

# King County Water Supply Planning Process

## Planning Framework Summary

October 31, 2005

### ***Current Status***

There are currently four Coordinated Water Supply Plans (CWSPs) in King County: 1) East King County; 2) South King County; 3) Skyway; and 4) Vashon. None of these CWSPs include projects and programs planned by the Cascade Water Alliance (such as the potential for Lake Tapps Reservoir water to be developed as a new source of supply). The current CWSPs (most recently updated in 1998) do not include the use of reclaimed water as a potential new source of supply nor do they incorporate options for source exchange to help vulnerable or at-risk fish populations. These plans also do not address any issues overlapping with Pierce County in the White/Green River basins. Some areas in King County are not included within a current CWSP boundary. In addition, provisions of the 2004 Municipal Water Law need to be incorporated into CWSPs as they are updated. New or updated information on demand forecasts and future supply options are also appropriate for inclusion in updated CWSPs.

King County has articulated a desire to move forward with a statutorily based regional water supply planning process to update existing CWSPs. These updates need to be based on a credible regional demand forecast, meet State Department of Health regulatory requirements, meet potential water permit requirements, evaluate potential new sources of water, incorporate water conservation, include reclaimed water, minimize the proliferation of small water systems, and address what should occur if a small system should fail.

To start this process, the King County Executive invited a broad group of interests, including representatives of local governments, utilities, state agencies, tribal governments, and environmental interests to participate in a Scoping Committee. The purpose of the committee was to explore what might be included in updated CWSPs.

### ***Desired Process and Outcome***

By action of the County Executive, the Scoping Committee will transition to a Coordinating Committee. New members will be added as appropriate. The role of the Coordinating Committee will be to review, and to the extent feasible, coordinate and facilitate a number of studies, analyses, and projects which will produce new information and findings that will be useful for King County and broader regional water planning activities. While the primary purpose of some of these studies and analyses is not implementation of the Coordination Act, much of the information they develop will be useful in updating CWSPs. The Coordinating Committee will form a six-member Executive Steering Committee to assist in the logistics of this planning process. Their role will include setting the agendas, calling committee meetings, resolving disputes, pressing for the completion of desired outcomes and deadlines, assuring open communications, and facilitating both the Coordinating Committee and Technical Subcommittees.

The Coordinating Committee will meet at least quarterly to receive update reports on each of the analytic pieces. Sub-committees will be appointed for each of the work elements. The Committee will coordinate and integrate the information that is being developed in a timely manner with information available to be integrated into the CWSPs and other appropriate water resource and supply planning processes. The Committee will make periodic progress reports to the Council and other interested legislative bodies prior to presenting its final report.

Information and work products that are developed from the following pieces of work will be incorporated as appropriate into the existing CWSPs.

- A. Regional demand forecast
- B. Supply alternatives analysis for King County
- C. Climate change analysis
- D. Reclaimed water
- E. Source exchange strategies
- F. Prioritization of tributaries to be addressed through source substitution for fish flow enhancement
- G. Small water systems strategy
- H. Implementing the Municipal Water Law

These work elements are described in detail in the body of this report.

It is recommended that the County Council state its intent in the first quarter of 2006 to initiate an update of the CWSP process. This updating process would not begin for twelve months.

The final report of the Coordinating Committee will include a summary of the results and status of the key work elements. It will provide a recommendation on the scope for Coordinated Water System Planning in King County. This report will include recommendations on the area to be covered by revised/updated/new CWSPs and participation in the planning process. At a minimum, the report will recognize that the Cascade Water Alliance and King County intend to develop or update relevant CWSP(s) to include key elements of its proposed system and the incorporation of reclaimed water, and that the County will initiate any update(s) necessary to meet Cascade's needs. Other utilities will be encouraged to participate in updating their CWSPs. Participation by utilities will be voluntary; no utility will be compelled to participate in the CWA/King County CWSP process.

All CWSP updates will be carried out consistent with the process outlined in the Coordination Act. King County's role will be to initiate the process, review the plans for consistency with other plans and regulations, and recommend approval to the State Department of Health as authorized by the statutory CWSP process.

The goal is to complete the updating of existing CWSPs and obtain the necessary approvals by December 31, 2007.

## **A. Regional demand forecast**

### **Current Status**

In order to update existing CWSPs or individual water system plans, reliable information on water supply and demand forecasting needs to be developed. Individual water utilities revise these forecasts as a part of their 6-year Water System Plan update for the State Department of Health. In 2001 the Central Puget Sound Water Suppliers Forum (Forum) produced a first-ever aggregate demand forecast for the 3-county Central Puget Sound Region. In 2002, a King County-wide compilation of demand was produced as a part of the Consolidated Report produced by Seattle. Questions have been raised about the independence, methodology and assumptions of earlier demand forecasts and about incorporating information about climate change. In order to make fully informed decisions on major new water supplies, the best available information needs to be developed on future water supply needs in the region.

### ***Desired Outcome and Process***

Development of an updated three county (King, Pierce and Snohomish) demand forecast in which various stakeholders would have a high degree of confidence. A broad based technical subcommittee will be formed to oversee this work. Previous technical subcommittees have primarily been composed of utility and county staff. The technical subcommittee for the updated demand forecast should also include tribal staff and representatives of the environmental and science community. The actual forecast work itself would be done on contract.

To achieve the desired outcome, the technical committee will develop criteria for the selection of any consultants, assist in selection of consultants, and will provide direction for work done by consultants. In addition, the methodology and work products should be subject to peer review and interested parties given the opportunity to review work products throughout the process, including assumptions, drivers, and the preliminary results.

The Puget Sound Regional Council's most current demographic and economic forecasts for the three or four county region and smaller areas within the region will be used as an input to forecasting regional water demand. Opportunities to review this demographic forecast will be provided by the technical committee and others as deemed necessary by the Coordinating Committee.

A valuable outcome would be a rigorous, transparent analysis that matches up the demand forecast with supply options available to individual purveyors in different parts of the county.

Although the goal is to develop a demand forecast in which the various stakeholders have a high degree of confidence, each water utility will retain the discretion on whether and how to use the demand forecast in its planning or decision-making processes.

### ***Timing (sequence, integration, and interim steps)***

If the project were focused on demand forecasting, the project would be complete within 12 months (October 2006). If the project included other subjects, it would take longer (and cost more).

## ***Range of costs***

Funding may be available through the Forum. If the project is focused on demand forecast, it should not be excessively costly. The more the forecast deals with supply components, the more it will cost.

## **B. Supply Alternatives analysis for King County**

### ***Current Status***

A critical part of water supply planning is linking the projected demand with available water supplies. Given the time necessary to bring major new water sources on-line, it is important to know if, and when, demand will exceed supply and what alternatives should be more fully evaluated.

There is disagreement on whether (and for how long) the currently developed sources of water supply are sufficient for projected demand. Several efforts over the past twenty years have identified potential new water supply options. It has been suggested that this information needs to be revisited and updated, including a thorough evaluation of viable alternatives.

In 1989, the East King County CWSP evaluated 10 new water supply options. Eight additional new water supply options were added in the 1996 update. Each individual project was evaluated in some detail and then subjected to a comparative evaluation of all individual sources. The result was a recommended supply plan that set forth preferred options on a near-, mid- and long-term basis.

At least one programmatic Environmental Impact Statement and one individual water system plan has included some evaluation of supply alternatives in the greater central Puget Sound region.

The 2001 Outlook identified current regional water supplies and provided an inventory of current sources available for future use. The Outlook provided a general assessment of the region's future municipal water needs by looking at demand forecasts and demographic analysis done by PSRC for 2020 and 2030 and relying on much more general census and other demographic data on a fifty-year horizon. Specifically the Outlook evaluated municipal needs and existing supplies to determine which utilities need to increase supply and/or reduce consumption. Seattle Public Utilities most recent water system plan also has an analysis of supply alternatives.

Potential regional sources discussed in the Outlook included:

- increased conservation
- conventional supply options (new surface or ground water sources, extraction of additional water from existing sources, storage of water, connection of systems, and conjunctive use)
- reclaimed water options
- stormwater options.

All options were analyzed for viability. The Outlook made no preferences between options but rather drew a general conclusion that “a combination of enhanced water conservation, alternative supplies such as reuse and new water supplies will be needed to address near- and long-term shortfalls.”

### ***Desired Outcome and Process***

The information contained in existing CWSPs and the Outlook needs to be updated to include additional new sources as well as to re-evaluate sources already discussed. Much more in-depth analysis needs to be done for some of the potential alternatives, including Lake Tapps, regional conservation and demand management strategies, and the role reclaimed water

should play as a future water supply alternatives. In addition, the impact of climate change on existing or potential sources needs to be evaluated.

The technical subcommittee overseeing the development of the demand forecast should be tasked with coordinating the supply analysis.

The Outlook and the East King County CWSP used evaluation criteria that emphasized the technical-legal-financial aspects of the project. Although environmental criteria were also used to evaluate some projects, a much more rigorous environmental assessment needs to be done. A key component of this element will be the development of new criteria to be applied when analyzing the environmental impact of such projects.

The development of the reclaimed water analysis (described elsewhere in this document) would be the foundation for determining how, when, and where reclaimed water can become a component, like conservation, and new conventional supply options of a broader water supply plan. The supply analysis should also incorporate the work of the technical committee on climate change (described elsewhere in this document.)

### ***Timing (sequence, integration, and interim steps)***

This information needs to be developed in conjunction with, and subsequent to, the demand forecast, which is predicted to take 12 months.

### ***Range of costs***

King County is undertaking the study of reclaimed water as an alternative source of supply. CWA is undertaking studies necessary for the development of Lake Tapps. The cost of other additional supply components is uncertain.

## **C. Climate Change**

### ***Current Status***

There is increasing interest in evaluating or modeling the effects global warming and associated climate changes will have on the Northwest within the next 20 to 50 years. Although the precise implications to water resources are not clear, what does seem to be clear is that climate change will increase the uncertainty and challenges to local governments, water utilities, and others whose facilities and operations are designed to deal with historic patterns that may be fundamentally changing.

### ***Desired Outcome and Process***

Two of the leading centers of study on climate change are at the University of Washington and Battelle Pacific Northwest Laboratories. These two centers, sometimes in conjunction with water utilities, have already done a number of studies to analyze some of these effects in the Northwest and Washington, and in other parts of the country. They are also involved in some current and planned work on the topic for a variety of entities.

As part of developing the supply analysis, a technical group would be convened to pool existing and currently planned studies across the array of water resource-related impacts. This technical group will develop both preliminary information as to what we know and can use as planning scenarios, and how this information can best be integrated into the water supply analysis. It will be important that a public peer-review process be a critical component of building reliable information. Once compiled, this information can be incorporated into the supply analysis and into any planning for major long-term water supplies and facilities, and for other water-related local government management responsibilities.

The technical group should consist of scientists involved in climate change, as well as key individuals involved in the supply analysis. Tribes and representatives of environmental groups should be included on the technical group.

### ***Timing (sequence, integration, and interim steps)***

The technical group would be convened after the first of the year and provide their report by the fall of 2006, in time to be incorporated into the supply analysis.

### ***Range of costs***

Both Seattle Public Utilities and King County have committed funding for climate change analysis. It may also be necessary to compensate consultants or academics for their participation in the technical group.

## **D. Reclaimed water**

### ***Current Status***

King County's Wastewater Treatment Division has the potential through its regional collection and treatment facilities to provide reclaimed water--either centrally treated or treated with satellite facilities—at the treatment plants, along major effluent conveyance lines, and at certain pump stations. Other utilities within King County that operate their own wastewater treatment plants are at various stages in planning, constructing or operating facilities for the use of reclaimed water. These facilities are being developed to maximize efficient use of existing water resources and to respond to regulatory pressures to reduce or avoid discharges to fresh or marine waters.

King County will soon start construction of the new Brightwater regional wastewater treatment plant, which is expected to be operational in 2010. All 36 mgd of baseflow from that plant will be treated to state Class A reclaimed water standards. Planning and construction decisions on the "backbone" transmission system must be made in 2005.

State law requires that proposed reclaimed water uses be included in regional water supply plans if such uses replace or augment potable supplies. The Municipal Water Law of 2003 also requires most utilities to evaluate opportunities to use reclaimed water as part of their water system plans.

### ***Desired Outcome and Process***

The development of a phased reclaimed water analysis that can be used to identify reclaimed water opportunities, issues and potential solutions on a countywide basis for inclusion in new or updated Coordinated Water Supply Plans (CWSPs). This analysis would be conducted with an open and transparent process and would have three phases:

**Phase I:** King County Wastewater Treatment Division (WTD) will provide an analysis of the volumes of reclaimed water that could be produced from key components of its wastewater system. These system components are: Regional Treatment Plants, Major Conveyance Lines, and Pump Stations.

In addition, Phase I will include the cost of producing this water and time frames for making the water available.

**Phase II:** Interested purveyors will provide information on potential users and demand for reclaimed water. These users are likely to be golf courses, cemeteries, and parks that have large irrigation areas, as well as agricultural, horticultural, or industrial water users. The County will use existing information already developed on potential customers and will explore other opportunities that participants identify. This will be accomplished by a series of workshops with purveyors, self suppliers, potential users, and reclaimed water suppliers. King County will be doing individual outreach to customers to develop a robust market for reclaimed water.

**Phase III:** This Phase will identify the most likely points of use (based on flows available and customer locations), fine-tuning of costs of technology and conveyance, and further discussion of other issues associated with reclaimed water use (e.g., liability, reliability, wholesale-retail relationships, pricing).

A technical committee will be formed to review the basic assumptions and draft results of the initial phases. This discussion will lead to a collaborative, open, and transparent process. This

group will then jointly recommend: (1) potential users of reclaimed water and (2) potential for source exchange using reclaimed water as a source substitute. It will also evaluate revenue sources other than the wastewater rate for distribution of reclaimed water. The group may also focus discussions on early action projects with interested and willing partners.

The information developed on the availability and cost of reclaimed water as an alternative source will be integrated into new or updated CWSPs.

### ***Timing (sequence, integration, and interim steps)***

- Phase I: Starts immediately. Completed by January 2006.
- Phase II: Starts late fall 2005. Completed by June 2006.
- Phase III: Starts Spring 2006. Completed by October 2006.

### ***Range of costs***

All costs will be borne by King County.

## **E. Source exchange strategies**

### ***Current Status***

A source exchange program is one that has as its purpose the temporary or permanent replacement or supplementing of existing water supply sources that adversely affect instream flows necessary for the preservation or recovery of salmon runs. Source exchange water would be from supply sources with less impact on instream flows.

The 2001 Outlook recognized that utilities could not do source exchange alone. Coincidentally, the 2001 drought gave the Forum the opportunity to develop a working relationship with fisheries experts as it developed a drought plan that included as a key component, a source exchange element. An ad-hoc group of Forum members worked with fisheries experts to identify potential approaches to address problem areas. Although the Forum's 2001 Drought Plan was designed specifically as a stopgap measure to address drought-related impacts, the concepts, working agreements, and process could be used to develop a longer-term source exchange program.

Since 2001, the watershed groups in King County have developed salmon recovery plans that are now being reviewed by NOAA. Those efforts have included analyses of the role of flows in recovery, and how altered flow regimes may be affecting recovery

The Department of Ecology in its initial Report of Examination (ROE)<sup>1</sup> for the Lake Tapps water right requires that the Cascade Water Alliance develop and implement a source exchange program. Specifically, the ROE requires that out of a maximum consumptive use of 72,400 acre feet per year, 11,000 acre feet per year or 16 mgd be set aside solely for the source exchange program. The source exchange program would be used to replace supplies for public water systems whose normal supply adversely impacts any waters within the Place of Use (POU) of the water right and will not be available to serve growth or to increase a utility's normal water supply. Since the POU for Cascade's permit includes essentially all of King County, much of Pierce County and portions of southern Snohomish County, the scope of the program could include most water purveyors in the three-county region.

Five years prior to the use of any water under the permit, the ROE requires Cascade to fund DOE with \$150K (2003 dollars) to conduct a study for the purpose of identifying and ranking by order of biological need priority surface waters that require instream flows/levels to be increased to achieve healthy harvestable fish runs.

In addition to the Lake Tapps ROE, King County has identified the use of reclaimed water as another opportunity for source exchange. Amounts available and distribution lines will be identified as part of the reclaimed water analysis. Opportunities for benefiting fish through source exchange needs to be identified in the same way as opportunities for use of the Lake Tapps water.

### ***Desired Outcome and Process***

The goal is the development of a source exchange plan or program that has as its purpose the temporary or permanent replacement of water supply sources that adversely affect salmon runs with water from supply sources with less impact on salmon runs. This program requires the identification of streams that would most benefit from additional flows made possible from

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<sup>1</sup> The initial ROE on Lake Tapps was remanded to Ecology. A final decision on a new ROE has not yet been issued. This framework makes reference to requirements from the initial ROE, which may or may not be included in the final ROE.

appropriate source exchange. Development of such a program would necessitate a strong working relationship between water supply utilities and fisheries resource agencies and Tribes. For utilities on groundwater sources, the primary focus should be on the reduction of use to lessen potential impacts on surface waters. Source exchange options should also include reclaimed water.

For purposes of prioritization, the Department of Fish and Wildlife, the various tribes, Department of Ecology, watershed groups, and Shared Strategy have already done much work. These entities will be responsible for developing the prioritized list described elsewhere. How these priorities are incorporated into the source exchange strategy will also involve utilities and King County.

### ***Timing (sequence, integration, and interim steps)***

Cascade's obligation to develop a source exchange program under the ROE is substantial, and could result in a program that has applicability to most of the region. The opportunity for using reclaimed water from Brightwater and elsewhere is also substantial, with water being available from Brightwater starting in 2010.

The biological needs survey to be conducted by DOE as part of the Lake Tapps ROE is the key to implementing a viable program and needs to be initiated as soon as possible if maximum benefit to existing runs is desired.

Use of reclaimed water as a part of a source exchange program is expected to come on-line in various phases (for example: 2010 for the Sammamish segment). Earlier opportunities may be identified as part of the reclaimed water analysis.

### ***Range of costs***

Cascade's "seed" money could be used initially to fund the process of identifying priority surface waters that could benefit from source exchange, although additional funding sources would be needed. Initially staff costs could be borne by participating entities.

## **F. Prioritization of tributaries**

### ***Current Status***

A central focus of the scoping effort is to identify opportunities and priorities for providing water quantities at a time and place to protect salmon, including those that are listed or are in decline. Various parties have worked on this effort over the last decade and longer. A central challenge is to articulate a specific set of actions that could be taken to provide additional water to particular vulnerable or closed tributaries.

Numerous groups (watershed planning groups, Shared Strategy, and WDFW) have been working to develop more detailed information on low flow problems and the needs of salmon in Central Puget Sound.

Currently available information highlights the need to improve instream flow conditions in favor of salmon recovery. This could involve taking actions that change the quantity, timing, frequency or duration of those flows. One possible opportunity for addressing quantity concerns arises through source substitution, wherein water resources developed for other purposes can be used to offset current groundwater withdrawals. That groundwater, in turn, can be left in place and used to recharge wetlands adjacent to streams, which will ultimately result in additional instream flows. Groundwater also contributes cold water to streams and rivers, which helps ameliorate the effects of high water temperatures on instream resources. Similarly and more directly, this is the case with direct diversions of surface water. This presumes that water withdrawals are the primary factor in reducing streamflows. Land-use and development and the infrastructure that accompanies it can also play a part through impervious surfaces that prevent recharge.

Cascade Water Alliance's pending water rights permit has requirements for Cascade to commit a percentage of the developed water right to source substitution. King County's proposed reclaimed water project also offers clear opportunities to support source substitution.

### ***Desired Outcome and Process***

- Development of a prioritization matrix which:
  - a) Identifies short-term opportunities to match the tributary instream needs with source substitution
  - b) Identifies longer-term opportunities and needs in the tributaries.
- Achievement of recovery flows and water temperatures in select King County streams and rivers.

The current group developing the short-term opportunity matrix includes representatives from each King County watershed, and staff from WDFW and from Ecology. To initiate the second phase, a broad based group should be formed early to define and agree upon the criteria to be used in the prioritization matrix. A technical subcommittee would then be formed to apply this matrix and begin to develop tributary flow enhancement action priority lists.

### ***Timing (sequence, integration, and interim steps)***

The initial phase of the prioritization matrix would be completed in the first quarter of 2006. The second phase of the prioritization matrix would be completed in conjunction with the source substitution efforts of Cascade and King County's reclaimed water project. This second phase would identify opportunities emanating from those efforts but would also identify other tributary

instream flow needs that might not be within the geographic area covered by the CWA and King County projects.

### ***Range of costs***

The first phase of this effort would be completed within the current budgets of the parties. Once the initial phase is complete, the fish group would work with the Forum and other interested parties to cost out the next steps of the prioritization matrix.

## **G. Small Water Systems.**

### ***Current Status***

The owners of small public water systems sometimes struggle to deal with water quality concerns and system capacity issues because they lack the financial, technical, and administrative resources to respond to some situations. Further, a proliferation of small systems can complicate the efficient management of our water resources and the delivery of an urban level of water service. DOH has identified two Group A water systems in King County that are facing some significant regulatory issues that, if unaddressed, may lead to receivership. King County indicates that over 50% of the Group B systems in King County are in significant violation of health requirements.

Since 1995, the Coordination Act has required that CWSPs include “policies and procedures that generally address failing water systems for which counties may become responsible under RCW 43.70.195,” as well as satellite system management requirements. Only the East King County CWSP currently has these elements.

Additionally, in areas outside urban growth boundaries, the county should be making land use decisions consistent with the development of water systems with the ability to provide a rural level of water service and should continue to discourage the creation of new small water systems unless the existing water utilities are unable to provide service in a timely and reasonable manner.

Finally, concern has been raised about a lack of policy on the proliferation of irrigation wells as a means of avoiding paying for water delivered by local purveyors.

### ***Desired Outcome and Process***

In order to control the number of new small systems, and to provide for an orderly approach to failing systems that may be placed into receivership, the County would like a consistent countywide approach or strategy to be developed that can be incorporated into updated or new CWSPs. This strategy should also include a review of the magnitude of the problem and recommended approach for dealing with the proliferation of irrigation wells within purveyors’ service areas.

### ***Timing (sequence, integration, and interim steps)***

This strategy needs to be completed in time to be integrated into the CWSP process. A task force should be formed immediately, with a schedule to complete the strategy, including any external review, prior to March 2006.

### ***Range of costs***

The costs of this component are minimal based on the assumption that the time and travel of each individual appointed to the task force would be absorbed by the represented entities.

## **H. Implementing the Municipal Water Law**

### ***Current Status***

The recently adopted Municipal Water Law (MWL) includes a number of provisions relative to water utilities and local planning processes. These include the "duty to serve," consistency of water system plans with local comprehensive plans, service area boundaries, compliance with conservation programs, water use efficiency, and timely and reasonable service delivery. The MWL directed the state Department of Health (DOH) to develop rules on water use efficiency by December 31, 2005. DOH developed some initial guidance documents on some of the other provisions, and is in the process of updating this guidance and developing new guidance for some of the other provisions. DOH is currently conducting informal outreach on its suggested language for these rules or guidance. They expect to finalize these rules by mid to late 2006.

The King County Code (Section 13.24) establishes a Utilities Technical Review Committee (UTRC) that is responsible for reviewing and approving water system plans under a number of criteria, including consistency with comprehensive plans and compliance with state laws and DOH regulations. The UTRC is also responsible for reviewing appeals under the Coordination Act as to whether a utility's proposed conditions of service are "timely and reasonable" under that statute. The County's interpretations of the statutory provisions, particularly with regard to consistency with local comprehensive plans and duty to serve, are not necessarily the same as DOH's.

In 2004, as part of its approval of the County Comprehensive Plan, the King County Council directed the Department of Natural Resources and Planning to develop definitions of "timely and reasonable service" and service provided with "reasonable economy and efficiency" that would be used in making service decisions for new developments in areas covered by the existing CWSPs and in unincorporated areas of the County.

### ***Desired Outcome and Process***

Development of consistent interpretations by both DOH and King County of key provisions in the Municipal Water Law, and agreed to roles and responsibilities for both state and local governments. These interpretations would be followed in reviewing existing water system plans, and will guide development of final rules and policy documents in time to use in the CWSP updating process.

### ***Timing (sequence, integration, and interim steps)***

Department of Health expects to finalize its rules by mid to late 2006. The King County Council directed development of "timely and reasonable" definitions by the end of 2005.

### ***Range of costs***

Costs are currently part of each agency's budget.

# Summary

## Key Benchmark Dates:

### 1<sup>st</sup> Quarter 2006

- Transition the Scoping Committee into the Coordinating Committee
- Formation of the various technical committees
- Prioritization of tributaries to be addressed through source substitution: Phase I
- Reclaimed water feasibility study: Phase I
- Strategy for addressing small or failing systems
- New rules (in draft form) to implement the Municipal Water Law
- County Council Resolution

### 2<sup>nd</sup> Quarter 2006

- Reclaimed water feasibility study: Phase II: Completed by June 2006.

### 3<sup>rd</sup> Quarter 2006

- Climate change analysis
- New rules (final adoption) to implement the Municipal Water Law.
- Supply Alternatives analysis for King County
- New demand forecast

### 4<sup>th</sup> Quarter 2006

- Reclaimed water feasibility study: Phase III
- Prioritization of tributaries to be addressed through source substitution: Phase II
- Source exchange strategy
- Begin CWSP updates

### 1<sup>st</sup> Quarter 2007

- Ongoing CWSP updates

### 2<sup>nd</sup> Quarter 2007

- Ongoing CWSP updates

### 3<sup>rd</sup> Quarter 2007

- Ongoing CWSP updates

### 4<sup>th</sup> Quarter 2007

- County Council and DOH approve updated CWSPs.

## Cost Summary:

### CWSP updates:

- Recent CWSP updates (for East King County, Kitsap and Skyway) cost between \$20,000 and \$140,000 each.

### Regional demand forecast:

- The Forum is expected to fund the regional demand forecast. If the project is focused on demand forecast, it should not be excessively costly. The more the forecast deals with supply components, the more expensive it becomes.

**Climate change analysis:**

- Both Seattle Public Utilities and King County have committed funding for climate change analysis. It may also be necessary to compensate consultants or academics for their participation in the technical group. Such costs could range from nominal to \$50,000, depending on the size of the committee, the level of work necessary to compile the necessary information, and whether the experts are willing to participate without compensation.

**Supply alternatives analysis for King County:**

- Cost uncertain.

**Reclaimed water feasibility study:**

- All costs will be borne by King County.

**Source exchange strategies:**

- Cascade's "seed" money could be used initially to fund the process, although additional funding sources would be needed. Initially staff costs could be borne by participating entities.

**Prioritization of tributaries to be addressed through source substitution:**

- The first phase of this effort would be completed within the current budgets of the parties. Once the initial phase is complete, the fish group would work with the Forum and other interested parties to cost out the next steps of the prioritization matrix.

**Small water systems strategy:**

- The costs of this component are minimal based on the assumption that the time and travel of each individual appointed to the task force would be absorbed by the represented entities.

**Implementing the Municipal Water Law**

- Department of Health is funded to develop these rules.
- King County costs are borne by the County.

## **Attachment A**

### **Members of the Scoping Committee**

Pam Bissonette, King County  
Walt Canter, Cedar River Water and Sewer Association  
Chuck Clarke, City of Seattle  
Grant Degginger, Cascade Water Alliance  
Larry Fay, Seattle and King County Public Health  
The Honorable Jane Hague, King County Council  
Ken Howe, Woodinville Water District  
John Kirner, Tacoma Public Utilities  
Jim Kramer, Shared Strategy  
The Honorable Peter Lewis, City of Auburn  
Michael Mayer, Washington Environmental Council  
Louise Miller, Chair  
Don Perry, Lakehaven Utility District  
Richard Reich, Muckleshoot Indian Tribe  
Richard Rodriguez, Washington Department of Health  
Carl Samuelson, Washington Department of Fish and Wildlife  
Dan Swenson, Washington Department of Ecology  
Lloyd Warren, Cascade Water Alliance

Facilitated by Dan Silver and Kaleen Cottingham

## Attachment B

### Some Recommended Questions to Guide the Technical Subcommittees

#### A. Regional demand forecast

- How should public review and transparency be built into the process and at what stages?
- Should the demand forecast integrate elements of the supply analysis, including but not limited to: alternative sources, conservation standards, reliability standards, and other key management constraints?
- What methodologies are there for doing regional forecasting and is there one that is sufficiently transparent and reflective of the needs of the region? Is it possible to get agreement on a single methodology?
- What is the best way to match predicted population growth with geographical areas so that the purveyors who will actually get new customers are modeled as such?
- In matching supply with demand, what should the reliability standard be?
- In matching supply with demand, what should the conservation standards be? What is the potential for additional demand reduction within geographic and purveyor service areas, including an analysis based on a countywide comparison of peak daily and average daily usage?
- What time horizon should be used for the demand forecast?
- What, how, and can climate change uncertainties be incorporated into demand forecasting?
- Should the demand forecast be for annual average demands, or are finer timeframes necessary in order to assess any treatment and transmission capacity or water right constraints?

#### B. Supply alternatives analysis for King County

- What is the best way to integrate the alternatives analysis with the demand forecast?
- What role should the updated new source alternatives analysis play in determining future new source development?
- How or will a priority system be established to rank potential new sources?
- How can water be moved or managed so that utilities with surplus share with utilities with projected deficits?
- Should this information be used by Ecology in reviewing applications for new or transferred water rights?
- How should this information be used by DOH in reviewing WSP's?
- What is the relative impact of the different supply options on fish and fish recovery?

#### C. Climate change

- How reliable are the climate change scenarios and predictions?
- If the scenarios and predictions cover a wide range of risk or outcomes, how should such a range be modeled in predicting future water demand and supply?
- How should utilities plan for or model uncertainty?
- How and when, if at all, should these scenarios and predictions be incorporated into decisions about future new source development and other modeling?
- What is the time horizon for planning?

## **D. Reclaimed water**

- Is the proposal by King County cost-effective?
- In evaluating costs and pricing policies for reclaimed water, how should costs be allocated between wastewater and water utilities?
- Where are the current and future opportunities for the use of reclaimed water?
- Where are the opportunities to use reclaimed water as part of source exchange to benefit vulnerable tributaries?
- Are there opportunities to use reclaimed water for ground application to help augment flows in streams and tributaries identified as vulnerable?

## **E. Source exchange strategies**

- Can this strategy be developed much sooner than envisioned in the Lake Tapps ROE so that it can be incorporated into the CWSP update process?
- Criteria must be developed to determine which tributaries may benefit most from source exchange. This will require significant technical work not only in developing the criteria but also in applying it to specific withdrawals.
- How will priorities be determined?
- Should the program be narrow by focusing on the use of water identified in the Lake Tapps ROE and in the reclaimed water analysis? Or should the source exchange program identify and prioritize all opportunities regardless of the source of the substitute water?
- Since substitute water from Lake Tapps isn't projected for decades, should this program be developed at this time or should it be developed closer to the availability of substitute water?
- In order for source exchange to work, utilities impacting streams must have physical access to a substitute source. Although many interties between utilities are already in place, additional and upgraded connections may be needed.
- How should substitute water be priced? Pricing of the substituted water poses a significant problem. The water being replaced is often cheaper water than the source exchange water. How can City X be encouraged to engage in source exchange if the substitute water significantly exceeds the cost of its own supply?
- Who should bear the burden of any cost differential? To date these issues have been recognized but not resolved. The Lake Tapps ROE for example says nothing about how Cascade is supposed to go about "selling" its 16 mgd of required source exchange water outside Cascade's membership.
- Is there a way to equitably encourage utilities to participate, given the regional benefits may not seem balanced with the localized impact?

## **F. Prioritization of tributaries**

- In which subbasins are opportunities for stream enhancement from source exchange most likely to exist?
- What are the selection criteria to be included in the action prioritization matrix?
- What specific tributaries would benefit from management strategies?
- What strategies in addition to source substitution offer reasonable prospects for the hydrating of tributaries?
- What metrics can be developed to assure that water which is substituted actually becomes instream flow and isn't diverted to support another water right?
- Articulation of a credible analytic connection between particular flow regimes and fish abundance, productivity, diversity and distribution.

## **G. Small Water Systems**

- Should the strategy emphasize a general preference for larger utilities assisting failing small systems within their defined service areas?
- Should the strategy include a consistent understanding of “duty to serve” and its relationship to service area boundaries?
- Should the strategy set forth a clear understanding of when a system crosses the threshold from viable to non-viable and the steps and priorities that will be taken?
- Should the strategy include a consistent approach to land use decisions in areas within service area boundaries?
- Should the strategy include an approach to individual water supply, including irrigation wells?

## **H. Implementing the Municipal Water Law**

- Can planning proceed prior to rule finalization?
- How will King County review CWSPs (and individual plans) in light of new provisions in the Municipal Water Law?