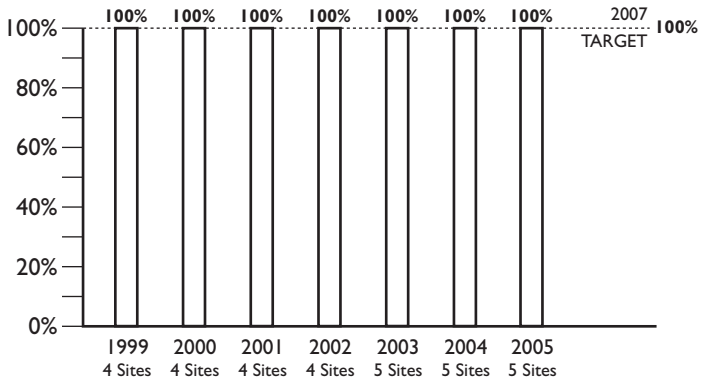
ABOUT THIS INDICATOR

The presence of fecal bacteria in waterbodies indicates contamination with the fecal material of humans, birds, or other warm-blooded animals. One type of bacteria, fecal coliforms, may enter Puget Sound from domestic animals, wildlife, stormwater runoff, wastewater discharges, and failing septic systems. Although these bacteria are usually not harmful, they often occur with other disease-causing pathogens so their presence at high levels indicates an increased possibility that people might get sick if they come into contact with the water.

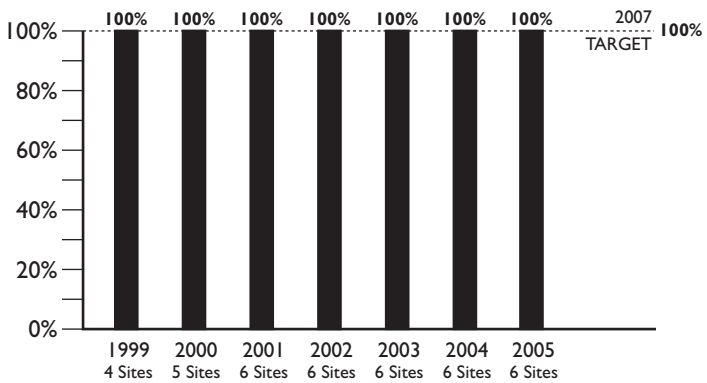
This standard addresses water quality requirements for protecting swimming, SCUBA diving, and other recreational uses. For marine surface waters, the current fecal coliform standard is a geometric mean of 14 colony forming units (cfu)/100ml.

King County conducts monthly monitoring of water quality at 11 offshore locations in Puget Sound. Offshore monitoring sites are divided into two categories. Ambient sites are chosen to reflect general, or ambient, environmental conditions. Outfall sites

Percent of offshore sites that meet fecal coliform geometric mean standard in 100 percent of samples

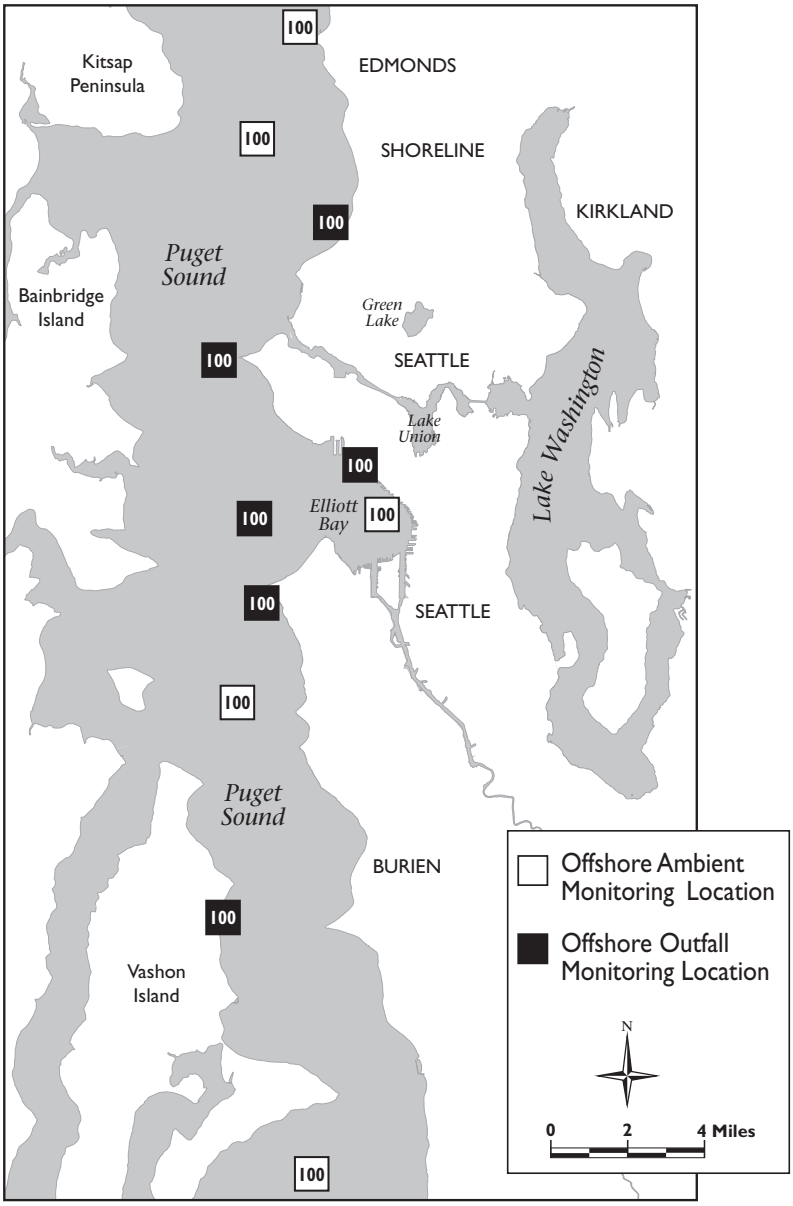


I-4a. Ambient Sites



I-4b. Outfall Sites

I-4c. Percent of samples of each monitored site that met the fecal coliform bacteria standard



are located at King County wastewater treatment plant outfalls and combined sewer overflow (CSO) outfalls operated by King County. The term "offshore" in this indicator refers to sites that are not classified as beach sites.

OBSERVATIONS

Ambient sites can be impacted by nonpoint source pollution, particularly in Elliott Bay. All ambient and outfall sites met the fecal coliform bacteria geometric mean standard in 2005. Although these standards were met at all sites for the last five years, bacteria levels tend to be higher in Elliott Bay due to freshwater inputs.

OUR STRATEGY

DNRP's strategy to prevent any decline in the measure is to continue to operate our wastewater treatment plants and conveyance system effectively. In addition, we are

working together with the Puget Sound Partnership to protect and restore the health of marine waters.

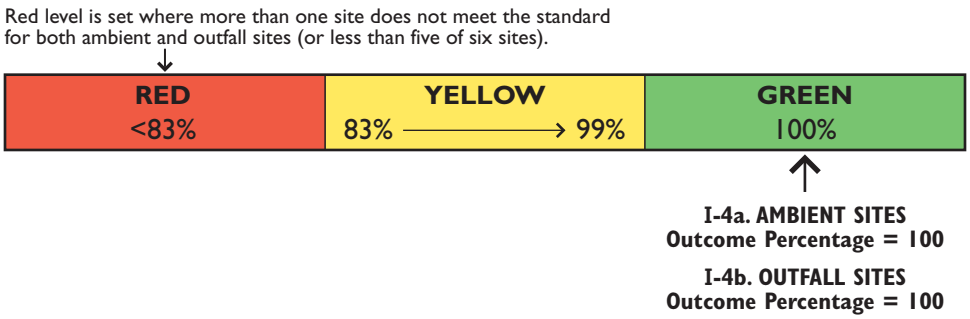
RATING

Results and Outcome

5a. Ambient Sites		5b. Outfall Sites	
2005 Results:	100 percent	2005 Results:	100 percent
Outcome:	100 percent	Outcome:	100 percent

The outcome for both ambient and outfall source sites is that all marine offshore sites do not exceed the marine surface water fecal coliform standard.

Performance- to-Outcome Ranges and Ratings



DATA REFERENCE

Water and Land Resources Division, Science, Monitoring and Data Management Section

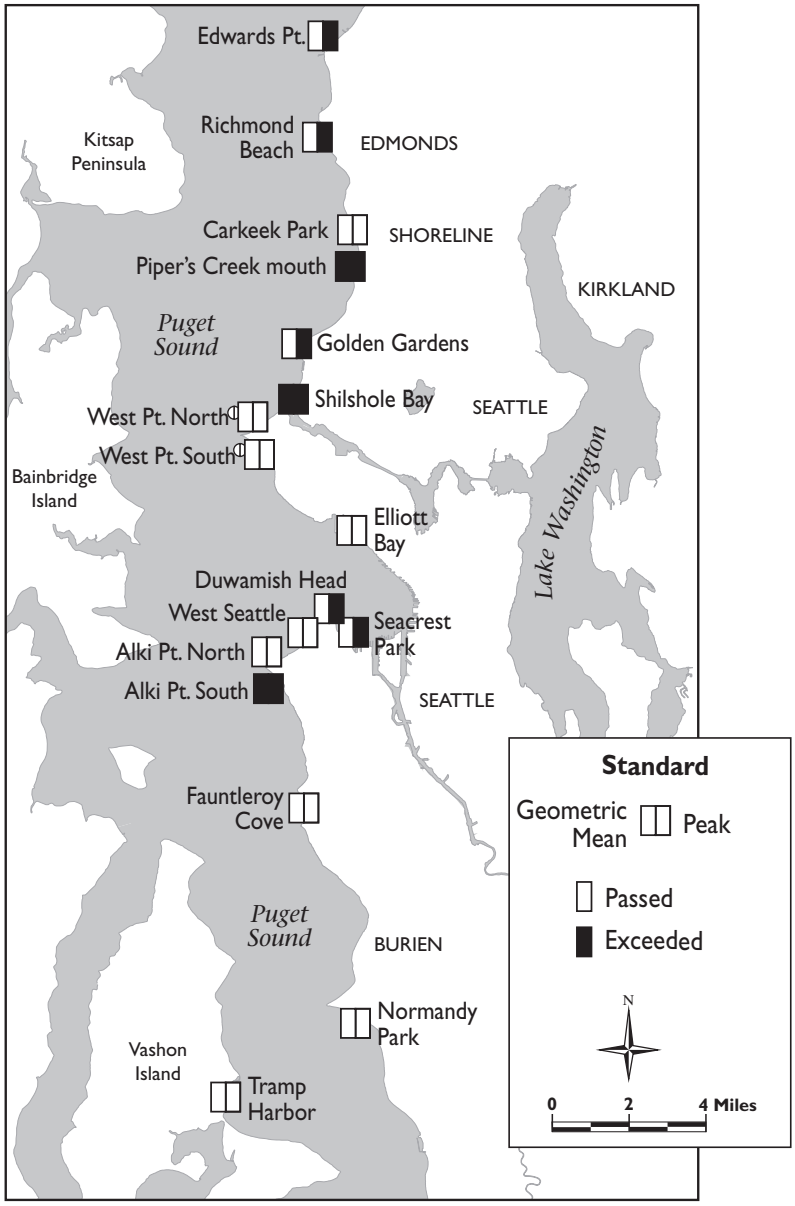
OUTCOME: Marine water and sediments are healthy for humans and aquatic species

I-5 Fecal Indicators for Marine Beaches

ABOUT THIS INDICATOR

Fecal coliforms are one of many groups of bacteria that indicate the presence of fecal contamination in recreational surface waters. This indicator was previously based on another bacterial group called Enterococcus. However, the U.S. Environmental Protection Agency (EPA) has excluded Washington State from the Enterococcus-based National Beaches Rule. The decision to allow Washington State to use fecal coliforms

I-5a. 2005 status of fecal coliform pollution at King County beach monitoring locations



GOALS

Environmental Quality
Achieve a net gain in environmental quality by protecting and restoring the natural environment, ensuring public health and safety, and exceeding environmental standards

Waste to Resource

Community Investment

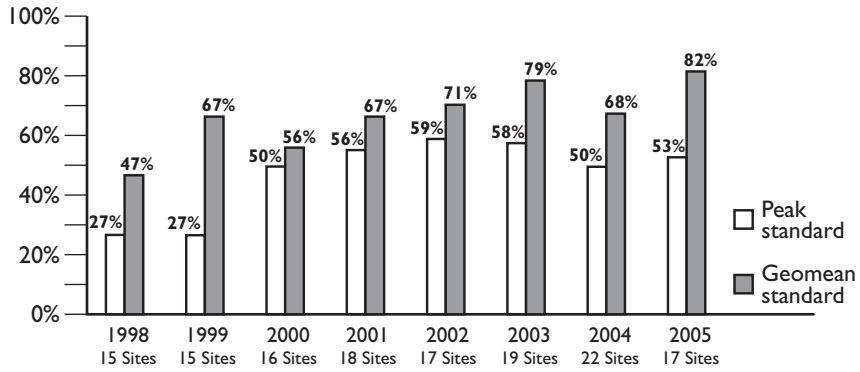
Leadership

Price of Service

Customer Satisfaction

Employee Involvement and Morale

I-5b. Percent of beach sites that meet the fecal coliform standards



as the marine waters bacterial standard was largely based upon data contributed by King County. Evidence from the King County dataset suggested that fecal coliforms are more accurate than Enterococci when measuring for recent fecal contamination.

The state standard addresses increased health risk from direct contact with marine waters during activities such as swimming, wading, SCUBA diving, or surfing. The Washington water regulatory standards state that organism counts should not exceed a geometric mean value of 14 colony-forming units (CFU) / 100ml and not more than 10% of the samples used to calculate the geometric mean should exceed 43 CFU / 100 ml. These standards are referred in shorthand as the geomean standard and the peak standard, respectively. For this indicator, comparison to both the geomean and peak standard are made for each beach site monitored (17 sites in 2005) using fecal coliform counts from 12 samples collected on a monthly basis during the year. The geomean value should be interpreted as the typical fecal coliform count at a given site while the peak value is used to determine whether pulses of high fecal coliform counts may be present at a site.

OBSERVATIONS

The results of fecal coliform testing for 2005 indicate that 9 of the 17 sites meet both the geomean and peak standards and are at a low level of concern, 5 of the 17 sites meet the geomean standard but do not meet the peak standard, and 3 of the 17 sites do not meet either the geomean or peak standards (Fig. I-5a). The three sites of highest concern (Piper's Creek mouth, Shilshole Bay, and Alki Point South) are all near freshwater sources or storm drains with high fecal coliform counts. The five sites that failed the peak standard but passed the geomean standard present an increased health risk and may be near a source of fecal contamination.

The percent of monitored sites that meet standards each year is presented in Fig. I-5b for the years 1998 through 2005. The percent of sites meeting standards in 2005 has almost doubled since 1998 for both the geomean and peak standards. The observed improvement in water quality at Puget Sound beaches over time is most likely caused by annual variability in amount and intensity of rainfall. For example, 1996-99 were substantially wetter than average, which is the likely explanation for higher fecal coliform levels in 1998 and 1999.

OUR STRATEGY

Past and on-going efforts by King County have reduced fecal contamination from most outfalls to the point that contributions from nonpoint sources in the area are more significant than the outfalls themselves. The agency exerts little control on improving current levels of fecal coliforms near most outfall sites. An exception to this is the Vashon outfall where recent improved maintenance and operations have reduced bacteria entering the environment and an upgrade to the outfall itself (moving it further out into deeper water) should further reduce fecal contamination on nearby beaches.

Because nonpoint source contributions of fecal coliforms continue to exist, the agency pursues efforts to determine the source. Included in these efforts are the evaluation of emerging technologies in microbial source tracking and the continued application of fecal coliform survey projects such as the one performed at Alki Point.

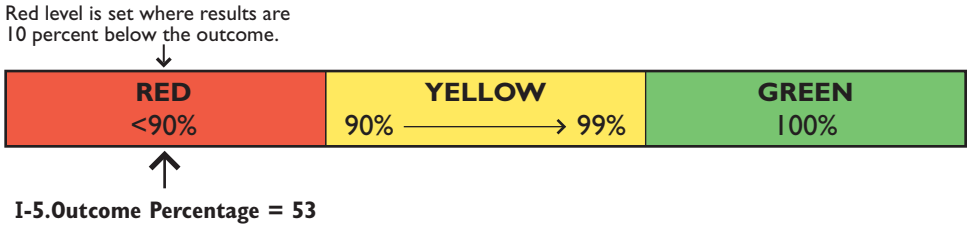
RATING

Results and Outcome

2005 Results: 9 of 17 beach stations (53%) pass the geomean and peak standards, 5 of 17 beach stations meet the geomean and fail the peak standard, and 3 of 17 beach stations fail both the geomean and peak standards.

Outcome: 100% of beach stations pass the geomean and peak standards.

Performance- to-Outcome Ranges and Ratings



DATA REFERENCE

Water and Land Resources Division, Science, Monitoring and Data Management Section

OUTCOME: Marine water and sediments are healthy for humans and aquatic species

Marine Sediment Quality

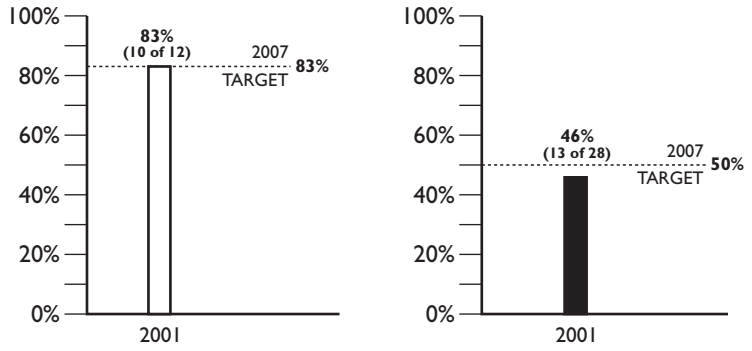
I-6

ABOUT THIS INDICATOR

Many pollutants found in the environment are not detected in water, but are attached to sediment particles. Once in the sediments, these pollutants can directly harm marine organisms or be reintroduced to the food chain through the organisms found in marine sediments. The purpose of Washington State's Sediment Management Standards are to reduce and ultimately eliminate adverse effects on biological resources and any significant human health risk from surface sediments in marine, low salinity or estuarine, and freshwater environments.

The Sediment Quality Standard (SQS), or "no adverse effects level," is the most protective chemical standard for marine sediments. The Cleanup Screening Level (CSL), or the "minor adverse effects level," helps identify areas of potential concern that may be designated cleanup sites. The SQS chemical criterion is selected as the indicator because it is the more sensitive of the two criteria for environmental protection. For this indicator, comparisons to the standards are made for each sediment site monitored in 2001. Data from 2001 are used because they represent the most recent comprehensive survey of sediment quality in King County. In 2001, sediment sites were divided into two categories. Ambient sites were chosen to reflect general, or ambient, environmental conditions. Point source stations are located near King County wastewater treatment plant outfalls and combined sewer overflow outfalls.

Percent of marine sediment sites sampled by King County that meet Washington State sediment quality standards



I-6a. Ambient Sites **I-6b. Point Source Sites**

OBSERVATIONS

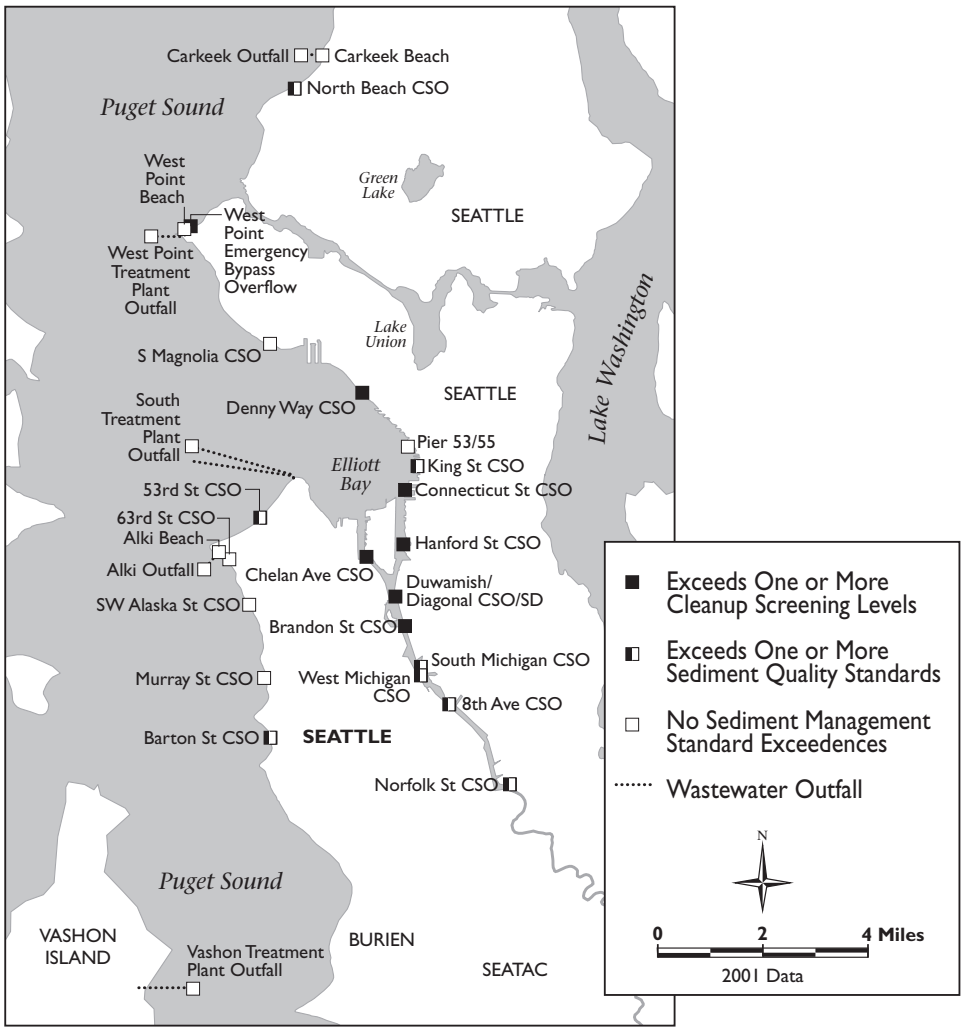
Based on 2001 sampling data, two ambient sites do not meet sediment quality standards, but do not exceed the cleanup screening levels. Both sites are located within the Duwamish waterway and there are no specific plans to address them at this point in time. As such, the ambient target is considered a "non-degradation" target such that conditions should not get worse.

Of the 15 point source-related sites that exceed the SQS, eight do not exceed the

CSL and do not therefore require clean up or monitoring. Six of the remaining seven point source sites that exceed the SQS are associated with combined sewer overflow outfalls and one is associated with an emergency overflow.

King County is in the process of assessing and redesigning the marine ambient and outfall sediment sampling program, therefore, no new samples have been collected. However, other related programs have collected data at some of the point source locations. When new data are available this indicator will be updated or revised.

I-6c. King County point source sediment monitoring stations



OUR STRATEGY

Strategies to achieve the outcome goal focus on collaborating with other organizations, including the City of Seattle, Port of Seattle, and Boeing, with whom King County has joined to form a public-private partnership called the Lower Duwamish Waterway Group. This group will be funding cleanups at "early action sites" as part of the Lower Duwamish Waterway Superfund process. A partial cleanup was completed in 2004 at the first of these sites, the Duwamish/Diagonal Way site. A follow-up cleanup was completed in 2005, reducing the contaminated outfall sites by one.

The cleanup of the Lower Duwamish Waterway includes a multi-agency source control effort to reduce the potential for future recontamination. In addition to the early action sites, additional sediment site cleanups may be completed later under Superfund or as part of other activities in the Duwamish waterways. It is expected that three to five additional sites could be addressed by 2010.

RATING

Results and Outcome

8a. Ambient Sites

2005 Results: no new data to report

Outcome: 100 percent

The target is a non-degradation approach. The long-term outcome for marine sediments is that no sediment sampling locations exceed SQS.

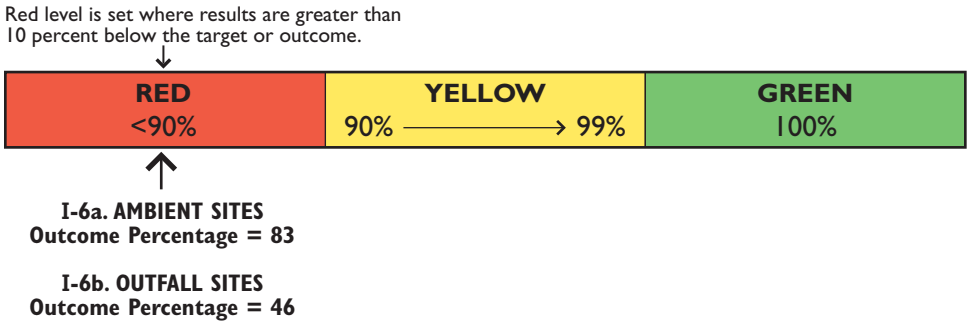
8b. Outfall Sites

2005 Results: no new data to report

Outcome: 100 percent

The long-term outcome for marine sediments is that no sediment sampling locations exceed SQS. The results for outfall sites are being treated as agency performance measures due to the degree of control we exert on the outcome.

Performance-to-Target and Performance-to-Outcome Ranges and Ratings



DATA REFERENCE

Water and Land Resources Division, Science, Monitoring and Data Management Section

I-7 Phosphorus concentrations in small, regional lakes

ABOUT THIS INDICATOR

King County lakes provide numerous environmental benefits in addition to aesthetic and recreational opportunities. DNRP's goal is to maintain all beneficial uses of county lakes. However, natural changes, development, and other human activities affect lake quality.

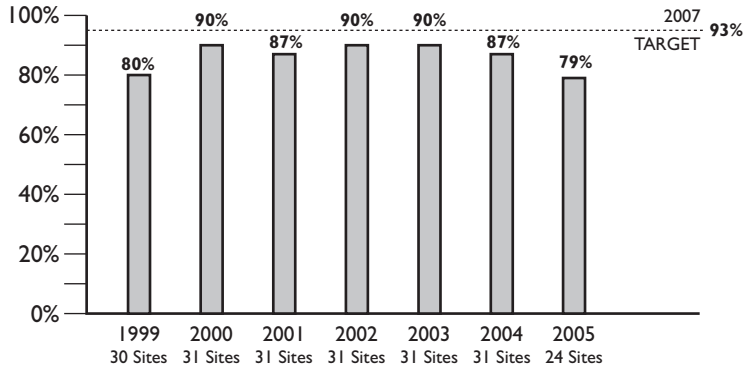
In this region, high concentrations of the nutrient phosphorus are often correlated with increased algal growth. Thus, if the amount of phosphorus entering lakes is controlled or reduced, the incidence of nuisance, and potentially toxic, algal blooms is likely to decrease. Algal blooms are a nuisance because they can cause scum to form on the lake's surface and occasionally give a foul odor and taste to the water. When a bloom dies off it can also deplete the oxygen levels available to other aquatic life. In rare circumstances algal blooms can become toxic.

Phosphorus can be managed through drainage system design, increasing sewer service, and encouraging homeowner best management practices through education and incentives. Using phosphorus concentration as an indicator is an inexpensive tool to assess the potential for nuisance or toxic algal blooms that impact lakes, facilitating allocation of limited county resources toward restoring lakes with indications of serious degradation.

This indicator uses summer phosphorus concentrations converted to Trophic State Indicators (TSI-TP) to assess conditions. Trophic State Indicators relate phosphorus to the amount of algae that the lake can support. Values below 50 have low or moderate potential for nuisance algae blooms; values above 50 have a high potential.

Due to budget cuts, the number of lakes that King County monitored was reduced from 55 in 2004 to 41 in 2005. Costs for lakes inside cities were picked up by contracts with those jurisdictions.

I-7a. Percent of regional county lakes with low or moderate TSI-TP values



GOALS

Environmental Quality
Achieve a net gain in environmental quality by protecting and restoring the natural environment, ensuring public health and safety, and exceeding environmental standards

Waste to Resource

Community Investment

Leadership

Price of Service

Customer Satisfaction

Employee Involvement and Morale

I-7b. Small Regional Lakes

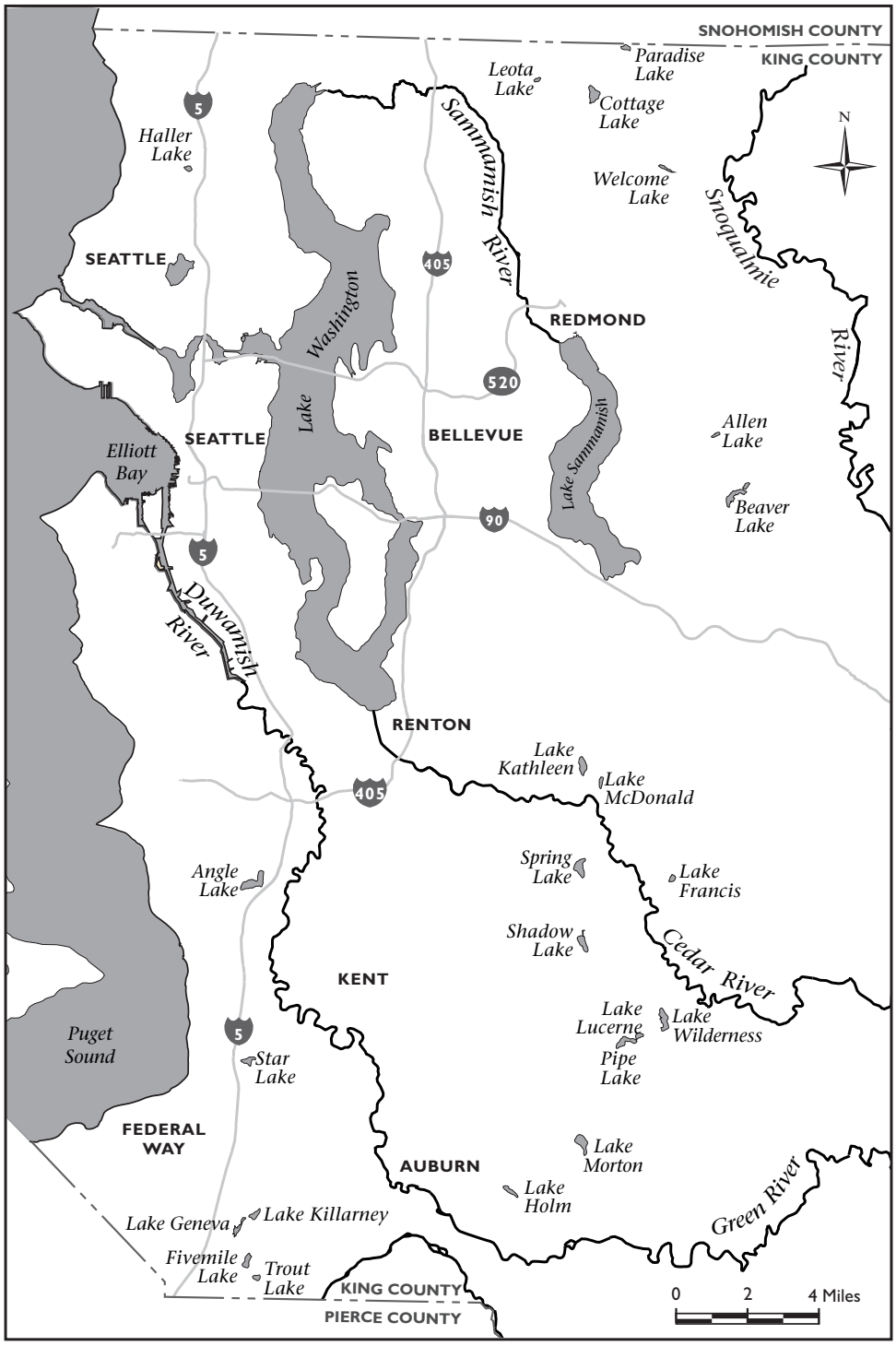


Figure I-7a., provides an indication of the overall health of small regional lakes in King County. Only 24 lakes (Fig. I-7b.) have long enough monitoring records to compile a regional record and are reported here.

Five small regional lakes have approved Lake Management Plans that include recommended activities in their watersheds. Only three of the five were monitored in 2005 due to funding cuts. Since King County has explicit management activities in the watersheds, it is possible to correlate water quality in these lakes to county actions. However, because data was collected for only three managed lakes, it is no longer

presented as a performance measure. Only one of the three monitored lakes had a TSI-TP value of less than 50% in 2005.

OBSERVATIONS

Lakes water quality varies annually and is affected by many factors unique to the conditions in each lake. Although large amounts of algae may relate to changes in conditions, it may not always reduce beneficial uses. However, a trend in a particular lake towards increased TSI-TP over time is probably due to changes in the watershed and cannot be discounted.

OUR STRATEGY

We plan to monitor the managed lakes and implement elements of the Lake Management Plans under County jurisdiction, with community support, as funds become available. In 2005, a Centennial Clean Water funded project for Cottage Lake was begun. Also in 2005, management and monitoring for Lake Sawyer began again by way of contract with Black Diamond.

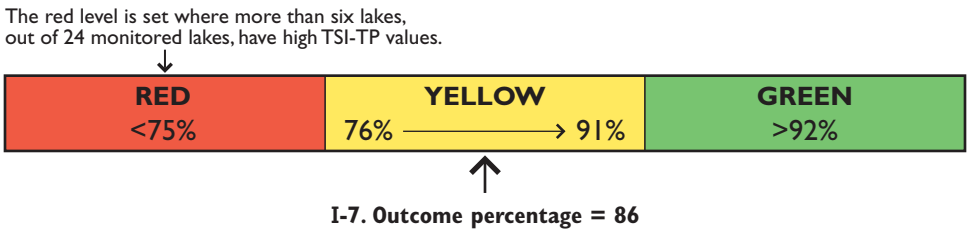
If any other county lakes begin to show serious deterioration in terms of beneficial uses, producing and implementing a lake management plan will be considered. Since several of the 24 lakes included in the indicator appear naturally productive, based on differing types of evidence (including TSI-TP values), the goal of 100% for this indicator is not supported, and an alternative goal of 92% is used for this measure, allowing for some naturally high productivity of algae growth.

RATING

Results, Target and Outcome for the 24 regional lakes

2005 Results: 79 percent of lakes with low or moderate TSI-TP
Outcome: 92 percent of lakes with low or moderate TSI-TP
The long-term outcome for the 24 selected lakes is that all but two lakes (92% or better) will have low or moderate TSI-TP values.

Performance-to-Outcome Range and Rating



I-7. Outcome percentage = 86

DATA REFERENCE

King County Lake Monitoring Report, 1996 - 2004.

OUTCOME: Lakes are healthy for humans and aquatic species

Phosphorus concentrations in large, regional lakes

I-8

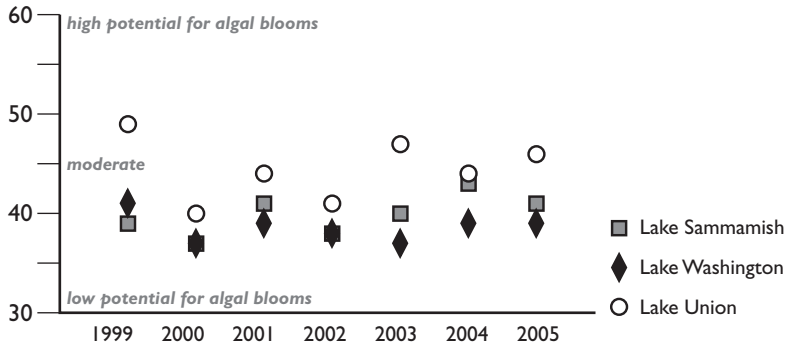
ABOUT THIS INDICATOR

The people of King County have made significant investments in water quality improvement and protection to lakes Washington, Sammamish and Union beginning with the diversion of wastewater effluent out of Lake Washington and Lake Sammamish in 1968. Improvements have continued with efforts to reduce the amount of stormwater discharges through the combined sewer overflow control program, waste treatment system improvements associated with the Brightwater Treatment facility, and evaluation of effluent reuse programs. However, improvements in water quality are constantly threatened by increases in non-point source phosphorus runoff entering the watersheds as a result of increased development.

In this region, high concentrations of the nutrient phosphorus in lakes are often correlated with increased algal growth. Thus, if the amount of phosphorus entering lakes is controlled or reduced, the incidence of nuisance, and potentially toxic, algal blooms is likely to decrease. In the highly urbanized setting of King County's three largest lakes, (Washington, Sammamish, and Union) phosphorus can be managed through well-designed drainage systems, changing homeowner and business behaviors using education and incentives, and replacing septic systems with sewers. In 1995 an interjurisdictional Lake Sammamish Initiative was put into motion and a citizen's task force, Partners for a Clean Lake Sammamish, worked to complete the 1996 Lake Sammamish Water Quality Management Report. The report identified sources of phosphorus pollution and strategies to prevent further large lake contamination.

This indicator uses summer total phosphorus concentrations measured in lakes Washington, Sammamish, and Union, converted to the Trophic State Index (TSI-TP). The Trophic State Index relates phosphorus to the amount of algae that the lake can support. The potential for nuisance algal blooms is considered low if the TSI-TP is less than 40, moderate if less than 50, and high with values above 50.

I-8a. Major lakes phosphorus trophic state index and the potential for nuisance algal blooms



OBSERVATIONS

Lakes water quality varies annually depending on what flows down from the watershed, weather and biological interactions that combine to create the conditions in each

lake. For example, the 1999 – 2005 results for these three lakes show values fluctuating across the low to moderate threshold from year to year, indicating the water quality varies from good to moderate (Figure I-8a). Lake Union typically has values within the moderate range. Lake Washington and Lake Sammamish are frequently in the low potential for nuisance algal bloom range.

Although high algae productivity often relates to "bad" water quality conditions, it may not reduce beneficial uses (such as fishing and swimming) in all cases, depending upon the natural condition of the lake. However, a trend towards increased TSI-TP would indicate watershed changes and should not be discounted.

Lake Sammamish is the only one of the three lakes with a management plan and designated water quality goals. The plan calls for an annual volume weighted total phosphorus concentration (VWTP) of 22 ug/L or less.

OUR STRATEGY

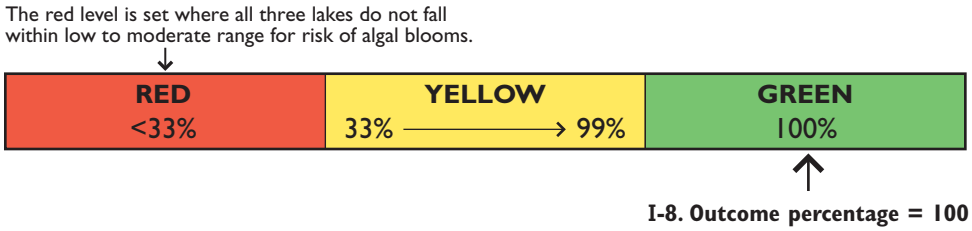
We plan to continue monitoring these lakes as part of King County's ongoing Major Lakes Ambient Monitoring Program. This program is designed to track how the lakes respond over time to the various activities and inputs from the watersheds through influent streams, lake nutrient cycles, ecological interactions, and seasonal or year-to-year weather variability. The goal of 100 percent of the three major lakes being within the range of moderate to low risk of potential algal blooms has been met. If the lakes begin to show serious deterioration in terms of their beneficial uses, actions will be taken to further investigate causes and plans will be made.

RATING

Results and Outcome

Percent of large regional lakes within low to moderate range for risk of algal blooms
2005 Results: 100 percent
Outcome: 100 percent

Performance-to-Outcome Ranges and Ratings



I-8. Outcome percentage = 100

DATA REFERENCE

Water and Land Resources Division, Science, Monitoring and Data Management Section

Fecal Bacteria in Large Lakes

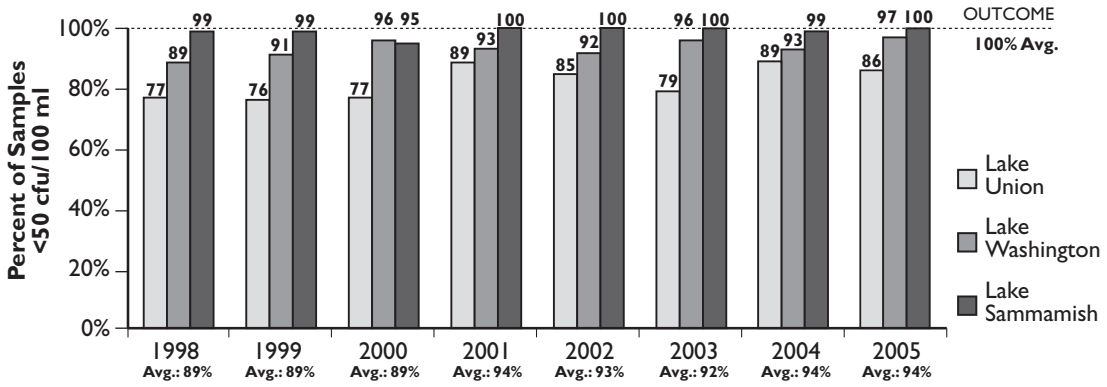
I-9

ABOUT THIS INDICATOR

The presence of fecal bacteria in waterbodies indicates contamination with the fecal material of humans, birds or other animals. Fecal coliform bacteria can come from household or farm animals, wildlife, stormwater runoff, untreated wastewater effluent, and failing septic systems. Although these bacteria are usually not harmful, they often occur with other disease-causing pathogens so their presence at high levels indicates an increased possibility that people might get sick if they come into contact with the water.

The lake standard for fecal coliform bacteria addresses human safety due to direct contact with the water from activities such as swimming and wading. The standard is a geometric mean value of less than 50 colonies/100 ml and not more than 10 percent of all samples obtained for calculating the geometric mean value shall exceed 100-colonies/100 ml (WAC 173-201A). Sites used for this indicator are located in both mid-lake or open water and nearshore locations.

I-9a. Percent of non-swimming beach samples that meet fecal coliform standard



OBSERVATIONS

Even though this measure uses a standard that is exceptionally difficult to attain, 100 percent of the Lake Sammamish and 97 percent of the Lake Washington samples have achieved it. Lake Union had less samples meeting this standard (86 percent), most likely due to the negative influence of many combined sewer overflow and stormwater outfalls into the lake.

OUR STRATEGY

The Henderson/M.L. King project will help eliminate sewer overflows to Lake Washington during extreme storms and improve the sewer system throughout Rainier Beach. The project, began in the fall of 2002 and was completed in the fall of 2005. It provides improved storage and treatment capacity within the sewer system. Following storms, stored flows will be routed to existing King County Wastewater treatment plants at West Point and Renton. Significant reductions in fecal coliform bacteria in

Lake Washington is expected. However, the possibility of combined sewer overflows from the City of Seattle sewer lines, not corrected as part of this project, remain.

With the completion of the Denny Way/Lake Union Project in the summer of 2005, it is predicted that both the volume and frequency of untreated combined sewer overflows to Lake Union and Elliott Bay will be reduced. Flows are now stored during small and moderate storms and are transferred away from Lake Union to the West Point Wastewater Treatment Plant when capacity is available. During larger storms, flows exceeding the storage capacity are treated and discharged via the Denny Way combined sewer overflow system into Elliott Bay. Untreated overflows into Elliot Bay are reduced to less than an average of once per year only for the largest storms that exceed the treatment capacity.

RATING

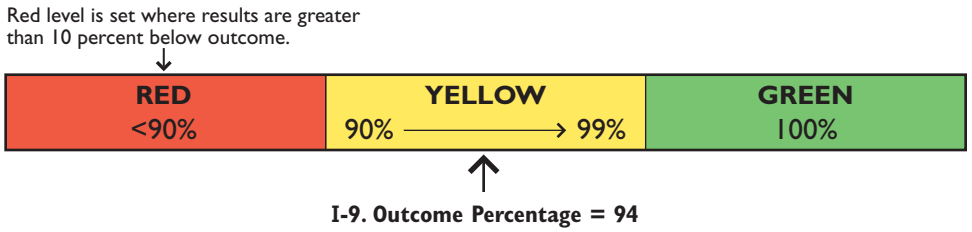
Results, Target and Outcome

2005 Results: 86, 97, 100 of samples met standard: average of 94 percent

Outcome: 100 percent for all three lakes

The long-term outcome for large lakes is to have no samples violate fecal coliform bacteria standards.

Performance-to-Outcome Ranges and Ratings



DATA REFERENCE

Water and Land Resources Division, Science, Monitoring and Data Management Section; Henderson Project: *http://dnr.metrokc.gov/wtd/henderson-cso/index.htm*;

Denny Way Project: *http://dnr.metrokc.gov/wtd/dennyway/index.htm*.

Fecal Bacteria at Large Lake Swimming Beaches

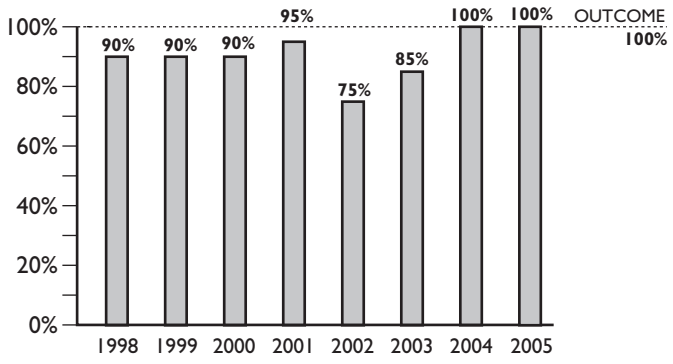
I-10

ABOUT THIS INDICATOR

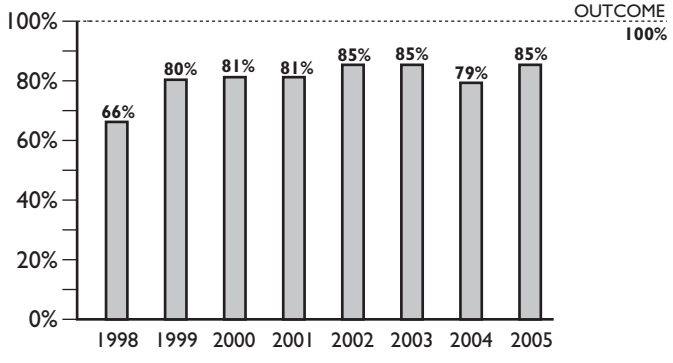
The presence of fecal bacteria in waterbodies indicates contamination with fecal material from humans, birds or other animals. Fecal coliform bacteria can come from household or farm animals, wildlife, stormwater runoff, untreated wastewater effluent, or failing septic systems. Although these bacteria are usually not harmful, they often occur with other disease-causing pathogens so their presence indicates an increased possibility that people might get sick if they come into contact with the water.

The target indicator for fecal coliform bacteria is met when there is less than 200 colonies/100ml in any sample. This target is based upon, but more conservative than, the Ten State Standard which requires that the geometric mean is less than 200 colonies/100 ml and that no single sample is greater than 1000 colonies/100ml. The Seattle & King County Public Health Department (Public Health) and the Washington State Department of Health currently use the Ten State Standard. When the swimming beaches achieve the standard, the health departments assume negligible risk to the bathing public from fecal contamination. The Ten State Standard is less restrictive than the lake bacterial standard used in this indicator and may be modified to an E. coli-based standard in the future because of regulatory changes by the U.S. Environmental Protection Agency.

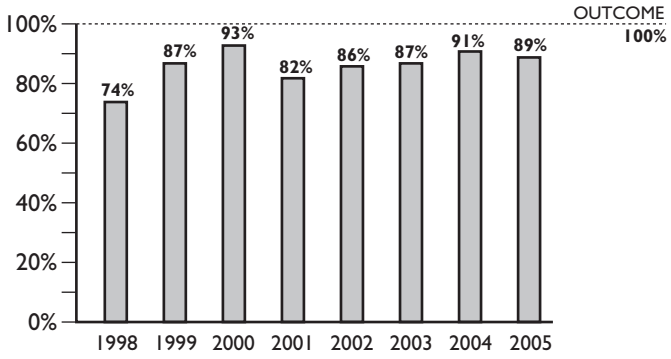
Percent of samples from all sites which met the target of < 200 colonies/100 ml



I-10a. Green Lake: 1 Site

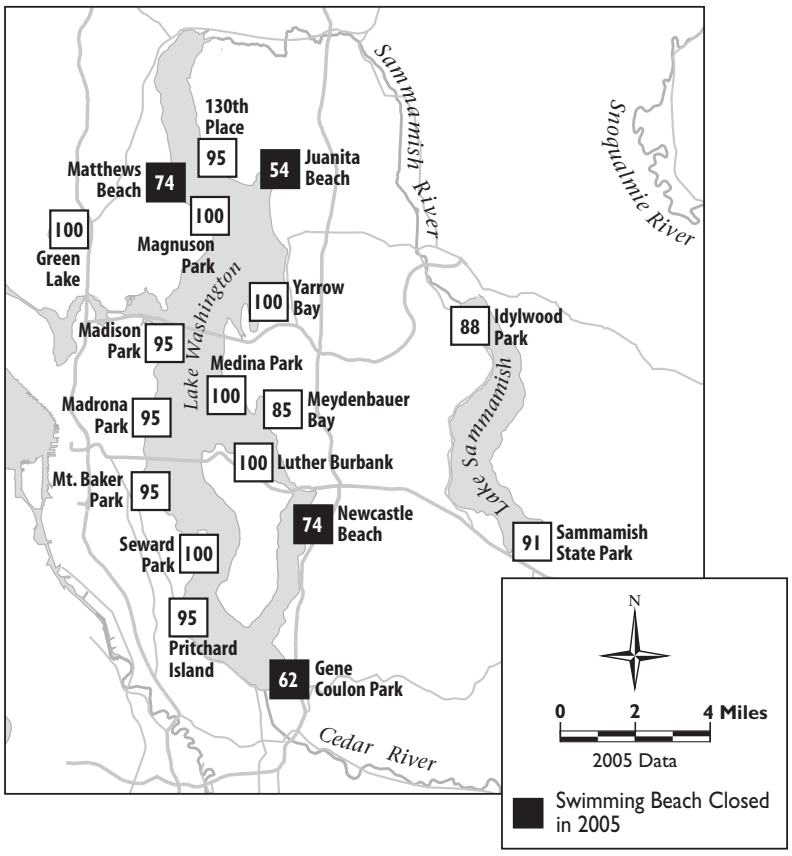


I-10b. Lake Washington: 18 Sites



I-10c. Lake Sammamish: 2 Sites

I-10d. Percent of samples at each swimming beach that met fecal coliform bacteria target



OBSERVATIONS

Bacteria levels were low in Green Lake for the second year in a row. Lake Washington and Lake Sammamish have remained fairly consistent with slight variability from year to year. Data from the beach monitoring program was used by Public Health to identify potential public health problems. Bacterial counts at all the beaches monitored in Lake Sammamish were within acceptable ranges and did not warrant swimming beach closures. Four Lake Washington swimming beaches were closed in July 2005. Matthews Beach was closed due to high bacteria from stormwater inflowing from Thornton Creek. It was reopened after the streamflow diminished. Waterfowl were suspected as sources of bacteria in the Newcastle and Juanita beach closures. Gene Coulon

beach was also closed and although the source of bacteria was not determined, the most likely source is waterfowl. There were no sewer line breaks, spills, or leaks, nor is there an adjacent stream that contributes high counts of bacteria into that swimming area.

For lakes Sammamish and Washington, there are a greater number of bacterial exceedances at swimming beaches than at ambient monitoring sites (see comparison with data in Indicator 9). There is no monitoring conducted by DNRP at Green Lake other than the swimming beach bacterial monitoring. In addition, since there are no public swimming beaches on Lake Union, the other lake in Indicator 9, it is not discussed here.

OUR STRATEGY

When the bacterial counts at the swimming beaches are greater than the target for this indicator (200 colonies/100 ml), the counts are often substantially higher and can result in the temporary closure of specific public swimming beaches. King County monitoring has identified waterfowl as the primary source of fecal coliform contamination at many of the beaches, during these times. Modifications to park maintenance procedures and control of non-migratory, non-native waterfowl will contribute to meeting the water quality and public health goals at swimming beaches.

RATING

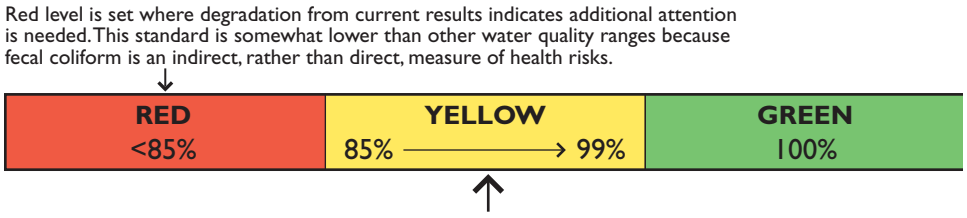
Results and Outcome

2005 Results: 85, 89, and 100 percent of samples meet target in each of the three lakes: average of 91 percent

Outcome: 100 percent

The long-term outcome for swimming beaches on large lakes is to have no sites violate the fecal coliform bacteria target.

Performance-to-Outcome Ranges and Ratings



I-10. Outcome Percentage = 91

DATA REFERENCE

Water and Land Resources Division, Science, Monitoring and Data Management Section

OUTCOME: Streams and rivers provide high quality habitat for aquatic species.

I-11 Streams and River Water Quality

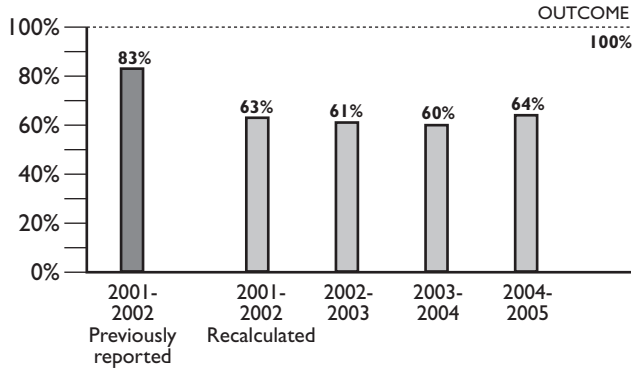
ABOUT THIS INDICATOR

King County conducts monthly monitoring of water quality at 56 stream and river sites in the Lake Washington and Green-Duwamish drainage basins. The Stream and River Water Quality Index (SRWQI) attempts to integrate a series of key water quality factors into a single number that can be used for comparison over time and among different stream locations in the Lake Washington and Green-Duwamish River drainage basins. The index number used here is based on a version proposed by the Washington Department of Ecology, originally derived from the Oregon Water Quality Index.

The index reports a number ranging from 10 to 100 - the higher the number, the better the water quality. For temperature, pH, fecal coliform bacteria and dissolved oxygen, the index expresses results relative to state standards that must be met to allow beneficial uses such as swimming and fishing. For nutrient and sediment measures, where the state standards are not specific, results are expressed relative to expected conditions in a given eco-region. Multiple constituents are combined and results aggregated over time to produce a single score for each sample station.

In general, stations scoring 80 and above met expectations and are of "low concern," scores 40 to 80 indicate "moderate concern," and water quality at stations with scores below 40 did not meet expectations and are of "high concern."

I-11a. Percent of stream and river stations with low or moderate water quality concerns

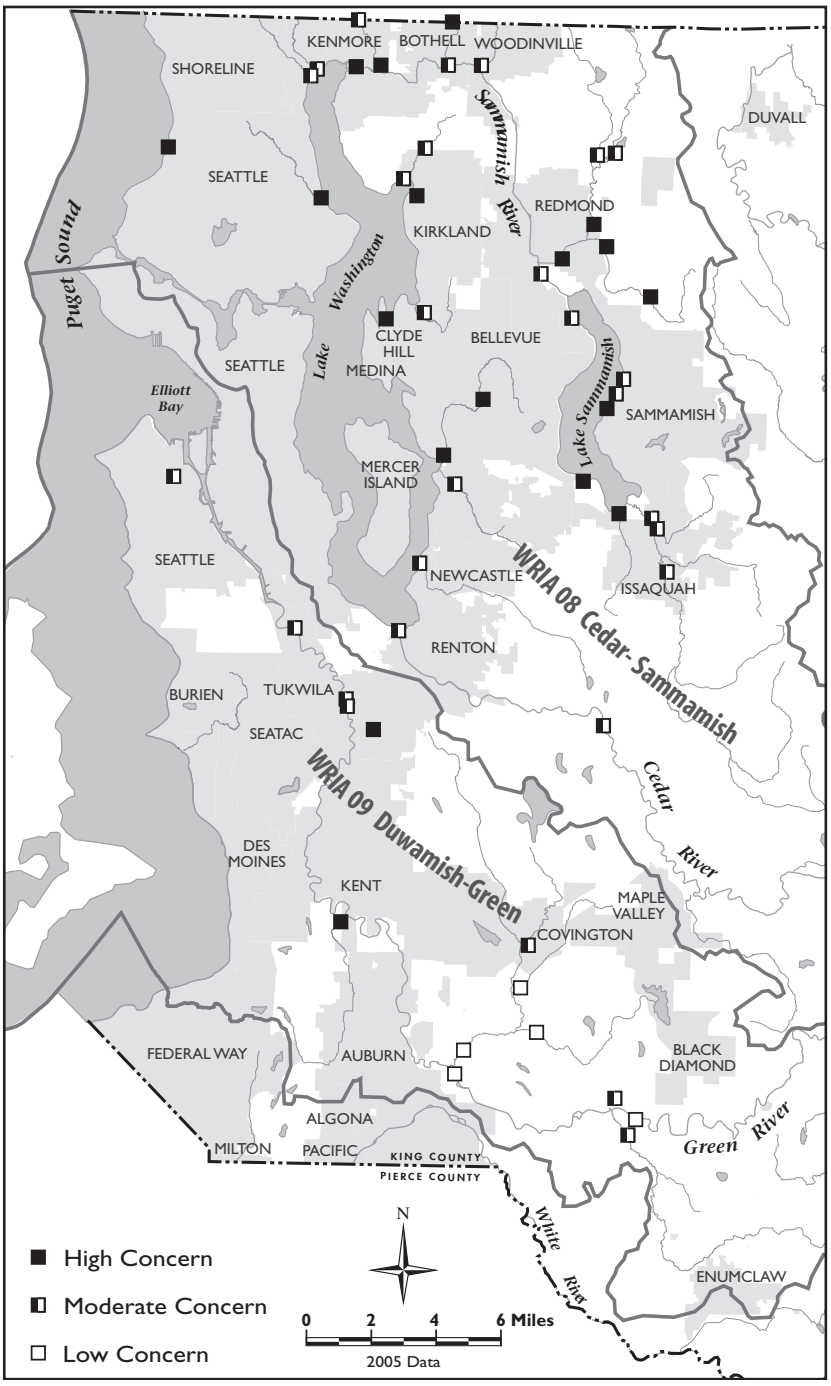


OBSERVATIONS

Given a population of almost two million residents and the intense urbanization of the area, overall stream water quality in King County is fairly good. Water quality at 36 of the 56 sampled sites, or 64 percent, were considered either "low concern" or "moderate concern," while 20 sites (or 36 percent) were rated "high concern."

In the Water Resource Inventory Area (WRIA) 9/Green-Duwamish Basin, six of the 16 sites were rated of "low concern," eight sites were of "moderate concern," and two sites were of "high concern." Of the 40 sites in the WRIA 8/Lake Washington Basin no sites rated of "low concern," 22 sites were of "moderate concern," and 18 were of

I-11b. Stream and river Water Quality Index



"high concern." Overall, "high concern" ratings were caused at least in part by excessive nutrients at all 20 high concern sites, high bacteria levels at 17 sites, low dissolved oxygen concentrations at 12 sites, and high temperatures at five sites.

Pets and failing septic systems are the most likely sources of bacteria in the urban areas. Poor livestock management practices can be a potential source of bacteria in agricultural areas. In wetland areas, wildlife and stagnant water conditions can lead to elevated bacteria counts. High phosphorus concentrations are found in fecal material and elevated concentrations are often linked to similar sources as bacteria. Phosphorus is also released from the sediment when dissolved oxygen concentrations are low. In addition, elevated phosphorus concentrations are linked to areas with high volumes of stormwater runoff and areas undergoing development.

Low dissolved oxygen concentrations can be associated with low flows, high temperatures (colder water holds more oxygen), and high levels of organic matter (bacteria use up oxygen in the process of decomposition). Low flows and high temperatures were a particular problem during the late summer of 2005 as there were extended dry periods and the cumulative rainfall was relatively low compared to historical values.

OUR STRATEGY

Preventing and repairing damage to King County's waterways is one of the primary goals of WLR. This indicator pinpoints "high concern" sites so that WLR programs and projects can focus efforts in those areas. This may involve a constructed or engineered solution, identifying where or how pollutants are entering the stream, or educating adjacent property owners about the impacts of pesticides and fertilizers on streams. In addition, WLR often works in coordination with an incorporated city to resolve a water quality problem within their jurisdiction.

This indicator also highlights the need for more comprehensive and coordinated approaches to resolving problems related to instream flow management since lower flows exacerbate every water quality measurement of the index. This need is particularly apparent in water supply planning. King County will continue to advocate for water supply planning at a regional scale to cover all of its watersheds. When combined with existing cross-watershed actions for managing land use, stormwater, and flooding, regional water supply planning will complete the necessary foundation for addressing in-stream flow factors that contribute to improving the status of this indicator.

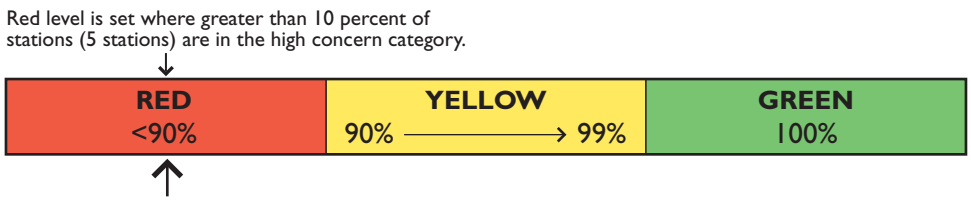
RATING

Results and Outcome

Percent of streams with low or moderate water quality concerns
2005 Results: 64 percent
Outcome: 100 percent

The long-term outcome for streams is that no stream stations are considered "high concern."

Performance-to-Outcome Ranges and Ratings



I-11. Outcome Percentage = 64

DATA REFERENCE

Water and Land Resources Division, Science, Monitoring and Data Management Section

OUTCOME: Streams and rivers provide high quality habitat for aquatic species.

Stream health based on the Benthic Index of Biotic Integrity (B-IBI)

I-12

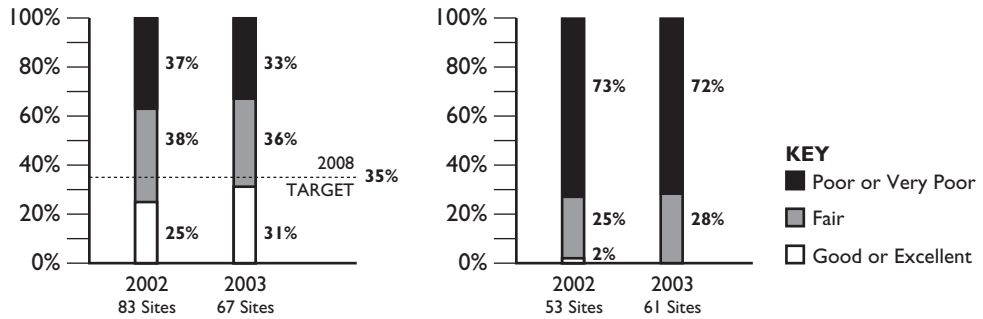
ABOUT THIS INDICATOR

King County monitors stream health by collecting samples of benthic macroinvertebrates, commonly referred to as "bugs", from selected streams. Scientists use a scorecard system called the Benthic Index of Biotic Integrity (B-IBI) to rank the health of streams. The scores are based on the types of stream bugs living in the stream and the number of different kinds of stream bugs present. By using this scoring system, we can compare very different streams to each other and rank their ecological health.

King County's benthic index is composed of ten metrics that measure different aspects of stream biology, including taxonomic richness and composition, tolerance and intolerance, habit, reproductive strategy, feeding ecology, and population structure. Each metric describes some aspect of the community that responds to degradation. The raw value of each metric is calculated, and from the raw value a score is assigned to the metric. The ten scores are then added to produce the overall B-IBI score that ranges from 10 to 50 and these are labeled very poor, poor, fair, good or excellent.

10-16	18-26	28-36	38-44	46-50
Very Poor	Poor	Fair	Good	Excellent

B-IBI results for stream stations



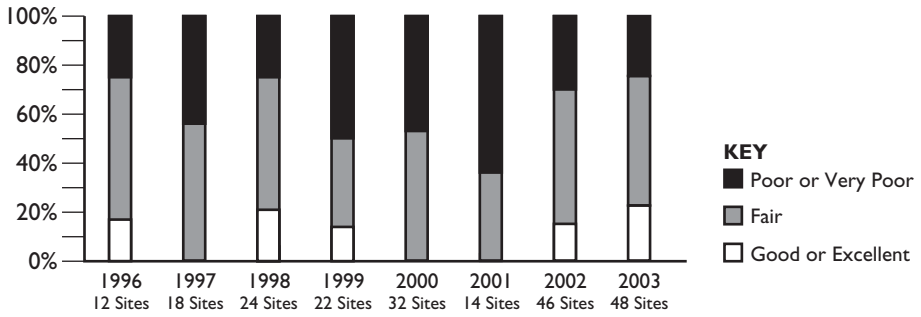
14a. Streams in Unincorporated King County

14b. Streams in Incorporated King County

OBSERVATIONS

The 2003 data are the most recent available. Data were not collected in 2004, and data are not yet available for 2005. Because the 2002 sampling efforts included more data than all previous years combined, these data represent the best available baseline. Sampling in 2003 was intended to replicate the program initiated in 2002; however, not all sites were sampled in 2003 due to insufficient flows at some of the sites. Sampling for 2002 and 2003 was conducted using a randomized design for streams in both incorporated and unincorporated King County. A total of 128 stations in 55 streams within 15 subbasins across the Lake Washington/Cedar/Sammamish watershed (WRIA 8) and the Green/Duwamish watershed (WRIA 9) were sampled.

14c. B-IBI ratings for selected stream stations in Bear, Soos and Issaquah Creeks and Cedar River tributarues



Not surprisingly, the results for unincorporated and incorporated areas within King County are dramatically different. In 2003, 31 percent of the sampled streams in unincorporated King County had benthic insect communities in good or excellent condition, whereas none of the incorporated stream stations rated this high. In addition, although both unincorporated and incorporated stations exhibited a high number of stations with poor or very poor ratings, incorporated stations had a higher percentage (72%) than did unincorporated (33%). Because streams can traverse jurisdictions, a steam station may reflect conditions that arise from conditions in another adjacent jurisdictional area.

In order to compare the 2003 results with historic data, Figure I-12c shows results from areas previously sampled (Lower Cedar River tributaries and Soos, Bear and Issaquah creeks) between 1995 and 2002.

The following observations are notable:

- The 2003 results were very similar to the 2002 results.
- The 2002 and 2003 sampling design was more rigorous and included more samples than in previous years. Changes in historic sample numbers make year-to-year comparisons prior to 2002 more difficult.
- Comparisons of 2002 and 2003 data with data from years without such intensive sampling should be made with caution. High inter-annual variability suggests that large data sets will be required to develop long-term trends.

OUR STRATEGY

WLR has a multi-pronged strategy to address stream health. Major programs focus on minimizing degradation from development, minimizing pollutant runoff from farms, preventing the loss of forest cover and its numerous stormwater benefits, or implementing watershed improvement projects identified in WRIA-based salmon recovery plans.

King County's Stormwater Program focuses on flow control to minimize adverse effects from development, provides surface water design standards for new development and inspects and maintains stormwater control facilities. The program will be working to identify steam "hot spots" where surface water flows pollute water quality that results in changes to the B-IBI.

The county acquires and works with landowners to restore streamside parcels that have important benefits as aquatic resources. In addition, WLR's capital projects program builds small and large stream and wetland enhancement projects while protecting public safety. Habitat restoration projects include streamside and wetland planting, livestock fencing, in-stream habitat improvements, removal of barriers to fish migration and removal of invasive and non-native plants.

Basin stewards work with the local community to respond to resident's inquiries for watershed protection, coordinate efforts among diverse public agencies, facilitate watershed project implementation, provide assistance to monitoring programs and provide public education opportunities. King County's Agriculture Program works with farmers and livestock owners to prevent agricultural pollutants from running off into streams.

Implementation of the county's Critical Areas Ordinance and federal total maximum daily load requirements for impaired water bodies are regulations that will also support water quality improvements in both incorporated and unincorporated areas.

RATING

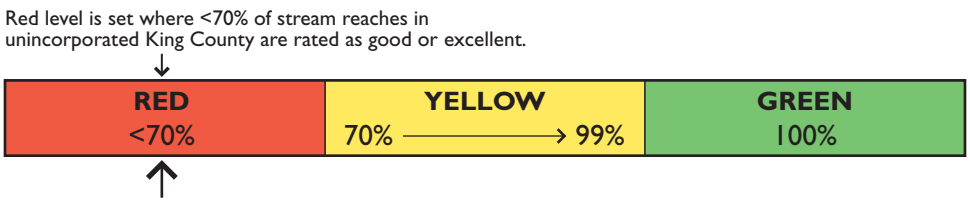
Results, Target and Outcome

2003 Results: 31 percent
Outcome: 100 percent

The long-term outcome is to ensure that 100 percent of stream reaches in unincorporated King County are rated as good or excellent.

No outcome has been set for the incorporated areas because these are in areas where the county has limited direct control.

Performance-to-Outcome Ranges and Ratings



I-12. Outcome Percentage = 31

DATA REFERENCE

King County's Stream Bug Monitoring Home Page (*http://dnr.metrokc.gov/wlr/waterres/Bugs/index.htm*); Benthic Macroinvertebrate Study for Greater Lake Washington and Green-Duwamish River Watersheds: Year 2003 Data Analysis (*http://dnr.metrokc.gov/wlr/watersheds/green/water-quality-assessment.htm*)

OUTCOME: Streams and rivers provide high quality habitat for aquatic species.

I-13 Riparian and Watershed Landcover

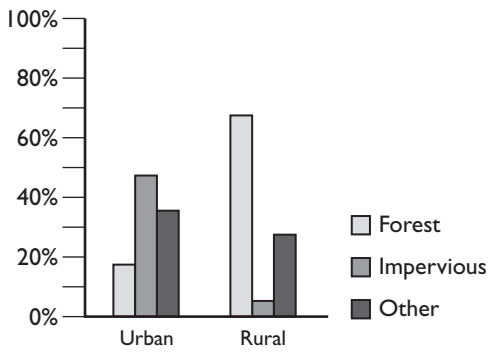
ABOUT THIS INDICATOR

Increased population and development have substantially altered the landscape in King County over the past two centuries. Of particular interest for the protection of salmon and other aquatic resources is the conversion of forest and natural land cover hard or impervious surfaces, such as roofs, sidewalks parking lots, and roads. Forests naturally regulate stormwater runoff, provide habitat for many species, and maintain healthy streams and rivers for salmon and other fish. Less forests result in less stormwater control, less habitat for forest species, and aquatic systems that are less healthy for fish. Increases in impervious surfaces are generally associated with the highest rates of stormwater runoff, the highest degradation in water quality, and the most impacts on forest and aquatic species.

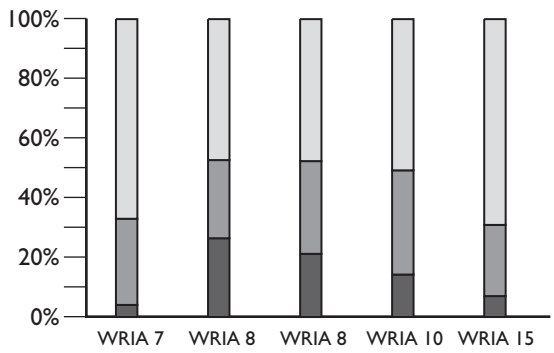
This index reflects landscape changes that protect forest and aquatic habitats. The percent of the landscape maintained as forest, and the percent that has been converted to impervious area, is presented watershed-wide for all of King County, and for areas alongside streams.

Forest data were derived from a 2001 Landsat image. And impervious area data were derived from 2000 multispectral images. The width of riparian areas along stream banks varied between a minimum165-foot buffer on each side and expanded to include wetland and steep slope areas (in addition, possible landslide areas that extend past this buffer). This approach to defining riparian areas is intended to encompass functional features of adjacent lands that could have been missed if a simple buffer width were used.

I-13a. King County landcover



I-13b. King County landcover by WRIA



GOALS

Environmental Quality
Achieve a net gain in environmental quality by protecting and restoring the natural environment, ensuring public health and safety, and exceeding environmental standards

Waste to Resource

Community Investment

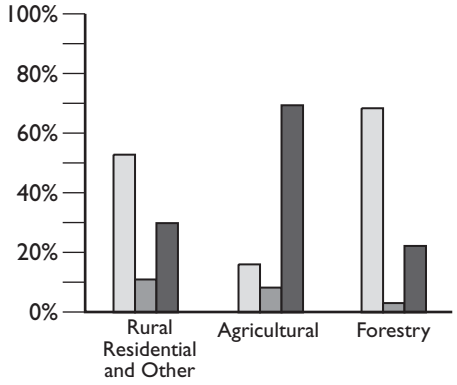
Leadership

Price of Service

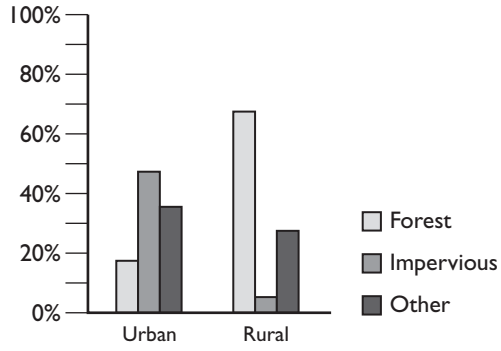
Customer Satisfaction

Employee Involvement and Morale

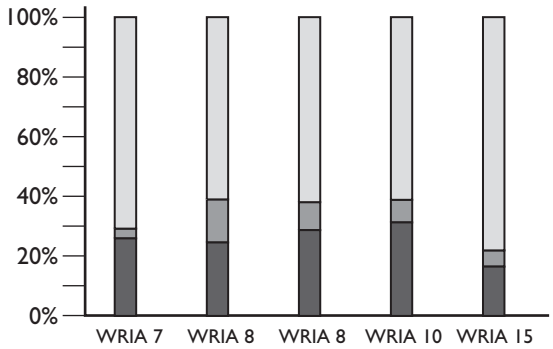
I-13c. Rural King County landcover by zoning



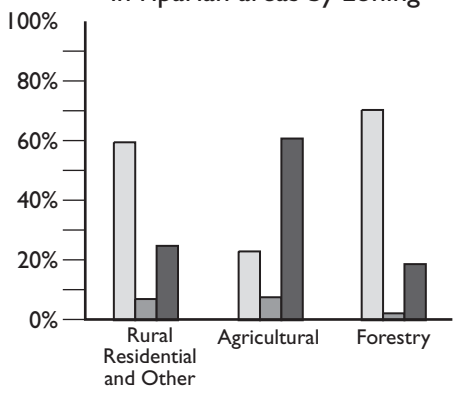
I-13d. King County landcover in riparian areas



I-13e. King County landcover in riparian areas by WRIA



I-13f. King County landcover in riparian areas by zoning



OBSERVATIONS

Total land cover across King County was categorized in three different ways: (1) by urban vs. rural, (2) by WRIA, and (3) by general land use within the rural areas. Countywide, rural areas have higher forest coverage than urban areas (see Figure I-13a), and WRIAs 7 and 15 have higher forest coverage than WRIAs 8, 9, and 10 (see Figure I-13b). Within rural King County, rural residential (and other miscellaneous) zoning maintains forest coverage between that maintained in the agricultural production and forest production zones (see Figure I-13c).

Stream riparian land cover across King County was categorized in the same three ways: (1) by urban vs. rural, (2) by WRIA, and (3) by general land use within the rural areas. Countywide, stream riparian areas in rural areas have higher forest coverage than urban areas (see Figure I-13d), and WRIAs 7 and 15 have higher forest coverage than WRIAs 8, 9, and 10 (see Figure I-13e). Within rural King County, rural residential (and other miscellaneous) zoning maintains forest coverage between that maintained in the agricultural production and forest production zones (see Figure I-13f).

OUR STRATEGY

Land use regulations recently updated as part of the Critical Areas Ordinance were passed by the Metropolitan King County Council in 2004. These regulations attempt to maintain a minimum of 65 percent forest cover and limit impervious areas to less

than 10 percent in rural, unincorporated King County. They also provide extra protection for aquatic riparian areas. King County DNRP intends to monitor forest cover and impervious area throughout the county, and within riparian zones as an important indicator of the health of our environment.

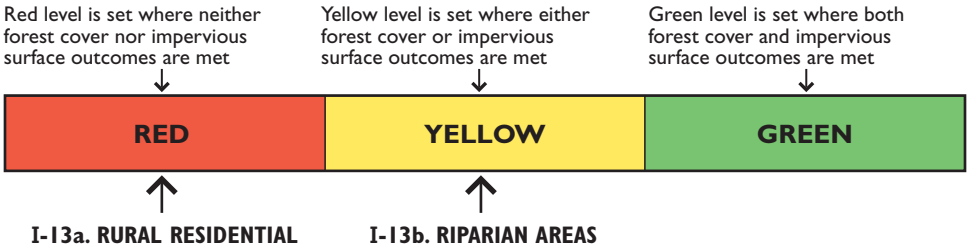
RATING

Results, Target and Outcome

I-13a. Rural Residential (and other miscellaneous) Zoning		I-13b. Riparian Areas in Rural Residential (and other miscellaneous) Zoning	
2005 Results:	56 percent forest and 12 percent impervious	2005 Results:	65 percent forest and 8 percent impervious
Outcome:	>65 percent forest and <10 percent impervious	Outcome:	>65 percent forest and <10 percent impervious

The long-term outcome for both watershed and riparian zones in rural King County is that 65 percent forest cover is maintained and that impervious area is limited to less than 10 percent.

Performance-to-Outcome Ranges and Ratings



DATA REFERENCE

DNRP's Science, Monitoring and Data Management Section. The percent forest data were derived from a 2001 Landsat image. The percent impervious area data were derived from 2000 multispectral images.

OUTCOME: Streams and rivers provide high quality habitat for aquatic species.

Stream "flashiness" in Puget Sound Lowland Streams

I-14

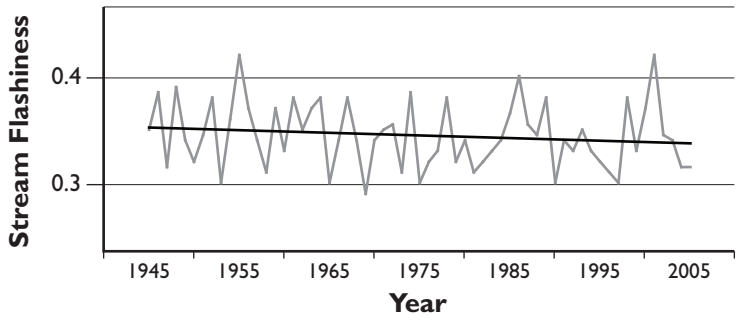
ABOUT THIS INDICATOR

Pacific Northwest rainwater can run off into streams, rivers, lakes, or Puget Sound, get captured by the landscape and stored (where it eventually evaporates or is transpired by plants back into the air) or infiltrate into the ground and recharge groundwater. As a result of extensive development, stream flow patterns and how they respond to rainfall have been substantially altered. In urban areas, surface runoff occurs more quickly than in forested areas because less rainfall is absorbed by the vegetation and soil. Faster runoff in urban areas results in higher peak stream flows rising and falling more rapidly than under forested conditions. Increased peak flows or "flashiness" lead to the most obvious effects from a human perspective – flash flooding and channel erosion. From a biological perspective, streams with more frequent peak flows are disturbed more often. In response the organisms that survive in these conditions are those that have adapted to more frequent and severe disturbances. Long-lived species that require periods or locations of calmer water are replaced by more opportunistic, short-lived species better adapted to "flashy" flow regimes.

This indicator uses a stream "flashiness" index that measures the fraction of days during the year the flow rises above the annual mean daily flow. Because peak stream flow rises and falls more quickly in urban areas than forested areas, urban streams tend to have a smaller fraction of days during the year when the flow is above the annual mean daily flow, and a lower "flashiness" index score. This decrease in the "flashiness" index score represents the loss of water storage capability of soils and vegetation due to urbanization. To assess conditions throughout the county, the median stream "flashiness" is calculated each year across all streams where flow is measured. The median stream "flashiness" score represents the degree of water storage ability where half of the streams are flashier and half are less flashy.

Flows from 12 stream sites in King County were measured and their "flashiness" index calculated during the 2005 water year (October 2004 – September 2005). Flows for several additional streams were measured by the United States Geological Survey, although these data are not yet available. The number of streams where stream "flashiness" is calculated varies from 1 stream in 1945 to 21 streams in 2001.

I-14a. Median "Flashiness" Index per Year



OBSERVATIONS

The median of the "flashiness" index scores across all streams measured in King County has decreased between 1945 and 2005 (see Figure I-14a). These data suggest that increased urbanization in King County has resulted in faster surface runoff and peak stream flow rise and fall than previously occurred for at least some streams.

OUR STRATEGY

King County has a multitude of regulatory, educational, and on-the-ground programs to reduce the impacts of development on streams and reduce the amount of "flashiness." The County's Drainage Design Manual directs drainage requirements for all new development. In compliance with National Pollutant Discharge Elimination System permit requirements from the state (as part of the federal Clean Water Act), a closer linkage between the effectiveness of stormwater controls and water quality and flows is expected. This may translate into more monitoring at retention / detention ponds to make sure they are working as expected.

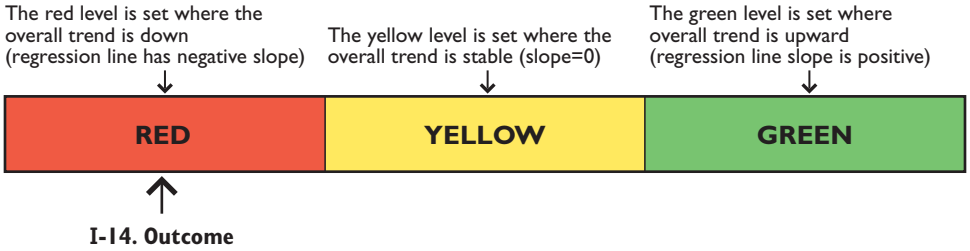
RATING

Results and Outcome

2005 Results: The median of the "flashiness" index for streams in King County was similar to that in 2004. The overall trend is downward over time.

Outcome: The overall trend in the median of the "flashiness" index for the streams in King County is upward.

Performance-to-Outcome Ranges



DATA REFERENCES

Stream flow gauge data from King County's Hydrologic Information Center web page *http://dnr.metrokc.gov/wlr/waterres/hydrology/* and USGS. Watershed modeling data from King County Water and Land Resources Division Science Section.

Booth, D.B., J.R. Karr, S. Schauman, C.P. Konrad, S.A. Morley, M.G. Larson and S.J. Burges. 2004. Reviving urban streams: Land use, hydrology, biology, and human behavior. JAWRA 40:1351-1364.

Cassin, J., R. Fuerstenberg, L. Tear, K. Whiting, D. St. John, B. Murray, J. Burkey. 2005. Development of hydrological and biological indicators of flow alteration in Puget Sound Lowland streams. King County Water and Land Resources Division. Seattle, Washington.

OUTCOME: Salmon populations are robust and abundant

Salmon recovery

I-15

ABOUT THIS INDICATOR

Salmonid fish species have major cultural, economic and political roles in the Pacific Northwest. However, current populations of many salmonid species are markedly lower than historical levels. In Washington State, fish populations are co-managed by the Washington Department of Fish and Wildlife and the treaty tribes. Each salmonid species in the Puget Sound region has a diverse life history and relies upon a range of habitats for spawning, rearing, feeding and migration. Although King County does not manage fish populations directly, it does have jurisdictional responsibility for many activities, including land use regulations, which influences the health of salmon habitats.

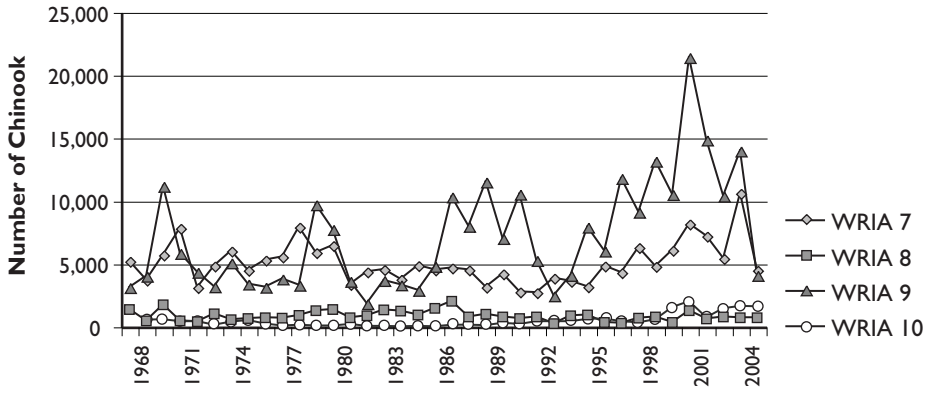
This indicator is based on natural Chinook escapement, or number of natural Chinook returning to spawn each year. Natural Chinook escapement is related to the quality of the county's rivers and streams, along with several other factors such as hatcheries, harvest, and dams. The number of fish is an important indicator of the health of salmon species and the overall health of marine and freshwater ecosystems.

King County includes all or portions of four major watersheds: the Snohomish (WRIA 7), Cedar/Lake Washington (WRIA 8), Green/Duwamish (WRIA 9) and Puyallup/White (WRIA 10). Chinook salmon recovery goals, reflective of characteristics of a viable salmon population (abundance, geographic distribution, genetic diversity and productivity), were established for these watersheds (with the exception of WRIA 10) through the Cooperative Puget Sound Shared Strategy process.

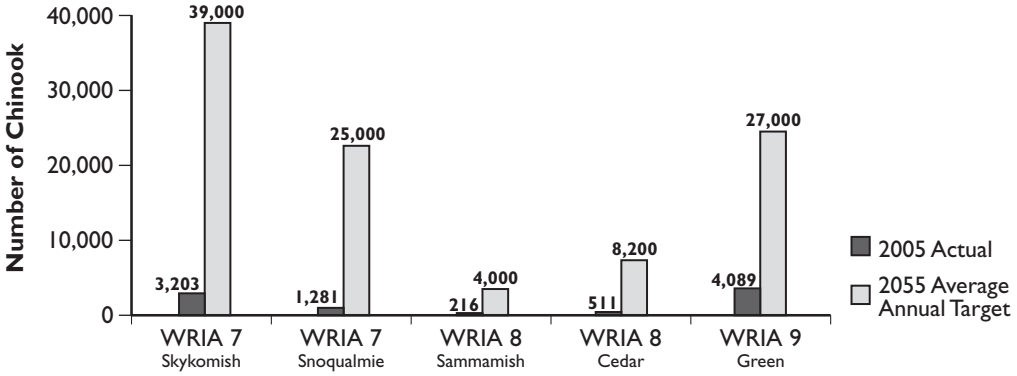
OBSERVATIONS

Estimates presented here of the number of natural Chinook returning to spawn each year (Figure I-15a.) were obtained from the Washington Department of Fish and Wildlife for chinook in each major King County watershed. Although there are many salmon species in King County, chinook populations are being reported because they cover a broad range of habitats and are listed as threatened species under the federal Endangered Species Act. Abundance data and long term recovery targets are also

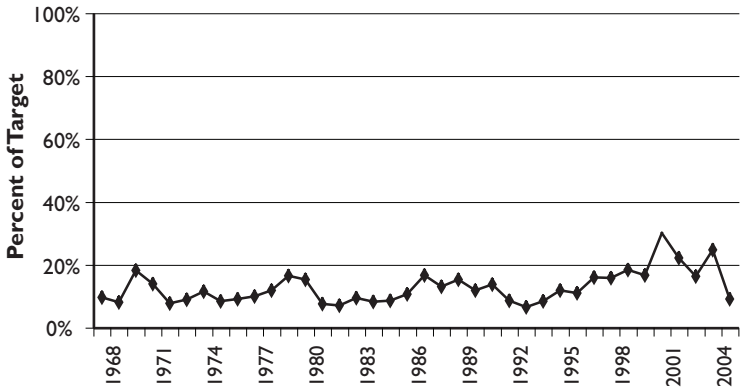
I-15a. Estimated chinook escapement



I-15b. Comparison of 2005 chinook natural escapement to population targets



I-15c. Percent of 2055 chinook population target



being reported available for this species in Figure I-15b, except for long term chinook recovery targets in the Puyallup/White River watershed.

Qualitative and quantitative data from the last century indicate an overall decline in the abundance of native, naturally spawning salmon in Puget Sound watersheds. Some annual variation in salmon returns is to be expected and unrelated to human influences. For example, the natural cycle of ocean warming and cooling ultimately has an effect on salmonid productivity. In King County, however, declines in natural-spawning chinook basins are believed to be greater than would be expected from natural fluctuations alone. This is due to the combined effects of habitat degradation, harvest, and hatchery management. It is difficult to determine the relative importance of any single factor that can influence the status of a particular stock of fish.

The data in this indicator show chinook salmon population estimates without attempting to link them to specific causal factors of decline. Detailed watershed-specific technical studies and assessments of factors of decline are available on the King County Web site at *http://dnr.metrokc.gov/topics/salmon/SALtopic.htm#salmonrecovery.*

The long term outcome is to recover chinook populations to the average annual abundance targets set for 2055.

OUR STRATEGY

Inter-jurisdictional, watershed-based salmon conservation plans have been completed for WRIAs 7, 8, 9, and 10. The plans were submitted to federal agencies for review in 2005. They include actions for meeting long term recovery outcome goals as illustrated in Figure I-15c. King County serves as the lead agency for two of the WRIA's and participates in the efforts and activities of all four. The county will continue its participation in the WRIA and larger, statewide Shared Strategy processes to secure funding for and implement the measures identified in these plans towards the improvement of habitats that should help to recover the species.

Policy direction that strengthens this resolve is found in King County's Comprehensive Plan (policies E-169 – E-172). It states that the county shall maintain and conserve fish populations, preserve habitat, protect salmonid species listed as threatened or endangered by state or federal governments, and protect the habitat of "Salmonids of Local Importance." Salmonids of Local Importance include: chinook, bull trout, kokanee, sockeye, chum, coho, pink, cutthroat, steelhead, Dolly Varden and pygmy whitefish.

RATING

Results, Target and Outcome

2001 Results: 9 percent

Outcome: 100 percent of average annual abundance targets set for 2055.

Performance-to-Outcome Range and Rating

DATA REFERENCE

Chinook population trend data from personal communications and data transfers from the Washington Department of Fish and Wildlife. Chinook population targets derived from co-managers and Technical Review Team for WRIA 7, Washington Department of Fish and Wildlife and Ecosystem Diagnosis and Treatment analysis for WRIA 8, and Washington Department of Fish and Wildlife for WRIA 9.

OUTCOME: The quantity and quality of drinking and surface water flows from a sole source aquifer is protected for island residents

I-16 Vashon-Maury Island Groundwater

ABOUT THIS INDICATOR

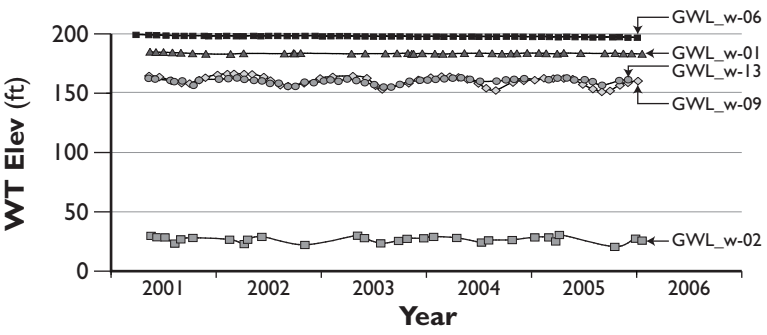
Maury-Vashon Island is in unincorporated King County, contains the County's only marine shoreline in unincorporated King County, and has a designated sole source aquifer. This means that island water supplies come from a single source. For this reason, protecting both the quantity and quality of drinking and surface water flows is very important to island residents. In 2000, when King County's Surface Water Management Service Area was extended to include Vashon-Maury, residents agreed to pay surface water fees if King County agreed to fund a groundwater management and protection program. This indicator reports on data gained from this effort.

As part of the Vashon-Maury Groundwater Program, King County routinely monitors well water levels and water chemistry. This information is being used to construct a computer model that will help geologists protect the island's shallow aquifer. Focus is being placed on the shallow (as opposed to the deep) aquifer because it is closest to the surface and most susceptible to impacts from pollution, salt water intrusion, land use, and development.

One of the best indicators of overall groundwater quality is the presence of nitrate. County hydrogeologists look for significant nitrate levels – even if they are below drinking water standards. In the soil, compounds containing nitrate break down easily and readily migrate with groundwater supplies. Contamination with nitrogen-containing fertilizers, including anhydrous ammonia as well as animal or human wastes, can also raise nitrate concentrations. Consumption of very high levels of nitrate from drinking water supplies can be of grave concern to families with infants because of an oxygen depriving condition termed Blue Baby Syndrome. In some cases, too much nitrate can even be fatal.

King County tracks water quantity by observing water level trends in both volunteer and dedicated monitoring wells. Protecting how much groundwater is available is important for human consumption and to support base flows in streams and other surface water bodies. It is important to understand how groundwater relates to surface water so that negative impacts associated with related land use, loss of vegetation, increased groundwater withdrawals, and climatic changes can be prevented.

I-16a. Water table elevations from Vashon Maury Island wells collected 2001 - 2006



Water table (WT) elevations, feet above sea level, for the volunteer water level sites from 2001 to 2006. The site, GWL_w-02, is the only site shown not within the Qva aquifer system. This location is within the Qpf aquifer.

OBSERVATIONS

Water quality

King County has been monitoring nitrate concentrations and water level measurements on Vashon-Maury Island since 2001. Of the twenty domestic and public wells/springs monitored, none has a nitrate concentration over the drinking water standard (Maximum Contaminant Level, MCL) of 10 mg/L (see Table I-16a). In addition, none of the sites have nitrate concentrations over 5 mg/L. This lower level is a "trigger" or action level as imposed by the Washington State Health Department. By comparing average nitrate concentrations over the past six years, three sites show nitrate increases while three sites show reductions. The remaining 14 sites are within the average range of concentrations for each site (see Table I-16b).

Water Quantity

Monthly water level measurements have been gathered since 2001 by five volunteers monitoring water levels in their own wells. Measurements were typically taken once a month. The results show that two wells have experienced very small water level changes (tenths of a foot) while the other three wells have exhibited more typical results (with smaller depth-to-water measurements in late spring and larger measurements in late summer/early fall.)

Figure I-16a shows the water table elevations of data collected 2001 - 2006. Water table elevations are calculated by subtracting the depth-to-water measurement from the elevation at the measuring point. This measurement "shows" the top of the water table (above sea level). The reasons why levels in these water tables change are not entirely known. The initial interpretation is that water levels changed with the amount of precipitation and recharge to island aquifers.

I-16b. 2005 nitrate concentrations

Range of Concentrations	Number of sites
above 5 mg/L	0
1 to 5 mg/L	7
0.1 to 1 mg/L	3
below 0.1 mg/L	10

I-16c. Comparison of 2005 nitrate concentrations to average 2001-2004 concentrations

Comparison	Number of sites
Above Average	3
Same as Average	14
Below Average	3
Total number of sites:	**20**

OUR STRATEGY

King County is committed towards the continued, long-term monitoring of Vashon-Maury Island wells and springs for both water quality and quantity. Additional well locations have and will be sought to increase water level measurements and a better understanding of island aquifers. Ultimately the county would like to produce water table contour maps that take seasonal variability into account. This data will be updated and reported annually in project data reports.

King County's goal is to ensure sustainable water quantity through appropriate zoning regulations, and high water quality through effective land use and on-site septic regulations. To prevent too many nitrates from contaminating water supplies, installing well-designed drainage systems, maintaining septic systems properly, and educating homeowners about responsible fertilizer use are effective.

RATING

Results and Outcome Nitrate Concentrations

2005 Results: 100 percent of well sites have < 5 mg/L nitrate concentrations

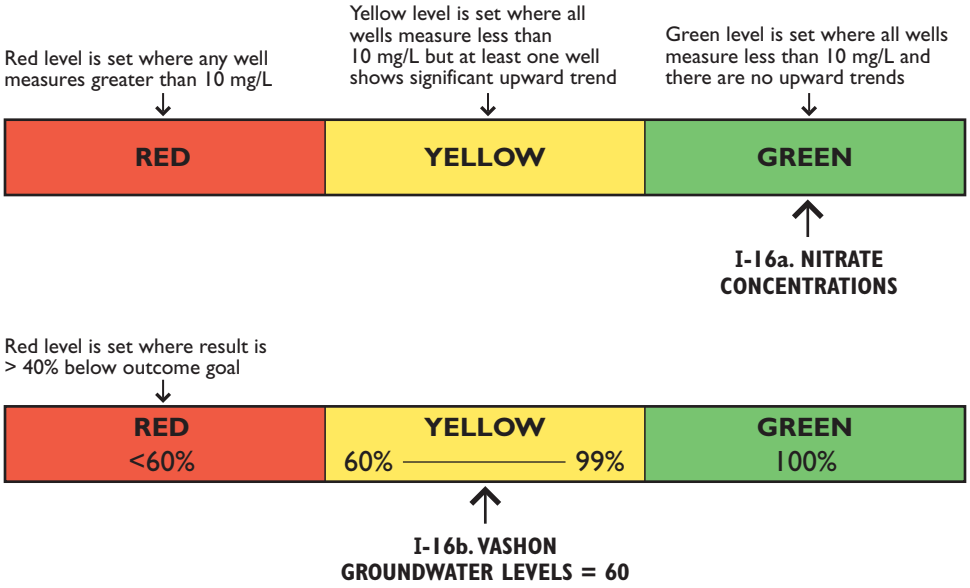
Outcome: 100 percent of well sites have < 5 mg/L nitrate concentrations

Results and Outcome Groundwater Levels

2005 Results: 3 of 5 wells exhibit stable or upward trend

Outcome: stable or upward trend for all wells

Performance-to-Outcome Ranges and Ratings



DATA REFERENCE

King County, Ambient Monitoring Report, 2001 - 2004.

King County, Water Resources Evaluation Project: 2005 Water Resources Data Report.

PERFORMANCE MEASURES

PERFORMANCE MEASURES
ENVIRONMENTAL QUALITY

OUTCOME: DNRP operations protect public health and the environment

Percent compliance with permit limits for the major wastewater treatment plants

PM-1

ABOUT THIS PERFORMANCE MEASURE

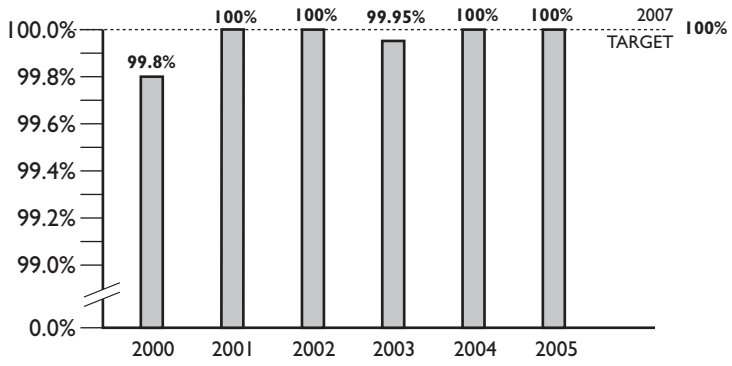
The National Pollutant Discharge Elimination System (NPDES) requires effluent permit limits for point source discharges. Under this system, King County's major wastewater treatment plants, West Point and South, are required to comply with a variety of effluent limits. This measure tracks violations of NPDES permit limits for biochemical oxygen demand, total suspended solids, fecal coliform counts, total residual chlorine and pH. This measure tracks one of DNRP's major environmental regulatory compliance issues.

OBSERVATIONS

In 2005, both major plants achieved their 100 percent compliance targets and earned the National Association of Clean Water Agencies (NACWA)* Gold Awards. The NACWA "Gold Award" requires 100 percent compliance for a calendar year. The NACWA "Silver Award," for five or fewer violations in a year, is the national industry benchmark. The NACWA "Platinum Award" requires 100 percent compliance for five consecutive years and is considered exceptional performance. Once achieved, a facility must achieve five consecutive years of 100 percent compliance before again qualifying for the "Platinum Award." This is very difficult to achieve due to the amount of equipment involved, weather variations, and the sheer number of opportunities for "failures."

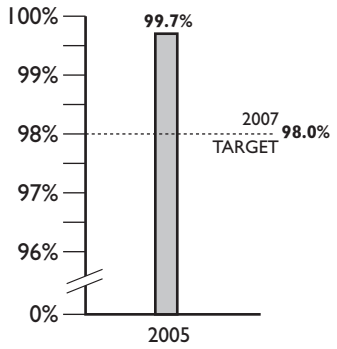
The Washington State Department of Ecology issued new NPDES permits to both plants in 2004. South Plant's limits remained the same while West Point's limits included more stringent chlorine residual requirements, a technical switch to carbonaceous biological oxygen demand limits from total biological oxygen demand, and the addition of a minimum percent removal requirement for total suspended solids and biological oxygen demand during wet weather. The 2007 target for the two major treatment plants is 100% NPDES permit compliance.

PM-1a. Percent compliance with NPDES limits for two major wastewater treatment plants



* The National Association of Clean Water Agencies (NACWA) changed its name from the Association of Metropolitan Sewerage Agencies (AMSA) in 2005. Its Peak Performance Awards (platinum, gold and silver) for excellence in wastewater treatment as measured by agencies' compliance with their National Pollutant Discharge Elimination System (NPDES) permits is the same as in prior years.

PM-1b. Percent compliance with NPDES limits for Vashon treatment plant



Starting in 2005, WTD has set an interim target of 98 percent compliance for the Vashon treatment plant since it has recently undergone an extensive "makeover" with additional major renovations planned for the future. The Vashon Treatment Plant had a NPDES compliance rate of 99.7% in 2005 (two exceptions out of a possible 709 effluent quality permit conditions). This level of success was in large part due to a more proactive operational approach for handling high storm flows, and remote monitoring that allows WTD staff to respond sooner to potential non-compliance conditions. The UV disinfection facility has been helpful to meet fecal coliform limits during the high storm flows. Construction activities in 2005 had minor impact to Vashon's performance; there were some overflows associated with tapping into the existing outfall line. A fairly mild wet weather season also played a role in so few permit exceptions by limiting heavy wet weather sewer flows. The transition from the old plant to the new plant in the latter half of 2006 will provide some interim permit challenges especially with regards to meeting effluent chlorine limits.

OUR STRATEGY

All WTD sections have strategies aimed at ensuring success for their part of NPDES compliance, such as: performing preventive maintenance; providing employees with training and tools; comparing new facility designs with existing facilities; using criteria such as product quality, operations and maintenance and life cycle costs to evaluate plans; developing asset management plans for major equipment maintenance or replacement; providing timely response to project requests that will prevent exceedances; maintaining a highly skilled Process Control staff whose responsibility is to monitor and analyze plant performance to develop control set points which ensure permit compliance while minimizing treatment costs; providing a coordinated NPDES program, including a dedicated staff person overseeing NPDES permit negotiations; providing a "key manhole" industrial sampling program to track down midnight dumpers; and, ensuring all staff are up-to-date on requirements.

RATING

Results, Target and Outcome for the Two Major Treatment Plants (West Point and South Plant)

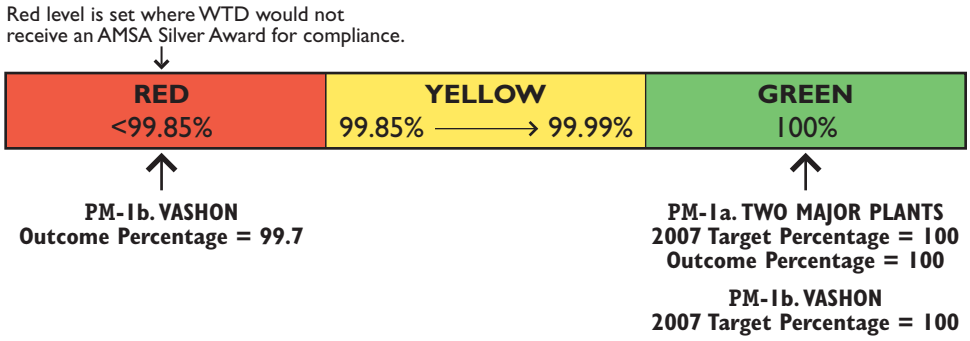
2005 Results: 100 percent
2007 Target: 100 percent
Outcome: 100 percent

Results, Target and Outcome for the Vashon Treatment Plant

2005 Results: 99.7 percent (2005 interim target was set at 98%)
2007 Target: 98 percent
Outcome: 100 percent

The expectation for performance is 100 percent compliance with state and federal regulations.

Performance-to-Target and Performance-to-Outcome Ranges and Ratings



DATA REFERENCE

WTD's Balanced Scorecard Report; reports by Process Control Supervisors.

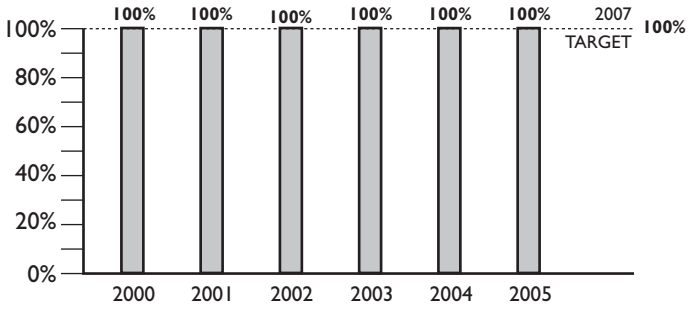
PM-2 Percentage of Health Department inspection reports that do not result in a notice of violation for solid waste facilities

ABOUT THIS PERFORMANCE MEASURE

SWD has responsibility for the Cedar Hills Regional Landfill, eight transfer stations, two rural drop box facilities, and 10 closed landfills. Both federal and state regulations govern solid waste handling and disposal, although these regulations delegate authority to local health districts. Public Health - Seattle & King County issues operational permits for the landfills, transfer station and drop box facilities. These permits require that the division develop, submit for approval, and comply with facility plans of operation. In addition, the division monitors groundwater, surface water, wastewater, and gas.

Inspections are routinely conducted on a weekly, monthly or quarterly basis for all of the division's facilities including active and closed landfills and transfer stations and drop boxes. Collectively, there are on average about 256 inspections conducted on SWD facilities per year. Inspections include examinations of the stormwater ponds, leachate collection systems, gas collection systems and access roads for litter, odors, damage, spills, seagulls, and other vectors. Inspections can inform the division of unsatisfactory practices or situations that warrant attention. If an unsatisfactory designation is received, the division must address the concern or else a Notice of Violation can be administered. This measure reflects an ongoing composite of the monitoring and reporting results.

PM-2a. Percent of Health Department inspections with no notices of violations



OBSERVATIONS

SWD did not receive any notices of violation for solid waste facilities or any unsatisfactory health inspection reports in 2005. The division did receive two Sanitation Survey Reports, one concerning the leachate collection system, gas pipes and odors; and one concerning seagull control. Actions were taken in a timely fashion to respond to the comments and issues identified in both reports.

OUR STRATEGY

This performance measure was included in the 2004 Solid Waste Division Business Plan. Monitoring and maintaining air emissions and water discharges in accordance with local state and federal standards is ongoing work. All programs to ensure compliance will continue and will be fully funded and staffed in 2006.

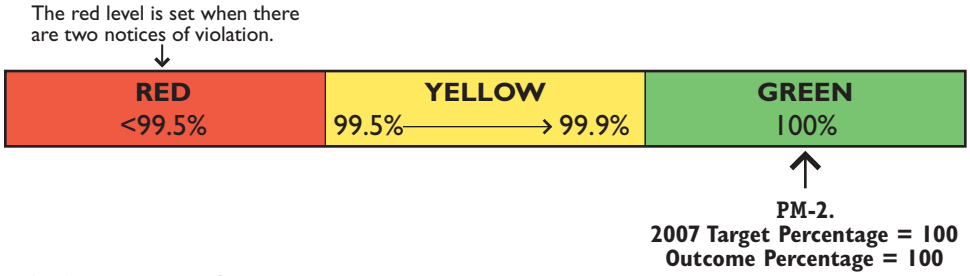
RATING

Results, Target and Outcome

2005 Results: 100 percent
2007 Target: 100 percent
Outcome: 100 percent

The expectation is 100 percent of inspection reports will not result in a Notice of Violation from Public Health - Seattle & King County.

Performance-to-Target and Performance-to-Outcome Ranges and Ratings



DATA REFERENCE

SWD, Engineering Services Section, Landfill and Environmental Monitoring Unit.

PM-3 Total greenhouse gas emissions from DNRP facilities

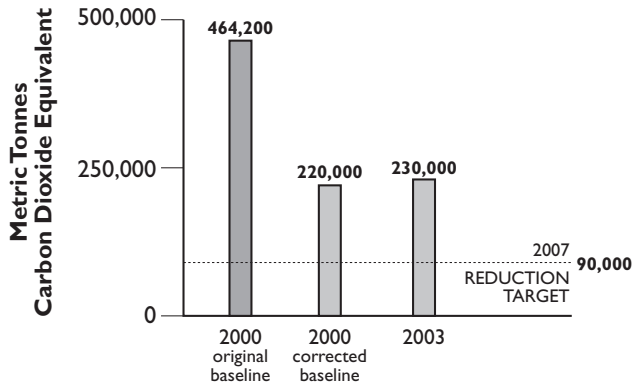
ABOUT THIS PERFORMANCE MEASURE

Greenhouse gases are produced primarily from burning fossil fuels. Additional sources include decomposing waste and synthetic chemicals. These combined emissions are presumed to be the source of global warming. Reducing greenhouse gas emissions is a priority in order to limit the potentially catastrophic damage from global warming.

Increased greenhouse gas concentrations cause global warming. In the Pacific Northwest, scientists expect to see significant changes in the amount of winter snowpack, earlier spring snow melt, and less water in reservoirs and rivers during summer. Sea levels will continue to rise. Many of the multiple stresses already exerted on salmon are likely to be exacerbated by warmer summer temperatures and lower summer streamflow.

Greenhouse gas emissions from DNRP operations are primarily from municipal solid waste facilities, wastewater treatment plants, and power production required to operate treatment plants and other DNRP facilities. This measure includes both direct emissions, those that are emitted directly from facilities or vehicles, and indirect emissions associated with energy purchases. This measure allows DNRP to tracks its greenhouse gas emissions and target reductions through the use of new technology, process alterations, or energy sources with lower emissions. In addition, greenhouse gas reduction can also serve as a proxy for energy and fiscal efficiency. Metric Tonnes Carbon Dioxide Equivalent (MTCO2e) is a common unit for quantifying releases of various greenhouse gases.

PM-3a. DNRP greenhouse gas emissions



OBSERVATIONS

In 2002, King County government evaluated its total emissions in 2000 and estimated them to be approximately 600,000 $MTCO_2e$. This number was substantially revised in 2005 for the updated 2003 inventory. The estimate was revised to approximately 400,000 $MTCO_2e$. There are two principal reasons for the large revision of the previous 2000 inventory:

GOALS

Environmental Quality
Achieve a net gain in environmental quality by protecting and restoring the natural environment, ensuring public health and safety, and exceeding environmental standards

Waste to Resource

Community Investment

Leadership

Price of Service

Customer Satisfaction

Employee Involvement and Morale

1. Carbon dioxide (CO_2) emissions from the existing Cedar Hills landfill flare should not have been counted in the previous inventory. The consensus from the majority of GHG accounting protocols presume that absent landfills, human-generated solid waste would naturally biodegrade and create aerobic CO_2 emissions. The CO_2 emissions from the flare are the same as would have occurred without the landfill. However, landfills do create anaerobic methane (CH_4) which is part of the GHG emissions inventory. If the methane is flared and subsequently converts to CO_2, it is not included in the inventory. Because of the size of Cedar Hills, there still is an enormous amount of methane that escapes, is not flared, and therefore is counted as a direct emission. This difference in GHG inventory accounting methods accounts for the majority of changes to the 2000 inventory.
2. Secondly, instead of using "national-average" calculations for emissions from DNRP's wastewater treatment plants, calculations from a case study of similar treatments plants was used in place of the national average. This case study is more likely to reflect the county's actual emissions compared to the national average.

The updated inventory for 2003 has included the most up-to-date calculations and protocols for estimating GHG emissions. The new 2003 total county estimate is approximately 420,000 $MTCO_2e$, up approximately 20,000 $MTCO_2e$ from 2000. While that amount represents only 1.5 percent of the emissions within the geographic boundaries of the county, it makes King County government one of the larger single-entity emitters.

Of the county government's total emissions, approximately 55 percent (or 230,000 $MTCO_2e$) comes from DNRP operations, primarily because of the Cedar Hills landfill and from powering the wastewater treatment facilities. The slight increase in 2003 from the corrected 2000 baseline figure reflects increases in general electric use by our facilities and increased solid waste amounts from county residents and businesses disposed at Cedar Hills landfill.

OUR STRATEGY

The county has long-standing plans to convert Cedar Hills' landfill gas to electricity (see Measure No. 21) and to upgrade the infrastructure at the existing wastewater treatment plants to generate additional electricity from treatment process-produced methane. These major capital improvements will provide significant offsets to DNRP's emissions inventory, perhaps as much as 160,000 $MTCO_2e$ in reductions. GHG reductions are one part of the justification for these capital improvements. Fundamentally, this use of waste-to-resources makes strong economic sense in addition to their strong environmental attributes.

As part of the 2003 GHG inventory, a long list of additional potential GHG reductions has been identified. However, the potential for achieving these additional reductions is somewhat limited. The most promising reductions that have been identified thus far are increases in the use of biodiesel fuel (already being used in Solid Waste Division's fleet as of January 2005) and increased use of cement substitutes in capital projects.

Although new technology and improved engineering can reduce some emissions from DNRP facilities, once the new energy facilities are up and running major additional reductions in DNRP's GHG emissions is unlikely. For example, Cedar Hills is a very well managed landfill and already captures more fugitive methane than most similar facilities. To expect greater capture than is already being attempted is not cost effective.

Likewise, to capture fugitive methane emissions at the wastewater treatment facilities is also unlikely without extraordinary capital retrofits. For example, buying emission reduction credits would be far more cost effective than attempting to retrofit the treatment processes at the South Plant that allows fugitive methane emissions.

RATING

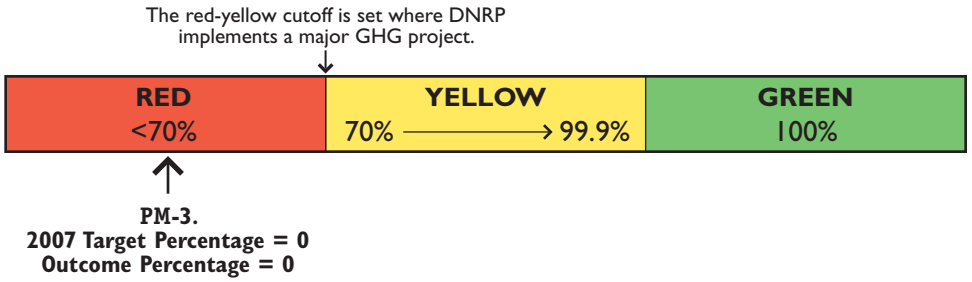
Results, Target, Outcome

2003 Results: 230,000 $MTCO_2e$
2007 Target: 90,000 $MTCO_2e$
Outcome: 0 $MTCO_2e$

The previously published 2007 target (304,300 $MTCO_2e$) reflected the older 2000 emissions inventory and its methodology. The new target, based on the corrected baseline, also takes into account the projects that we are planning to accomplish by 2007.

There is no commonly agreed upon benchmark that can be used as a long-term outcome. However, most scientists agree that in order to stabilize the climate from current impacts generated by greenhouse gas emissions, then the United States would have to reduce its emissions by 60 to 80 percent below 1990 emissions levels. DNRP will base its success upon what is needed to protect the environment from the potential impacts from global warming and therefore the long-term outcome is set at zero net emissions. This number will continue to be evaluated in terms of new scientific findings.

Performance-to-Target and Performance-to-Outcome Ranges and Ratings



DATA REFERENCES

King County Clean Air Library (*http://dnr.metrokc.gov/dnrp/air-quality/*); 2003 Inventory of King County Air Emissions, Revision D – 28 December 2004 (*http://dnr.metrokc.gov/dnrp/air-quality/inventory.htm*).

OUTCOME: Public safety related to flooding is improved

King County's annual flood safety rating score

PM-4

ABOUT THIS PERFORMANCE MEASURE

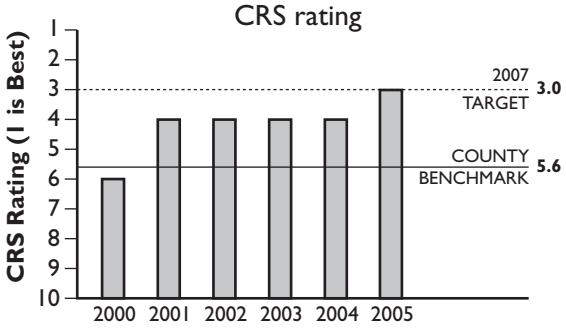
The National Flood Insurance Program's Community Rating System (CRS) is a voluntary federal incentive program that recognizes and encourages community floodplain management activities that exceed minimum federal standards. There are 18 creditable activities organized under four main categories (Public Information, Mapping and Regulation, Flood Damage Reduction, and Flood Preparedness) recognized by the CRS as appropriate measures for eliminating exposure to floods. Credit points are assigned to each activity and these points are rolled into an overall score, or class, from 1 to 10, with 1 being the highest rating and 10 the lower rating.

Based on this rating, individual flood insurance premiums are adjusted to reflect the reduced flood risk in the county. The CRS also encourages programs and projects that preserve or restore the natural state of floodplains and protect these functions. The CRS encourages communities to coordinate their flood loss reduction programs with local jurisdictions, Habitat Conservation Plans and other public and private activities that preserve and protect natural and beneficial floodplain functions.

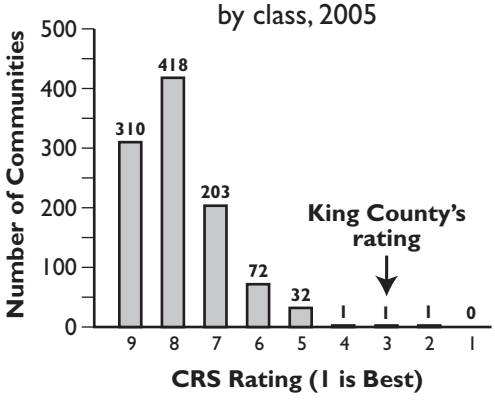
OBSERVATIONS

As of October 1, 2005, there are 1038 participating CRS communities (both cities and counties). No community has received a class "1" ranking, one community received a class "2" ranking, and one community received a class "3" ranking: King County. This puts King County in the top one percent of all participating communities and makes it the highest rated county in the nation for its floodplain management program and services. The resulting flood insurance premium reduction in Special Flood Hazard Areas is 35 percent annually for policyholders in unincorporated King County. The 35 percent savings translates to a savings of $450,536 annually for King County policyholders on the 1,592 flood insurance policies in unincorporated county, or $283 savings average per policy. Although insurance premium discounts are one benefit of participation in this program, more important benefits result from activities that save lives and reduce property and infrastructure damages.

PM-4a. King County's CRS rating



PM-4b. CRS communities by class, 2005



For a more local comparison, the average score for all participating Washington counties is 5.6 and the average score for all participating Washington counties and cities is 6.3. Since this scale uses "1" as the best, a lower number means a better outcome.

OUR STRATEGY

King County's steadily improving Community Rating System classification since 1990 is a function of the County's commitment to comprehensive and cost-efficient floodplain management strategies. In 2005, King County's continued implementation of floodplain management actions resulted in an improvement of its CRS rating to a class 3 – a one step increase from 2004. King County will ensure annual CRS certification reviews by the Federal Emergency Management Agency (FEMA) and the Insurance Services Office (ISO) are comprehensively organized and prepared and will provide prompt and complete follow-up for any outstanding issue identified in the review.

King County will work with FEMA and ISO representatives to integrate CRS credit allowance for the countywide 2006 Flood Hazard Management Plan, the recent completion of the Lower Snoqualmie River floodplain mapping study, as well as any other creditable activities into the county's CRS Program certification package in the next round of CRS Program re-verification. King County will also coordinate the 2006 Flood Hazard Management Plan with the Office of Emergency Management's King County All Hazards Plan to ensure these plans meet the most current policies and standards of the CRS Coordinators Manual which will optimize CRS credit points.

A cornerstone strategy will be the implementation of the 2006 Flood Hazard Management Plan and extensive collaboration and strong partnerships among floodplain stakeholders. King County will provide leadership as nationally recognized floodplain managers to coordinate and partner with local jurisdictions, special districts, state and federal agencies, Water Resource Inventory Areas, Tribes, and other stakeholders to reduce flood risks in proximity to its major rivers, streams and floodplains.

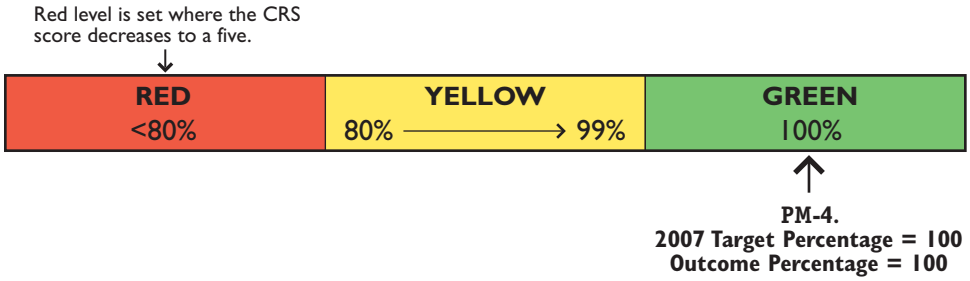
RATING

Results, Target and Outcome

2005 Results: 3 CRS Rating
2007 Target: 3 CRS Rating
Outcome: 3 CRS Rating

The target and outcome for this measure have changed from 4 to 3 (lower number being a higher outcome) because of the high rating of 3 that King County received in 2005.

Performance-to-Target and Performance-to-Outcome Ranges and Ratings



DATA REFERENCE

DNRP's River and Floodplain Management Program (Water and Land Resources Division, Regional Services Section); *www.fema.gov/nfip/crs.shtm*.

OUTCOME: Streams and rivers provide high quality habitat for aquatic species.

PM-5 Percent of Stormwater Control Facilities Maintained by Others that are Functionally Compliant with County Maintenance Standards

ABOUT THIS PERFORMANCE MEASURE

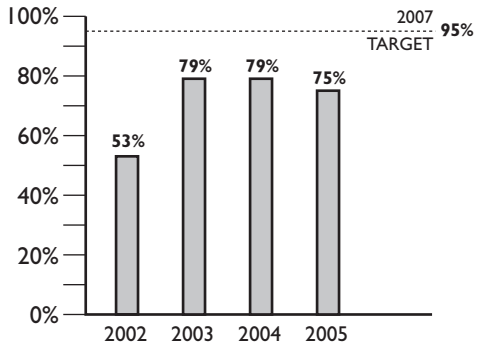
Increased stormwater flow and degraded water quality from developments are significant sources of stream degradation and flooding. In response, DNRP has developed a stormwater design manual that specifies the design and maintenance standards for stormwater control facilities (i.e., flow control and water quality treatment facilities) required on new developments and redevelopments to reduce these impacts. DNRP is also responsible for inspecting these stormwater control facilities on a regular basis after each development has been constructed to make sure the facilities comply with maintenance standards. These standards specify the threshold at which cleaning or repair action must be taken to ensure proper function of the facility.

The focus of this performance measure is on those facilities for which WLR does not have direct maintenance responsibility. Examples include privately maintained commercial facilities, school district facilities, county Roads Services Division facilities, and county Parks Division facilities. Not included in this performance measure are residential subdivision facilities, which are owned and operated by WLR. Since WLR staff inspects and directly oversees the maintenance of these facilities, their compliance factor is much higher and thus assessed with a different performance measure.

For facilities that are not maintained by WLR, WLR's Stormwater Services Section inspects the facilities biennially and determines maintenance actions needed. If maintenance is needed, a maintenance correction letter is issued, directing the property owner to implement the necessary actions and return a form certifying that the required actions were completed.

The owners of drainage facilities not inspected by WLR Stormwater Services staff are sent an information packet requesting that the property owner perform a self inspection and perform any necessary maintenance to bring the drainage facility into compliance with maintenance standards. These owners are directed to return a form indicating what, if any, maintenance was needed and certifying that the necessary work was completed. Stormwater Services staff perform spot checks on some of the facilities

PM-5a. Privately owned stormwater facility compliance



GOALS

Environmental Quality
Achieve a net gain in environmental quality by protecting and restoring the natural environment, ensuring public health and safety, and exceeding environmental standards

Waste to Resource

Community Investment

Leadership

Price of Service

Customer Satisfaction

Employee Involvement and Morale

for which a certification form was returned to verify that the required actions were correctly implemented. The spot checks focus on facilities that require maintenance which affects their functionality. As an incentive to maintain drainage facilities to accepted standards, owners who return the form certifying that they have completed the prescribed maintenance receive a Surface Water Management fee discount.

The percent of functionally compliant facilities in any given year is determined by dividing the number of facilities that are in compliance by the total number of facilities inspected. The number of facilities in compliance is derived from both direct observation and extrapolation of the compliance rate for facilities after spot checks are performed.

OBSERVATIONS

In 2005 there were approximately 844 stormwater facilities in unincorporated King County affected by this performance measure.

In previous years, the measure considered any incomplete work activity, including such things as missing manhole lid bolts, as an indication that the facility was out of compliance. Unfortunately, this gives the impression that the problem is more severe than it may actually be since something like a missing lid bolt does not affect functionality. To clarify this misconception, the measure was revised in 2004 to only include facilities with a functional problem, for example, excess sediment that limits the flow in pipes. For 2002, the compliance figure was 53 percent, which included all facilities with any level of maintenance problem. For 2003 and later, when the compliance rate is limited to functional problems, the rate is closer to 80 percent.

Several variables can affect the compliance rate. One major factor is property owner turnover. Frequently new property owners are unaware of the stormwater system or maintenance needs until county staff contact them. Another factor is the cost of maintenance relative to the realized savings in the Surface Water Management fee. Finally, some property owners forget about the maintenance or to return the completed form.

OUR STRATEGY

In order to improve the compliance rate for facilities, Stormwater Services has initiated a multi-pronged approach that includes increased owner education, more technical support and enforcement actions for chronic problem facilities. By focusing on facilities with functional problems we can avoid using staff resources on minor problems. Additional resources will be needed to achieve the five-year target.

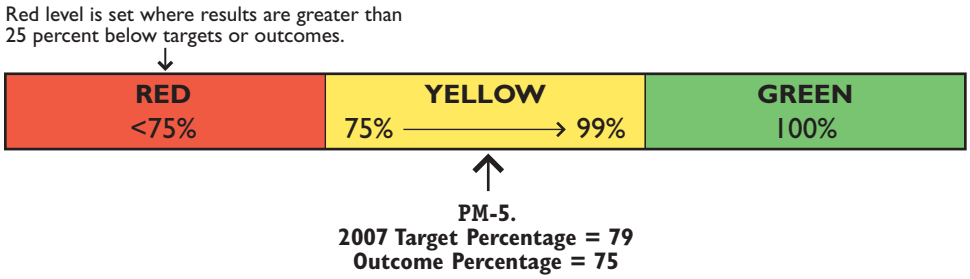
RATING

Results, Target and Outcome

2005 Results: 75 percent
2007 Target: 95 percent
Outcome: 100 percent

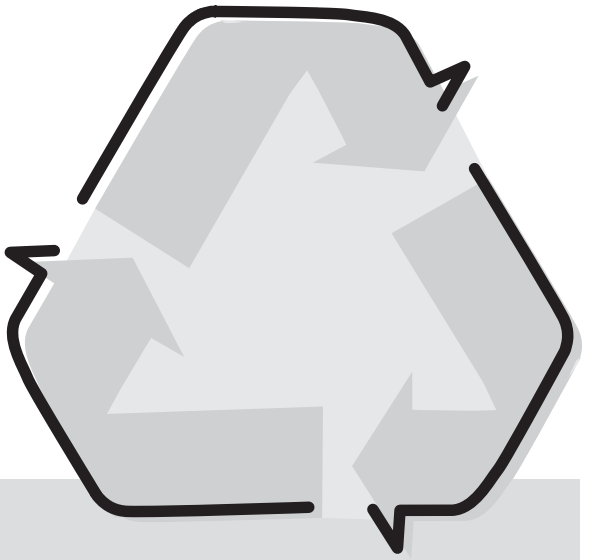
The long-term outcome for this measure is that 100 percent of stormwater facilities are in compliance.

Performance-to-Target and Performance-to-Outcome Ranges and Ratings



DATA REFERENCE

DNRP's Stormwater Section.



PERFORMANCE MEASURES
WASTE TO RESOURCE

OUTCOME: The amount of waste requiring disposal is reduced

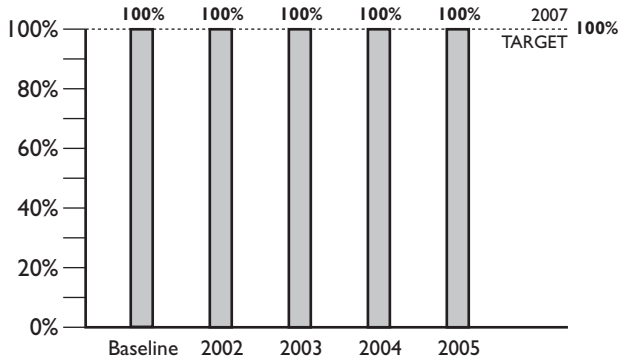
Percent of biosolids recycled and used

PM-6

ABOUT THIS PERFORMANCE MEASURE

Biosolids are the nutrient-rich organic material produced by treating wastewater solids. As permitted under federal and state regulations, biosolids in King County are recycled to improve soils and enhance the growth of forests and agricultural crops. This measure represents DNRP's ability to continue producing biosolids that meet high regulatory standards and to maintain customers and contracts for biosolids by addressing public perception issues that might affect these markets.

PM-6a. Percent of biosolids recycled and used



OBSERVATIONS

The Regional Wastewater Service Plan (Policy BP-1) states "King County shall strive to achieve beneficial use of wastewater solids." Several projects are underway at the treatment plants to improve biosolids quality and reduce digester problems that will help us maintain this target. Although 100 percent of available biosolids were reused, the measure requires ongoing attention to ensure this high rate.

OUR STRATEGY

The amount of biosolids produced will be decreasing because more efficient dewatering technology has been installed at South Plant. High-solids centrifuges put in place in 2005 brought annual production from 122,000 tons in 2004 down to 115,000 tons in 2005.

Increased wastewater flows from population growth will be accommodated at the Brightwater Treatment Plant and will lead to increased amounts of biosolids. Brightwater is expected to produce approximately 35,000 tons of biosolids at its startup in 2010.

WTD's strategy for continuing to meet the target of 100 percent biosolids reuse has several components. To maintain public and customer confidence in biosolids quality and management, King County now operates under an Environmental Management System for biosolids, which was nationally certified in 2004. Other strategies include:

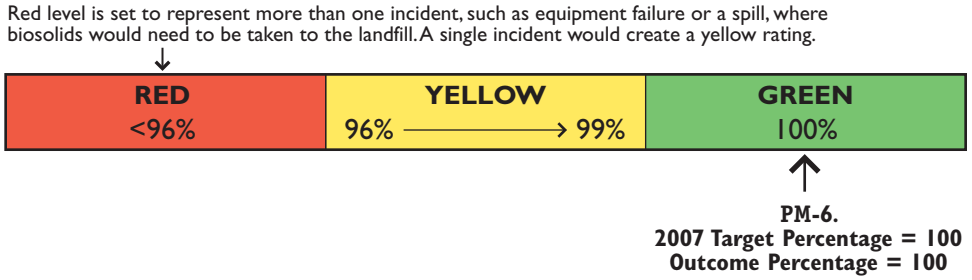
- Ensuring availability of reuse sites for 150 percent of biosolids production.
- Continuing an aggressive industrial pretreatment program to maintain current low metals levels.
- Maintaining an active research and demonstration program that responds to public concerns and identifies potential new uses for biosolids.
- Investigating Class A technologies and determining which ones would be most appropriate and cost-effective for West Point and South Plant.

RATING

Results, Target and Outcome

2005 Results: 100 percent
2007 Target: 100 percent
Outcome: 100 percent

Performance-to-Target and Performance-to-Outcome Ranges and Ratings



DATA REFERENCE

WTD's Balanced Scorecard Report; reports by Supervisor of Technology Assessment and Resource Recovery.

OUTCOME: The amount of waste requiring disposal is reduced

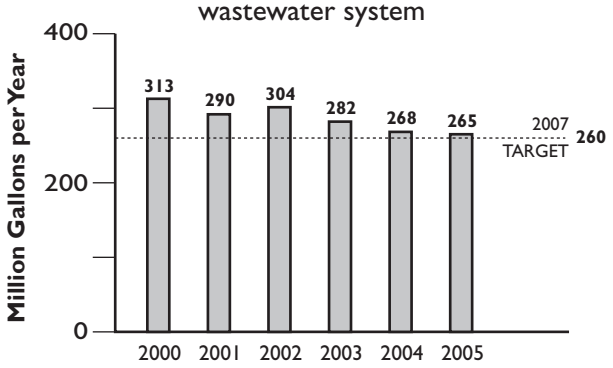
Volume of Water Reclaimed from Wastewater System

PM-7

ABOUT THIS PERFORMANCE MEASURE

Despite our gray and rainy image, King County's surface and groundwater resources are under pressure. One approach to increasing the amount of water available to people and the environment is to use, rather than discharge, treated wastewater for a variety of purposes, such as irrigation, commercial and industrial uses. This in turn can reduce pressure on surface and groundwater supplies so that they can be used for other important beneficial uses such as drinking water or left in the rivers and streams for salmon protection. This measure tracks the amount of wastewater that DNRP converts into a resource.

PM-7a. Water reclaimed from wastewater system



OBSERVATIONS

In the long term, DNRP's success in converting wastewater into a resource will depend on the cost of providing treatment and conveyance for reclaimed water relative to the cost of utilizing existing sources and/or providing new sources of surface and groundwater. Factors that influence the cost of providing reclaimed water or continuing to use existing sources include more stringent wastewater discharge requirements, closer scrutiny of water rights, more integrated water supply and wastewater planning, and the need to provide water and habitat for salmon recovery. In the short term, higher costs--and the apparent abundance of other, lower-cost supplies--have resulted in low demand for reclaimed water from outside customers. However, both WTD treatment plants continue to reclaim all water needed for their own operations and any needed by customers.

The total volume reclaimed at South Plant has declined in 2003, 2004 and 2005 for several reasons. The treatment plant reduced their use of reused water in operations. Some of the reduction was due to fixing leaks in the reuse system. Other reductions were due to switching several process/plant areas back to potable water (from reuse water) due to negative impacts from the reuse water (such as corrosion). In addition, one of the reuse water mains serving Fort Dent was removed when the new Starfire Sports soccer complex was built. The fields that were irrigated with reuse water still exist, and Starfire Sports is still interested in getting reuse water to these fields and in expanding their use of reuse water to several more fields. WTD is working with them to determine how to get the reuse water over to these fields.

OUR STRATEGY

The 2004 King County Comprehensive Plan and the Regional Wastewater Service Plan both support the use of reclaimed water to meet the region's water needs. DNRP's goal is to expand the use of reclaimed water where feasible, and produce reclaimed water to match any increase in demand. Reclaimed water will continue to be provided from existing facilities. Brightwater, the new regional wastewater facility, will produce effluent that is essentially reclaimed water quality when it becomes operational; plans are being developed to maximize the reclaimed water use from this plant both along the effluent line and into the Sammamish Valley south of the plant. A satellite reclaimed water plant was planned to be built for the Sammamish Valley by 2005, but was replaced in a cost savings decision with the plan to serve the Sammamish Valley by 2010 with reclaimed water from Brightwater. One major customer--the Willows Run Golf Course--remains under contract with King County to use the reclaimed water from Brightwater when it becomes available.

At the policy level, DNRP will be developing a regional water supply plan that will address the role of reclaimed water in meeting the region's diverse water supply needs. The reclaimed water element of the plan is intended to include multiple tiers for reclaimed water delivery. For example, options include: obtaining reclaimed water directly from a wastewater plant which has already treated water to reclaimed water standards; delivery from an effluent outfall line, after a "polishing" treatment; or delivery from a satellite or decentralized treatment plant connected to the regional wastewater collection system. There may be pilot proposals that DNRP and water utilities or other potential customers may pursue as the plan develops, if such early action opportunities arise. The end result should be an integrated regional supply plan where the role of reclaimed water is clearly described.

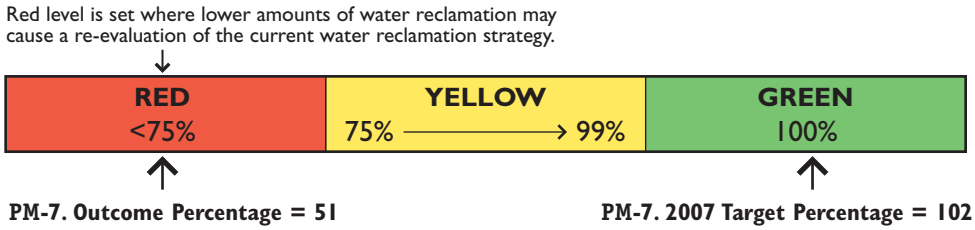
RATING

Results, Target and Outcome

2005 Results: 265 mg/yr
2007 Target: 260 mg/yr
Outcome: 520 mg/yr

The target includes water reclamation from existing wastewater plants only. Last year's 2007 target, of 360 mg/yr, was based on assumptions that included the planned Sammamish plant. The new regional treatment plant (Brightwater), which will serve the Sammamish Valley, will not be operational until 2010. The number and location of existing facilities able to produce recycled water and the number of customers willing to use and pay for reclaimed water limits the target and outcome for this measure. DNRP hopes to increase the long term outcome as a result of the regional water supply planning work.

Performance-to-Target and Performance-to-Outcome Ranges and Ratings



DATA REFERENCE

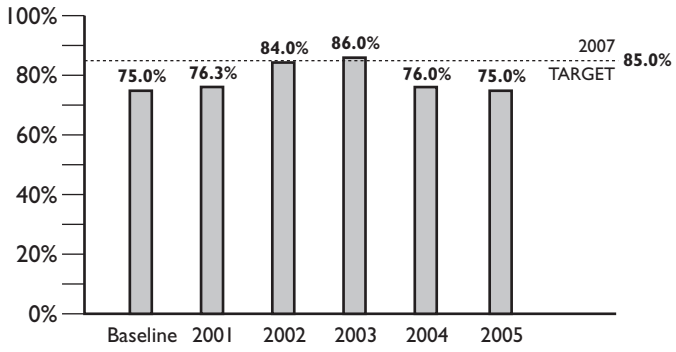
WTD's Balanced Scorecard Report; reports by Process Control Supervisors.

Percent of biogas recycled and used from wastewater treatment facilities

ABOUT THIS PERFORMANCE MEASURE

Biogas is a natural byproduct of the wastewater treatment process. Biogas generated at the wastewater treatment plants consists of methane, a significant source of DNRP-generated greenhouse gases (see Measure No. 3 on greenhouse gas emissions) and carbon dioxide. Instead of viewing biogas as a waste or pollutant, it can be captured, processed and burned as a renewable energy resource for our Fuel Cell and Cogeneration units, or scrubbed and sold to Puget Sound Energy at the South Plant, and will be utilized at the West Point Plant for new Cogeneration units and the influent pump engines. This measure ensures that available biogas resources are being efficiently utilized. This measure presents the average amount of biogas utilized at the West Point and South Plant wastewater treatment plants.

PM-8a. Percent of biogas recycled and used from wastewater treatment facilities



Note: Average of the combined rate of the West Point and South plants.

OBSERVATIONS

In 2005, 75 percent of the biogas produced at the county's two major wastewater treatment plants was recycled. Less biogas was recycled in 2004 and 2005 than in 2003 because of difficulties with the aging cogeneration facilities at West Point. The West Point staff made a commitment several years ago during the energy crisis to maximize the use of the existing cogeneration units; this effort has been largely successful. However, the age of the units (over 20 years), and the lack of parts resulted in an increased unit failure and down time in both 2004 and 2005. Additionally, West Point's gas recycling efforts rely on the influent pump engines (which are powered by digester gas). Over the past two years, lower flows reduced the amount of digester gas consumed by the influent pumps. Thus, a greater percentage of digester gas was flared.

OUR STRATEGY

WTD's strategy to maintain current performance and meet the 2007 target is to replace the cogeneration facilities at West Point. The new West Point facilities are scheduled for startup second quarter 2007. These units will allow a greater utilization of the available digester gas and will be both more efficient and have lower emissions than the current units. In the near term, WTD's annual target is set at 75 percent, a number based on West Point staff's assessment of the existing cogeneration plant's capabilities. West Point staff indicate this number will grow to close to 95 percent with the installation of the newer cogeneration units.

South Plant underwent various changes in energy that came online in 2005 (a new boiler, fuel cell and cogeneration turbines). However, these facilities are not expected to significantly change the percentage recovery achievable at South Plant. Instead, these new facilities are focused on reducing our vulnerability to the energy markets.

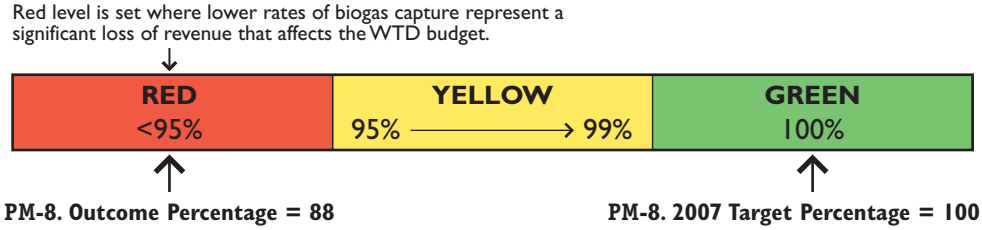
RATING

Results, Target and Outcome

2005 Results: 75 percent
2007 Target: 85 percent
Outcome: 85 percent

The 2007 target is based on the application of new technology in that year. The target up until 2007 is 75 percent. The measure will be rated on the 75 percent target until 2007 when the new technologies are designed to be in place. The 2007 target and outcome are based on the maximum, cost effective amount of biogas obtainable.

Performance-to-Target and Performance-to-Outcome Ranges and Ratings



DATA REFERENCE

WTD's Balanced Scorecard Report; reports by Process Control Supervisors.

Percent of methane produced by Cedar Hills landfill that is converted to usable energy

ABOUT THIS PERFORMANCE MEASURE

In the natural decay process of landfill material, gases such as methane and carbon dioxide are produced. Cedar Hills Regional Landfill produces landfill gas that is about 52 percent methane, and the methane can be turned into usable energy. In an effort to capture existing "wastes" and use them as resources, SWD plans to have a private entity develop a methane capture and energy conversion facility.

OBSERVATIONS

Current practice at Cedar Hills is to burn-off the accumulated gases; therefore zero percent of the methane produced at Cedar Hills is being converted to usable energy. SWD plans to build a methane energy conversion facility with the goal to have the facility on-line by 2009. The amount of methane that can be converted to usable energy will be determined by the capacity of the methane conversion facility. The actual conversion rate will be determined by a number of factors including efficiency of the conversion process and equipment downtimes for maintenance. Actual conversion rates are likely to be about 80 percent of the facility's capacity.

OUR STRATEGY

The division will continue to work towards implementing the best methane to energy project to meet our outcome goal. The division is pursuing options to sell the methane gas to a private entity and lease the space necessary for the development the project.

RATING

This measure will be rated red until the required infrastructure is installed, at which time the rating will be reevaluated.

Results, Target and Outcome

2005 Results: 0 percent
2007 Target: 0 percent
Outcome: 100 percent of the methane gas that can be converted to usable energy will be converted to usable energy.

The target has been reduced to zero, given the time delays associated with the project. The outcome for this measure is that 100 percent of methane gas that can be converted to usable energy is converted to usable energy.

GOALS


Environmental Quality


Waste to Resource
Regard the region's waste products as resources and minimize the amount of residual waste disposed.


Community Investment

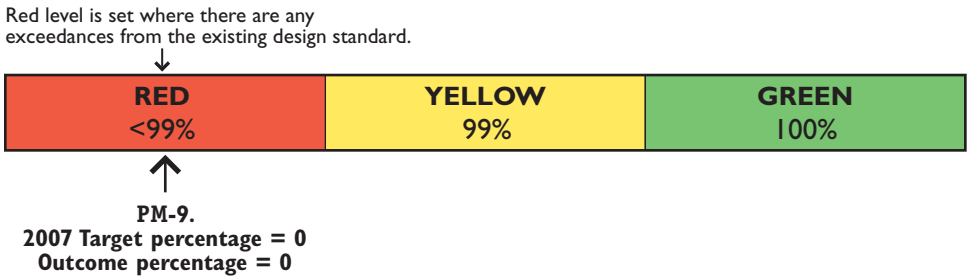
Leadership


Price of Service


Customer Satisfaction


Employee Involvement and Morale

Performance-to-Target and Performance-to-Outcome Ranges and Ratings



DATA REFERENCE
SWD

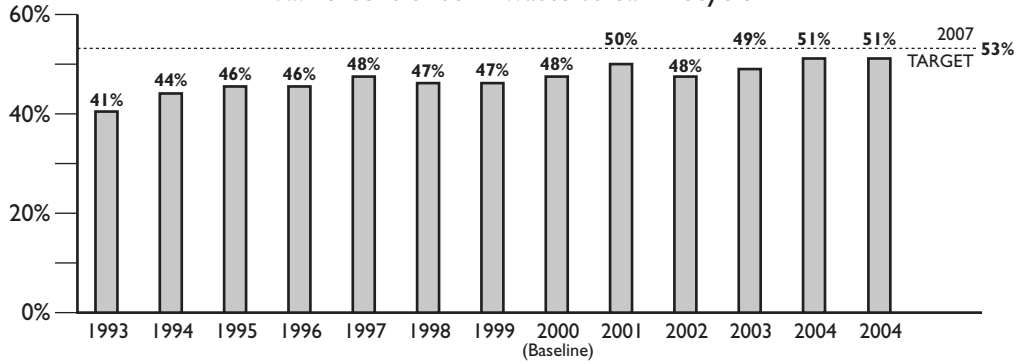
Percent of single-family curbside solid waste stream that is recycled

ABOUT THIS PERFORMANCE MEASURE

Recycling programs are important because they divert waste from the landfill and increase the landfill's life by encouraging residents to generate less waste and maximize the beneficial use of materials. In King County, recyclable materials collected are glass, tin, aluminum, plastics, newspaper, mixed paper, and corrugated cardboard. Yard waste is also collected and considered as recycled material in this measure. In some areas, food waste is also being collected with the yard waste.

This measure, focused on the single-family recycling rate, is calculated by taking the annual tonnage of recyclables, including yard waste, collected from single-family households through curbside programs divided by total tonnage collected from all single-family households receiving curbside service (which includes recyclables, yard waste and garbage).

PM-10a. Percent of solid waste stream recycled



Single-family Curbside Recycling Rate

OBSERVATIONS

In the past several years, single-family recycling rates have hovered around 50 percent. In 2005, for the second year in a row, the rate was 51 percent. In December 2003, the King County Council enacted an ordinance requiring that new materials – including metals and additional plastic containers – be collected in curbside recycling programs in unincorporated areas. Haulers serving most unincorporated areas and cities where collection is regulated by the Washington Utilities and Transportation Commission (WUTC) also have an incentive to enhance their recycling efforts due to state legislation enacted in 2002. This legislation allows haulers to retain a percentage of revenues from the sale of curbside recyclables if they implement county-approved plans to enhance recycling.

As a result of these recycling plans, by October 2005, 39 percent of households in the WUTC-regulated areas had food waste collection with yard waste available. Additionally, in many areas, a new "single-stream" collection system was launched, making it easier for residents to recycle by combining all recyclables in one large wheeled cart. Recycling plans include educational campaigns by the haulers to increase participation. Several cities that contract directly with haulers have also switched to single-stream

recycling and expanded the types of materials they are collecting to include food waste, textiles, and certain electronics.

Although all these factors have contributed to the increase in the recycling rate, there are a number of other factors independent of SWD programs that affect the rate. Annual rainfall and temperatures directly affect the volume and weight of yard waste put out at the curb. Economic growth and jobs can also affect the rate of garbage generation. Therefore, a recycling rate could fall (as it did in the 2002 recession) or remain the same as a prior year even if participation in recycling programs increases.

Despite these slight fluctuations, King County's recycling rate is very high. In 2003 (the latest year for which data is available), the national average recycling rate in the United States was estimated to be about 30 percent (however, this includes both residential and nonresidential recycling, so it is not a one-to-one comparison). Comparing recycling rates with other jurisdictions is complicated by the lack of a uniform methodology. Some jurisdictions, such as the City of Seattle, include multi-family recycling and backyard composting in their overall rate. This yields a very high recycling rate of 57 percent. Other jurisdictions include construction and demolition recycling in their rates.

King County currently uses the single-family recycling rate as a performance measure because reliable data on multi-family and non-residential recycling are not available. Additional information related to this measure is discussed in the "Waste Reduction, Recycling, and Market Development" chapter of the 2001 King County Comprehensive Solid Waste Management Plan.

OUR STRATEGY

To improve the information we have on the amount of recyclables collected from multi-family and non-residential accounts, the division has been working with a consultant and the Washington State Department of Ecology (DOE) to collect missing data and develop a predictive model. The model estimates missing quantities of recyclables in order to fill in gaps to in DOE's annual estimates and to mitigate the substantial deviation in year-to-year recycling reported by DOE. The model was developed in 2005 and will be tested on 2005 data when it becomes available. Additional information may be gained by surveying cities that already track multi-family recycling and by seeking additional sources of data on commercial recycling.

The division continues to pursue a "Zero Waste of Resources by 2030" goal. SWD has organized programs with a target of "zeroing out" key materials that remain in the waste stream but that have value in the recycling marketplace. Target materials for 2005 and 2006 include food waste, electronics, paper and wood.

Food waste: As a result of several successful food waste collection pilot projects conducted in 2002-2003, several cities have added food waste to citywide yard waste collection starting in 2004. In 2005, SWD worked with haulers to extend food waste collection with yard waste in unincorporated areas and other cities. By the end of 2005, about a third of single-family households, including contract cities and WUTC-regulated areas had food waste collection available. In addition, a commercial food waste collection pilot has been in place since 2004. The program is testing the feasibility of collecting food waste from commercial establishments and the operational challenges that this material presents. To date, this program has diverted about 500 tons of food waste from the landfill.

Electronics: SWD is pursuing a "product stewardship" approach to the collection and recycling of electronic products. Product stewardship shares the responsibility for handling a product at the end of its useful life with the parties that have designed, produced, sold, or used the product. This approach saves local governments money by sharing the collection and recycling costs with parties that have benefited from the sale and use of the product. This is especially effective when the product in question contains hazardous materials and should be properly recycled or handled as a hazardous waste, which is considerably more expensive to process than traditional recyclables. In 2005 King County helped develop groundbreaking state legislation that requires electronics manufacturers to finance and implement an electronics collection and recycling program throughout Washington state. This legislation was enacted in 2006 and will go into effect in 2009. In addition, SWD developed and currently coordinates a private sector electronics recycling network called the "Take it Back Network" to collect and recycle electronic products for a fee.

Paper and wood: In 2006, the division will be developing program options as part of the solid waste comprehensive planning process for zeroing out these valuable resources from the waste stream.

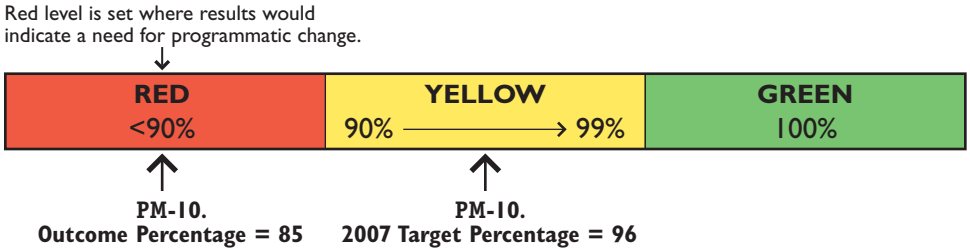
RATING

Results, Target and Outcome

2005 Results: 51 percent
2007 Target: 53 percent
Outcome: 60 percent

In 2005, the division adjusted the original 2007 (5-year) target of 50 percent to 53 percent. This was done as a result of changes in the collection system (single-stream recycling) and additional materials starting to be recycled (food and soiled paper). The target was adjusted to better reflect the "Zero Waste of Resources 2030" guiding principle that is a part of the 2004 Solid Waste Business Plan.

Performance-to-Target and Performance-to-Outcome Ranges and Ratings



DATA REFERENCE

Private hauling companies' collection activity reports; 2001 King County Comprehensive Solid Waste Management Plan; Department of Ecology's annual recycling survey; SWD Waste Monitoring Program surveys; SWD's tonnage records; U.S. EPA Municipal Solid Waste Generation, Recycling, and Disposal in the United States: Facts and Figures for 2003.

OUTCOME: The amount of waste requiring disposal is reduced

PM-11

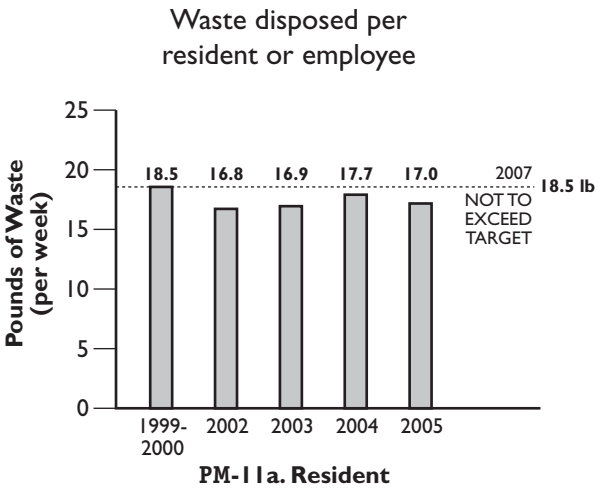
Amount of solid waste being disposed per resident or employee

ABOUT THIS PERFORMANCE MEASURE

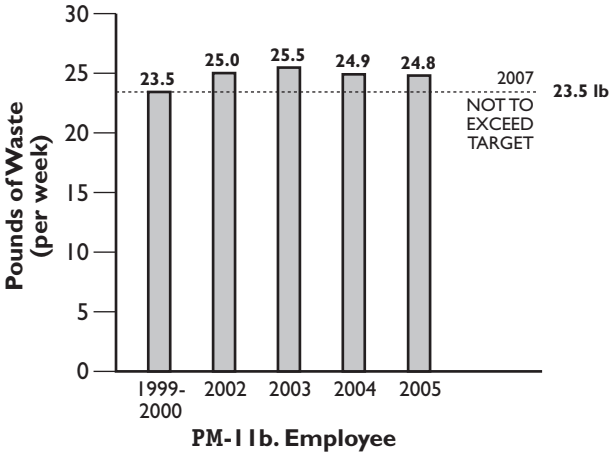
This measure focuses on waste disposal practices by residents and employees. The measure integrates waste reduction and recycling efforts by tracking the impact of both desired behaviors on the amount of waste that actually goes into the garbage can. By contrast, the single family recycling rate (Measure No. PM-10) only measures progress in recycling, not waste reduction.

It should be recognized that waste disposed is a direct function of the degree of consumption (the more you consume, the more you'll need to dispose of at some point in time). Further, increased production of goods will also increase waste disposal associated with manufacture and packaging. Consumption and production patterns are fueled by economic conditions, therefore the state of the economy has a huge influence on waste disposal, regardless of programmatic efforts by SWD designed to minimize disposal.

This measure tracks residential and non-residential waste disposal activity separately; this is important because factors affecting residential disposal can differ from those affecting non-residential disposal. In addition, strategies to address each of these segments are different. In contrast to most other measures in the report, these targets are considered "not to exceed" targets where we want to be under, rather than over, the targets.



PM-11a. Resident



PM-11b. Employee

OBSERVATIONS

Data for 2005 indicate per capita disposal is going down for both residents and employees compared to 2004. However, the split between what is counted as residential vs. non-residential is not exact because there are loads that are a mix of both.

The 2001 Comprehensive Solid Waste Management Plan established long-term targets of holding disposal constant at year 2000 levels of 18.5 pounds per resident per week and 23.5 pounds per employee per week. These numbers were used to establish the

2007 targets for this report. Initially, a national average of waste disposed per week was used as the long term outcome. This has been changed, as the national average includes both commercial and residential waste and is therefore not a good comparison. The new outcome measures are now the same as the targets identified in the Comp Plan and as those used as the 2007 targets in this report. Given historical patterns of increased waste disposal, these targets are quite aggressive, yet data for 2005 indicate that per capita disposal has gone down for both residents and employees compared to 2004. Since the regional economy was reasonably robust in 2005, this result is encouraging; however, additional reductions in disposal will be needed to meet the 2007 employee target. The 2007 revision to the Comp Plan will assess whether even more aggressive outcome levels should be established based upon basic changes in producer practices and consumer behavior.

OUR STRATEGY

Residential and commercial recycling services are widely available in King County, and while nearly 90% of residents report that they participate in curbside recycling programs and commercial recycling is widely available, thousands of tons of readily recyclable materials, such as paper, bottles and cans, are still thrown in the garbage. SWD will implement a new regional recycling education campaign to reinvigorate recycling by reminding residents and businesses to use their existing recycling containers and not throw away recyclable materials.

The education campaign will target businesses as well as single- and multi-family residences and will be developed in partnership with cities, haulers, and recyclers. For businesses, the campaign will consist of determining which companies have the potential to recycle more, especially paper and plastic film, and providing educational literature and signage targeted at specific employee types, including building managers, custodial staff, employees and managers. SWD will also coordinate with hauling companies to determine where more recyclables can be obtained. For residential recycling, outreach will consist of a broader approach, most likely a media campaign that may use radio, television and print advertising. SWD will target low-recycling areas and partner with city recycling coordinators to remove barriers and increase recycling while reducing the quantity of recyclables that end up in the landfill.

Food and compostable paper represent 26% of the disposed waste stream. To zero this material out of the disposed waste stream, the division has been working with the cities and the haulers to offer "food +" recycling services ("food +" includes all food scraps and food soiled paper). As a result of these efforts, 43% of single family garbage customers in King County have "food +" recycling services available to them. The division is now focusing its resources on increasing participation in the "food +" programs through education. SWD recently completed a pilot food recycling program for businesses in three cities, two of which (Kirkland and Redmond) are working towards adding food recycling services to their business recycling programs. We will also continue to work with other King County cities to add food recycling services to their collection contracts.

Another group of materials that we have been targeting our efforts toward is electronics. In 2003, the division established the "Take it Back Network", a group of retailers, repair shops, recyclers, waste haulers, and non-profit organizations that accept electronic equipment from the public for recycling. In October 2005, the division banned the disposal of computers, monitors, televisions, and cell phones at our transfer stations. An education campaign was launched to educate residents about the ban and

the recycling options that are available. And in March 2006, Governor Christine Gregoire signed an electronics recycling bill that will provide electronic product recycling opportunities for all Washington State residents, small businesses, small governments, charities, and schools through programs financed and implemented by electronics manufacturers. Recycling of computers, monitors and televisions will be provided at no additional cost for these entities. Products covered under this bill include computers, TVs, and monitors. King County strongly supported this bill in part because it incorporates product stewardship principles that cause the producers and manufacturers to be responsible for managing their products at their "end of life."

Our longer term strategies for realizing our "Zero Waste of Resources 2030" goal will be developed as part of the update of the Comp Plan. The plan is expected to be adopted in late 2007. A variety of strategies will be explored in the Plan, including additional educational efforts, banning the disposal of recyclable materials, financial incentives/disincentives, and product stewardship legislation. We will work with our various stakeholders to agree on the strategies that will be implemented.

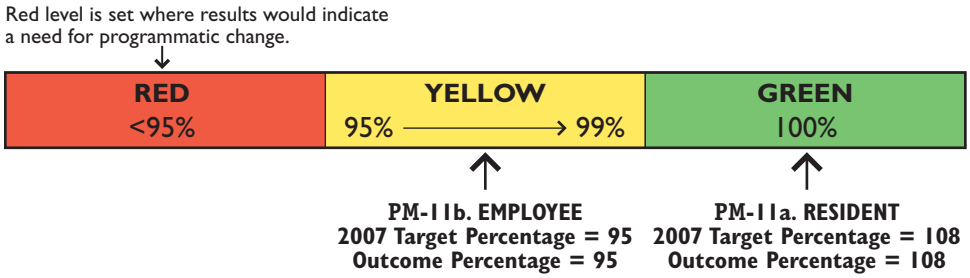
RATING

Results, Target and Outcome

23a. Resident		23b. Employee	
2005 Results:	17.0 lbs of waste/week	2005 Results:	24.8 lbs of waste/week
2007 Target:	18.5 lbs/week	2007 Target:	23.5 lbs/week
Outcome:	18.5 lbs/week	Outcome:	23.5 lbs/week

The targets and outcomes are based on the 2001 Solid Waste Comprehensive Plan. The targets are meant to ensure that the amount of waste generated by each resident and employee does not increase.

Performance-to-Target and Performance-to-Outcome Ranges and Ratings



DATA REFERENCE

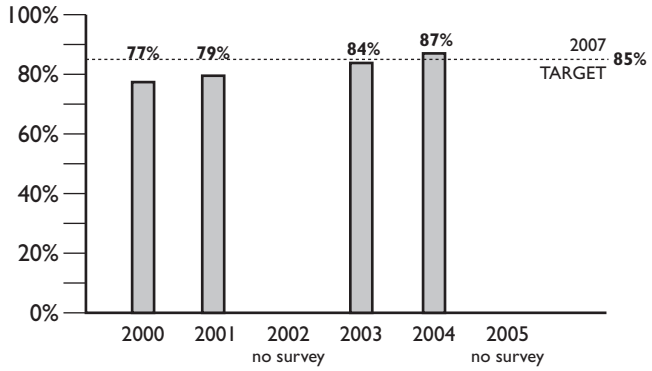
King County Monitoring Program: 2002/2003 Comprehensive Waste Stream Characterization and Transfer Station Customer Surveys – Final Report, April 2004; Office of Financial Management: April 1 Population of Cities, Towns, and Counties Used for Allocation of Selected State Revenues State of Washington; Washington Sate Employment Security: Nonagricultural Wage and Salary Workers Employed in King County, Final 2001 King County Comprehensive Solid Waste Management Plan.

Percent of single-family households in King County (excluding Seattle) participating in curbside recycling

ABOUT THIS PERFORMANCE MEASURE

This measure is designed in conjunction with the percent of single-family curbside waste recycled measure (No. PM-10) and the waste disposal measure (No. PM-11). Together, these measures assist the division in understanding the impacts of recycling education programs, recycling availability, and rate incentives for solid waste collection that encourage participation in recycling programs. Maximizing participation in curbside recycling programs makes efficient use of the existing collection system and reduces the use of self-haul capacity at King County transfer stations. Increased participation in recycling programs also will reduce the amount of solid waste disposed and move the county closer towards its "Zero Waste of Resources 2030" goal. "Single-family households" include single-family homes and buildings with four units or less. Seattle is not included because it is not part of the King County service area.

PM-12a. Single-family households participating in curbside recycling



OBSERVATIONS

The King County Solid Waste Division Residential Waste Reduction and Recycling Survey was not conducted in 2006 for 2005 but will be conducted in early 2007 for 2006. Curbside recycling service is available at no additional charge to single family households that subscribe to garbage collection service in all of King County except the town of Skykomish and the unincorporated areas of Snoqualmie Pass and Vashon Island.

OUR STRATEGY

SWD continues to coordinate with haulers to provide information to households on how to recycle. In 2006, a greater focus will be placed on multi-family recycling, where recycling rates are not as high. Barriers to higher rates of recycling participation in multi-family units include space constraints and lack of interest from building management. The division will implement a series of focus groups to better understand these barriers and identify options to improve recycling options and participation.

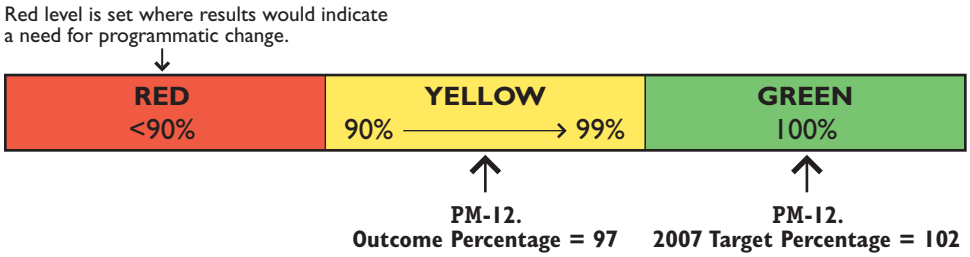
RATING

Results, Target and Outcome

2004 Results: 87 percent
2007 Target: 85 percent
Outcome: 90 percent

The long-term outcome is based on SWD's goal of 90 percent participation.

Performance-to-Target and Performance-to-Outcome Ranges and Ratings



DATA REFERENCE

"Waste Reduction, Recycling, and Market Development" chapter of the 2001 King County Comprehensive Solid Waste Management Plan; King County Solid Waste Division Residential Waste Reduction and Recycling Survey 2005.

PERFORMANCE MEASURES
COMMUNITY INVESTMENT

OUTCOME: Residents are more involved in their communities and in protecting the environment

Average percentage of households engaged in an index of thirty positive environmental behaviors

PM-13

ABOUT THIS PERFORMANCE MEASURE

Collectively, we as individuals can have a major impact on the environment. Nonpoint sources of pollution, small contributions of pollution from multiple sources, such as runoff from urban areas, are currently thought to be the primary cause of water quality degradation in the Puget Sound region. Household hazardous waste can have significant impacts on surface, marine, and groundwater quality. Also, products used by residents in their yards can have either a positive or negative impact on human health and the environment.

Because DNRP wants to assess a variety of environmental practices, this measure is designed as an index. The Environmental Behavior Index (EBI) takes the average percentage for thirty desired environmental behaviors from a survey of King County residents. The behaviors are grouped into three main categories: recycling and disposal; yardcare; and environmentally friendly purchasing behaviors. All thirty environmental behaviors identified for inclusion in the EBI are behaviors that DNRP attempts to influence through its various programs and outreach efforts.

The King County Environmental Behavior Survey is conducted annually and was first administered to 1001 households in 2005. In its first year the index was composed of 29 key environmental behaviors. In 2006 one additional behavior was added to the survey (whether households choose sustainable wood products for home construction and remodeling projects).

OBSERVATIONS

For each of these 30 behaviors, criteria were established by program managers that would define desired behaviors that have been promoted by DNRP. Respondents were asked a series of questions that resulted in their household being categorized, for each behavior, as one of the following:

- Bright Green: Do the desired behavior all or most of the time
- Light Green: Do the desired behavior only some of the time
- Yellow: Do not do the desired behavior but have thought about it
- Brown: Do not do the desired behavior and are not considering it
- Gray: Don't know about the behavior or what their household is doing
- White: Does not apply (e.g., don't have a yard or lawn)

The EBI score is based on the percentage of households in the bright green category, that is those that report engaging in the positive environmental behavior all or most of the time. Behaviors scoring highest in the light greens and yellows represent the markets of greatest opportunity for increasing the total number of households engaged in the desired behavior. If they are light green, they at least know how and perhaps want to do the behavior. They just need to be encouraged to do more. If they are yellow, they are indicating they at least have some interest in engagement and King County

programs can then explore what barriers need to be addressed and what motivators need to be highlighted that might influence their participation.

Compared to last year, the average Bright Green score for Recycling/Disposal has risen significantly, from 60% to 65%.

All other average scores have not changed at a statistically significant level. Overall, as was found in the previous survey, households appear to be the "greenest" relative to their recycling and disposal behaviors, followed by their yard care behaviors. Purchasing continues to have the most (on average) "Grey" households, due to the large number of households (69%) still indicating they were not aware of EnviroStar businesses.

OUR STRATEGY

The greatest opportunities for increased adoption of desired behaviors are with households that are currently engaged to some extent in the behavior, but not at the desired level (Light Greens), and those households who have been talking about or considering this behavior (Yellows).

Twelve behaviors stand out as having the most opportunity for this growth and are listed below. DNRP programs will work to identify barriers that could be addressed and perceived benefits (motivators) that could be highlighted in communications and program enhancements to encourage these behaviors. Follow-up with survey respondents may be conducted through the use of focus groups or other types of follow-up contacts.

RANKING BY LIGHT GREEN OR YELLOW

- Use of energy saving lightbulbs
- Consideration of environmental impact on purchases
- Whether choose sustainable wood products for home projects
- Reducing size of lawn
- Proper fertilizing of lawn
- Restoring or planting of native vegetation on property
- Proper disposal of unwanted electronics
- Presence of low-flow toilets
- Use of compost on lawn or gardens
- Removal of invasive plants or weeds
- Proper disposal of CFL & tubes
- Giving experience gift to reduce waste

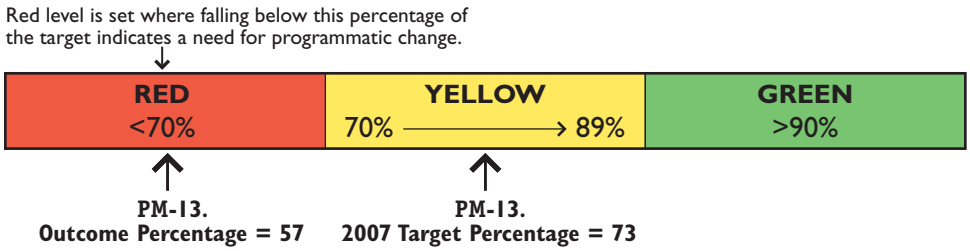
RATING

Results, Target and Outcome

2005 Results: 51
2007 Target: 70
Outcome: 90

The target is based on continued public information campaigns, incentive programs, and other services to increase the percentage of the population adopting the positive activities. The ultimate outcome is that a large majority of residents, 90 percent, will engage in these thirty positive environmental behaviors. The nature of this measure, focusing on changing resident behaviors, requires a long time to attain desired outcomes.

Performance-to-Target and Performance-to-Outcome Ranges and Ratings



DATA REFERENCE
King County Environmental Behavior Survey (2005 and 2006).

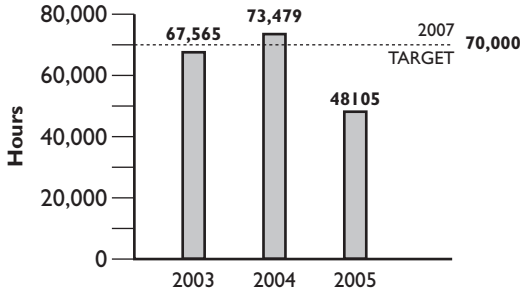
OUTCOME: Residents are more involved in their communities and in protecting the environment

PM-14 Number of volunteer hours invested in Parks and Natural Lands projects

ABOUT THIS PERFORMANCE MEASURE

Parks and recreation is one area of government that generates significant volunteerism. People volunteer on King County Parks' and Natural Lands projects as a way to invest in the community, educate park visitors, and provide basic enhancements to the park system and the environment. The degree of community involvement with the King County parks and natural lands system is an important measure of how engaged the community is with this important public asset.

PM-14a. Total volunteer hours



OBSERVATIONS

The division provided opportunities for youth and adults to participate in a variety of natural resource projects, recreation and aquatics programs, services, and special events in parks, natural lands, and in parks facilities. Volunteers enhance division services in a variety of ways--by providing additional projects and programs without additional expense, supplementing staff's efforts, and promoting citizen understanding of and assistance with park services, challenges and issues.

King County Parks has a strong volunteer base built over many years. Given the division's reorganization, recent transfers of parks and pools to cities, and the elimination of numerous recreation programs, the 2003 total volunteer hours level was used to establish the new baseline level of involvement.

In the division's Regional Parks, Pools, and Recreation Section, 4-H adult and youth volunteers contributed 7,737 hours at the King County Fair in Enumclaw. Adult and teen volunteers worked with teen participants at the White Center Park Teen Program giving 600 hours in areas ranging from photography, racquetball and cooking instruction to graphic design support for a teen poetry magazine. In the division's Parks Resource Section, 260 volunteer projects were completed on King County Parks and Natural Lands. Over 6,685 volunteers provided more than 37,390 volunteer hours for Park's Resource Coordinators and District Managers performing many tasks which included: restoration and trial projects; building and installing new kiosks; weeding flower beds and gardens; picking up litter; clearing invasive weeds; and installing bat and owl boxes. Over 15,000 tree and shrub seedlings were "potted up" at the King County Green-

house and Nursery using volunteers. Volunteers planted over 11,150 native trees and shrubs at 11 King County sites.

Projects involved both individuals and groups including businesses such as Boeing, Microsoft, Starbucks and REI. Youth groups, student groups from colleges and universities, community service clubs including Rotary and Lions participated in a variety of volunteer projects. Washington Trails Association, WA Fly Fisherman, and WA State Youth Gathering provided partnerships with their members volunteering on King County sites. The cities of Redmond, Bothell, Maple Valley and Woodinville hosted volunteer events in parks and along the regional trails.

Adopt-A-Park groups were active in 2005 with S.O.D.A. (Serve Our Dog Areas) contributing 2,378 hours for the year. The East Lake Washington Audubon Society began work on its grant funded project for the Bird Loop Trail in Marymoor Park.

A significant factor contributing to the reduction in volunteer hours from 2004 is most likely due to the vacancy in the Volunteer Program Coordinator position for over half the year and the time needed to ramp up the program after the position was filled.

Another way to assess the value of volunteer contributions is to identify an in-kind value for each volunteer hour. Although expert volunteers can be valued at their market rate, for simplicity, using a standard estimate of $18.04 per hour for Washington volunteers yields a volunteer community investment equivalent of over $674,500.

OUR STRATEGY

The division believes it is important to continue building the volunteer program. There is one staff member committed to creatively increasing volunteer opportunities and our volunteer base. A system-wide volunteer database will be updated and used to efficiently track volunteer hours, produce reports, and archive valuable information on user groups and park investment. In 2006 additional funding will be provided to expand and improve the Park Ambassador program by adding a regional trail component and increasing trainings, communications and recognition.

In 2006, the division will continue to focus on increasing volunteer opportunities and creating community volunteer partnerships in recreation, as well as supporting and expanding volunteer projects in parks, regional trails and natural lands on a project-by-project basis.

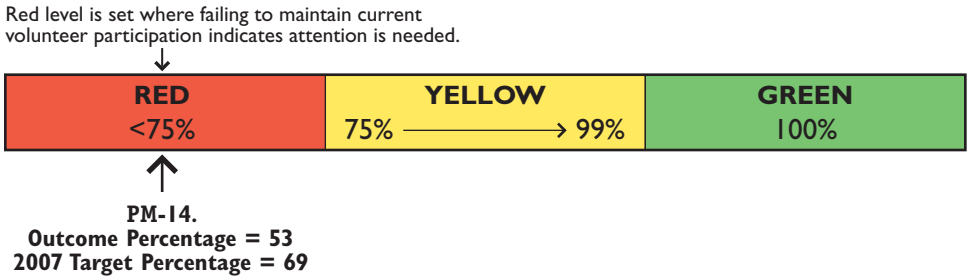
Future evolution of this measure may include a more comprehensive measure of volunteer contributions across the entire department. For example, additional volunteer efforts support WLR programs related to native plant salvage, noxious weed removal, lake monitoring, salmon monitoring, storm drain stenciling, and naturalists for beaches and the Cedar River.

RATING

Results, Target and Outcome

2005 Results:	48,105 hours
2007 Target:	70,000 hours
Outcome:	90,000 hours

Performance-to-Target and Performance-to-Outcome Ranges and Ratings



DATA REFERENCE

Parks Resource Section; Independent Sector Value of Volunteer Time (*www.independentsector.org/programs/research/volunteer_time.html*)

OUTCOME: Productive farms and forests are maintained

Acreage of agricultural land in King County

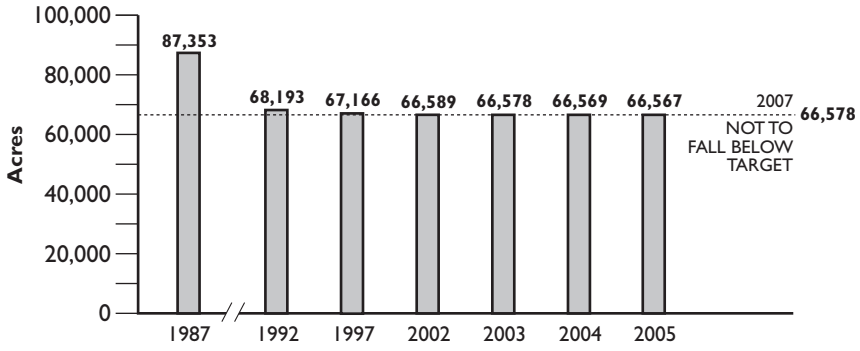
PM-15

ABOUT THIS PERFORMANCE MEASURE

DNRP has an interest in preserving farmlands, both for their agricultural and economic contributions as well as for the environmental benefits they provide. Open farmland contributes significantly less runoff than developed impervious surfaces, it provides surface water storage during the wet season, and it facilitates groundwater recharge. However, due to a number of socio-economic forces, such as dramatic increases in population and rising land values for development, there has been a dramatic loss of agricultural land in the county over the last 50 years.

This measure relies on a baseline of agricultural properties established in 2002. DNRP has identified 66,589 acres used for agriculture within the county. This includes 41,295 acres within the county designated agricultural production districts and 25,294 acres in the remaining rural area. These properties are used for both horticulture and livestock, and include small hobby farms as well as large agricultural operations such as dairies. DNRP will conduct a comprehensive field survey approximately every five years to determine if there is a change in the number of properties in the rural area that are used for agriculture.

PM-15a. Acres of agricultural land in King County



OBSERVATIONS

In 2004, no acreage was lost to development and only nine acres were lost to the creation of a wetland. Historical data were generated using U.S. Department of Agriculture data for properties filing farm profit/loss statements. Since this is a smaller subset of properties than is being tracked by DNRP, the historical data was extrapolated for previous years. This is considered a conservative estimate by program staff and probably underestimates the loss of agricultural land in past years. As additional Department of Agriculture data becomes available, these figures will be updated to increase the accuracy of this estimate.

In 2005, no acreage was lost to development but 1.6 acres were lost to the creation of a wetland for mitigation purposes.

OUR STRATEGY

The Office of Rural and Resource Programs will continue its work to ensure that the comprehensive plan "no net loss of farmland" policy is maintained. Program staff will continue to provide marketing assistance to farmers through the "Puget Sound Fresh" farm products marketing program which helps maintain the economic viability of small farm operations and will continue to develop and promote a regulatory environment that fosters agriculture and agribusiness in King County.

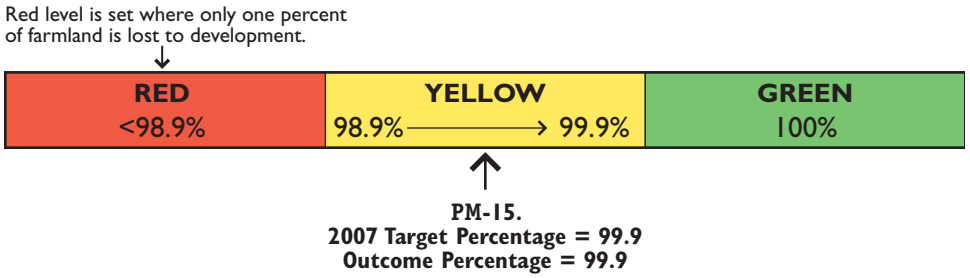
RATING

Results, Target and Outcome

2005 Results: 66,567 acres
2007 Target: 66,578 acres
Outcome: 66,578 acres

The 5-year target and long term outcome is zero loss of acreage to development.

Performance-to-Target and Performance-to-Outcome Ranges and Ratings



DATA REFERENCE

DNRP's Office of Rural and Resource Programs; USDA Natural Resources Conservation Service; King County Department of Development and Environmental Services.

OUTCOME: Productive farms and forests are maintained

Acreage of Forestlands in Public Ownership or in the Current Use Taxation Program

PM-16

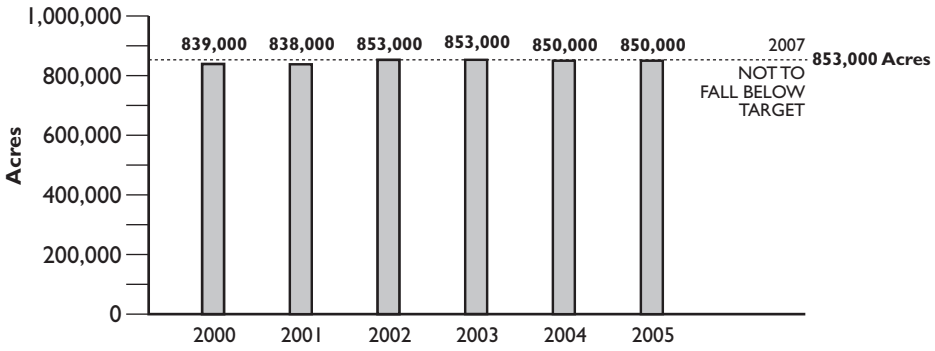
ABOUT THIS PERFORMANCE MEASURE

Forestlands, including those actively managed for timber, provide a variety of environmental benefits including maintaining the natural water cycle and providing wildlife habitat. As development pressure increases the value of forestlands, these lands are often converted to other, primarily residential, uses. Once the forest is fragmented into home sites, many of the environmental benefits, as well as the ability to manage the land for forest production, are lost.

Through the Timberland and Forestland property tax programs, actively managed forestlands are taxed at the current use, keeping property taxes relatively low. DNRP promotes these programs because they serve as incentives to encourage private landowners to voluntarily conserve and manage their forestland rather than convert it to another use. In addition, DNRP is actively involved in the acquisition of forestland and development rights by pursuing select properties and supporting the efforts of nonprofit groups.

This indicator is intended to track the amount of land that is conserved as forest through public acquisition (including development rights) and enrollment in Current Use Taxation (CUT). Note that when land is brought into public ownership, it is removed from the current use taxation program, so an increase in publicly owned land will result in a decrease in current use taxation enrollment.

PM-16a. Forestlands in public ownership or Current Use Taxation



OBSERVATIONS

The 2003 King County Annual Growth Report states that between 1972 and 1996 there was a 33 percent decrease in forest cover within the county. County efforts have slowed the conversion of forestland in the past decade, but there continues to be tremendous development pressure throughout the region. The amount of forestland in public ownership and in the CUT program has remained relatively constant since 2000. In general the number of acres leaving the CUT program because of change in ownership or development was balanced out by the acreages coming into public ownership in 2005.

OUR STRATEGY

The King County Assessor's Office administers the Forestland current use taxation program for large lots, greater than 20 acres of contiguous forest. WLR administers the Public Benefit Rating System and Timberland current use taxation programs. The WLR Forestry Program provides technical assistance and education to small forest landowners to encourage them to maintain their land in forest and manage it responsibly. DNRP is also involved in the acquisition of forestlands and development rights.

The 2007 target is to maintain the existing amount of forestland in public ownership or enrolled in the current use taxation program. DNRP hopes to achieve this goal through acquisition, education, conservation easements, and incentive programs such as current use taxation. In 2005 WLR hired additional staff in PBRS and Timberland to ensure that in addition to enrolling new properties, currently enrolled properties could be monitored for compliance with their open space taxation agreements.

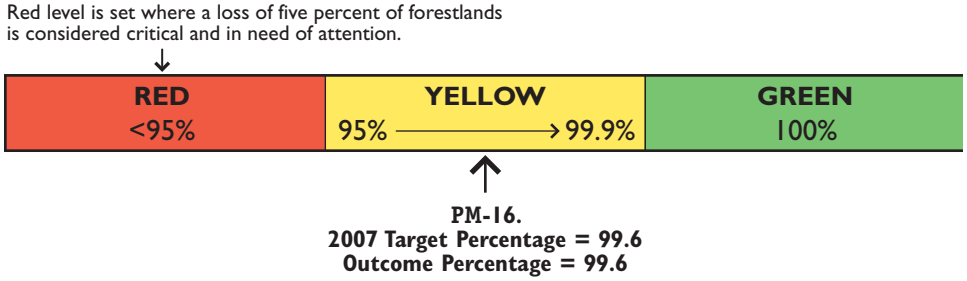
RATING

Results, Target and Outcome

2005 Results: 578,000 acres in public ownership + 272,000 acres in Current Use Taxation program = Total of 850,000 acres
2007 Target: 853,000 acres
Outcome: 853,000 acres

The target and long-term outcome are to maintain existing amounts of forestland acreage either in public ownership or in the Current Use Taxation Program.

Performance-to-Target and Performance-to-Outcome Ranges and Ratings



DATA REFERENCE

Assessor's Office, DNRP's Office of Rural and Resource Programs.

OUTCOME: Productive farms and forests are maintained

Percent of forest acres where landowners are demonstrating stewardship

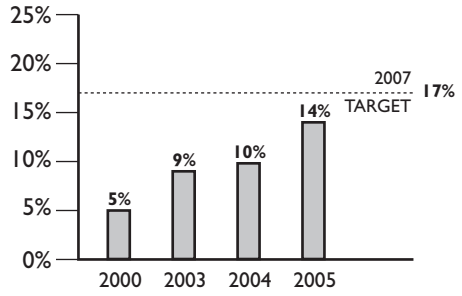
PM-17

ABOUT THIS PERFORMANCE MEASURE

Forestlands, including those actively managed for timber, provide a variety of environmental benefits, including maintaining the natural water cycle and providing wildlife habitat. A major focus of the Forestry Program is to provide technical assistance to small forest landowners to encourage them to manage their forests responsibly. Staff accomplishes this by assisting with forest stewardship plans, providing on-site technical assistance, and offering forest stewardship classes. It is assumed that a landowner who writes a plan, seeks technical assistance, or takes a class has a commitment to retaining the property in forestry for some time. This measure serves as a proxy for best management practice implementation and appropriate forest stewardship. The measure only counts properties in the first year that the landowner receives assistance. Services in subsequent years are not included in the measure.

The acres considered for this measure are forested lands in the Rural Area and Forest Production District owned by non-industrial private forest landowners. Land showing proper stewardship is being defined as forested lands: 1) with an existing forest stewardship plan; 2) where technical assistance has been provided by the DNRP Forestry Program, or; 3) whose landowners have taken a forest stewardship class offered by the DNRP Forestry Program in cooperation with Washington State University Extension.

PM-17a. Percent of forest areas with demonstrated stewardship



OBSERVATIONS

There are approximately 51,000 forested acres in the Rural Area and Forest Production District owned by non-industrial private forest landowners and considered high priority for DNRP's Forestry Program. From 1997 through 2004, the Forestry Program served a total of 5,743 acres in these areas through planning, technical assistance and stewardship classes.

In 2005 there was an increase in the number of requests for technical assistance from small forest landowners and a corresponding increase in the acres affected by forest stewardship. Some 1,419 acres were affected compared to an annual average of 765 acres between 1997 and 2004.

There are two reasons for this increase. First, several owners of relatively large, 20-acre parcels in the Forest Production District completed forest stewardship plans in

order to receive building permits. Second, the adoption of the Critical Areas Ordinance in 2005 allowed forest landowners to develop forest stewardship plans or rural stewardship plans. As a result, more of the work of the Forestry Program is focused on assisting landowners meet these regulatory needs.

OUR STRATEGY

The Forestry Program succeeded in meeting the increased demand for forestry technical assistance during 2005 with existing staff. The strategy is to serve as many landowners as possible with existing staff and to sustain an average rate of 765 acres per year to achieve the 2007 target. To consistently achieve a higher level of service would require additional resources.

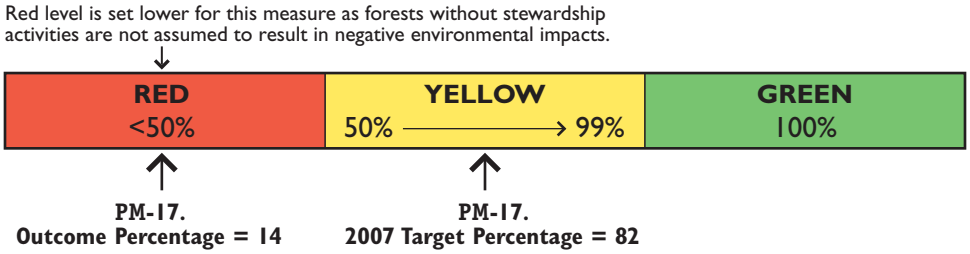
RATING

Results, Target and Outcome

2005 Results: 14 percent (7,167 acres)
2007 Target: 17 percent (8,400 acres)
Outcome: 100 percent (8,400 acres)

The 2007 target is based on the historical number of acres assisted per year. With current staffing levels, DNRP is able to serve approximately 765 acres per year, which would total 8,400 acres, or 17% of the 51,000 acre baseline, by the end of 2007. The long-term outcome is to eventually affect a much higher percentage of the acres owned by small forest landowners.

Performance-to-Target and Performance-to-Outcome Ranges and Ratings



DATA REFERENCE

DNRP's Office of Rural and Resource Programs.

OUTCOME: Farms and forests are managed in a sustainable manner

Acreage of agricultural lands using agricultural best management practices

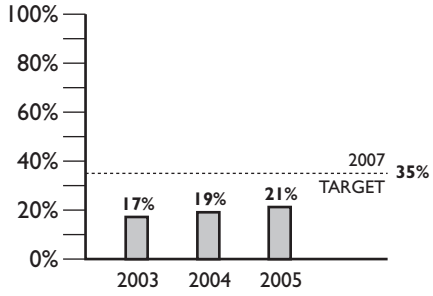
PM-18

ABOUT THIS PERFORMANCE MEASURE

The King County Agriculture Program encourages landowners to complete farm plans and engage in farm practices that protect natural resources. Best management practices (BMP's) protect waterways and fish and wildlife habitat by managing stormwater runoff, keeping nutrients and pathogens out of streams, preventing erosion of pasture soils, and minimizing disturbance of streamside vegetation.

King County has a Livestock Management Ordinance whose primary purpose is to support livestock operations in a manner that minimizes their adverse impacts on the environment - particularly on water quality and fish habitat. The ordinance encourages farm plans and implementation of BMP's to protect environmental features from livestock impacts. The County has recently adopted the Critical Areas Ordinance, which also encourages farm planning and BMP's to protect critical areas. Examples of these BMP's are stream and wetland buffer fencing and planting, pasture rotation, manure storage structures, and runoff management facilities such as gutters and downspouts. The King Conservation District is responsible for working with landowners to develop and implement farm plans. King County further encourages implementation by providing technical assistance and cost share funding. This measure is intended to track the degree to which farms are implementing BMP's. It counts the acreage of farms that have implemented BMP's through the County's technical assistance and cost share programs, and the acreage of farms with farm plans or dairy nutrient plans.

PM-18a. Percent of agricultural lands using best management practices



OBSERVATIONS

BMP's are encouraged for all livestock owners and horticultural farmers in order to minimize the environmental impacts of farm practices and maximize the environmental benefits of farmland in King County. In most instances, these practices are not required, but are done voluntarily by property owners to be good stewards of the land. Because the use of BMP's is voluntary, and often occurs without the County knowing about it, tracking the acreage is difficult. The data for this measure show only the

acreage of farmland on which King County is aware of farm plans and implementation of BMP's — 13,515 acres out of a total of 65,000 farm acres. This includes 1044 acres added in 2005.

Note that the 2004 "Measuring for Results" incorrectly reported the 2004 acreage. The error has been corrected here.

OUR STRATEGY

Provide education and technical assistance to landowners on the value of farm planning, including the installation of BMPs, to their farm operations and for the environment. Provide cost share assistance to landowners who agree to implement water quality BMPs listed in their farm plans. Provide technical assistance in manure management and composting. Coordinate with the WRIA efforts by targeting lands identified as important for salmon enhancement. Continue to collaborate with King Conservation District on workshops and events to increase landowner awareness of good agriculture practices and opportunities for assistance.

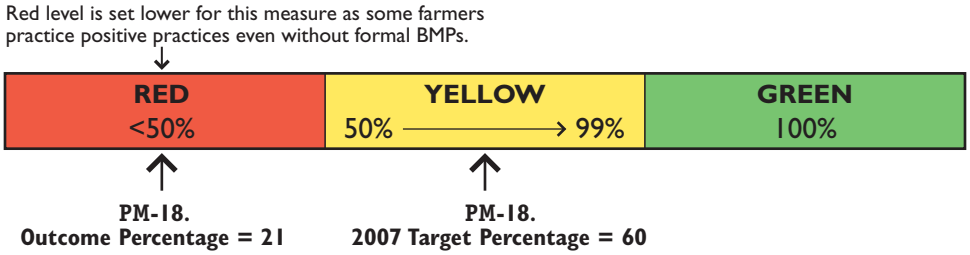
RATING

Results, Target and Outcome

2005 Results: 21 percent
2007 Target: 25 percent
Outcome: 100 percent

The long-term outcome is that all King County parcels with livestock or horticultural farming install the appropriate BMPs.

Performance-to-Target and Performance-to-Outcome Ranges and Ratings



DATA REFERENCE

DNRP's Office of Rural and Resource Programs, King Conservation District.

PERFORMANCE MEASURES

LEADERSHIP

OUTCOME: The department is recognized as a resource and a leader in environmental issues in the region

Local jurisdictions' rating of their relationship with DNRP

PM-19

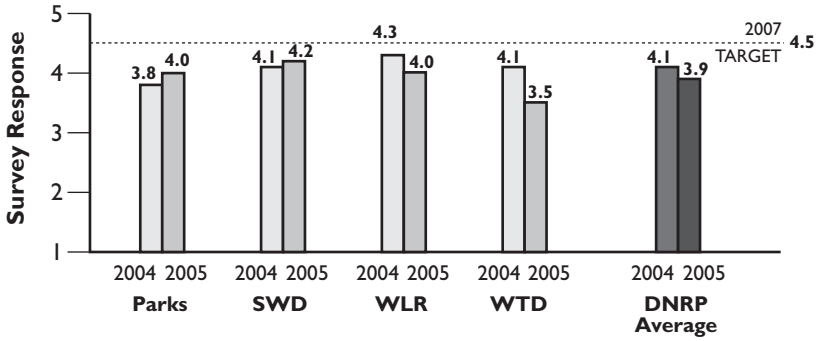
ABOUT THIS PERFORMANCE MEASURE

One element of leadership is to have positive relationships with others with whom you work. Environmental outcomes in particular require sustained, coordinated actions by a wide variety of organizations in order to be accomplished. In addition, DNRP has a goal of being a regional service provider. Therefore, DNRP views a positive relationship with local jurisdictions as a critical element in our overall success as an organization.

Prior to 2004, DNRP reported this measure as a percentage of local jurisdictions that rate their relationship with DNRP as positive. In 2004 the methodology was changed to report this measure by scores using a five-point Likert scale. In 2004, DNRP developed a departmental internet survey tool that included sections for each division. Local jurisdictions were asked to give their opinion on the question "How would you rate your relationship with <<division name>>" using a five-point Likert scale: excellent (5), good (4), adequate (3), poor (2) and very poor (1).

The survey, conducted for the second time in 2005, was sent to 306 individuals (staff, management, and elected officials) from local jurisdictions that were obtained from existing departmental databases. Respondents were also encouraged to send the survey to additional jurisdictional representatives. There were 80 respondents (26 percent response rate) representing 36 jurisdictions (75 percent response rate). Multiple responses from a single jurisdiction were averaged and the total score was based on an equal weighting by jurisdiction (rather than by number of individuals responding). The DNRP score, which serves as the basis for the measure, is an unweighted average of the four divisions' ratings.

PM-19a. Local jurisdictions rating of their relationship with DNRP



OBSERVATIONS

DNRP now has two years of data using the new scoring methodology described above, therefore beginning with this 2005 report, the trend in the relationship measure over time will be shown. DNRP's 2005 score for this measure is 3.9, a slight drop from 2004's score of 4.1. This drop in score changes the performance-to-target and

performance-to-outcome ratings from yellow to red. Previous results indicated a very positive relationship between DNRP and local jurisdictions, with 86 percent reporting a "good" or "excellent" response. The new lower rating is reflective of lower than usual scores for WTD, which due to contract negotiations in progress with the sewage contract agencies it serves, has received lower scores on survey questions across the board. It is anticipated that once these negotiations are completed and all issues resolved, the relationship score will go back up.

OUR STRATEGY

DNRP can improve its communication to foster a more positive relationship with local jurisdictions. Many of the issues that DNRP faces, such as moving towards being a regional service provider or ongoing budget pressures, have direct impacts on local jurisdictions. Cities, sewer districts, and other governmental bodies all work collaboratively with DNRP on a wide variety of issues. However, as DNRP's business environment changes due to broader issues affecting King County, the department needs to make sure that these local jurisdictions are appropriately involved in decision-making, and have a say in the desired outcomes and programmatic impacts.

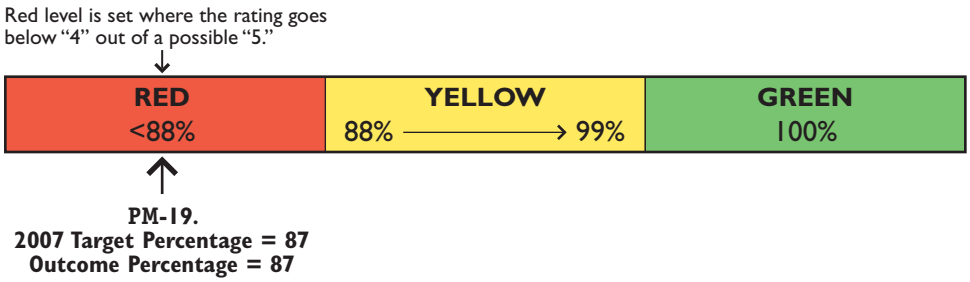
RATING

Results, Target and Outcome

2005 Results: 3.9 out of 5
2007 Target: 4.5
Outcome: 4.5

The target and long-term outcome is to have all jurisdictions view their relationship with DNRP as positive.

Performance-to-Target and Performance-to-Outcome Ranges and Ratings



DATA REFERENCE

DNRP and WTD surveys of local jurisdictions.

OUTCOME: The department is recognized as a resource and a leader in environmental issues in the region

Local jurisdictions' rating of DNRP as a resource in addressing environmental issues in the region

PM-20

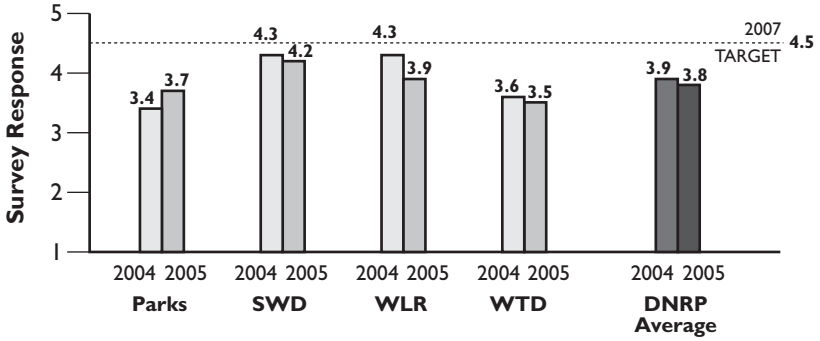
ABOUT THIS PERFORMANCE MEASURE

DNRP serves numerous roles with local jurisdictions. One important role is that of a regional resource for jurisdictions that do not have the technical or financial resources to independently address environmental or resource management issues. DNRP's role as a resource to local jurisdictions comes in several forms as: an information source, technical assistance provider, or a direct service provider.

In 2004, DNRP developed a departmental internet survey tool that included sections for each division. Local jurisdictions were asked to give their opinion on the question "How would you rate <<division name>> as a resource (such as providing information or technical assistance) in regional environmental issues?" using a five-point Likert scale: excellent (5), good (4), adequate (3), poor (2) and very poor (1).

The survey, conducted for the second time in 2005, was sent to 306 individuals (staff, management, and elected officials) from local jurisdictions that were obtained from existing departmental databases. Respondents were also encouraged to send the survey to additional jurisdictional representatives. There were 80 respondents (26 percent response rate) representing 36 jurisdictions (75 percent response rate). Multiple responses from a single jurisdiction were averaged and the total score was based on an equal weighting by jurisdiction (rather than by number of individuals responding). The DNRP score, which serves as the basis for the measure, is an unweighted average of the four divisions' ratings.

PM-20a. Local jurisdictions rating of their view of DNRP as a resource



OBSERVATIONS

DNRP now has two years of data using the new scoring methodology described above, therefore beginning with this 2005 report, the trend in the relationship measure over time will be shown. The results for this measure show the Solid Waste and Water and Land Resources divisions as being rated very high in their role as a resource for local jurisdictions. This may reflect the nature of their work, which is in part to provide expertise and technical assistance. Parks and Wastewater Treatment divisions' lower ratings show areas for future improvement.

OUR STRATEGY

As part of the divisions' business planning processes, DNRP has been taking a much closer look at:

- what role each division should have in terms of service provision,
- are the services each division is providing important to the cities, and
- how is each division performing those services.
- DNRP plans to continue to use business planning, jurisdictional surveys, and interlocal forums to gather information about local jurisdictions' ideas for DNRP's role in serving as a technical or administrative resource and regional service provider.

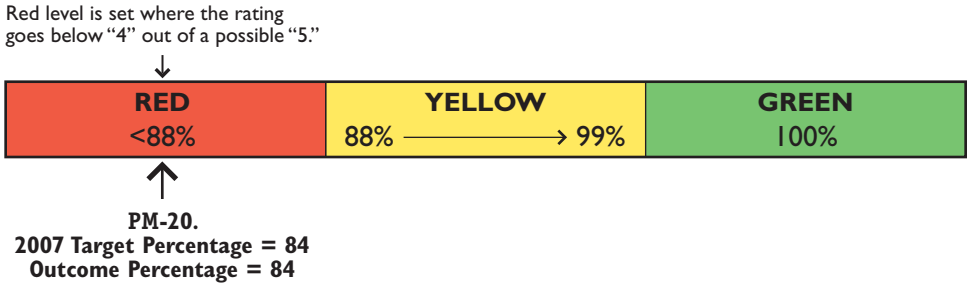
RATING

Results, Target and Outcome

2005 Results: 3.8 out of 5
2007 Target: 4.5
Outcome: 4.5

The target and long-term outcome is to have all jurisdictions view DNRP as a resource in addressing environmental issues in the region.

Performance-to-Target and Performance-to-Outcome Ranges and Ratings



DATA REFERENCE

DNRP survey of local jurisdictions.

OUTCOME: The department is recognized as a resource and a leader in environmental issues in the region

Percent of local jurisdictions that view DNRP as providing leadership in addressing environmental issues in the region

PM-21

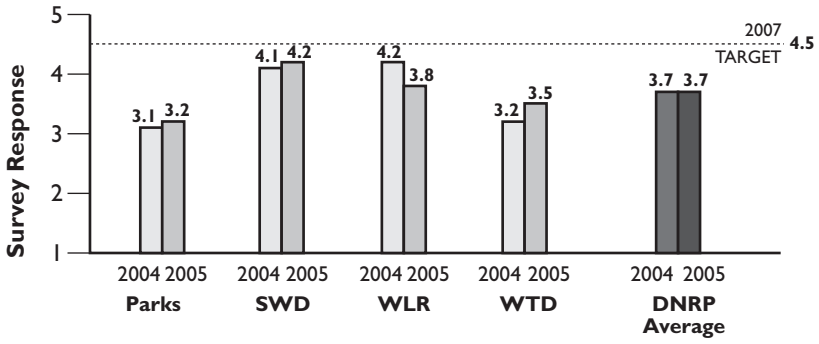
ABOUT THIS PERFORMANCE MEASURE

Many of the important environmental issues facing the region are technically complex, have significant costs, and include elements of uncertainty and risk. In its effort to be a high performance organization, DNRP seeks to provide leadership on these challenging environmental and resource management issues. Leadership can be shown through serving as a lead entity in a planning effort, providing unique technical resources, or developing an innovative program or policy solution. This measure tracks the perception local jurisdictions have of DNRP as a leader on regional environmental issues.

In 2004, DNRP developed a departmental internet survey tool that included sections for each division. Local jurisdictions were asked to give their opinion on the question "How would you rate <<division name>> as a leader in regional environmental issues?:" using a five-point Likert scale: excellent (5), good (4), adequate (3), poor (2) and very poor (1).

The survey, conducted for the second time in 2005, was sent to 306 individuals (staff, management, and elected officials) from local jurisdictions that were obtained from existing departmental databases. Respondents were also encouraged to send the survey to additional jurisdictional representatives. There were 80 respondents (26 percent response rate) representing 36 jurisdictions (75 percent response rate). Multiple responses from a single jurisdiction were averaged and the total score was based on an equal weighting by jurisdiction (rather than by number of individuals responding). The DNRP score, which serves as the basis for the measure, is an unweighted average of the four divisions' ratings.

PM-21a. Local jurisdictions rating of their view of DNRP as an environmental leader



OBSERVATIONS

DNRP now has two years of data using the new scoring methodology described above, therefore beginning with this 2005 report, the trend in the relationship measure over time will be shown. This score is the lowest of all of the local jurisdictional survey-related measures. Some of the recent budget issues and projects have not been positively

received by local jurisdictions. For example, the Parks and Recreation Division has been facing a protracted reduction in funding, including transferring facilities to local jurisdictions. Likewise, the Wastewater Treatment Division has been moving forward with Brightwater, the regions' third wastewater treatment facility. Water and Land Resources Division has been working on salmon planning, which seems to be more positively received. Solid Waste Division's implementation of their business plan seems not to have eroded local jurisdictional support.

OUR STRATEGY

Leadership often requires making difficult decisions around controversial topics. Siting the Brightwater wastewater treatment plant, transferring county parks, or changing solid waste transfer station operating hours all required informing local jurisdictions and the affected communities to develop an acceptable approach that addresses key policy, operational, or programmatic needs.

There are a number of important regional issues, such as land management, salmon restoration, and water resource management (including water quality restoration, groundwater protection, and instream flow management) where DNRP hopes to have a leadership role. DNRP plans to better understand what local jurisdictions expect from the county, develop specific strategies to respond to those needs, and where possible, address those needs and implement the strategies. When the county cannot meet expectations, DNRP will work with the affected jurisdictions on alternate strategies.

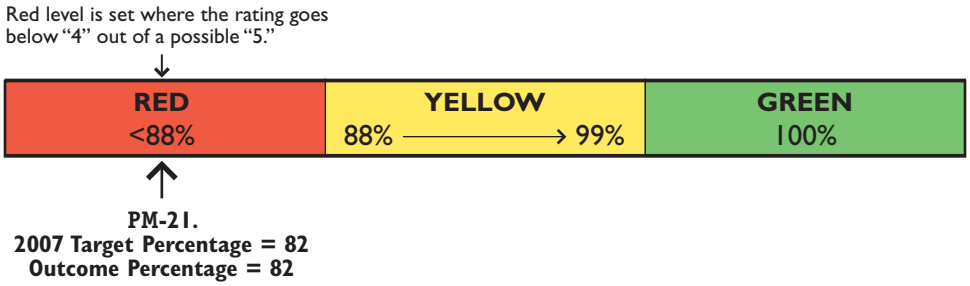
RATING

Results, Target and Outcome

2005 Results: 3.7 out of 5
2007 Target: 4.5
Outcome: 4.5

The target and long-term outcome is to have all jurisdictions view DNRP as providing leadership in addressing environmental issues in the region.

Performance-to-Target and Performance-to-Outcome Ranges and Ratings



DATA REFERENCE

DNRP and WTD surveys of local jurisdictions.

PERFORMANCE MEASURES

PRICE OF SERVICE

OUTCOME: Department utility rates are reasonable and competitive

Comparison of fees and rates with other agencies that provide comparable services

PM-22

ABOUT THIS PERFORMANCE MEASURE

DNRP desires to minimize fees and rates while maximizing the value of services provided to King County residents. There is an expectation that public agencies provide a desired or mandated service in a competitive manner. One way to ensure that our prices for services remain reasonable is to compare them with other jurisdictions - often called "benchmarking."

Fee and rate comparisons across jurisdictions need to be viewed with great care for several reasons: the range of service is often not comparable; the level of service provided may differ; fees and rates are often structured differently; and fee and rate revenues may cover different proportions of program costs. Because these factors are not readily quantifiable, no target is being defined for this measure, although it will be tracked over time to identify trends.

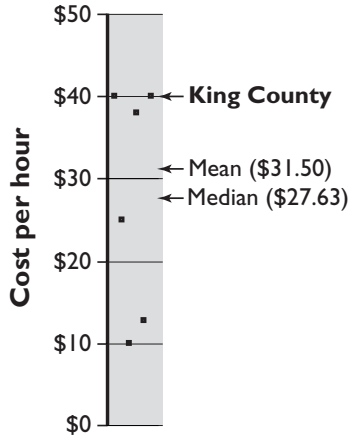
The charts below provide a range of fees or rates for a defined set of jurisdictions that were believed to provide roughly similar services to King County DNRP. The graphs also indicate where King County falls within this range. The following description includes the set of jurisdictions used for comparison and key factors affecting rates for each service.

Parks

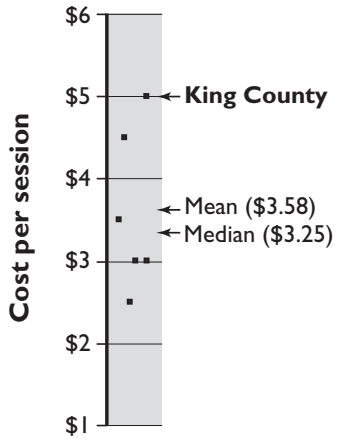
Comparison group: Five jurisdictions for ball fields, and aquatics that are large metropolitan parks and recreation providers in the Northwest. Fees for adult soccer games and adult swim/lap swim were determined to be representative and commonly available, and therefore easiest to compare with other jurisdictions.

Factors affecting rates: Level of service, quality of facility, level of subsidy or general fund support, field type (grass vs. synthetic), game type (soccer vs. baseball), resident status, practice vs. game.

PM-22a. Field rental fees (2005)



PM-22b. Lap swim fees (2005)

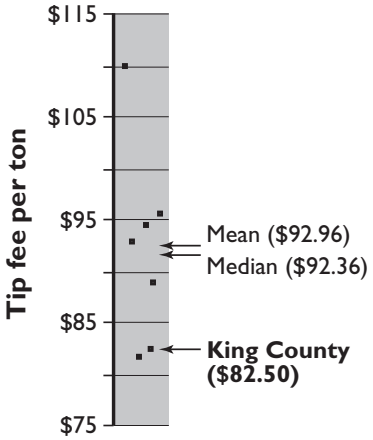


SWD

Comparison group: Seven large jurisdictions in Washington having solid waste programs (includes those counties serving > 300,000 people and cities serving > 150,000 people). This group was chosen because tip fees (the basic fee charged per ton of waste delivered to transfer stations) are a primary source of revenues for all of the jurisdictions, and the level and range of services appear to be generally comparable.

Factors affecting fees: Range of services provided (and funded through fees); level of services; disposal method; differences in fee structure; other sources of revenues; and regulatory requirements.

PM-22c. Solid waste tip fees (March 2006)

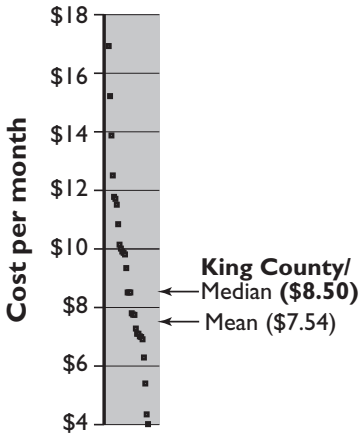


WLR

Comparison group: Thirteen jurisdictions in King County (population > 20,000) with a storm or surface water fee, plus the five other jurisdictions in Western Washington large enough to require a NPDES Phase I stormwater permit. National comparisons are less justifiable due to differences in permit requirements, environmental and climatic conditions, and government structure.

Factors affecting rates: Extent of services provided (such as, street sweeping, facility construction and maintenance, regulatory development, etc.); levels of services provided (such as, some jurisdictions provide more extensive education and outreach, regulatory development, facility maintenance); type/extent of stormwater problems (such as, some jurisdictions have more significant water quality/drainage issues than others); extent of facility construction (such as, the proportion of jurisdictions' operating budgets to capital budgets varies significantly across jurisdictions); and financial differences (such as, rate structure, proportion of revenues from residential charges vs. other sources, amount of debt financing).

PM-22d. Single family stormwater rate (2005)

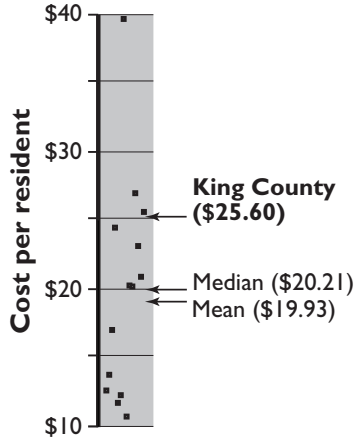


WTD

Comparison group: Thirteen wastewater utilities providing interceptor and treatment services (no collection), responding to 2002 Association of Metropolitan Sewerage Agencies financial survey.

Factors affecting rates: History of capital construction/ degree of federal grant funding; range of services provided; permit limits/environmental considerations; treatment technology used; labor rates (varies by geographic location); major capital projects in progress; non-rate revenue available; organizational structure (whether the utility is a stand alone utility district versus part of general purpose government); and financing strategy and rate setting policies (desire for rate stability).

PM-22e. Average monthly residential wastewater service rate (2005)



OBSERVATIONS

Ball Field and Swim Fees
Parks ball field and lap swim fees remain as high as or higher than comparable public organizations. This is consistent with the policy established by the Executive and Council in adopting the 2003 Parks Business Plan, as described in the following section on strategy. Fees structures vary between jurisdictions and can change over time. For instance, Parks fee structure changed between 2003 and 2004 from charging "per game" to "per hour" and Parks began differentiating between soccer versus baseball/softball fees. In 2003, the field rate was converted to an hourly rate using a game time of 1 1/2 hours when 1 3/4 hours should have been used to determine an hourly fee. Charging and tracking fees has become much easier since changing to an hourly fee. Some jurisdictions charge more for non-residents, while some jurisdictions, including King County, charge different rates for soccer and baseball/softball fields. To minimize variances, soccer rates where compared when game-type fees varied (Parks' baseball rate is $55 compared to a $40 soccer rate). Finally, fees for field rentals are for the entire team, not per person. Consequently, King County ball game fees are less than $2 per person per game. See Measure No. 23 for a more detailed discussion of revenues from these fees.

Although this measure does not compare fees to private entities, one ball field programmer and provider charges $150 minimum for the first 1 1/2 hour and $100 for each additional hour. Clearly, the market will bear much higher fees for competitive, high-end facilities.

Solid Waste Tip Fees
King County's solid waste tip fee is below the mean (average) and median for the comparison group. This is particularly noteworthy because the county provides a broad range of high-level solid waste services, including extensive recycling programs. The lower cost of using an in-county landfill compared to other disposal methods (such as waste export) is a primary reason for the relatively low rates.

Surface/Stormwater Fees
King County's single-family surface water fee is within the range for the comparison group, but slightly above the mean (average). Additional Clean Water Act-related requirements are forthcoming and as a jurisdiction responsible for adhering to a Phase I permit, King County will have to respond or face stiff penalties.

Services provided by King County appear to be more extensive than those of other jurisdictions. For example, King County appears to provide services that some jurisdictions do not, such as development drainage standards, extensive stewardship services to assist landowners, high level drainage complaint response, and programs to control water quality and erosion.

King County's surface water rate is static and is not linked to inflation. This is decreasing the purchasing power of fee dollars collected.

Wastewater Service Charges
King County's residential wastewater service charge is within the range, but above the mean and median of the comparison group. There are significant differences among these utilities in the extent and level of services they provide. Some may not provide full secondary treatment or recycle biosolids as extensively as King County, for example. Additionally, the division is in a period of major construction activity that is an invest-

ment in future service. This includes construction of a third regional treatment plant (Brightwater) and associated conveyance system.

The Wastewater Treatment Division remains committed to ongoing efforts to become more efficient while continuing to provide a high level of service.

OUR STRATEGY

Parks
The 2003 Parks Business Plan directs Parks to maximize user fees for active recreation facilities in order to minimize any general tax subsidies required for such facilities. It is important, however, that fees do not increase to the point that users cannot afford to participate in recreation programs, or that the parks system is not competitive with other providers that results in a reduced user base or loss of revenue. The division will continue to monitor other public agency user fees, maintain the existing dialogue with user groups, and increase our other revenue streams in order to become more self-reliant.

The division will continue to discuss our role as a provider of ball fields and how our fee structure will be modeled (market driven or cost-recovery driven). We will continue to upgrade our facilities so that they are safe and desirable to play on. New synthetic fields are scheduled to open in 2006 and 2007.

SWD
The 2004 SWD Business Plan has an explicit business strategy that states, "rate increases for consumers for the next 20 years are not higher or earlier than projected in the 2001 Solid Waste Plan." The business plan outlines a wide variety of measures to increase efficiencies within the division to keep rates low and ensure this strategy is met.

WLR
Despite dramatic programmatic and staff cuts in 2004 and 2005, WLR expects a major reduction in SWM revenue as a result of annexations and incorporations related to the Growth Management Act over the next three to five years. Along with the effects of inflation and increasing Clean Water Act-related requirements, this revenue loss means the division may be forced to pursue additional cuts or a change in the SWM rate.

WTD
The division launched a "Productivity Initiative" in 2001 that has already resulted in reduced operating costs and increased savings to ratepayers. The division will continue to put significant effort into controlling costs and keeping rates as low as possible.

RATING

Information on rates was compiled to allow a qualitative comparison and there are no explicit targets or outcomes for this measure. Below is a listing of how each division's rates and fees compare to the average fees from comparable jurisdictions.

Parks ball field and pool fees > average fees from other jurisdictions

Solid waste tip fee < average fees from other jurisdictions

Surface/stormwater rate < average fees from other jurisdictions

Wastewater service rate > average fees from other jurisdictions

DATA REFERENCE

Parks and SWD: Contacts with program representatives from various jurisdictions; Internet research. WLR: Contacts with program representatives from various jurisdictions; rate compilations prepared by King County and other jurisdictions. WTD: 2002 AMSA Financial Survey; updated based on contacts with wastewater utilities and Internet research.

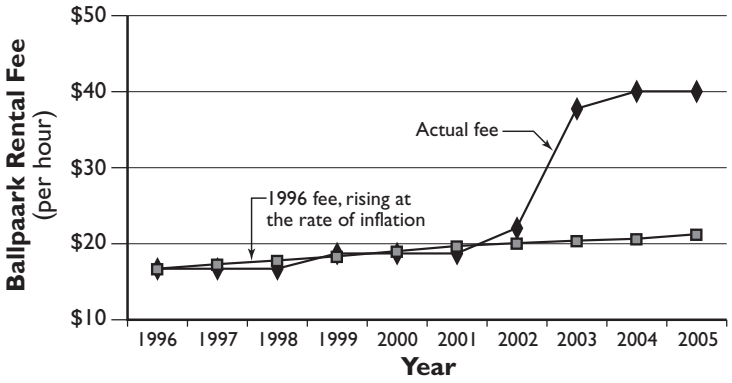
PM-23 Growth in DNRP rates and fees relative to the consumer price index

ABOUT THIS PERFORMANCE MEASURE

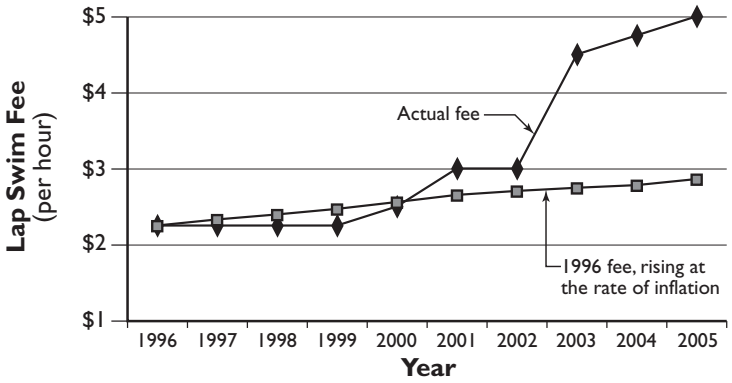
One indicator of how reasonable DNRP's prices of services are is to compare how rates and fees have changed relative to the rate of inflation. The Consumer Price Index is the most widely accepted measure of inflation. This measure is being used as one type of benchmark to assess our price of service and ensure that the department is providing cost-effective services to our customers.

It is important to compare rates and fees to inflation over a several year period, since rate adjustments are often step-wise in nature. The time period must be set so that services and legal or programmatic requirements are generally comparable across the period. For all fees a ten-year period was chosen (1996-2005).

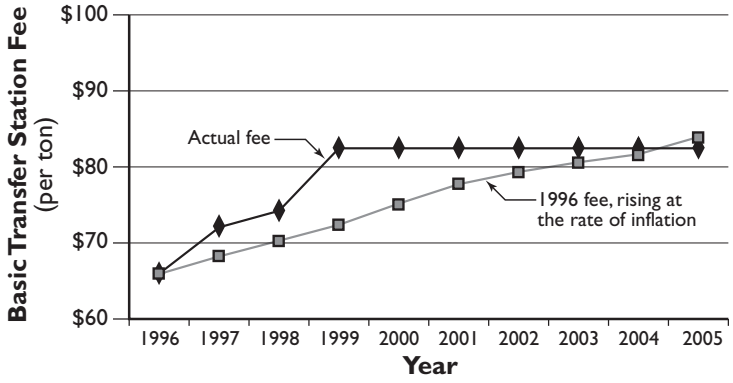
PM-23a. Parks and Recreation Division:
Ballpark fee compared to rate of inflation



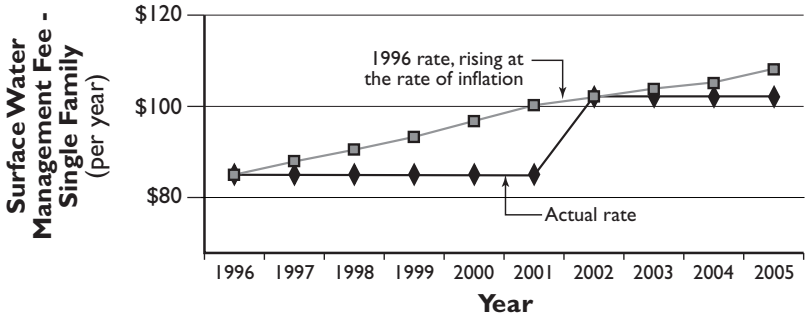
PM-23b. Parks and Recreation Division:
Lap swim fee compared to rate of inflation



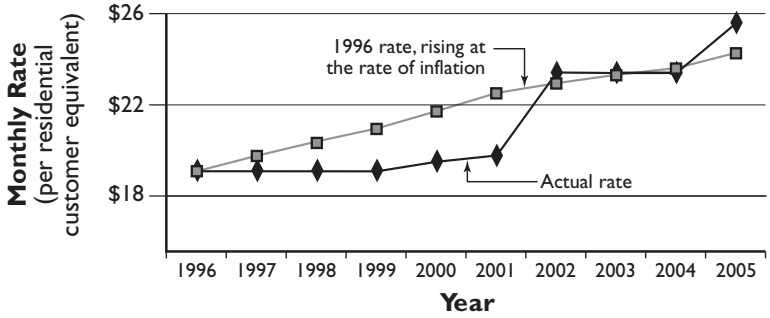
PM-23c. SWD:
Tip fee compared to rate of inflation



PM-23d. WLR:
Surface water management fee compared to rate of inflation



PM-23e. WTD:
Service charge compared to rate of inflation



OBSERVATIONS

Parks

Parks user fees were set very low in 1996, with some services free, reflecting the long-standing practice of subsidizing parks and recreation facilities with general fund, also known as current expense fund, tax revenues. Fees were established in ordinance each year through 2002. There was a fee increase in 2002 in response to the county current expense budget crisis and a significant increase in 2003 in direct response to the County Council mandate to increase fees in order to improve cost recovery for the agency. Youth fees continue to be set at a low rate. After 2003, DNRP was given fee setting authority.

Rates for fee-based park facilities need to be comparable with other jurisdictions, respond to inflation, not be fully subsidized by non-users, and address cost recovery, yet be priced low enough so that the public is provided an important and desired service. In contrast with utility rates in the other divisions, Parks' rates are not expected to stay below CPI because it must make up for historical subsidies by general fund revenues. Under county ordinance, Parks must increase its fees in order to recover a higher percentage of its operating expenses. In contrast, utility fees are generally set to fully recover operating costs.

SWD and WLR

Solid waste rates and surface water management fees were lower in 2005 than if they had simply risen at the rate of inflation over the past ten years. Many factors drive the level of utility rates, including changes in the economy, demand for services, floods and other natural disasters, and changes to the rate base.

WTD

The 2005/6 wastewater rate is slightly higher than if the 1996 rate rose at the level of inflation. Wastewater rate increases over the past few years were due to growth in the capital and operating expenditures to accommodate enhancements at West Point treatment plant, increased energy costs incurred in 2001, and to allow for a stable three-year rate. Such Council approved actions were needed to meet current regulatory requirements and maintain the financial viability of the utility, and will help to minimize long-term rate increases.

OUR STRATEGY

Parks

Under the 2003 Parks omnibus ordinance, Parks has been authorized to recommend fees for the department director's approval, which provides Parks staff the ability to more quickly establish market driven fees. While the Parks 2002 Business Plan indicated that the division needs to increase fees in order to make up for historic subsidization of fee-based park facilities, experience over the last few years has shown that Parks' goal should be to maximize revenues, rather than fees. Revenues from fees leveled off in 2005, which suggests some price sensitivity to fee increases and that an increase in fees may not always increase revenues. As a result, the division has targeted fee increases only where they are warranted, and made efforts to increase user fee revenues in other ways, for example by providing additional services and facility improvements. It is important to note that while fee revenues have leveled off in recent years, the division has increased business revenues through a variety of non-traditional enterprise and entrepreneurial efforts, such as corporate sponsorships, concessions, and facility rentals. In 2005, the division's total business revenues (comprised of user fees and enterprise/entrepreneurial revenues) increased by over 5%. Parks will continue to analyze our fees as well as enhance marketing, partnerships, and public outreach efforts in order to increase overall business revenues and the user base.

SWD
The 2004 SWD Business Plan has an explicit business target to ensure that "rate increase for consumers for the next 20 years are not higher or earlier than projected in the 2001 Solid Waste Plan." The business plan outlines a wide variety of measures to increase efficiencies within the division to keep rate pressure low and ensure this strategy is met. Solid waste rates are currently anticipated to increase, but not until January 1, 2008.

WLR
Maximizing ratepayer value is important to WLR and was a key component of many of the division's policy directives. Due to a variety of factors including revenue reductions due to annexations, increased regulatory requirements and the impacts of inflation, either a surface water rate increase or budget cuts may be considered.

WTD
WTD has been implementing a Productivity Initiative to reduce operating costs and reduce future rate pressure. The division's capital improvement program will require a rate increase in 2007. There will be continuing upward pressure on the rate over the next several years as the Regional Wastewater Services Plan is implemented and investments are made in maintaining and upgrading the utility's system of treatment plants, wastewater conveyance facilities, pump stations, and combined sewer overflows improvements.

The rate was held at $25.60 for 2005 and 2006. WTD proposed to the County Council a rate increase for 2007 that would remain stable for 2007 and 2008 at $28.35. The Council adopted a slightly lower rate ($27.95) by assuming a somewhat lower capital accomplishment rate.

RATING
Information on rates was compiled to allow a qualitative comparison and there are no explicit targets or outcomes for this measure. Below is a listing of how each of the division's fees and rates compare to the Consumer Price Index for 2005.

Parks fees > Consumer Price Index

Solid waste tip fee < Consumer Price Index

Surface/stormwater rate < Consumer Price Index

Wastewater service rate > Consumer Price Index

DATA REFERENCE
DNRP records; Bureau of Labor Statistics (Consumer Price Index data for all urban consumers, Seattle-Tacoma-Bremerton, WA, 1996-2005).

OUTCOME: Department utility rates are reasonable and competitive

PM-24 Percent of anticipated revenue earned from entrepreneurial activities

ABOUT THIS PERFORMANCE MEASURE

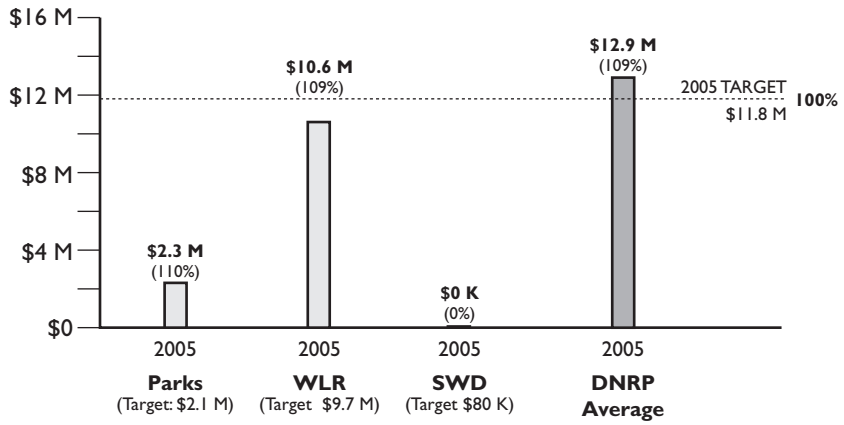
General fund revenues and specific fees have long been the mainstay of many county operations. However, the ongoing King County budget crisis has made DNRP divisions look carefully at finding and increasing non-fee revenues. A major focus of the strategic business planning that has been occurring in DNRP's divisions over the last several years has been to identify specific opportunities for new sources of revenue. This has meant new ways of doing business, including increasing the marketing of our services and capital assets. New revenues, coupled with increasing efficiencies, are expected to allow DNRP to maintain existing service levels into the future while keeping its utility rates stable.

Revenue considered for this performance measure must meet one or more of the following criteria (and not contradict any of the others): leverages other funds; furthers our mission; is entrepreneurial in nature (including by providing services for external customers); or maximizes revenue from existing capital assets.

Each division has its own strategies for generating entrepreneurial, non-fee revenues. Parks' Business Plan focuses on obtaining new revenue from enterprise and entrepreneurial approaches to all lines of business - emphasizing non-traditional Parks revenue streams such as cell tower agreements, concession agreements, operating partnerships, advertising, corporate sponsorships, naming rights, facility rentals, use permits, gravel sales, the King County Fair, grants and foundation donations among other things.

SWD's 2004 Business Plan encourages maximizing revenue from capital assets, such as rent from cell towers, advertising on SWD's truck trailers, selling landfill gas, obtaining rent from currently unutilized land, and grants. WTD produces revenue methane production at South Plant, its cogeneration facilities at West Point and from cell towers. WLR has a diverse mix of non-fee revenue streams including: King Conservation District grants, stormwater services for cities, interlocal watershed services, maps &

PM-24a. Entrepreneurial revenue



publications, and surface water monitoring impact fees. The King County Code directs Conservation Futures tax levy (CFT) allocations to have dollar-for-dollar matching funds. This helps leverage and expand King County's open space acquisition funding resources by requiring that additional non-Conservation Futures funds be obtained. Thus, a significant percentage of CFT matching funds are from federal, state or other city sources. Examples of revenue not included in this measure because they do not meet the above criteria include: pass through funds and Federal Emergency Management Agency cleanup finds.

OBSERVATIONS

Parks

Since adoption of its 2002 business plan, Parks has been empowered to engage in 'good-government' initiatives and embrace non-traditional ways of doing business. This recent transformation from a centrally funded service provider to an entrepreneurial performance-driven organization ensures that parks serve to enhance communities and our regional quality of life, even during tight fiscal times. A four-year voter approved levy currently funds more than 50% of our system and is complemented by a more business minded approach to enacting efficiencies and generating revenue. Business revenues continue to be critical to not only fill a budget gap but also to solidifying the public trust that King County has a Parks system worth continued support.

In 2005 King County Parks revisited how entrepreneurial revenues were tracked. Initially, the business plan projected annual revenue of around $1.2 million from entrepreneurial initiatives narrowly explained as "concert series and parking revenue". With the broad implementation of the business plan, the goal of generating enterprise and entrepreneurial revenue has been integrated into almost every facet of Parks culture allowing for more aggressive generation of enterprise/entrepreneurial revenues across the board.

The new enterprise/entrepreneurial revenue target of a 5% annual increase over the previous year reflects the integration of non-traditional revenue generation in all areas of Parks business by all employees rather than reflecting just a few discrete projects. In 2005, Parks was more successful in generating enterprise/entrepreneurial revenues as a result of relationships cultivated over the first two years of the Business Plan. By the third quarter of 2005, Parks had already met 2005 enterprise/entrepreneurial revenue goal of a 5% increase over 2004.

SWD

SWD's 2005 entrepreneurial revenue target was $80,000 ($50,000 from advertising on trailers and $30,000 from rent from cell towers). Total entrepreneurial revenue earned in 2005 was zero. Reasons for this are as follows: in 2005, SWD explored options for placing advertising signs on the division's trailers. The original bid for this project was too costly and was rejected, however, the bidding company made a counter offer that includes more revenue to SWD as well as a less expensive method of attaching the signs to the trailers and the project is moving forward. SWD expects to begin receiving revenue from this endeavor in 2007.

In addition, although the division does collect revenue from cell towers placed on properties it owns, it was determined in 2005 that any new cell towers would be placed on properties that are owned by the King County Current Expense (CX) fund and not by SWD. Therefore, rent from cell towers placed on these properties goes into the CX fund and does not generate income for the division.

WTD

In prior years, WTD entrepreneurial activities primarily focused on using waste material as resources. South Plant recovered and sold methane gas while the West Point Plant uses its methane gas to produce electricity (cogen). Three new heat and electricity generating pieces of equipment have come on line at South Plant: boilers, fuel cells and cogen. Depending on the degree of usage of this equipment during the year, all of the methane that previously generated revenues is likely to be used in plant operations. In addition, starting in 2005, electricity generated in either plant will be offset against the electricity bills meaning that this will no longer count as "revenue." Due to these changes, 2004 was the last year that methane and cogen electricity could be used as measurable entrepreneurial revenue for WTD.

WLR

This year, the division exceeded its target by 109%. The 2005 target was $9.71 million and actual entrepreneurial revenue in 2005 was $10,627,325. While 2005 was a very successful year, the future level of entrepreneurial revenue for Water and Land is difficult to predict. The division expects a slight increase in contracts from cities for surface water management services due to increased annexations and incorporations. Now that the WRIA recovery plans are completed, WLR hopes that state and federal funds may be available to implement fish habitat restoration projects identified during the planning process.

OUR STRATEGY

Developing new sources of revenue will continue to be an integral part of how the department does business for the foreseeable future. Given the unique and diverse business lines within the department, each division will continue to develop their own revenue goals to meet their business needs.

Parks

Enterprise and entrepreneurial revenues together with user fee revenues comprise business revenues – revenues from sources other than taxes or government subsidy. User fees were significantly increased in 2003, '04 & '05 consistent with policy direction to reduce tax subsidy of active recreation facilities. User fee revenues in 2004 & 2005 leveled off with a decrease in the number of users. For 2006, fees will be held stable to reflect market conditions and avoid further drop-off in usage and revenue.

While traditional user fee revenues (pools & ballfield revenues) have stabilized, non-traditional enterprise/entrepreneurial revenues are increasing. As DNRP develops strategies for long-term funding options, including a possible levy – Parks will maximize enterprise & entrepreneurial revenue and continue to explore strategies (enterprise/entrepreneurial revenues, efficiencies) to minimize tax subsidy needed for active recreation facilities.

In an effort to increase revenues and leverage capital funds, Parks continues to aggressively pursue mutually beneficial and financially lucrative corporate, non-profit and community based partnerships through the Partnership for Parks program. Partnership for Parks initiatives can include: Concessions (Subway, Coffee, Dog Wash, Pepsi, etc.); Naming Rights (Group Health Velodrome, MSN Wi-Fi Hotspot); Event Sponsorships (US Bank Concerts at Marymoor, First Tech Movies at Marymoor); Gifts/Grants (Starbucks Trail Wayfinding Kiosks); Marketing/Advertising (Dasani Blue Bikes, Ballfield Signs,

Vehicle Ads); Utilities & Lease Agreements (cell towers, easements, Cirque du Soleil, ATMs); and Public/Private Real Estate Development (Lodges, Hotels or Spas among many other projects).

In 2005 the Partnership for Parks expanded to negotiate a diversified enterprise/entrepreneurial revenue base that brought in revenue commitments of over $2 million.

Parks will continue to implement its revenue enhancement strategic plan which positions King County Parks as an advertising partner, program and event facilitator, and entrepreneur. Parks staff will pursue revenue-generating opportunities by continuing to meet with and coordinate revenue based proposals with corporate entities; continuing exploratory meetings with media partners for event and program promotion, sponsorship and revenue based initiatives. In addition, Parks staff will issue an annual Request for Ideas & Proposals to generate new profit centers and lines of business for the division.

SWD

SWD plans to generate entrepreneurial revenue in the future by maximizing revenue from existing capital assets, including revenue from trailer advertisements and the eventual sale of landfill gas.

WLR

WLR will focus on receiving full cost recovery under contracts and providing services that are not available from other providers.

WTD

WTD's entrepreneurial activities focus on using waste material as resources wherever possible. Due to adopting recommended accounting changes for cogen and operational use of methane, the largest sources of previous entrepreneurial revenue from WTD, cannot be included in future revenue targets.

RATING

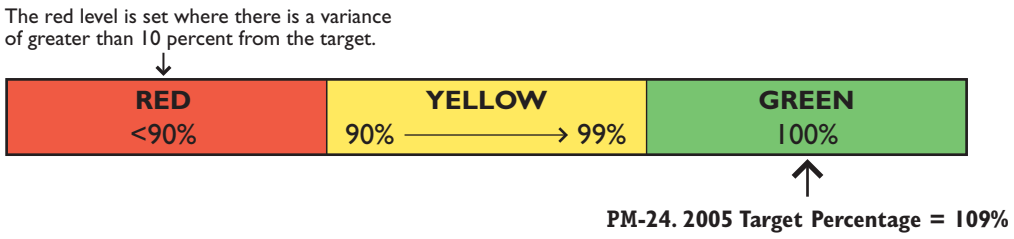
Results and Target

2005 Results: 109% percent of target ($12,927,325 earned in entrepreneurial revenue)

2005 Target: 100 percent of $11.81 million target

Entrepreneurial revenue targets are for the current year only.

Performance-to-Target and Performance-to-Outcome Ranges and Ratings



DATA REFERENCE

Solid Waste Division 2004 Business Plan; Parks and Recreation Division, *Business Transition Plan: Phase II Report; Wastewater Treatment Division Productivity Initiative Annual Report*; Water and Land Resources Division Finance Section.

OUTCOME: Department utility rates are reasonable and competitive

Efficiency of key operations

PM-25

ABOUT THIS PERFORMANCE MEASURE

In addition to the other Price of Service measures already presented (Nos. 22-24), this measure includes a variety of formal efficiency measures. An efficiency measure is defined based on the relationship between inputs and outputs; or how well the agency used the resources in relation to the output produced.

Since our department produces distinct outputs associated with several core businesses, this measure has a separate measure for each division. By design, these measures are meant to capture significant portions of each division's efforts. These efficiency measures should be looked at in conjunction with the agency performance measures and environmental indicators elsewhere in the report. The department wants to ensure that we are simultaneously producing the desired organizational and environmental results in the most efficient way possible.

For Parks, the efficiency measure is the amount of Parks' acres maintained per full time equivalent employee working directly on maintaining park sites and facilities. This measure is designed to track the ability of Parks to manage lands given a relatively static staffing level. For SWD, the efficiency measure is the transfer station operating costs per ton of solid waste. This measure tracks the operating costs at the division's 10 geographically dispersed transfer facilities (eight transfer stations and two drop boxes). For WTD, total operating costs have been used in the efficiency measure: cost per pound of biological oxygen demand (BOD) and total suspended solids (TSS) removed. This measure shows the cost per unit effort of how much waste removal is achieved through the wastewater treatment process.

For WLR, a new efficiency measure was designed in 2006. This measure takes four of the division's largest revenue sources and measures their efficiency by principal or "sentinel" task(s). WLR administers a multitude of programs funded from over forty different sources, therefore it is impossible to quantify a single all-encompassing "outcome" for the division.

For the surface water, river improvement and hazardous waste measures, only the efficiency of a principal or primary activity of a much larger program is being measured – what are called "sentinel" indicators. We chose sentinel indicators to represent the efficiency of the larger program because it is challenging to measure something we don't produce (rain water, surface water, or hazardous waste) and almost impossible to quantify. For example, it is impossible to measure how many gallons of river flow are held back by levees or revetments or how many gallons of surface water is retained or filtered by surface water facilities.

The hazardous waste program is working towards an outcome-based efficiency measure that would track total pounds of hazardous chemicals no longer used and of hazardous wastes no longer generated, but it is still a work in progress.

The river improvement fund measure will be developed during this year and reported in next year's Measuring for Results.

OBSERVATIONS

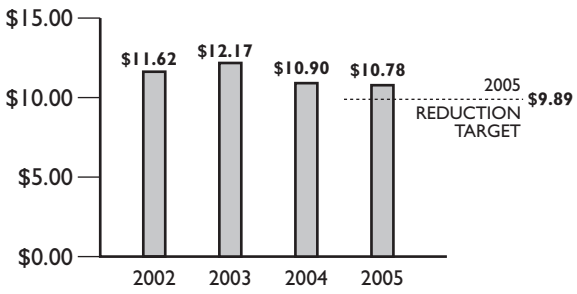
Parks

The Parks division is maintaining more acres of park land per FTE than in previous years. The division manages over 24,000 acres of park and natural lands, 175 miles of regional trails, and regional park facilities such as the King County Aquatic Center. Work includes mowing, habitat restoration, and cleaning and maintaining restrooms, athletic fields and pools. Prior to 2004, Parks worked under a different business model, managing more properties and recreation programs located in incorporated or urban areas. With the 2004 business plan and voter-approved levy, the division transferred many local facilities to cities and other entities, and now focuses more on managing regional parks and trails. Regional trails, natural lands, and passive parks now comprise a higher proportion of the parks inventory than they did prior to 2004.

As a result of this changed asset mix and reorganization, data prior to 2004 would be problematic and not easily comparable. The 2006 target is based on adding 1,000 acres of resource to the Parks maintenance responsibilities, and we expect to continue to see modest increases in the Parks inventory of natural lands and trails in the future. However, it should be noted that future interpretations of this performance measure must recognize any potential change in Parks' asset mix as well as any deliberate level of service adjustments that may occur.

SWD

PM-25a. Transfer station operating costs per ton of solid waste



The King County transfer stations are facilities where hauling companies, businesses, and King County residents can bring their waste for disposal. The waste is consolidated at the transfer stations and then transported to the Cedar Hills Regional Landfill. SWD's transfer system operating costs include costs for transfer station staffing (Transfer Station Operators and Scale Operators), utilities, equipment repair and maintenance, and equipment replacement, but not the cost of transportof waste to Cedar Hills. Estimates for 2002 - 2005 are based on actual labor and utility costs and estimated equipment related costs. The total is divided by transfer system tonnage.

This performance measure includes costs for commercial and self-haul customers at all Solid Waste Division transfer facilities, including rural transfer stations and drop boxes. One important factor driving the declining cost per ton in 2004 and 2005 is the increase in tons of waste being taken to the transfer stations by private haulers. This increase is due to an increase in the rate charged to haulers that take waste directly to the Cedar Hills Landfill (aka the "regional direct fee") instead of to the transfer stations. A portion of our staffing costs are fixed and the tonnage shift allows us to spread these fixed costs over more tons.

WLR

Noxious Weeds: Noxious Weed Program expenditures / area of infestations controlled = cost per unit area infestations controlled

Over the past two years, the Noxious Weeds Program has seen a reduction in the cost per unit area of noxious weed infestations controlled. This is because a larger area of noxious weeds has been kept under control.

This trend in efficiency is explained by increasing levels of voluntary citizen weed control compliance due to program education and outreach activities. In addition, economies of scale also partly contributed to this trend because it is cheaper to keep fewer, larger infestations under control than a multitude of smaller ones. This is confirmed by looking at the number of sites and total area of infestations controlled. In 2004, 3859 infestations covering an area of 6,688,651 square feet were controlled. In 2005, 3772 infestations covering an area of 9,872,000 square feet were controlled. So in 2004, there were fewer infestations covering a smaller area that were more expensive to control than more infestations covering a larger area in 2005.
Some future variability in this efficiency measure may be expected due to: seasonal climactic changes, the level of citizen engagement in helping to identify, report, and control weeds, and the addition of new weeds to the noxious weeds list.

Hazardous Waste: EnviroStars Program costs / number of EnviroStars-recognized businesses

The EnviroStars Program is a customer incentive program that recognizes businesses that generate less hazardous waste. This measure provides a cost to the program for each business recognized in the program. Costs used to calculate this efficiency include salary and benefits, administrative, overhead and program costs such as advertising. In 2005 the program was able to become more efficient and the per business cost of EnviroStar recognition decreased by $245. These efficiency gains are expected to level off as they were attributed to the program reaching maturity.

Surface Water Management: Facility maintenance/mowing costs (WLR & Roads) / number of facilities maintained

For surface water management, maintenance of surface water facilities was chosen as a sentinel measure of the program's efficiency. Facility maintenance is one of the primary responsibilities of surface water fees as described in its enabling legislation. Costs used to calculate the efficiency of this activity include labor and mowing. Labor efficiency is important for the division to track since facility maintenance work is performed by King County's Roads Division in the Department of Transportation.

This measure will be refined over the next year to account for differences in maintenance schedules and demands that vary by the facilities' type, age and degree of sophistication.

River Improvement Fund: Facility maintenance costs / number of river protection facilities (levees & revetments) maintained

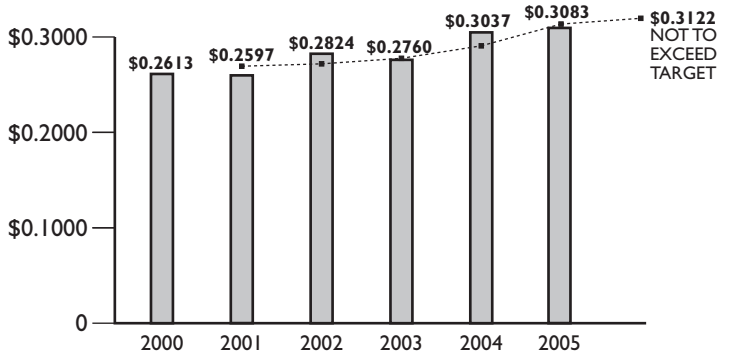
For the River Improvement Fund, the sentinel measure of labor costs to maintain river levees and revetments was chosen. Maintenance of levees and revetments are one of the primary responsibilities of the River Improvement Fund as described in its enabling legislation and the importance that they retain river flows and prevent flooding is

obvious. As with the maintenance of surface water management facilities, labor efficiency is important for the division to track because this work is done by King County's Roads Division in the Department of Transportation.

This measure will be developed during 2006. Tracking these costs is difficult because of differences in how facilities are distinguished and billed by the Roads Division.

WTD

PM-25b. Cost per pound of biological oxygen demand and total suspended solids removed during treatment process



WTD measures efficiency as cost per pound of Biological Oxygen Demand (BOD) and Total Suspended Solids (TSS) removed during the treatment process. Both of these parameters are measured in treatment plant influent and effluent in milligrams per liter (mg/L) and then converted to pounds. BOD and TSS removal during the treatment process is the outcome selected because removal of these pollutants is the ultimate design parameter for the treatment plants. BOD and TSS are the primary pollutants that the treatment process is designed to remove, and these are the pollutants directly monitored and regulated in the plants' water quality permits. Therefore, WTD's total efficiency as an agency can be measured by total operating costs per pound of BOD and TSS removed from wastewater effluent during the treatment process. Operating costs used to calculate total agency efficiency include all costs that the division has some control over: operating costs for the treatment plants and support services located in King Street Center, the Environmental Laboratory, and Industrial Waste Pre-treatment Program. It does not include capital costs or administrative costs WTD pays to other agencies.

The division's target is for the cost to increase no more than the rate of inflation, a target that requires savings through the Productivity Initiative. In 2005, WTD achieved its target. The cost per pound was $0.3083 compared to a target of $0.3119. Savings that were achieved were attributed to better internal monitoring systems in place to track new work more accurately, employee initiated savings actions and a higher than anticipated vacancy rate.

This measure is affected both by actual costs of operation and by variability in the pounds of BOD and TSS coming into the plants. The amount of BOD and TSS can be affected by rainfall and industrial activity and the amount reported can be affected by measurement variability and technique. For example, West Point changed its measurement method due to its NPDES permit and this resulted in a small decline in the measured amount of BOD. Typically, BOD and TSS vary by a greater percentage than expenditures. Because so much of WTD's operating costs are fixed costs that WTD incurs regardless of a yearly change in the BOD and TSS removed, the year-to-year variations are not as meaningful as the trend over time. Due to the challenges posed by the variability in the pounds of BOD and TSS coming into the plants, a new efficiency measure will be developed in 2006 for WTD.

OUR STRATEGY

The AGA peer review of the Measuring for Results - 2003 report indicated that performance reports should present efficiency measures to enable "readers to evaluate the efficiency and cost effectiveness with which resources have been used." These efficiency measures, first developed in 2004, as well as departmental budget information presented in Appendix I, are designed to meet this important need. The efficiency measures have been improved upon since the 2004 report to reflect AGA peer review feedback received for the Measuring for Results – 2004 report. Specific modifications include clarification of the costs and outputs being measured for Parks and Solid Waste, and revision of WLR's efficiency measure to reflect costs per units of outputs/ outcomes, rather than a revenue per output measure that was previously reported.

Parks

Parks plans to acquire key properties while maintaining current staffing levels. By increasing volunteer efforts through our programs, such as Park Ambassadors, Adopt-a-Park, and Community Partnership Grants, and continuing our partnerships with agencies, such as the Washington Trails Association and Earthcorps, we hope to continue to improve our existing service levels.

Parks will strive to maintain park lands cost-effectively, within the restrictions of the acquisition funding sources. Prior to acquisitions, funding to support the annual cost of the land management plan will be identified. This type of pre-acquisition evaluation will avoid costly liabilities, such as environmental hazards (including mine shafts, methamphetamine labs, and noxious weed infestations), and recognize existing inappropriate public uses, which may require costly management.

Factors considered in site maintenance plans include:

1. Public and employee safety (for example: injury may result if maintenance action not taken)
2. Mandated requirements subject to potential fines if not performed (for example: various required permits, sensitive areas protection, ESA, integrated pest management, drainage maintenance)
3. Scheduled (revenue generating) use of park assets (for example: athletic leagues, picnics, weddings, large special events, revenue would be lost if maintenance action is not taken)
4. High community expectations and visibility projects (for example: East Lake Sammamish Trail, new athletic fields or community centers)
5. Storm damage and other natural event problems to the park system
6. Preserve and protect projects (for example: roof repairs or field maintenance, if not done, further damage occurs); and
7. Unscheduled public use (for example: trail use, drop in athletic play, dog off-leash use)

SWD

The Solid Waste Division is undergoing a multi-year process to improve the efficiency of its operation, guided by its 2004 Business Plan. Beyond increasing the number of tons in the transfer cost per ton measure, the most important initiative that affects the transfer costs is to better match facility operating hours to demand. Rural facilities, where tonnage is very low, are now open for 40 hours per week instead of 70 hours. Conversely, one of the urban facilities is now open around the clock on weekdays and another is open from 6:15 a.m. until 11:30 p.m., reflecting higher tonnage. SWD will adjust hours in the future on an as needed basis to ensure that the division is maintaining both an efficient operation and appropriate service levels.

WLR

Whenever possible, the Noxious Weeds Program looks for large parcels with large infestations to control. As explained in the Observations section, because of efficiencies of scale control of larger infestations is cheaper than control of smaller infestations at many different sites. The program will continue to look for and control large infestations but expects a fair amount of fluctuation in the efficiency of its control efforts over the next several years. Marketing, education and citizen reports of infestations have much potential to help the program gain this efficiency.

For Hazardous Waste, the program expects some leveling off over the next few years as the EnviroStars Program matures further. Gains made in 2005 from 2004 are expected to slow.

For Surface Water Management, it will be important to track and negotiate labor practices, machine usage and maintenance schedules with the Roads Division at the Department of Transportation. The results of this measure may be particularly useful to WLR in approaching these discussions. Targets are being set so as to account for inflation.

WTD

WTD's strategy for maintaining efficiency consists of its Productivity Initiative, an effort to improve how the entire wastewater treatment program delivers its services to the public. The Productivity Initiative includes business plans to identify specific savings, a balanced scorecard performance measurement system to measure performance, and an incentive fund to return savings to employees as well as ratepayers.

RATING

Results and Target

Efficiency targets are for the current year only.

PM-25a. Parks

2005 Results:	274 acres maintained/FTE working directly on maintenance
2005 Target:	none, new measure established in 2006

PM-25b. SWD

2005 Results:	$10.78 per ton
2005 Target:	$9.89 per ton

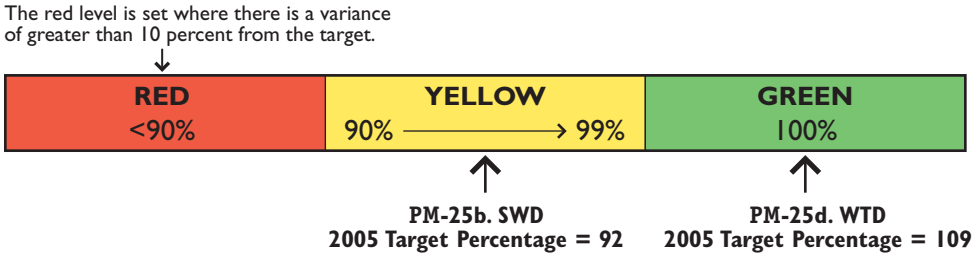
PM-25c. WLR

2005 Results:	
Noxious Weeds:	10.45 cents / square foot
Hazardous Waste:	$547 per business
Surface Water:	$1013 per facility
Rivers:	In progress
2005 Targets:	none, new measures established in 2006

PM-25d. WTD

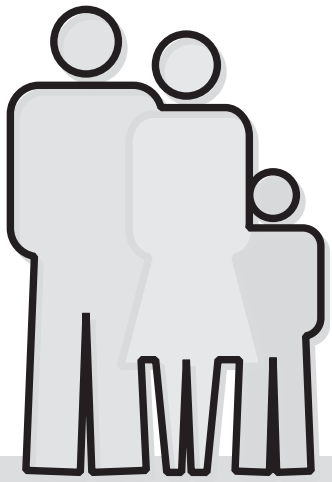
2005 Results:	$0.3083 per pound of BOD & TSS removed
2005 Target:	$0.3119 per pound of BOD & TSS removed (not to exceed target)

Performance-to-Target and Performance-to-Outcome Ranges and Ratings



DATA REFERENCE

Solid Waste Division 2004 Business Plan; Parks and Recreation Division, *Business Transition Plan: Phase II Report*; Wastewater Treatment Division Productivity Initiative Annual Reports, division budget data.



PERFORMANCE MEASURES
CUSTOMER SATISFACTION

OUTCOME: Customers are satisfied with the services and benefits they receive

Customer Satisfaction Ratings for DNRP Services and Programs

PM-26

ABOUT THIS PERFORMANCE MEASURE

Customer service is a cornerstone of good performance. The challenge for a large, complex organization is to determine what specific aspects of its operations merit customer feedback. Rather than ask a generic, broad-based customer satisfaction question to residents, each division has surveyed specific groups of customers on which programs have direct impacts. In most cases, "customer" refers to targeted segments of the public who have requested services or participated in a DNRP program; in one case (wastewater treatment), customers are municipalities who directly use our services, not individual residents.

Parks conducted its first customer service survey in 2003. The on-line survey was publicized through newspaper stories and regional user groups. More than 1,100 people took the survey to provide feedback on a number of subjects. The 2004 survey had 273 respondents. In December of 2005, the Parks Division launched a three month pilot web-based survey in parts of our system to gather customer feedback and respond immediately to maintenance concerns. During the pilot period, the Division received over 170 responses.

For SWD, customer surveys are conducted with transfer station and Wastemobile customers as well as with participants in secondary schools education programs. The transfer station survey is conducted every two years. The Wastemobile Education Program informs King County residents about waste reduction, proper management, and recycling opportunities related to household hazardous waste. The Wastemobile survey is conducted every few years on an as needed basis. SWD also provides educational programs on recycling, waste reduction, and resource conservation to students in grades 1 through 12, and on household hazardous waste to teachers of grades 4 through 12 and their students. A variety of educational approaches are used including workshops, classroom presentations, interactive assembly shows, and classroom and community projects. The teacher satisfaction and student learning surveys are conducted every year.

WLR used customer feedback related to their drainage complaint services. The Stormwater Services section of the division distributes survey cards to residents that have registered a drainage complaint.

WTD used data from their Wastewater Contract Services survey, which assesses the attitudes of component agencies that have sewer service agreements with WTD. WTD also receives customer satisfaction information from industrial discharge permit holders, via a survey conducted every two years.

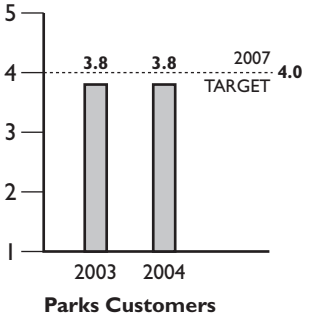
This year, DNRP is adding the King County GIS Center to this performance measure. The KCGIS Center, a unit within DNRP, has been conducting customer satisfaction surveys since 2004. These surveys are distributed to all customers of the client services unit, as well as matrix services customers in the Parks and Solid Waste divisions. Client services customers include county staff, cities, utilities, fire departments, private companies, non-profits, and citizens, essentially anyone requesting GIS services. Matrix services customers surveyed are limited to county staff working for the two divisions.

OBSERVATIONS

Parks

Customer satisfaction remains a key factor to Parks' success. Due to the limited duration of the pilot in 2005, the Parks Division does not have data for this reporting period. However, anecdotal data from the pilot suggests that immediate responses to customer concerns and integration of user feedback into the maintenance of operations of parks is critical to improving customer experiences. Also, with over 170 responses the satisfaction score (based on responses to the question, 'would you recommend this facility to a friend?') has ranged from 3.8 to 4.6 out of 5.

PM-26a. Parks customer satisfaction rating



Parks Customers

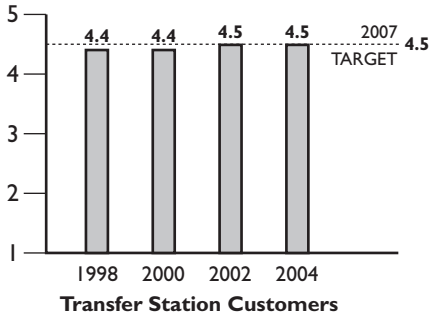
SWD

Customer satisfaction surveys are conducted for three SWD services/programs: transfer stations, the Wastemobile, and school-based waste reduction and recycling education. The surveys are conducted on varying schedules.

A survey was not conducted at the transfer stations in 2005; therefore there is no customer satisfaction data for this report. The survey is conducted every two years and will be conducted again in 2006. The Wastemobile on-site Education Program did not conduct a formal customer survey in 2005. The Program did collect anecdotal information from customers as it spoke to them one-on-one at the Wastemobile. In 2005, customers thought that the Wastemobile was a service that answered their questions and did a good job of providing information about using less toxic products to reduce hazardous waste.

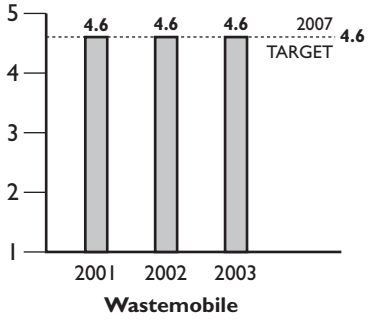
A survey of the Elementary, Middle, and High School Waste Reduction and Recycling Education Programs was conducted for 2004-2005. In addition to questions on satisfaction and learning, the school survey asked elementary teachers to report any activities they did or behaviors they changed with their classrooms as a result of the program. Over 69 percent said their classroom had started or improved recycling habits as a result of the program. Forty-three percent said they had reduced classroom or lunchtime waste and over 27 percent noted there was less littering and more litter pick-up by their students. These teachers and students have translated Solid Waste Division messages into constructive actions, a further indication of the program's effectiveness.

PM-26b. "Customer Service, Waste Service & Physical Facility" Rating



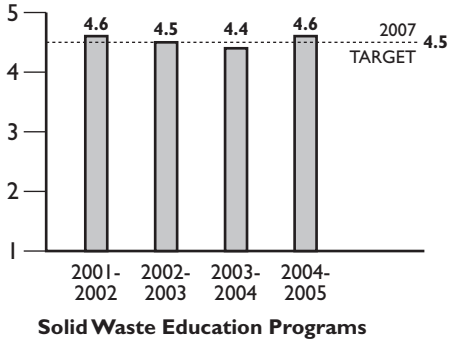
Transfer Station Customers

PM-26c. "Customer satisfaction rating"



Wastemobile

PM-26d. "Satisfaction Rating"

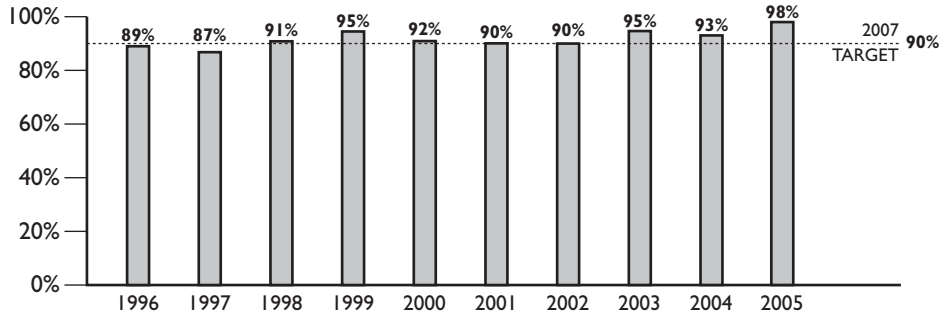


Solid Waste Education Programs

WLR

The Stormwater Services section has been collecting customer feedback for ten years to track, modify, and improve how engineers and technicians treat and respond to customer needs. The number of residents that respond to the Stormwater Services customer complaint cards correlates with rain events so that during rain events more survey responses are received. Stormwater Services used responses to track attitudes and levels of customer service. Training and education were offered to staff when performance measures fell below goals. The success of this effort is reflected in the very high ratings.

PM-26e. "Customer Service Rating"

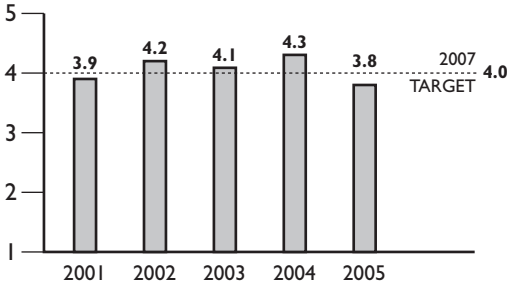


Drainage Services

WTD

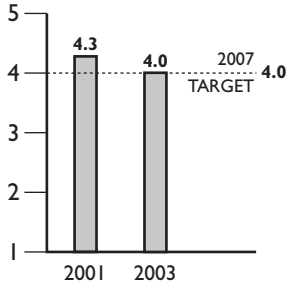
In 2005 the customer satisfaction rating from the municipal wastewater service contract customers fell below the target. WTD is currently renegotiating contracts with all of the wastewater service contract customers and some issues were unresolved at the time of the survey. It is anticipated that customer satisfaction ratings will improve once contract negotiations are completed. Budget considerations caused the Industrial Waste Program survey to be changed from biannual to a triannual survey. The next survey will be done in 2006.

PM-26f. "Satisfaction with Quality of Customer Service"



Wastewater Contract Service Customers

PM-26g. "Quality of Customer Service"



Industrial Waste Customers

KCGIS Center

In 2005, KC GIS Center customers gave client services and matrix services uniformly high satisfaction ratings. These findings substantiate the KCGIS Center's continuous emphasis and focus on providing quality services and products.

Parks

The web-based feedback tool has helped the division identify areas of concern in the system and immediately respond to customers. This consistent feedback loop is one tool we are using to connect to our citizen and user groups. Parks users are pleasantly surprised when they promptly receive a reply to their concerns and efforts are made to resolve their issues. The Parks Division is launching www.parksfeedback.com system-wide and will have comprehensive data to report for 2006.

SWD

The division has changed operating hours at several stations to accommodate the increased demand from hauler customers, primarily due to the increased regional direct rate. The entire transport system is under review and analysis for improvement as the region prepares for waste export over the next 10 years. This will result in significant capital improvement and construction activity at urban stations that could impact customer satisfaction. In 2006, the First Northeast Station will undergo major remodeling and will be closed for 14 months. Surveys will continue to be conducted at the transfer stations every two years to monitor division service.

Educational programs are evaluated for teacher satisfaction using written surveys, and for student learning using pre- and post-tests. Evaluation results are used to make adjustments to programs to ensure that teacher and student needs are being met. Since teacher satisfaction with the programs has been consistently high over the years, most of the program modifications have come as a result of student pre and post-test scores. When scores indicate that students already have a high awareness of a particular concept, the program is modified to incorporate new, more complex material. In 2004-05 student tests were modified somewhat. All questions on litter and litter prevention were dropped because previous results showed that students were already highly aware of litter as an environmental problem and of the means to address it. These were replaced with other questions more specific to the workshop themes of consumption and sustainability and the impact students' choices have on the environment.

WLR

WLR's 2004 Business Plan put a strong focus on key program areas, such as stormwater services and CAO implementation. In 2005, WLR developed and implemented a customer feedback process modeled on the current stormwater services system.

WTD

The Metropolitan Water Pollution Abatement Advisory Committee, made up of wastewater service contract customers, has moved from quarterly to monthly meetings. In addition, WTD and the committee have agreed to examine wastewater program issues of greatest concern to local jurisdictions. Also, once contract negotiations with the wastewater service contract customers have been completed with all issues resolved, customer satisfaction ratings are expected to rise. These developments should move us closer to the five-year target on customer satisfaction.

The Industrial Waste Program is working to maintain its high customer service rating by continuing its policy of being responsive to customer needs. The 2003 survey

identified technical assistance as being a high priority for the customers. The program plans to focus its outreach efforts on technical assistance in 2005. In the 2006 survey, the program will seek clarification on the types of technical assistance desired by its customers.

KC GIS Center

The KCGIS Center will continue to survey customers, asking for their feedback and comment to ensure that service levels remain high. This year the KCGIS Center instituted an annual online survey to solicit feedback from customers using our Web mapping services. Initial results from the 2006 survey are encouraging. Feedback from these surveys will be used to guide enhancements to these popular services.

RATING

Results, Target and Outcome

PM-26a. Parks Customers
2005 Results: Pilot Year
2007 Target: 4.0
Outcome: 4.0

PM-26b. Transfer Station Customers
2005 Results: None
2007 Target: 4.5
Outcome: 4.5

PM-26c. Wastemobile Customers
2004 Results: None
2007 Target: 4.6
Outcome: 4.6

PM-26d. Solid Waste Education Programs
2005 Results: 4.6 out of 5
2007 Target: 4.5
Outcome: 4.5

PM-26e. Drainage Services
2005 Results: 98 percent
2007 Target: 90 percent
Outcome: 90 percent

PM-26f. Wastewater Customers
2005 Results: 3.8 out of 5
2007 Target: 4.0
Outcome: 4.0

PM-26g. Industrial Waste Customers
2003 Results: 4 out of 5
2007 Target: 4
Outcome: 4

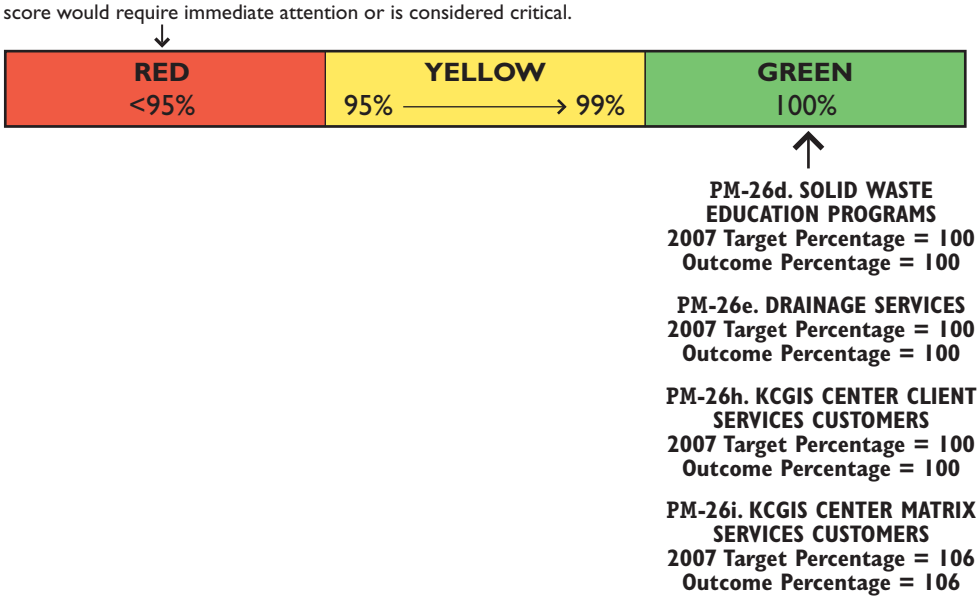
PM-26h. KC GIS Center Client Services Customers
2005 Results: 4.8 out of 5.0
2007 Target: 4.5
Outcome: 4.5

PM-26i. KC GIS Center Matrix Services Customers
2005 Results: 4.8 out of 5.0
2007 Target: 4.5
Outcome: 4.5

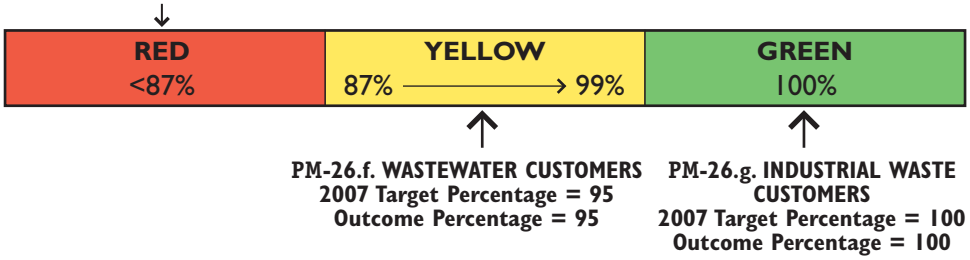
The long-term outcome is a high degree of customer satisfaction (scores of 4 to 4.5 on a 5-point scale or 90 percent or higher) based on a variety of customer satisfaction surveys.

Performance-to-Target and Performance-to-Outcome Ranges and Ratings

Red level for almost all customer satisfaction scores is set where a lower score would require immediate attention or is considered critical.

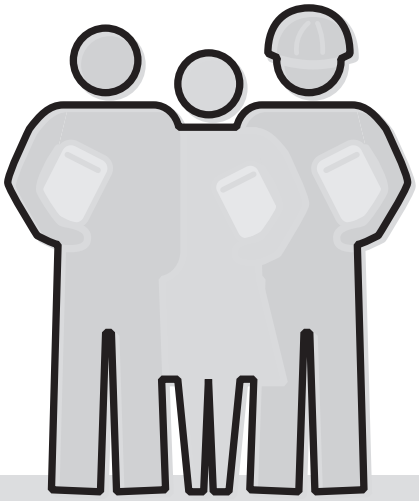


For the two WTD customer measures with outcomes set at 4, the red level represents a score below 3.5 out of 5. This level is somewhat lower due in part because a higher score for the Industrial Waste program may mean that the regulatory program is being too lenient.



DATA REFERENCE

WLR, SWD, and WTD; 2004-2005 King County-Solid Waste Division Evaluation of the KC-SWD Elementary, Middle, and High School Waste Reduction and Recycling Education Programs; *2004 Water and Land Resources Division Business Plan*; Industrial Waste Program Customer Survey Research Report, 2003; 2004 WTD Balanced Scorecard Survey; 2005 KC GIS Center Customer Satisfaction Survey.



PERFORMANCE MEASURES
EMPLOYEE INVOLVEMENT AND MORALE

OUTCOME: DNRP consists of a forward thinking workforce where employees are engaged in our business, involved in decisions that affect them, and understand their role in achieving the DNRP vision

Employee rating of workplace practices

PM-27

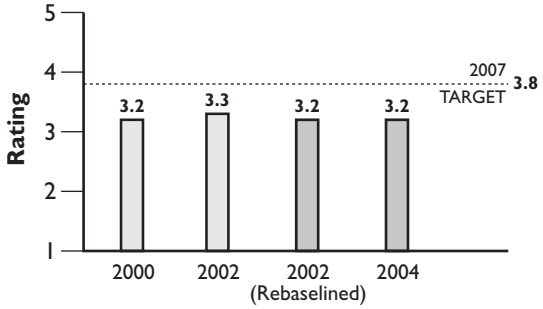
ABOUT THIS PERFORMANCE MEASURE

One important aspect of employee involvement and morale is the degree to which employees believe their workplace is a positive working environment. Effective organizations require a culture that promotes excellence, innovation, customer orientation and accountability. This measure, on workplace practices, focuses on employees' ratings of a variety of management practices, leadership and decision-making issues.

Ten separate questions from the DNRP employee survey are clustered together to derive a composite score for this performance measure. The score is on a one to five scale, with five being the highest. Questions in this measure cover a wide range of issues including: employee accountability; management behavior and responsiveness; openness to new ideas; the effectiveness of teams; the degree of cooperation between management and unions; and providing quality services to customers.

The first two bars in the graph reflect scores from the initial 2000/2001 survey compared with the 2002 survey using identical questions. The second two bars reflect a new baseline in which some of the questions in the 2002 survey differ from the items included in the 2000/2001 survey and therefore the previous scores are not strictly comparable. The 2004 survey was identical to the 2002 survey. The survey is conducted every two years; therefore there is no new data for 2005.

PM-27a. Employee rating of workplace practices



OBSERVATIONS

The scale for questions included in this measure is: strongly disagree, disagree, neither agree nor disagree, agree, and strongly agree. A three out of four rating equates to a "neither agree nor disagree" answer. This measure had the lowest score of the four employee-related measures, only slightly above the midpoint on the 5-point scale.

OUR STRATEGY

The DNRP management team is evaluating issues of organizational accountability that arose from questions associated with this measure. Divisional focus groups identified areas of common concerns and strategies for improving accountability are being

developed and implemented at both the division and department level. As a result of this work, the department director has implemented a new performance appraisal approach for managers that report directly to her. Additional actions include training supervisors to deal with harassment and disruptive behavior in the workplace and increased coordination of disciplinary actions by Human Resources.

RATING

Results, Target and Outcome

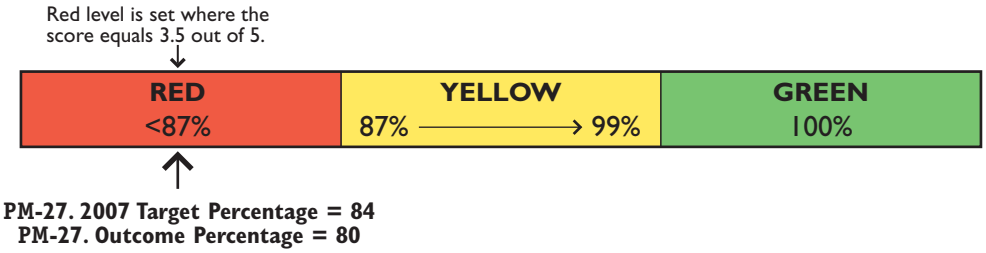
2004 Results: 3.2 out of 5

2007 Target: 3.8

Outcome: 4.0

The long-term outcome for this measure is a 4.0 rating.

Performance-to-Target and Performance-to-Outcome Ranges and Ratings



PM-27. 2007 Target Percentage = 84
PM-27. Outcome Percentage = 80

DATA REFERENCE

DNRP Department-wide 2004 Employee Survey Research Report.

OUTCOME: DNRP consists of a forward thinking workforce where employees are engaged in our business, involved in decisions that affect them, and understand their role in achieving the DNRP vision

Employee rating of the availability of resources

PM-28

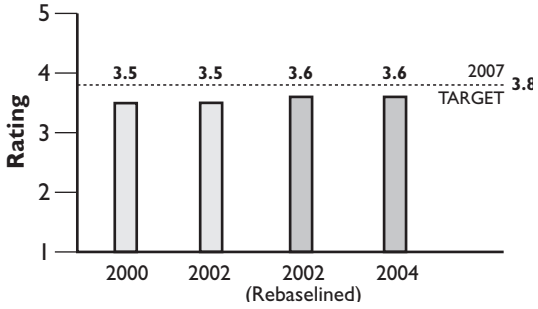
ABOUT THIS PERFORMANCE MEASURE

One aspect of employee morale is that employees have the necessary resources required to do their jobs. Resources in this context are considered broadly and include information, equipment, tools and supplies. This measure focuses on employees' ratings of the availability of those critical resources.

Four separate questions from the DNRP employee survey are clustered together to derive a composite score for the performance measure. The score is on a one to five scale, with five being the highest. Questions included in this measure included: access to equipment, tools and supplies; receiving information in a timely manner; clear understanding of job expectations; and investments in improving employee skills.

The first two bars in the graph reflect scores from the initial 2000/2001 survey compared with the 2002 survey using identical questions. The second two bars reflect a new baseline in which some of the questions in the 2002 survey differ from the items included in the 2000/2001 survey and therefore the previous scores are not strictly comparable. The 2004 survey was identical to the 2002 survey. The survey is conducted every two years; therefore there is no new data for 2005.

PM-28a. Employee rating of available resources



OBSERVATIONS

The scale for questions included in this measure is: strongly disagree, disagree, neither agree nor disagree, agree, and strongly agree. A four out of five rating equates to an "agree" answer. The score for this measure indicates that the department can go further in improving the availability of resources for employees.

OUR STRATEGY

In response to the initial employee survey and division initiatives, training to meet business needs and access to equipment and information has been targeted. Each division regards training and staff development as key factors to achieve their business objectives. DNRP has a 100 percent target for all supervisors and managers to complete

four training modules on "Managing Individual Performance," which includes clearly communicating job expectations.

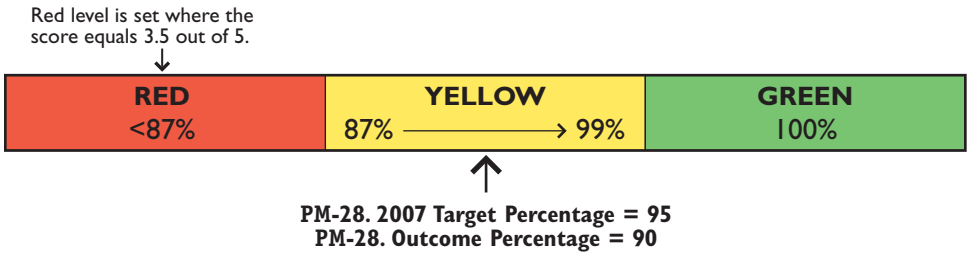
RATING

Results, Target and Outcome

2004 Results: 3.6 out of 5
2007 Target: 3.8
Outcome: 4.0

The 2007 target for this measure is set below the 4.0 outcome due to expected impacts from the county's ongoing budget issues. The long-term outcome for this measure is a 4.0 rating.

Performance-to-Target and Performance-to-Outcome Ranges and Ratings



DATA REFERENCE

DNRP Department-wide 2004 Employee Survey Research Report.

OUTCOME: DNRP consists of a forward thinking workforce where employees are engaged in our business, involved in decisions that affect them, and understand their role in achieving the DNRP vision

Employee rating of job satisfaction

PM-29

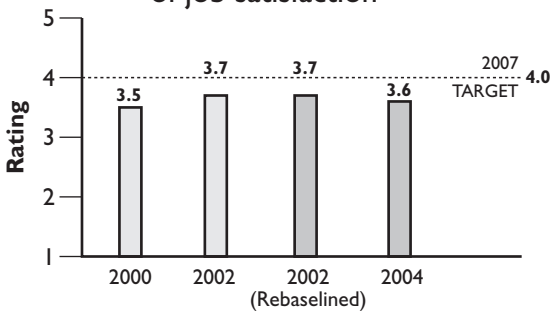
ABOUT THIS PERFORMANCE MEASURE

Job satisfaction is one of the most important features of employee morale. Satisfied employees contribute to higher quality service and productivity for the organization. This measure focuses on employees' ratings of their satisfaction, their value to the organization, and communication between employees and their supervisors.

Ten separate questions from the DNRP employee survey are clustered together to derive a composite score for this performance measure on a one to five scale, with five being the highest. Questions included in this measure included: overall job satisfaction; satisfaction with involvement in decision-making; feeling valued for work done by the employee; a spirit of teamwork and cooperation; and supervisory-employee communications.

The first two bars in the graph reflect scores from the initial 2000/2001 survey compared with the 2002 survey using identical questions. The second two bars reflect a new baseline in which some of the questions in the 2002 survey differ from the items included in the 2000/2001 survey and therefore the previous scores are not strictly comparable. The 2004 survey was identical to the 2002 survey. The survey is conducted every two years; therefore there is no new data for 2005.

PM-29a. Employee rating of job satisfaction



OBSERVATIONS

The scale for questions included in this measure is: strongly disagree, disagree, neither agree nor disagree, agree, and strongly agree. A four out of five rating equates to an "agree" answer. The score for this measure shows that employees have slightly increased job satisfaction and that the department has opportunities to increase this score in the future. Potential external factors that influence this measure include the general state of the economy and diminishing continuing county budget resources.

OUR STRATEGY

Employee job satisfaction remains an important issue at DNRP. Despite programmatic efficiencies that impact every aspect of the department, including staffing levels, DNRP strives to create a positive work environment. For example, all DNRP supervisors and managers are expected to complete a series of 22 trainings that include team leadership skills and coaching individuals for improved performance.

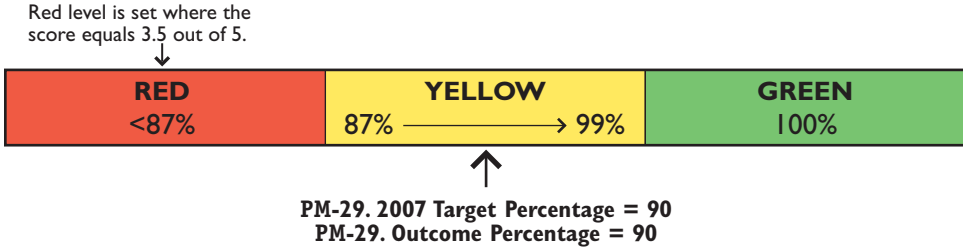
RATING

Results, Target and Outcome

2004 Results: 3.6 out of 5
2007 Target: 4.0
Outcome: 4.0

The long-term outcome for this measure is a 4.0 rating.

Performance-to-Target and Performance-to-Outcome Ranges and Ratings



DATA REFERENCE

DNRP Department-wide 2004 Employee Survey Research Report.

OUTCOME: DNRP consists of a forward thinking workforce where employees are engaged in our business, involved in decisions that affect them, and understand their role in achieving the DNRP vision

PM-30

Employee Rating of Their Role

ABOUT THIS PERFORMANCE MEASURE

Employees need to see the connection between their specific contribution and the overall success of their organization. This is an important element to instill a sense of personal accomplishment. This measure focuses on employees' ratings of their own role in the organization.

Three separate questions from the DNRP employee survey are clustered together to derive a composite score for this measure. The score is on a one to five scale, with five being the highest. Questions included in this measure included: employees' contribution to the success of the department; comfort in making day-to-day decisions about work; and the importance of holding people accountable.

The first two bars in the graph reflect scores from the initial 2000/2001 survey compared with the 2002 survey using identical questions. The second two bars reflect a new baseline in which some of the questions in the 2002 survey differ from the items included in the 2000/2001 survey and therefore the previous scores are not strictly comparable. The 2004 survey was identical to the 2002 survey. The survey is conducted every two years; therefore there is no new data for 2005.

PM-30a. Employee rating of their role

OBSERVATIONS

The scale for questions included in this measure is: strongly disagree, disagree, neither agree nor disagree, agree, and strongly agree. A four out of five rating equates to an "agree" answer. The score for this measure was the highest of the four employee survey-related measures.

OUR STRATEGY

The department has maintained a long-term commitment to employee involvement and valuing our employee contributions. This rating shows that our efforts have resulted in a very positive view of the employee's role in the agency.

RATING

Results, Target and Outcome

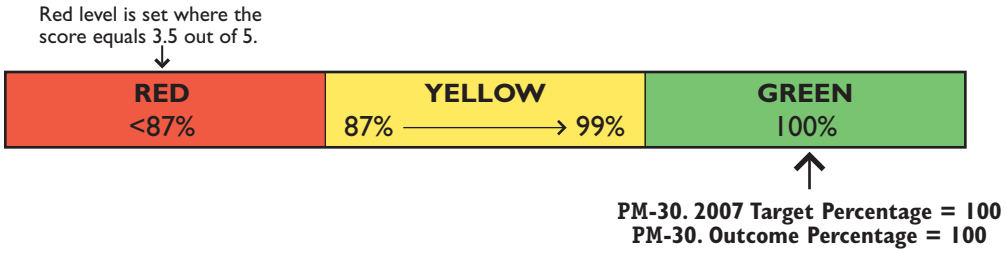
2004 Results: 4.1 out of 5

2007 Target: 4.1

Outcome: 4.1

The target and long-term outcome for this measure is to maintain the 4.1 rating.

Performance-to-Target and Performance-to-Outcome Ranges and Ratings



DATA REFERENCE

DNRP Department-wide 2004 Employee Survey Research Report.

ACRONYMS

AMSA	Association of Metropolitan Sewerage Agencies
B-IBI	Benthic Index of Biotic Integrity
BMPs	best management practices
BOD	Biological oxygen demand
cfu	Colony forming units
CH_4	Methane
CO_2	Carbon dioxide
CRS	National Flood Insurance Program's Community Rating System
CSL	Cleanup Screening Level (or "minor adverse effects level")
CSO	combined sewer overflow
CUT	Current Use Taxation program
DIN	Dissolved Inorganic Nitrogen
DOE	Washington Department of Ecology
DNRP	King County Department of Natural Resources and Parks
EDI	Energy Developments Inc.
EPA	U.S. Environmental Protection Agency
FEMA	Federal Emergency Management Agency
KCE	King County Extension
MCL	maintenance correction letter
MGW	megawatt
MTCO2e	metric tonnes carbon dioxide equivalent
NACWA	National Association of Clean Water Agencies
NIPFs	Non-industrial private forest landowners
NPDES	National Pollutant Discharge Elimination System
P/O	performance-to-outcome ratio
P/T	performance-to-target ratio
Parks	Parks and Recreation Division
PSWQI	Puget Sound Water Quality Index
RDP	Rural Drainage Program

SKCPHD	Seattle-King County Public Health Department
SQS	Sediment Quality Standard (or "no adverse effects level")
SRWQI	Stream and River Water Quality Index
SWD	Solid Waste Division
SWM	Surface Water Management
TSI-TP	Trophic State Indicator-Total Phosphorus
TSS	Total suspended solids
WLFFF	Water, Land, Forests, Farms and Food Team
WLR	Water and Land Resources Division
WQI	Water Quality Index
WRIA	Water Resource Inventory Area
WTD	Wastewater Treatment Division
WUTC	Washington Utilities and Transportation Commission

GLOSSARY

Algae – Simple rootless plants that grow in sunlit waters in proportion to the amount of available nutrients. They can affect water quality adversely by lowering the dissolved oxygen in the water. They are food for fish and small aquatic animals.

Algal blooms – Sudden spurts of algal growth, which can affect water quality adversely and indicate potentially hazardous changes in local water chemistry.

Ambient (measurement) – A measurement of the concentration of a substance or pollutant from a site not located near known sources of pollution. Used in contrast to outfall or point source sites.

Aquatic – Of or related to water; can refer to both freshwater and marine environments.

Armoring – A facing layer (protective cover), or Rip Rap, consisting of very large stones placed to prevent erosion or the sloughing off of a structure or embankment. Also, a layer of large stones, broken rocks or boulders, or pre-cast blocks placed in random fashion on the upstream slope of an Embankment Dam, on a reservoir shore, or on the sides of a channel as a protection against waves, ice action, and flowing water. The term armoring generally refers only to very large rip rap.

Bacteria – Microscopic living organisms; when present in soil, water or air can cause human, animal, and plant health problems. Bacteria can also aid in pollution control by metabolizing organic matter in sewage, oil spills, or other pollutants.

Balanced Scorecard – A performance measurement system used to track strategic objectives by looking beyond financial performance to include customer services, internal processes and people management. DNRP's Wastewater Treatment Division uses the Balanced Scorecard system.

Baseline (data) – Initial collection of data to establish a basis for comparison, evaluation, and target setting.

Benchmark – 1) an outcome with a specific target for achievement. Benchmarks are often time-bound (for example, achieve 100% compliance within two years); 2) a standard based on the performance of another organization or group of organizations (comparison typically made with organizations having similar characteristics and/or demographics); 3) The title of a series of reports reporting on status and trends of indicators in King County: King County Benchmarks.

Benchmarking – The process of continuously comparing and measuring a private and/or public organization against recognized leaders and similar organizations to gain information that will help the organization take action to improve its performance.

Benthic – Of or related to the bottom under a body of water. Can be used to describe environments or organisms.

Benthic Index of Biotic Integrity – A stream monitoring "report card" for measuring the health of the benthic community and for the stream ecosystem as a whole. The index is composed of ten metrics that measure different aspects of stream biology, including the diversity of macroinvertebrate species, number of macroinvertebrates, presence of macroinvertebrates that are tolerant and intolerant to pollution, reproductive strategy, feeding ecology, and population structure.

Biochemical oxygen demand (BOD) – A measure of the amount of oxygen consumed in the biological processes that break down organic matter in water. The greater the BOD, the greater the degree of pollution.

Biogas – A natural byproduct from the wastewater treatment process containing primarily methane gas.

Biosolids – Nutrient-rich organic material produced by treating wastewater solids.

Chlorine – an elemental gas commonly used for disinfecting drinking water and wastewater.

Combined sewer overflow – Discharge of a mixture of storm water and domestic waste when the flow capacity of a sewer system is exceeded during rainstorms.

Consumer Price Index – An index of prices used to measure the change in the cost of basic goods and services in comparison with a fixed base period. Also called cost-of-living index.

Dissolved Inorganic Nitrogen (DIN) – Nitrogen compounds, present post-filtration, that are detectable by accepted analytical chemical methods, e.g. nitrite, nitrate, and ammonium.

Dissolved oxygen (DO) – The oxygen freely available in water, vital to fish and other aquatic life, and for the prevention of odors. DO levels are considered a most important indicator of a water body's ability to support desirable aquatic life.

Drop box – A King County-owned and operated solid waste disposal facility. Drop box facilities normally serve the general public with loose loads and receive waste from off-site. DNRP's Solid Waste Division operates two drop box facilities: Skykomish and Cedar Falls.

E. coli bacteria – A bacillus (Escherichia coli) normally found in the human gastrointestinal tract and existing as numerous strains, some of which are responsible for diarrheal diseases.

Enterococcus bacteria –Refers to a subgroup of the fecal streptococci that includes S. faecalis, S. faecium, S. gallinarum, and S. Avium.

Eutrophic – A condition which describes that a water body has built up excess nutrients so that excess plant growth occurs. As a result, large amounts of plant material decay and consume dissolved oxygen while doing so. Thus, less dissolved oxygen is available to aquatic life. Eutrophication is the process by which this occurs.

Eutrophication – The process where nutrient over-enrichment of water leads to excessive growth of aquatic plants.

Fecal coliform bacteria – Bacteria found in the intestinal tracts of mammals. Their presence in water or sludge is an indicator of pollution and possible contamination by pathogens.

Floodplain – The flat or nearly flat land along a river or stream or in a tidal area that is covered by water during a flood.

Flow rate – The rate, expressed in gallons -or liters-per-hour, at which a fluid escapes from a hole or fissure in a tank. Such measurements are also made to describe the movement of liquid waste, effluent, and surface water movement.

Flow regime – quantity, frequency and seasonal nature of water flows

Geometric mean – A statistical term representing an 'average' defined as the nth root of the product of n numbers.

Goal – Broad statements describing desired outcomes, but more specific than an agency's mission. Goals support the mission and identify specific themes or opportunities for an organization to accomplish in order to achieve its mission. Goals translate the mission of the organization into performance and help create the organization's identity.

Greenhouse gas – A gas, such as carbon dioxide or methane, which contributes to climate change.

Habitat – The native environment or specific surroundings where a plant or animal naturally grows or lives. The surroundings include physical factors such as temperature, moisture, and light together with biological factors such as the presence of food or predator organisms. The term can be employed to define surroundings on almost any scale from marine habitat, which encompasses the oceans, to microhabitat in a hair follicle of the skin.

Household Hazardous Waste – Hazardous products used and disposed of by residential, as opposed to industrial, consumers. Includes paints, stains, varnishes, solvents, pesticides, and other materials or products containing volatile chemicals that can catch fire, react or explode, or that are corrosive or toxic.

Hydrograph - A graph of runoff rate, inflow rate or discharge rate, past a specific point over time.

Hypochlorite – A salt or ester of hypochlorous acid; used in the wastewater treatment process.

Indicator – A measure that focuses on the condition of the environment.

Invertebrate – Animals without backbones.

Landfill gas – Gas produced by the microbial decomposition of municipal solid waste in a landfill. It is comprised of up to 60 percent methane, up to 50 percent carbon monoxide and less than one percent hydrogen, oxygen, nitrogen, and other trace gases combined.

Macroinvertebrate - Animals that you can see with the naked eye that don't have backbones. Some examples include insects, crustaceans, worms, snails, and clams. Macroinvertebrates are often referred to by biologists with the colloquial term of "bugs."

Mean – The average value of a set of numbers.

Median – Relating to or constituting the middle value of an ordered set of values (or the average of the middle two in an even-numbered set).

Methane – A colorless, nonpoisonous, flammable gas created by anaerobic decomposition of organic compounds. A major component of natural gas used in the home.

Mission – Provides a summary of the organization's purpose and answers the questions, "why do we exist?" The mission provides the basis for aligning goals, core businesses and programs. The mission does not answer "how" the purpose will be achieved.

National Pollutant Discharge Elimination System (NPDES) – A provision of the federal Clean Water Act which prohibits discharge of pollutants into waters of the United States unless a special permit is issued by EPA or a state.

Nitrate – A compound containing nitrogen that can exist in water as a dissolved gas. It can have harmful effects on humans and animals. Nitrates in water can cause severe illness in infants and domestic animals. A plant nutrient and inorganic fertilizer, nitrate is found in septic systems, animal feed lots, agricultural fertilizers, manure, industrial wastewaters, sanitary landfills, and garbage dumps.

Nitrite – An intermediate product in the conversion breakdown of ammonium to nitrate as part of the nitrogen cycle. Nitrite is very unstable, and is almost immediately converted into nitrate. Nitrite is toxic to fish, but less so than Ammonia. Nitrites are toxic, but because they are an intermediary between ammonium (NH4+) and nitrate (NO3-), they do not normally occur in high concentrations under "normal" conditions. The nitrite ion is regulated by the US Environmental Protection Agency.

Nonpoint source – Diffuse pollution sources (without a single point of origin or not introduced into a receiving stream from a specific outlet). The pollutants are generally carried off the land by storm water. Common non-point sources are agriculture, forestry, construction, and city streets. Used on contrast to "point sources" which refers to any single identifiable source of pollution such as a pipe or outfall.

Normative flow – A flow regime in streams and rivers that resembles the natural flow regime sufficiently to sustain all stages of a diverse set of native species.

Outcome – A type of measure that looks at customer satisfaction with services, program results, or impact on clients or society. Also called effectiveness measures.

Outfall – The place where effluent is discharged into receiving waters.

Pelagic – Referring to the open sea at all depths (pelagic animals live in the open sea and are not limited to the ocean bottom).

Performance measure – A measure that is used to track the performance of a program or an organization. Performance measures can be related to inputs, processes, efficiency, or effectiveness (outcomes). See indicators.

pH – An expression of the intensity of the basic or acid condition of a liquid; may range from 0 to 14, where 0 is the most acid and 7 is neutral. Natural waters usually have a pH between 6.5 and 8.5.

Phosphorus – An essential chemical food element that can contribute to the eutrophication of lakes and other water bodies. Increased phosphorus levels result from discharge of phosphorus-containing materials into surface waters.
Riparian – Areas adjacent to rivers and streams with a high density, diversity, and productivity of plant and animal species relative to nearby uplands.

Point source – A discharge point subject to the Clean Water Act's NPDES program; a point source is any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, and well. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.

Solid waste – Non-liquid, non-soluble materials ranging from municipal garbage to industrial wastes that contain complex and sometimes hazardous substances. Solid wastes also include sewage sludge, agricultural refuse, demolition wastes, and mining residues.

Stratification – The arrangement of a body of water, such as a lake, into two or more horizontal layers of differing characteristics, such as temperature, density, etc. Also applies to other substances such as soil and snow, etc.

Superfund – The program operated under the federal legislative authority that funds and carries out EPA solid waste emergency and long-term removal and remedial activities. These activities include establishing the National Priorities List, investigating sites for inclusion on the list, determining their priority, and conducting and/or supervising cleanup and other remedial actions.

Target –Targets are used to denote the degree of improvement desired or an attainable goal.

Total residual chlorine – Amount of chlorine remaining after the wastewater treatment process has taken place.

Total suspended solids – A measure of the suspended solids in wastewater, effluent, or water bodies, determined by tests for "total suspended non-filterable solids."

Transfer station – A permanent fixed supplemental collection and transportation facility, used by persons and route collection vehicles to deposit collected solid waste from off-site to a larger transfer vehicle for transport to a solid waste handling facility. Transfer stations may also include recycling facilities and compaction/balancing systems.

Trophic State Index (TSI) – A measure of Eutrophication of a body of water using a combination of measures of water transparency or turbidity (using Secchi Disk depth recordings), Chlorophyll-a concentrations, and total phosphorus levels. TSI measures range from a scale 20-80 (referred to as Carlson's Trophic State Index). Degrees of eutrophication typically range from Oligotrophic water (maximum transparency, minimum chlorophyll-a, minimum phosphorus) through Mesotrophic, Eutrophic, to Hypereutrophic water (minimum transparency, maximum chlorophyll-a, maximum phosphorus).

Trophic State Indicators – Environmental calculations that help to define the trophic state of lakes. Lakes can be divided into three trophic categories - oligotrophic, mesotrophic, and eutrophic. These categories are based on potential algae production. Characteristics used to calculate trophic state indicators include: total phosphorus concentration (necessary for algae growth); chlorophyll a concentration (a direct measure of the amount of algae present); and Secchi disc readings (an indicator of water clarity).

Vision – An organization's vision provides a picture of a preferred future that provides long-term direction, guidance and inspiration for the organization.

Water Quality Index (WQI) – A index of water quality that analyzes a defined set of water quality parameters and produces a score describing general water quality. The water quality parameters included in the WQI are temperature, dissolved oxygen (percent saturation and concentration), biochemical oxygen demand, pH, total solids, ammonia and nitrate nitrogens, total phosphorous, and fecal coliforms. WQI scores range from 10 (worst case) to 100 (ideal water quality).

Water Quality Standards – State-adopted and EPA-approved ambient standards for water bodies. The standards prescribe the use of the water body and establish the water quality criteria that must be met to protect designated uses.

Water Resource Inventory Areas (WRIA) – A way to organize Washington State's watershed basins as created under the Washington State's Watershed Planning Act (RCW 90.82). The Department of Ecology and other state resource agencies frequently use the WRIAs to refer to the state's 62 major watershed basins. King County includes, in whole or in part, four WRIAs: 7, 8, 9, and 10.

Watershed – The land area that drains water to a particular stream, river, lake, estuary, or coastal zone. It is a land feature that can be identified by tracing a line along the highest elevations between two areas on a map, often a ridge. Large watersheds, like the Mississippi River basin contain thousands of smaller watersheds.

Note:
Many of these definitions come from U.S. EPA's Terms of Environment (*www.epa.gov/OCEPAterms/*) and King County's Performance Measurement Website (*http://apps01.metrokc.gov/www/exec/perform/index.cfm*).

APPENDIX A

2005 DNRP FINANCIALS

The following budget tables are from *Environmental Stewardship In King County: Department of Natural Resources and Parks Annual Report 2004.*

PARKS AND RECREATION DIVISION 2005 ADOPTED BUDGET

Regional Parks, Pools, and Recreation Section

- Aquatics
- Fair and fairgrounds
- King County Aquatics Center
- Marymoor Regional Park
- Recreation/scheduling and community centers
- Greenhouse Program

Budget
$6,783,399

Revenue (14)
Levy:
$4,166,101
Business Revenues (UGA):
$243,578
Business Revenues (Regional-Rural):
$1,413,001
Current Expense (CX):
$960,719

Resource Section

- Maintenance districts
- Facilities and Grounds
- Natural resources program
- Utility and mow crews

Budget
$7,255,381

Revenue (14)
Levy:
$4,321,068
Business Revenues (UGA):
$297,066
Business Revenues (Regional-Rural):
$1,465,560
Current Expense (CX):
$1,171,687

Capital and Land Management Section (1)

- Capital improvement program management
- YSFG management
- ADOPS management
- Small contracts (CIP)

Budget
$1,472,657

Revenue (14)
Levy:
$300,000
Real Estate Excise Tax (REET):
$1,172,657

Director's Office and Administrative Services (13)

- Director's office
- Finance/budget
- Revenue collection/ accounting
- WAN/LAN/PC IS support
- Audits
- Central Rates/Overhead

Budget
$4,837,634

Revenue (14)
Levy:
$2,945,668
Business Revenues (UGA):
$157,049
Business Revenues (Regional-Rural):
$999,071
Current Expense (CX):
$619,434
REET:
$116,412

Homeland Security (HS) Grant

Coordination of emergency services

Budget
$185,329

Revenue (14)
HS Grant:
$185,329

Youth Sports Facilities Grant (YSFG)

Partnership grants to develop, rehabilitate, and/or expand youth sports fields/facilities

Budget
$934,490

Revenue (14)
YSFG Grant:
$934,490

2005 Adopted Parks & Recreation CIP

		Revenue Sources
Trail Connections	$609,434	REET
Administration	$489,738	REET
Infrastructure Imp.	$2,474,959	REET, Fee In Lieu
Partnerships	$815,000	REET
System Rehabilitation.	$7,811,971	REET, Fee In Lieu
Revenue Generation.	$800,000	REET
C&LM Operating	$1,075,026	REET, Other
Total, 2005 Adopted P&R CIP Budget	**$14,076,128**	

2005 Operating Budget Summary

2005 Revenues (2)	
Levy Revenues (3)	$11,762,629
Business Revenues, Regional/Rural (4)	$3,953,612
Business Revenues, UGA (4)	$697,693
Current Expense (CX) (5)	$2,696,803
Real Estate Excise Tax (REET) (7)	$1,289,070
Homeland Security Grant (8)	$185,329
Interest Earnings (9)	$14,191
Total, Parks Revenues	**$20,599,327**
YSFG Grant (6)	$934,490
Total Revenues	**$21,533,817**
2005 Expenditures	
Parks Operating Expenditures (10)	$20,534,400
Estimated Underexpenditure (11)	$(410,688)
Contribution to Fund Balance (12)	$475,615
Total, Parks Expenditures	**$20,599,327**
YSFG Expenditures	$934,490
Total Expenditures	**$21,533,817**

Notes

(1) Operating portion only of Capital & Land Management section ($1,075,026 REET + $397,631 other funds).

(2) Source: Adopted 2005 P&R Division Financial Plan.

(3) Funds expenditures in regional and rural facilities; not used for UGA facilities.

(4) Funds expenditures in regional and rural and unincorporated urban growth area (UGA).

(5) Funds O&M costs of facilities in unincorporated urban growth area (along with business revenues generated by UGA facilities).

(6) Dedicated car rental tax.

(7) Funds expenditures associated with

(8) Grant funds exclusively for homeland security planning.

(9) Interest not specifically earmarked, assumed to go towards fund balance.

(10) Sum of Parks operating expenditure categories.

(11) Financial plan assumes 2% underexpenditure.

(12) Excess of revenues over expenditures contributes to fund balance, available in 2006 and beyond.

(13) Of the $4,837,634 budgeted in the Director's Office and Finance and Adminstration sections, approximately $1.1 million is for salaries, benefits, and general office supplies to support staff in these

support the entire division. An additional $396,000 is for DNRP departmental overhead.

(14) This allocation of revenue

be viewed as preliminary estimates. The division is in the process of substantially revising its methodology for allocating costs

SOLID WASTE DIVISION 2005 OPERATING BUDGET

Transfer Station Operations

Operate transfer facilities
Collect fees
Monitor waste
Equipment replacement transfers

Budget
$10,026,478

Revenue
Disposal fees: $9,871,478
Lease fees: $80,000
Recycled materials proceeds: $75,000

Transportation Operations

Transport garbage to landfill
Haul leachate and maintenance material
Equipment replacement transfers

Budget
$8,560,052

Revenue
Disposal fees: $8,560,052

Landfill Operations (6)

Operate and maintain active and closed landfills
Landfill and equipment replacement transfers

Budget
$26,287,491

Revenue
Disposal fees: $26,187,985
Interest earnings: $699,883

Maintenance Operations

Maintain facilities and equipment
Procure and control inventory

Budget
$8,142,735

Revenue
Disposal fees: $8,101,807
DOE grants: $40,928

Operations Administration

Maintenance planning for operations functions

Budget
$1,446,679

Revenue
Disposal fees: $1,446,679

Debt Service

Budget
$6,262,745

Revenue
Disposal fees: $6,262,745

Capital Facilities (1)

Plan and execute capital projects
Environmental monitoring
Operations support

Budget (1)
$4,860,285

Revenue
Disposal fees: $4,850,285
Misc program revenue (7): $10,000

Recycling & Environmental Svcs

Education
Technical and financial assistance
Collection services
WSU cooperative
Grants to cities

Budget (1)
$9,685,367

Revenue
Disposal fees: $5,249,351
Moderate risk waste fees: $2,949,100
Uninc. household fees: $260,000
Grants and contributions: $1,226,916

Manager, Finance & Administration (5)

Manage fiscal functions
Administer customer service
Personnel functions
Payroll functions
Communications

Budget (4)
$12,821,283

Revenue
Disposal fees: $12,286,133
Interest earnings: $500,000
Other: $35,150

2005 Operating Budget Summary

2005 Revenues

Disposal fees	$82,816,515
Lease fees	$80,000
Moderate risk waste fee	$2,949,100
Uninc. household fees	$260,000
Recycled materials proceeds	$75,000
Misc revenue	$10,000
Grants and contributions	$1,226,916
DOE grants	$40,928
Interest earnings	$1,199,883
Other	$35,150
2005 Total Revenues	**$88,693,492**
2005 Total Operating Expenditures	**$88,093,115**
Contribution To Fund Balance	$600,377
Debt Service (2)	$6,262,745

Designations & Reserves

(Estimated fund balances on 12/31/05)

Landfill Reserve Fund (3)	$36,129,000
Landfill Postclosure Maintenance Fund (3)	$22,357,000
Capital Equipment Replacement Fund	$9,143,000
Environmental Reserve Fund	$1,526,000
Operating Fund	$13,990,000
Construction Fund	$6,945,000

2005 Adopted SWD CIP (from Solid Waste Disposal Fees)

Solid Waste Transfer	$25,899,362
Solid Waste Disposal	$6,246,589
Capital Equipment Replacement Program (Transfer)	$2,924,457
Capital Equipment Replacement Program (Disposal)	$295,000
Total, 2005 Adopted SWD CIP Budget	**$35,365,408**

Notes

(1) Operating portion only of capital facilities budget.
(2) Debt service is used to pay for major capital projects.
(3) Reserves required by statute and code.
(4) Capital Equipment Replacement Program (CERP).
(5) Of the $12,821,283 budgeted in the Manager's Office and Finance and Adminstration sections, approximately $5.20 million is for central rates and general government charges to support the entire division. An additional $1.57 million is for DNRP departmental overhead. An additional $837,754 is for centrally budgeted charges that are allocable across all sections.
(6) A Cedar Hills landfill rent payment of $7.21 million is included in this budget. Revenues for this section are shown as exceeding budgeted expenditures by $600,377, which is the anticipated fund balance for the Solid Waste Fund on 12/31/05.
(7) Anticipated Junk Vehicle Program revenues.

WATER AND LAND RESOURCES DIVISION 2005 OPERATING BUDGET

	Manager, Finance & Administration[1]	Strategic Initiatives	Office of Rural and Resource Programs	Land and Water Stewardship	Science Monitoring and Data Management	Stormwater Services	Flood Hazard Reduction	Capital Projects and Open Space Acquisition[2]
	Division management Finance and budget Accounting and payroll Customer accounts LAN/PC support Office support Human resources Rate development	RDP implementation Policy and performance Adaptive management Intergovernmental Watershed ILA Visual comm./Web Performance measures Groundwater program	Forestry Agriculture PBRS incentives Natural lands management CAO implementation	Hazardous waste program Community outreach Grants Watershed support Lakes stewardship CAO implementation	Environmental lab Data management Monitoring and assessment Analysis CAO implementation	Facility maintenance Drainage investigation Regulations and compliance NPDES permit CAO implementation	River facility maintenance River management program Green River program CAO implementation	Land acquisitions Ecological services SWM engineering Project coordination/tracking
Budget	$8,464,918	$4,679,260	$3,638,353	$6,447,291	$10,432,738	$11,212,995	$4,324,498	$456,072
Revenue								
SWM Fee	$4,214,070	$861,189	$910,764	$546,747	$513,913	$7,326,441		$392,250
SWM Fund Balance	$380,622	$77,784	$82,262	$49,383	$46,417	$661,737		$35,429
Rural Drainage Program (RDP) Fee and Fund Balance	$342,672	$768,471	$381,973	$690,720	$32,870	$1,966,877		
River Improvement & Intercounty River Fund							$2,611,484	
RIF Fund Balance							$422,287	
Noxious Weed Program and Fund Balance			$1,142,182					
Local Hazardous Waste	$328,363			$3,221,389				
WTD Operating	$2,031,062	$188,690	$16,750	$1,532,522	$8,911,085			
WTD Capital	$201,151	$43,707		$170,000	$567,396			
Grants/Service Charges / ILAs/Other (3)	$966,978	$2,739,419	$1,104,422	$236,530	$361,057	$1,257,940	$ 1,290,727	$28,393

2005 Operating Budget Summary

2005 Revenues:

SWM Fee	$14,765,373
SWM Fund Balance	$1,333,635
Rural Drainage Program (RDP) Fee and Fund Balance	$4,183,583
River Improvement & Intercounty River Fund	$2,611,484
RIF Fund Balance	$422,287
Noxious Weed Program and Fund Balance	$1,142,182
Local Hazardous Waste	$3,549,752
WTD Operating [4]	$12,680,109
WTD Capital [4]	$982,254
Grants/Interagency Services	$5,402,536
King Conservation District Fees	$645,483
ILA/City Services	$1,937,447
2005 Total Revenues	**$49,656,125**
2005 Total Operating Expenditures	**$49,656,125**

Designations & Reserves

Estimated fund balance on 12/31/05 ..... $1,184,317
(all WLR funds)

2005 Adopted WLRD CIP

Surface Water Construction and Environmental Restoration	$11,348,725	**Revenue Sources**
Flood Hazard Reduction	$1,010,741	SWM, RDP, Grants, ILAs
Open Space Preservation	$3,055,318	RIF, Grants, ILAs
Farm and Forest Preservation	$514,663	1989 Open Space Bond and other Arts & Natural Resources Initiative
Conservation Futures Open Space	$8,882,220	Conservation Futures Levy
Total, 2005 Adopted WRLD CIP Budget	**$24,811,667**	

Notes

[1] Of the $8,464,918 budgeted in the Manager's Office and Finance and Administration sections, approximately $2.0 million is for central rates and general government charges to support the entire division. An additional $760,000 is for DNRP departmental overhead. An additional $1.55 million is for centrally budgeted rent, taxes, and interest payments that are allocable across all sections. RIF and Noxious Weeds contributions are included in "Other" revenue category as interfund transfers.

[2] CPOSA labor is charged directly to capital projects. Residual budget is for non-billable costs.

[3] Includes grants, interagency services charges, ILA and service charges to cities, and KCD.

[4] Operating transfer from the Wastewater Treatment Division of $12,680,109 and a capital transfer of $982,254, for a total WTD transfer of $13,662,363.

WASTEWATER TREATMENT DIVISION 2005 OPERATING BUDGET

Debt Service	Manager's Office [5]	Finance & Administration [5]	South Plant Operations	West Plant Operations	Planning & Compliance	Asset Management	Major CIP	Central & Other Charges
	Management Safety and training Water, air, and energy policy Special projects	Finance Human resources Information systems Technical publications Accounts receivable Capacity charge	Shift crews Buildings and grounds Office operations Process control Coordination Electrical and mechanical	Shift crews Buildings and grounds Office operations Process control Coordination Electrical and mechanical	Resource recovery Environmental compliance Community relations Comprehensive planning CSO, I&I, Industrial waste	Construction management Inspection and scheduling Engineering Program implementation	Program management Treatment Conveyance Permitting and right-of-way Project controls	Emergency contingency Central charges and overhead Direct program transfers
Budget $112,877,000	**Budget** $2,664,256	**Budget** $4,023,880	**Budget** $20,794,553	**Budget** $22,452,366	**Budget** $8,257,124	**Budget** [1] $2,473,344	**Budget** [1] $40,762	**Budget** [4] $26,153,715
Revenue Sewer rates: $88,084,000 Interest earnings: $4,816,000 Capacity charges: $19,977,000	**Revenue** Sewer rates: $2,664,256	**Revenue** Sewer rates: $4,023,880	**Revenue** Sewer rates: $18,606,935 Industrial flow charges: $941,619 Septage disposal fees: $1,246,000	**Revenue** Sewer rates: $21,510,748 Industrial flow charges: $941,619	**Revenue** Sewer rates: $6,561,806 Industrial flow charges: $1,695,318	**Revenue** Sewer rates: $2,473,344	**Revenue** Sewer rates: $40,762	**Revenue** Sewer rates: $26,153,715 Transfer to reserves & CIP [3]: $34,468,000

2005 Operating Budget Summary

Total Operating Revenues	$234,205,000
Total Operating Expenditures	$86,860,000
Transfers To Reserves & CIP	$34,468,000
Debt Service	$112,877,000

Designations & Reserves

Bond And State Revolving Fund	$68,979,000
Undesignated Fund Balance [2]	$109,254,000
Policy Reserves	$17,989,000
Rate Stabilization Reserve	$9,250,000
Operating Liquidity Reserve	$8,029,000

2005 Adopted WTD CIP

(Funded by Sewer Rates and Capacity Charges)

Wastewater Treatment	$450,743,691
Wastewater Conveyance	$90,246,771
Capital Replacement	$17,239,70
Asset Management	$9,188,576
Total, 2005 Adopted WTD CIP Budget	**$567,418,747**

Notes

(1) Operating portion only of these primarily capital-related sections.

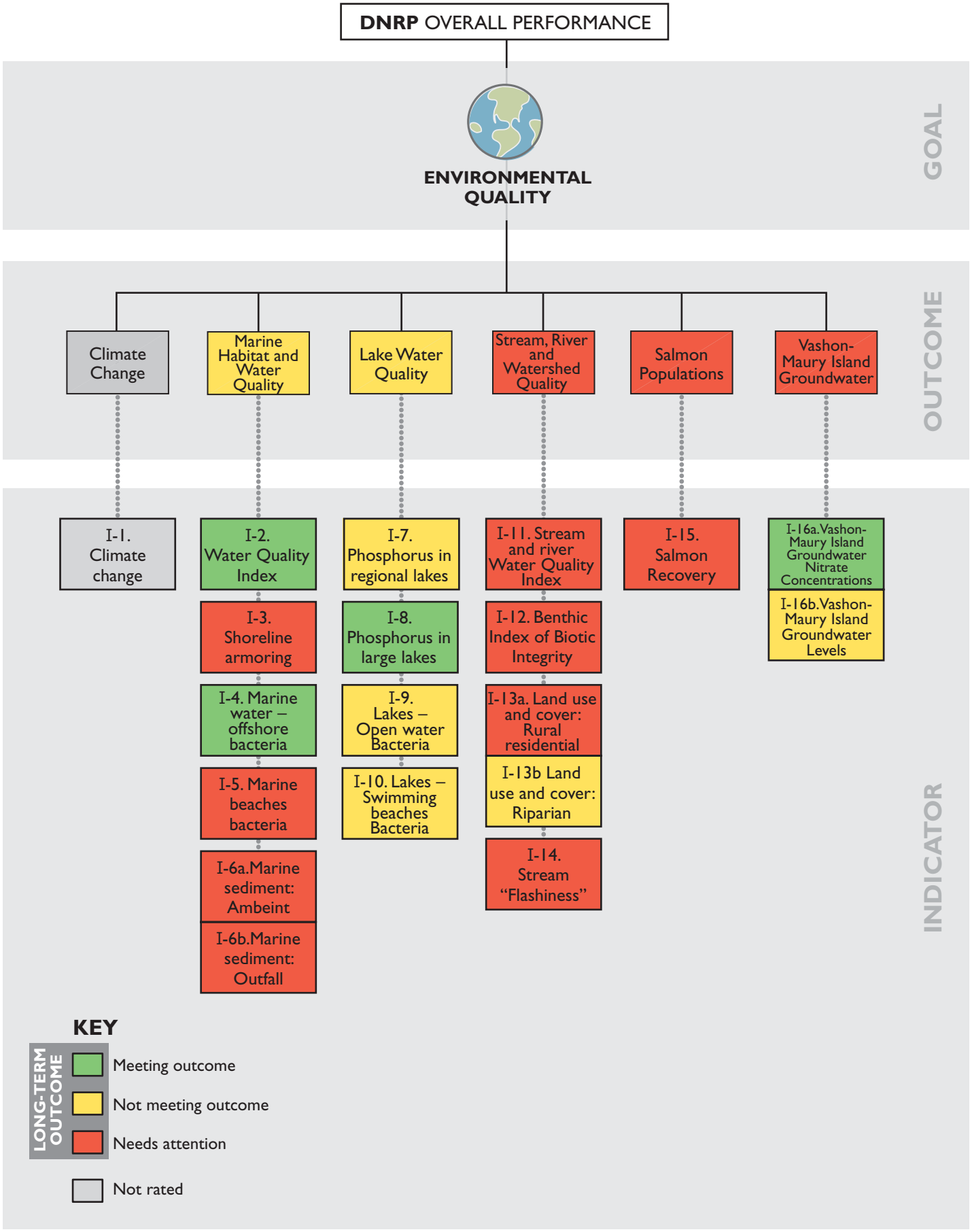
(2) Includes projected operating and capital ending fund balances.

(3) Not included in WTD operating budget. Shown only to balance revenue use to total operating revenues.

(4) Includes an operating transfer to Water and Land Resources Division (WLRD) of $12,680,109. A separate capital transfer to WLRD of 982,254 is not shown here. WTD's total transfer to WLRD is $13,662,363.

(5) Manager's Office and Finance and Administration budgets include direct charges only. County and Department level charges are budgeted in "Central and Other Charges" cost center.

DNRP 2005 ENVIRONMENTAL INDICATORS COMPARED TO LONG-TERM OUTCOMES



DNRP 2005 PERFORMANCE MEASURES COMPARED TO 2007 TARGETS AND LONG-TERM OUTCOMES

DNRP OVERALL PERFORMANCE

GOAL

OUTCOME

PERFORMANCE MEASURE

ENVIRONMENTAL QUALITY	WASTE TO RESOURCE	COMMUNITY INVESTMENT	LEADERSHIP	PRICE OF SERVICE	CUSTOMER SATISFACTION	EMPLOYEE INVOLVEMENT AND MORALE
Public Safety	Reduced Waste	Productive Farms/ Forests	DNRP as Regional Leader	Rates are Reasonable/ Competitive	Satisfied Customers	Employee Morale
DNRP Operations	PM-6. Biosolids recycled	Sustainable Farms/ Forests	PM-19. Relationship with DNRP	PM-22. Rates and fees compared to other agencies	PM-26a. Parks Customers	PM-27. Workplace practices
PM-1a. Waste-water Plant compliance: major plants	PM-7. Water reclaimed	Residents involved	PM-20. DNRP as a resource	PM-23. Rates and fees compared to CPI	PM-26b. Transfer Station Customers	PM-28. Availability of resources
PM-1b. Waste-water Plant compliance: Vashon plant	PM-8. Biogas recycled	PM-13. Environmental Behavior Index	PM-21. DNRP as a leader	PM-24.* Entre-preneurial revenue	PM-26c. Wastemobile Customers	PM-29. Job satisfaction
PM-2. Solid Waste health inspection	PM-9. Methane to usable energy	PM-14. Volunteer hours		PM-25.* Efficiency Parks	PM-26d. Solid Waste Education	PM-30. Role of the employee
PM-3. Greenhouse gas emissions	PM-10. Waste stream recycled	PM-15. Agricultural land		PM-25.* Efficiency SWD	PM-26e. Drainage Services	
PM-5. Stormwater facility compliance	PM-11a. Waste disposed per resident	PM-16. Forestlands		PM-25.* Efficiency WLR	PM-26f. Wastewater Customers	
PM-4. Flood safety	PM-11b. Waste disposed per employee	PM-17. Forest stewardship		PM-25.* Efficiency WTD	PM-26g. Industrial Waste Customers	
	PM-12. Curbside recycling participation	PM-18. Ag. lands with BMPs				

* Based on 2005 Target only.

KEY

2007 TARGET
- Meeting target
- Not meeting target
- Needs attention

LONG-TERM OUTCOME
- Meeting outcome
- Not meeting outcome
- Needs attention
- Not rated