BEFORE THE METRO COUNCIL

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| FOR THE PURPOSE OF PROVIDING COMMENTS ON THE PRELIMINARY REGIONAL WATER SUPPLY PLAN | ) ) ) | RESOLUTION NO. 95-2233A<br><br>Councilor Susan McLain |

WHEREAS, Metro is mandated by its Charter to address Regional Water Supply and Storage in its Regional Framework Plan; and

WHEREAS, Metro joined the Regional Water Supply Planning Study on July 28, 1994, with adoption of Resolution No. 94-2010A; and

WHEREAS, Metro provided Region 2040 project population projections to the Regional Water Supply Planning Study and other map and analytic services as its contribution to the study as agreed in Council Resolution No. 94-1962A; and

WHEREAS, Metro coordinates regional growth management planning through its Region 2040 program and the resulting urban form will affect water consumption demands and future water supply infrastructure needs in the region; and

WHEREAS, Metro is member of the Regional Water Supply Planning Study and is participating in the adoption process of the Regional Water Supply Plan, together with the other 27 sponsoring water districts and jurisdictions in the region; and

~~WHEREAS, Metro will eventually adopt the final Regional Water Supply Plan in early 1996 and use relevant parts of that plan as a basis of its Regional Water Supply and Storage element in the Metro Regional Framework Plan; now, therefore~~

WHEREAS, Metro Council has had a presentation and staff report on the preliminary Water Supply Plan (see Exhibit A) and that Metro does not accept or adopt the preliminary Water Supply Plan in its current form; now, therefore

BE IT RESOLVED,

1. That the Metro Council recognizes the importance of the Regional Water Supply Planning Study, its link with the Metro's Region 2040 program and applauds the region's water providers for their leadership in conducting this study.

2. That the Metro Council has reviewed the preliminary Regional Water Supply Planning Study and has taken public testimony regarding the study. Based on this review, the Council has identified the following major recommendations as the study is refined

- Implement comprehensive aggressive regional water conservation and water pricing as the cornerstone of any future regional water supply strategy;
- Investigate future source options such as dual systems, nonpotable water systems and water reuse;
- Maintain the regional scope of this study to ensure that all citizens in the Metro region are assured high water quality;
- Maintain regional flexibility and options for future water supply sources;
- Initiate a formal regional consortium of water providers and other participants to implement a regional water supply plan, especially with regard to water conservation;
- Recognize that this public review is only the beginning of a long process of public input into the development of future water supply options and Metro's Urban Water Supply element in the Regional Framework Plan.

3. That the Metro Council is sending the attached Exhibit B to the Study's consultant team and steering committee for ~~inclusion~~ consideration in preparing the draft final Regional Water Supply Plan.

ADOPTED by the Metro Council this 16 day of Nov., 1995.

J. Ruth McFarland, Presiding Officer

Approved as to Form:

Daniel B. Cooper, General Counsel

Exhibit A

STAFF REPORT

INFORMATIONAL BRIEFING ON PRELIMINARY REGIONAL WATER SUPPLY PLAN AND ADOPTION PROCESS

Date: August 31, 1995 Presented By: Rosemary Furfey

PURPOSE OF INFORMATIONAL BRIEFING

The purpose of this informational briefing is to: 1) present a brief summary of the newly-issued preliminary Regional Water Supply Plan (RWSP) and answer any questions regarding the plan; and 2) present the RWSP's adoption schedule and public involvement activities.

BACKGROUND

The preliminary RWSP (see Attachments 1 and 2) is the result of a five-year regional planning effort that has involved twenty-seven municipal water providers (cities and districts), together with Metro, in the three-county metropolitan region. The plan resulting from this unique multi-agency and inter-disciplinary program provides strategies for:

- cooperative regional conservation programs;
- efficient and flexible transmission systems;
- coordinated development of new supply sources; and
- options for institutional arrangements for providing municipal water service throughout the region.

The Metro Charter mandates that Metro adopt elements of the Regional Framework Plan that address regional water supply and storage, particularly as they relate to growth management. In addition, as the Region 2040 project progressed, it became clear that there was a need for coordination between Region 2040 growth planning and the demand forecasting being conducted by the Regional Water Supply Planning Study (RWSPS).

In order to facilitate coordination between these two major regional planning efforts, and to prepare for eventual adoption of water supply elements in the Regional Framework Plan, Metro formally joined the RWSPS effort on July 28, 1994 with adoption of Resolution No. 94-2010A. In addition, the Metro Council also authorized the transfer of Region 2040 population data to the RWSPS so that water demand scenarios could be modeled based on Metro's population growth projections. The data transfer was authorized by Metro Council resolution No. 1962A and the data transfer was completed during the summer of 1994. In addition, Metro Data Resources Center produced maps for several RWSPS technical reports.

When Metro formally joined the RWSPS, it appointed Planning Department Director Andy Cotugno as Metro's representative to the project. Since then staff have attended the study's steering committee and participant committee meetings as the preliminary plan was developed.

In addition, Councilor Jon Kvistad and Executive Office Mike Burton are members of Commissioner Lindberg's Regional Water Leadership Group which met periodically to brief the region's elected officials about the status of the project. Metro staff served on the study's Environmental Task Force which reviewed the ***Environmental Analysis of Future Water*** **Source Options** report. Metro provided written comments to the steering committee about this report. Metro's Water Resources Policy Advisory Committee (WRPAC), which is chaired by Councilor McLain, was briefed at each of its meetings about the status of the study. Finally, information and maps about this study were made available at the Region 2040 open houses which were held around the region in June 1995.

Since formally joining the study, the Metro Council, its former Planning Committee and current Land Use Committee have had periodic updates and briefings about the progress of the RWSPS. In September 1994, the Planning Committee reviewed the study's draft policy objectives and provided specific comments to the study's steering committee regarding Metro's policy interests in a letter dated October 20, 1994. These included:

- strong support for the efficient use of water resources in particular emphasis on water conservation and making the best use of existing supplies;

- the study should address the issue of planning for curtailment during drought. The study should examine the cost of continuing to provide water with high reliability versus curtailment of use during periods of drought. The committee emphasized the need to educate the public about managing water demand and that additional reliability can come from different sources (e.g. conservation);.

- strong support for watershed protection to protect water quality and ensure future water quality. The committee stressed the need to protect and ensure high water quality standards while ensuring the ability to mix water sources across the region;

- the need to avoid environmental impacts, not just minimize or mitigate them when developing new sources or transmission systems. Impacts need to be evaluated on a watershed basis in order to characterize the cumulative and downstream impacts of water supply facility development and operation. Metro will evaluate any supply planning option from an integrated multi-objective viewpoint. Retention of natural systems should be a goal.

- with regard to growth management the committee emphasized the need for continued cooperation between Metro and the region's water providers to determine where future growth should occur.

FACTUAL ANALYSIS

**Phase I**

Prior to Metro joining this study, the planning work began in 1991 with three "Phase I" studies. These studies projected future regional water demand, evaluated potential water sources and identified ways to conserve water. It recommended more detailed study of conservation, transmission and system efficiency, and new supply sources. Options that could provide enough water to meet population growth during the next 50 years included: demand management; a third dam and reservoir on the Bull Run River; expanding the Barney Reservoir on the Trask River; increased treatment and use of the Clackamas River; new diversions and treatment on the Willamette and Columbia rivers; and aquifer storage and recovery.

**Phase II**

The currently completed "Phase II" work included more detailed studies of promising water sources and alternatives to help meet water demand in the years ahead. It has investigated how to make new and existing water systems more efficient and cost-effective through conservation and transmission.

The study used an integrated resources planning (IRP) process that examined a range of water resource options including supply, transmission and conservation. The IRP process designs and evaluates different resource combinations to determine their respective and relative costs, benefits, impacts and risks. This involves identifying the policy values which guide the study, formulating and evaluating the mix of resource options, communicating with citizens and decision makers, and presenting tradeoffs which must be weighed and balanced before an informed decision can be made.

The key planning elements included: 1) evaluation of conservation and demand management opportunities; 2) analysis of water supply source options; 3) analysis of system efficiency and transmission; 4) identification of different water service governance and institutional arrangements; and 5) public involvement through newsletters, media coverage, slide show and video, stakeholder interviews, focus groups, public forums, workshops and briefings for interested groups and decision makers.

The project consultants developed a computer model called "IRPlanner" to assist in generating and evaluating the scenarios. The model allows planners to set up different scenarios by specifying different sources, supply amounts, transmission routes, conservation efforts, and timelines to determine how various choices differ in terms of system reliability, efficiency costs, environmental impacts, and the ability to manage catastrophic events.

**Results and Recommended Long Term Strategy**

The preliminary plan identifies and investigates five approaches to meeting the region's water supply needs and achieving the highest level of reliability. Each of these five sequences emphasizes different policy objectives and combinations of objectives. Some of the key findings in the plan are: 1) a significant amount of water is available to the region; 2) supply facilities will be added to the existing supply base in the near-term ( see Attachment 3). These include

expansion of the Barney Reservoir and treatment facilities on the Tualatin River, additional intake and treatment capacity on the Clackamas River, and the return of Portland's Columbia South Shore Wellfield to full capacity; 3) given existing and committed resources, the region will not need major new supply increments until close to the year 2020, unless water demands increase faster than even high projections, or unless committee resource additions do not materialize. 4) conservation program opportunities and water reuse offer significant water savings to the region; 5) the region is fortunate to have so many viable supply options; 6) regional growth patterns are difficult to predict; and 7) the region's citizens care about their water supply.

Based on the provider's review of the five water supply sequences, they have recommended a particular long term strategy to meet the region's future water supply needs. The recommended strategy includes aggressive regional outdoor conservation programs, transmission, aquifer storage and recovery (east and west), expansion of Clackamas River supplies, and lastly development of a supply source on the upstream Willamette River in 2035 -2045. This multi-resource, phased approach provides a great deal of flexibility in responding to information needs and changing circumstances ( e.g. demand, or regulatory requirements) over time.

**Public Involvement and Plan Adoption Schedule**

With publication and dissemination of the preliminary plan, Metro and the region's water providers now begin an extensive public involvement process. In addition to the full plan and executive summary, there will be a newsletter summarizing the results of the plan, a video, technical summary sheets (see Attachment No. 4) and a series of public forums to educate the public and seek their comments on the preliminary plan.

The overall plan adoption schedule is outlined on Attachment No. 5. In September, the plan will be reviewed by each participating agency and a series of regional public forums will be held around the region on September 26, 27 and 28, 1995. In October, the Metro Council will conduct a public hearing to receive testimony about the plan in October, as well as receive technical comments from the Water Resources Policy Advisory Committee (WRPAC). Metro's comments and recommendations will be submitted to the project management team and a decision alternative will be formulated. The draft final plan will then be reviewed again in public forums, WRPAC will provide technical comments and the Metro Council will again solicit public testimony before the final plan is prepared in early 1996. It is anticipated that Metro will adopt the plan in early 1996. The plan will then become a basis for the water supply element of the Regional Framework Plan.

ATTACHMENT 3

## Near-term Strategies

- Completion of the Barney Reservoir
- Small expansions of existing Clackamas systems
- Remediation and maintenance of the Portland wellfiel
- Transmission and interconnection to areas facing immec
- Continued conservation
- Further study of potential non-potable sources including treated wastewater effluent and untreated groundwater and surface water
- Maintain the viability of supply options including:
  - Conduct water quality monitoring and pilot treatment testing
  - Participate in numerous state and federal studies relating to water quality and supply related issues
  - Participate in growing number of watershed related work
  - Conduct fishery studies (e.g., IFIM on ClackamasR.)
  - Acquire or protect land/right-of-way acquisition for facility sites.
  - Participate in Metro regional framework plan formulation and implementation
  - Participate in water rights adjudication in Willamette Basin.
  - Conduct pilot tests at potential ASR sites and participate in state rulemaking on ASR
  - Participate in wellhead protection rulemaking.

  <u>For Bull Run:</u>
  - Participate in implementation of President's NW Forest Plan;
  - Participate in Sandy Basin/Watershed activities;
  - Participate in Sandy Basin water rights adjudication;
  - Advocate protection of the Little Sandy Basin as optional municipal water supply if long-term storage on the Bull Run isn't available.

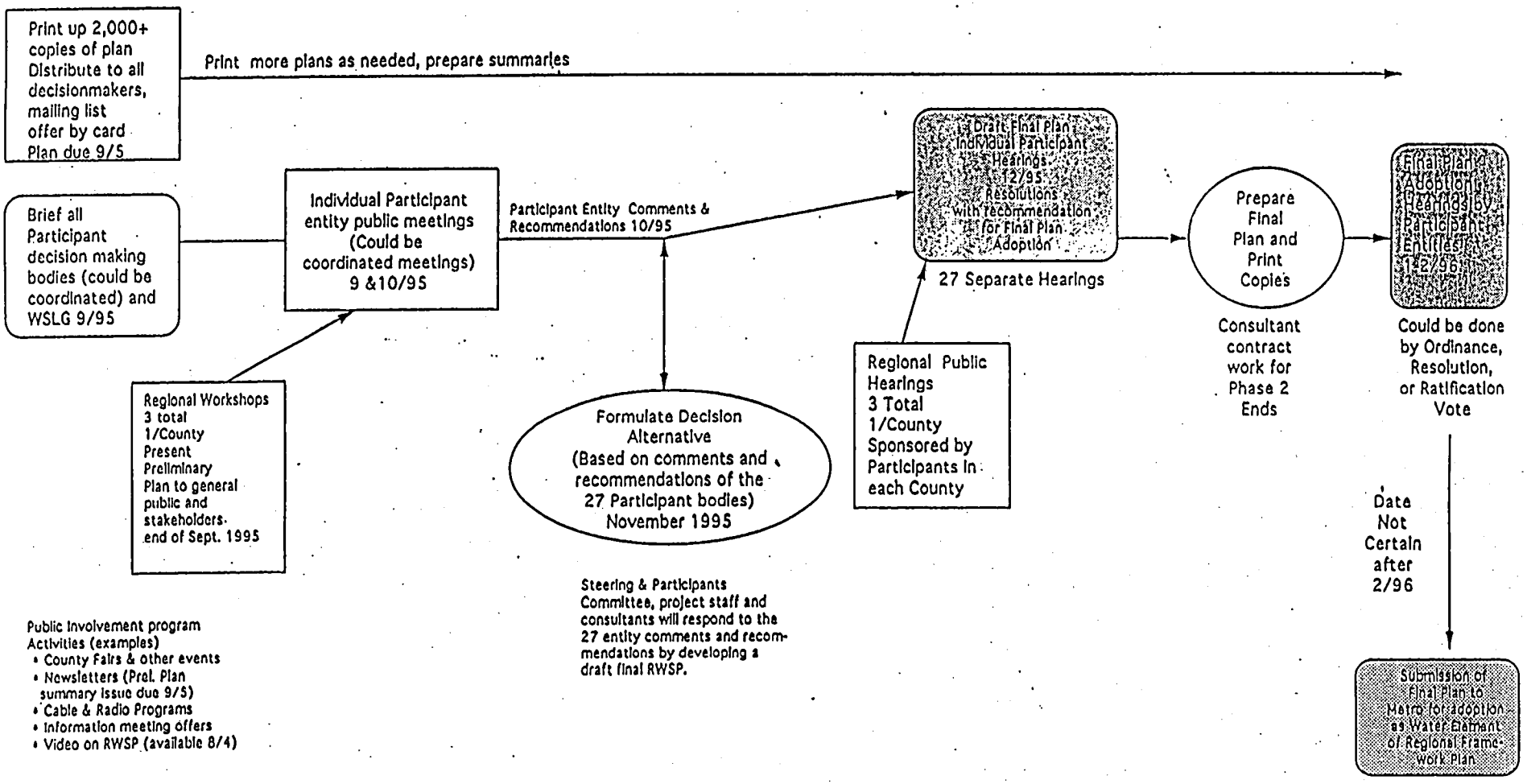
PRELIMINARY PLAN AUG-SEPT 1995

October

November

December

FINAL PLAN JANUARY-FEBRUARY 1996




Public Involvement program Activities (examples)

- County Fairs & other events
- Newsletters (Prel. Plan summary issue due 9/5)
- Cable & Radio Programs
- Information meeting offers
- Video on RWSP (available 8/4)

Steering & Participants Committee, project staff and consultants will respond to the 27 entity comments and recommendations by developing a draft final RWSP.

ATTACHMENT 5

**EXHIBIT B**

Attachment to Resolution 95-2233A

**METRO ANSWERS TO QUESTIONS FOR PRELIMINARY REGIONAL WATER SUPPLY STUDY PARTICIPANTS**

November 8, 1995

Introduction

The preliminary ***Regional Water Supply Plan*** is the culmination of a five-year multi-jurisdictional planning effort. The plan is comprehensive, regional in scope and far reaching in its technical analyses and recommendations. The Metro Council recognizes that water providers have shown exceptional leadership by organizing themselves and funding a regional water supply study that addresses issues that are vital to the future of the Portland metropolitan region. The study identifies specific policy objectives, investigates selected water source options and supply strategies. It identifies the trade-offs associated with each strategy and recommends a preferred strategy to meet future water supply demands. There are no easy answers to the questions of how to meet future water supply needs. Each strategy has positive and negative aspects. There are also many unknowns. For example, we will not know how much water citizens and industry can conserve until an aggressive regional water conservation programs are initiated. Most importantly, however, this planning effort is focusing public attention on water supply issues, stimulating public debate about source options and how water resources should be managed. This study is raising these issues to the important level it deserves.

**Important Link with Region 2040 and Growth Management**

The Metro Council strongly supports the regional scope of this plan and the regional nature of its proposed strategies. The ***Regional Water Supply Plan*** is being issued at a time when the citizens of this region are participating in Metro's Region 2040 project to determine how the region will grow in the next 50 years. The region's future urban form must complement and protect natural resources as the region grows. Water supply planning is a crucial part of this debate. Urban density, land use and growth patterns affect water demands and options for future sources. Urban form and land use will dictate near term and future infrastructure needs. One of the cornerstones of Region 2040 is resource conservation, therefore, water conservation must be the most important part of any source option strategy. Metro's land use decisions should complement and protect future water supply options. Metro has a responsibility and important role to play in these future decisions. Regional water supply planning and the Region 2040 growth management planning program must continue to be coordinated since it is critical to the future livability of this region.

**Water Conservation and Public Education Are Essential for Any Future Water Supply Action**

The scope and implications of this plan require an aggressive, regionally comprehensive public education and conservation program. The study's public opinion survey reveals that a significant portion of the respondents to the survey are unaware of their drinking water source or the implications for the sources being considered. This illustrates the need for public education to make citizens aware that their personal actions have direct implications on the region's water

resources and future drinking water options. It is imperative that a broad-based, comprehensive and regional public education strategy be initiated as one of the first steps in implementing the region's water supply plan. Finally, this study highlights the need to ensure water supplies for in stream uses as well as coordinating all out-of-stream water uses (e.g., irrigation, industrial, water supply and hydro-power) on a comprehensive watershed basis to ensure the protection of water resources for the future.

1. **The Regional Water Supply Study has identified policy values. Which of these key policy values are most important to you in meeting your future water needs? Are there other policy values that are equally or more important to you, if so what are they?**

   In September 1994, the Metro Council Planning Committee reviewed the study's draft policy objectives and provided specific comments to the study's steering committee regarding Metro's policy interests in a letter dated October 20, 1994. The policy issues of highest concern identified by the Metro Council are:

   Efficient Use of Water

   The Metro Council strongly supports the efficient use of water resources with particular emphasis on water conservation and making the best use of existing supplies. It also stated its support for the current effort to investigate the potential efficiencies gained by the selective reuse of wastewater.

   Reliability

   The Metro Council believes the issue of planning for curtailment during drought should be addressed. It encouraged the study's steering committee to examine the cost of continuing to provide water with high reliability versus curtailment of use during periods of drought. The Metro Council believes that the public should be educated and involved in managing demand and that higher reliability can be obtained through different strategies (e.g., conservation).

   Water Quality

   The Metro Council strongly supports watershed protection to enhance and protect water quality and ensure future water quality. In addition, it wants to stress the need to protect and ensure high water quality standards while ensuring the ability to mix water sources across the region.

   The Metro Council wants to add that it is equally important to ensure surface water quality is protected after water supply needs are met, rather than only considering raw water quality for drinking purposes. The plan should avoid surface water quality degradation before and after water withdrawals.

   Environmental Impacts

   The Metro Council emphasizes the need to avoid environmental impacts, not just to minimize or mitigate them. These impacts must be evaluated on a watershed basis in order to characterize the cumulative and downstream impacts of water supply facility development and operation. This includes evaluation of impacts on adjacent as well as watershed-wide land uses and natural resources. Metro will evaluate any supply planning option from an integrated multi-

objective viewpoint. This includes consideration of the multiple functions and benefits of fish and wildlife habitat, open space, natural areas and wetlands. Retention of natural systems should be a priority goal.

Growth

The Metro Council strongly supports the coordination between the water supply planning study and the Region 2040 project. In addition, the Metro Council emphasizes the need for continued active cooperation between Metro and the region's water providers to determine where future growth should occur. Future urban form and growth will have an impact on future water supply demands and opportunities for water efficiencies.

2. **Do you agree with the recommended strategies contained in the Preliminary Regional Water Supply Plan? If so, why? What strategies specifically do you not support and why?**

Overview of the Recommended Strategies

**All five strategies address the range of policy issues of concern to the Metro Council.** All five address reliability, water quality, environmental impacts and water efficiency (see Table X1-3, below). These strategies are flexible and adaptive to changing conditions, and can be reassessed at periodic intervals during implementation of the plan. The strategies include incentives for water conservation and land use controls to protect water quality and future source options. The importance of land use decisions is a critical factor in each strategy with regard to protecting groundwater, surface water quality and land use patterns that reduce water demand. The incremental nature of these strategies incorporate strong incentives for reducing environmental impacts and conserving water while implementing the plan. The five strategies allow the public to understand the range of policy options, the trade-offs with different supply sources and the phasing of different sources as demand changes over time or as new information becomes available about source options.

**TABLE XI-3**

**Key Policy Objectives**
**Addressed by Level 1 Resource Sequences**

| Sequence | Natural Environment | Water Use Efficiency | Raw Water Quality | Costs | Catastrophic Events |
|---|---|---|---|---|---|
| 1.1 | ✔ | ✔ | | | |
| 1.2 | | ✔ | ✔ | | |
| 1.3 | | ✔ | ✔ | ✔ | |
| 1.4 | | ✔ | | | ✔ |
| 1.5 | ✔ | ✔ | | ✔ | ✔ |

**The Metro Council strongly supports water conservation as the first action taken in each strategy, in conjunction with bringing on the currently committed base case sources. Water conservation should start immediately.** It must be the cornerstone to any regional water supply strategy because it can delay the need to develop new sources, while putting off unavoidable environmental impacts and costly public works projects. Most importantly, this preliminary plan helps to identify the key research needs and questions that must be answered before future water supply options are initiated. This planning process must necessarily be iterative and the source options must be continually re-evaluated as new data and information become available.

Policy options and combination of sources in the five proposed strategies are reasonable. The five strategies allow the public to evaluate the trade-offs and implications of achieving different combinations of policy objectives. There are critical decision points in each strategy where water supply choices must be made. There are, however, many unresolved issues regarding each strategy. Research and aggressive water conservation programs are essential to meet the goals of whatever strategy is finally adopted.

Evaluation of the Recommended Strategy

The recommended strategy to meet the region's future drinking water needs is Sequence 1.5 as illustrated in Figure XI-6. These source options are: outdoor water conservation, aquifer storage and recovery (ASR), use of water in the Clackamas and Willamette Rivers and designated regional water transmission interconnections. These options must be considered in the context of naturally occurring conservation (mandated through legislation) and existing base case commitments.

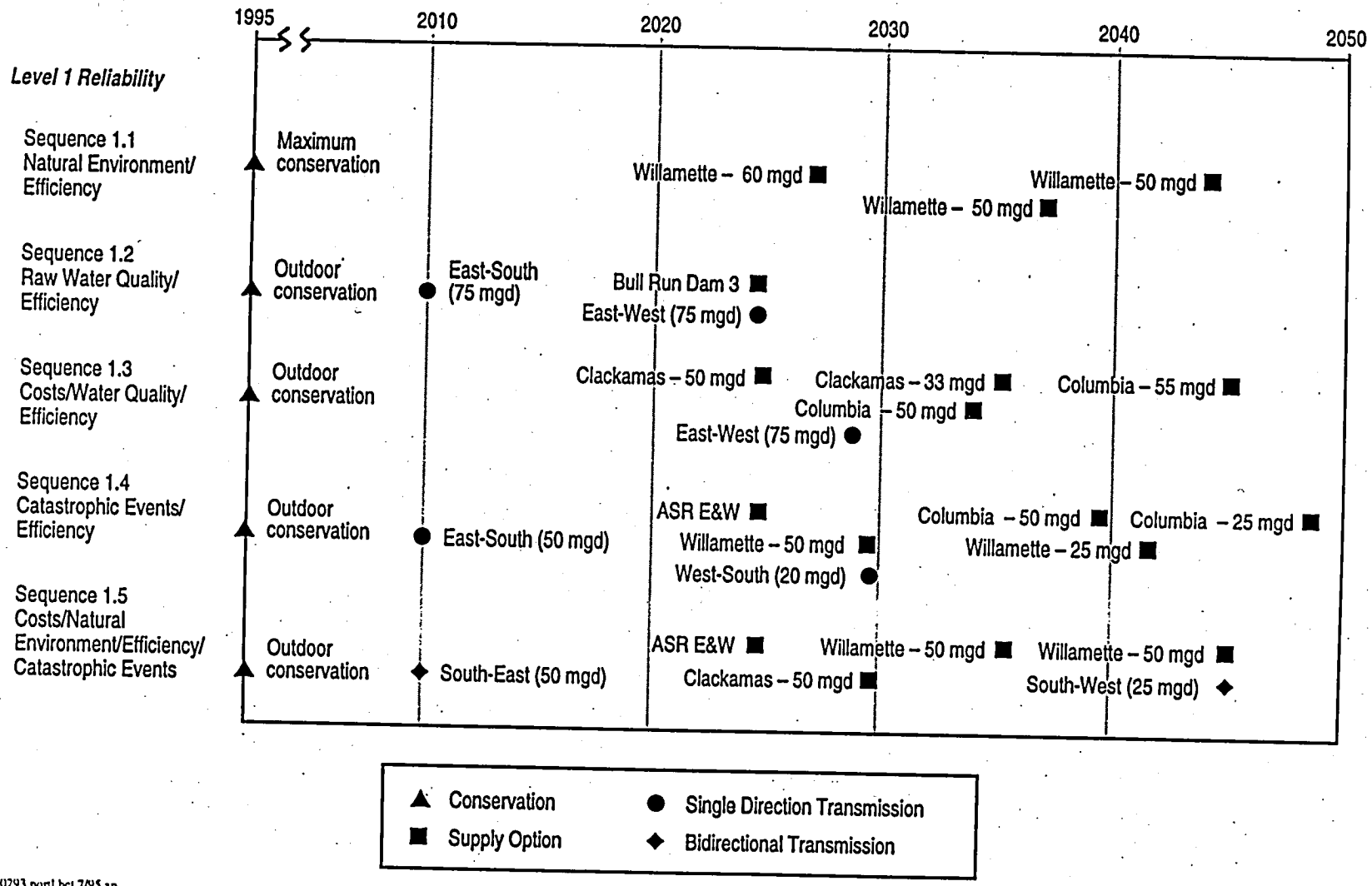
The recommended strategy has many advantages including: relatively low costs, relatively low environmental impacts, emphasis on water conservation, relatively low vulnerability to catastrophic events and flexibility to deal with future uncertainty. These advantages address many of the policy issues of concern to the Metro Council.

The Metro Council supports the selection of conservation as the first action to be taken to implement this strategy. It is recommended, however, that a cost effective mix of both indoor and outdoor conservation measures be implemented rather than just outdoor conservation. Conservation must be comprehensive rather than compartmentalized into different sectors (i.e. outdoor versus indoor). To avoid bringing future sources on line, this mix of conservation measures will have to be used eventually, and it is recommended to implement this most effective mix of conservation as soon as possible. Conservation must be seen as a long-term strategy that fundamentally changes human behavior and the public's understanding of how personal actions affect water supply and water quality. Based on Metro's success with regional solid waste recycling, staff believe there is tremendous potential for the public to similarly conserve water.

The Willamette River option is controversial. Public sentiment against the Willamette River option is a strong incentive for maximum conservation and land use planning to comprehensively protect and manage water quality in the watershed. There is public concern about the risk associated with varying levels of treatment technologies to treat raw water from the Willamette River. This concern was strongly expressed at the Metro public hearing regarding this preliminary plan. Metro Council and staff members share many of these

Figure XI–6

## Level 1 Resource Sequences–High Demand

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concerns and questions. The Metro Council, however, recognizes the need to maintain a regional perspective when evaluating future source options. The Metro Council, therefore, recommends aggressively pursuing the most cost effective water conservation and water pricing, other nonpotable source options, and re-evaluating lower reliability in order to maximize existing sources. The Metro Council requests that this scenario be analyzed and evaluated in the next phase of plan revision. This scenario should be fully utilized before consideration of future new regional water sources.

The Oregon Department of Environmental Quality's (DEQ) recent report entitled ***Willamette River Basin Water Quality Study*** identifies the Willamette River watershed as imperiled by environmental deterioration if action is not taken now to reverse current water quality and land use trends. There is clearly a need to take action to improve water quality in the Willamette River to protect and enhance all its beneficial uses and functions. The Metro Council strongly supports the formation of a watershed-wide effort to manage and protect the Willamette River.

Ultimately, the public must decide how much risk it is willing to accept regarding potential health affects of using the Willamette River as a source of drinking water. According to the recommended strategy, however, the Willamette River would not be used until after 2035, thereby allowing research to be conducted to better understand the water quality of the Willamette River and how it can be treated most effectively. In addition, a watershed land use action plan must be developed and implemented to protect and enhance the river's water quality. Citizens, industry and agricultural land mangers will have to change their current practices and personal actions in order to improve water quality.

Aquifer storage and recovery is another component of the recommended strategy which raises several unanswered questions. For example, this strategy has not been fully tested in Oregon, particularly in the three-country metropolitan region. New laws are only now being promulgated to regulate aquifer storage and recovery. The issue of how existing and future land uses (e.g., intensive agriculture in the aquifer storage and recovery (ASR)-designated areas) will affect water stored in aquifers needs to be investigated. In addition, how will stored drinking water be protected from unauthorized uses or co-mingling with other groundwater which may be contaminated? How is the zone of influence of the injected water determined to identify if water is being withdrawn for unauthorized uses? What are the impacts of increased withdrawals? These questions highlight the need to ensure that land use controls and wellhead protection programs are in place before ASR is implemented. The Metro Council urges that these key research questions must be identified and action taken to protect future ASR lands.

The recommended strategy also includes withdrawal on the Clackamas River. Metro staff have several concerns about this option. The Clackamas River's cold water fishery is significant in the Pacific Northwest. The watershed is experiencing rapid growth pressures as well as projected future growth based on the Region 2040 project. It is recommended that an instream flow incremental methodology (IFIM) study be conducted as soon as possible before additional withdrawals are initiated on the Clackamas River to investigate key questions about the Clackamas fishery and other questions regarding in-stream priorities. Land use that protects water resources is essential. There is also an opportunity to manage large portions of the upper watershed which is in federal land ownership. It is, therefore, critical that all jurisdictions, including Metro, coordinate their actions to achieve resource protection goals in the Clackamas watershed.

Comments on Other Strategies

Strategy 1.2 includes the construction of a third dam on the Bull Run River. The Metro Council has many concerns and questions about pursuing this option. A third dam will have significant impact on in-stream flows and aquatic resources within the watershed. Because this dam will be higher in the watershed, it can be assumed to have higher proportional damage to aquatic and terrestrial systems, therefore, the Metro Council does not fully support this option at this time for the following reasons: 1) the dam will have high, and as yet not fully determined, environmental impacts; 2) there is high risk related to catastrophic impacts; 3) there would be impacts to old growth habitat; 4) there is high uncertainty of regulatory permitting within the context of the Clinton Forest Plan; and 5) it serves as a disincentive for water conservation by making a large volume of high quality water available.

The preliminary plan does not identify the downstream impacts on recreation (e.g., on the Sandy River) that would be caused by the third dam. In addition, the plan states that the Oregon Water Resources Department has established "Diack" flows on the Sandy River to meet the objectives of the State Scenic Waterway legislation. In fact, these flows are often not met during most months. This also highlights the connection between consumption of Bull Run water and its direct effect on the declining salmon in the Sandy River.

The Metro Council also believes the Bull Run option is more restrictive and limits the flexibility of the planning process. Once it is determined to pursue the Bull Run dam option, other options and flexibility about future water sources are eliminated. One does not build one-half a dam. The option of a third dam also takes away the responsibility for regional watershed planning and land use controls to protect future water supply sources. It also takes away the public incentive to conserve water in order to avoid using future water sources. If the public knows that the Bull Run is planned for the future, what incentive is there to conserve water? In fact, this may cause water conservation targets not to be met and the dam may have to be built sooner than scheduled.

**3. What changes would you recommend for consideration in the final RWSP? Why?**

Water Conservation

The range of conservation technologies and strategies analyzed in this report is impressive. The assumptions for projected water savings appear to be realistic, yet it is impossible to know if these savings can be achieved until actual field or pilot testing is conducted. One additional measure that is recommended for consideration is lodging industry showerhead replacements. Based on the number of hotel rooms in the Portland metropolitan area and the high output volume of showerheads in use in the Portland lodging industry, this conservation measure could significantly reduce summertime peak day demand.

The preliminary plan groups conservation measures by sector and in three levels or "bundles." In reviewing these measures, it is recommended to move several of the conservation measures from Level III to Level II. For example, when a water audit is conducted in Level II, it would make sense to include ultra low flush (ULF) toilet rebates at the same time. Customers want to know all the measures which can help them save water. If ULF rebates are included in the water audit program, auditors can verify the need for ULF toilets and inform customers of their availability at the time of the audit. It would be relatively easy to include this measure in

Level II programs and less expensive then trying to return to these customers later with the hopes that they will install ULF toilets. Water audits should be geared toward helping the customer save water in every cost effective way. Customers are interested in all measures which help them save water and all measures should be included in the original audit performed for that customer.

Another measure that is recommended to be moved to Level II from Level III is landscape ordinances. Ordinances can be relatively inexpensive to implement and can result in substantial water savings if they are combined with existing inspection and enforcement actions. Ordinances can also be inexpensively adopted to establish maximum turf requirements for commercial and industrial sites throughout the region, therefore, it is recommended that it be included in Level II. Given the importance of conservation measures to this plan and the extensive marketing and public education that will be needed to achieve the plan's targets, it makes sense to combine Level II and Level III in a more aggressive conservation strategy.

Successful implementation of the conservation component and achieving or surpassing projected water savings will depend on a well-coordinated comprehensive regional strategy. This must include extensive public education, aggressive marketing to all customer classes, regional pilot programs designed to test incentive levels, participation rates, water savings, customer acceptance and all the other unknown variables inherent in a new program of this scope and magnitude. The Metro Council recognizes that conservation is not easy to implement and it certainly is not free, however, it is clearly less expensive than the alternatives. It is such an important component of this plan, however, that it must be approached as aggressively and seriously as possible. Metro has extensive experience in successful resource conservation and public education through its solid waste recycling programs. There are many parallels that can be drawn between promoting recycling and achieving regional recycling goals and promoting water conservation. Based on Metro's charter mandates, this is an important role Metro should undertake as the plan is implemented. Specific recommendations will be described in the answer to question No. 4.

Finally, in order to maximize the full potential water savings from a conservation program and recognizing its critical role conservation plays in all future water source decisions, the Metro Council recommends that each strategy include a mix of the most cost effective conservation measures, both indoor and outdoor. Currently, only Strategy 1.1 includes maximum conservation and all the others include only outdoor conservation. One of the main reasons for advocating this mix of conservation measures is that the conservation program must look at all customer water use and help them reduce water use in all possible ways and reduce their total water bills. Promoting only outdoor conservation may not gain total customer commitment and may send a message to customers that the water conservation strategy is not comprehensive.

Aquifer Storage and Recovery

Several issues have already been raised regarding aquifer storage and recovery (ASR). These include: 1) contamination of stored water by adjacent land uses; 2) contamination of stored drinking water by contaminated groundwater; 3) contamination of existing groundwater with treated drinking water; 4) impact of future urban growth boundary changes and land use in urban reserves; 5) surface water impacts due to injected groundwater; and 6) unauthorized withdrawal of groundwater for adjacent land use activities.

ASR has not been adequately tested in Oregon, though it is being used in other parts of the country. The ASR pilot testing that is occurring in Salem needs to be closely monitored. Identification of research needs and pilot testing in the Portland region needs to be initiated immediately. The experiences of municipalities around the country with ASR must also be investigated. The Metro Council recommends that these research questions be investigated as soon as possible when implementing a regional water supply plan.

Regional Water Pricing

Conservation programs must be linked to conservation pricing policies across the region. Regionwide water pricing must be implemented if water conservation is going to be successful. Price signals must be put in place as soon as an aggressive water conservation program is initiated. The price structure will encourage conservation program participation and conservation programs can help customers lower their bills. If new rates cause higher bills, which in turn spur conservation program participation, reducing water bills, a clear path has been established for a successful demand side water management program. The Metro Council supports the water pricing recommendations made in the preliminary plan.

Several providers in the region have already implemented some form of conservation pricing. It is recommended that all providers in the region implement an aggressive conservation rate program, monitor its impact and adjust rates to maximize as large a water savings as possible. This issue needs considerable follow-up to coordinate, design and implement a regional pricing system.

Wastewater Reuse and Nonpotable Options

The Metro Council agrees with the plan's conclusion that there are potential markets for cost-effective wastewater reuse and nonpotable options. The Metro Council recommends that further investigation focus on institutional level reuse, rather than residential or business level development. This has the potential of being a very cost effective substitute for additional sources being brought on line. The Metro Council recommends additional investigation and public education about the advantages of wastewater reuse. Public information should include data about experiences of wastewater reuse in other parts of the country, particularly California.

High Technology Water Demands

The recent publicity about the water requirements of new high technology firms in the region has focused attention on this sector of the economy that can have a significant impact on regional and subregional water demands. The Metro Council recommends that this issue be closely monitored and the results factored into the water demand calculations as the plan is periodically updated. An aggressive industrial water reuse and conservation program must be implemented and monitored throughout the region.

Financing Recommendations

The Metro Council recognizes that the preliminary plan seeks to gain consensus about regional water supply strategies, rather than addressing implementation issues. The issue of how to finance implementation of the plan has raised many questions. The Metro Council recommends

that the draft final plan identify a basic financing strategy or polices that will guide future financing decisions. Metro is addressing this issue with regard to who will pay for future growth. Local jurisdictions participating in this regional water supply planning study as well as Region 2040 will want guidance and policy directives that identify how financing will be dealt with in the future and who will bear the costs of future development.

The final plan should also address the issue of how to deal with lost revenues to water districts due to successful water conservation programs.

4. **Do you support the concept of forming a formal consortium of water providers through the adoption of an intergovernmental agreement when the final RWSP is adopted? What types of functions do you think the region's water providers should carry out in a cooperative approach? If you do not support a formal organization how would you recommend that these functions be carried out?**

The Metro Council strongly supports the formation of a formal consortium of water providers when the final RWSP is adopted. The Metro Council recommends that Metro be a full member of this consortium with specific tasks and responsibilities to implement the adopted plan. It may also be advantageous to have other entities, agencies and organizations as members of the consortium to facilitate implementation of the plan based on the plan's adopted strategy.

Formation and Functions of a Consortium

The Metro Council recommends that the functions of this proposed regional water provider consortium include, but not be limited to, the following:

a. setting benchmarks and interim targets to monitor and measure implementation of the plan;
b. coordinating with other agencies, organizations and jurisdictions on all aspects of plan implementation;
c. conducting formal periodic reviews of plan implementation every five years and reporting on progress in achieving the goals of each aspect of the plan (i.e., are regional water conservation targets being met?);
d. identifying interim measures to achieve plan goals based on the results of plan implementation review;
e. sharing information among providers and participants in the consortium;
f. coordinating regional water conservation activities, monitoring progress and revising programs based on pilot testing results;
g. developing and coordinating an aggressive public education campaign regarding all aspects of plan implementation. Keeping public informed about how targets are being met or not met, identifying new strategies to meet conservation targets and ensuring a regionally comprehensive education program;
h. monitoring base case implementation;
i. seeking funding for and coordinate different research projects with relevant agencies/ jurisdictions;
j. identifying financing options for each stage of plan implementation;
k. coordinating with Metro Region 2040 project; and
l. conducting pilot testing of aquifer storage and recovery.

The Metro Council recommends that Metro identify its preliminary role in implementing the plan. This role should evolve over time and continually be evaluated in the context of Region 2040 implementation.

Proposed Metro Role and Responsibilities

Based on Metro's Charter mandate to address regional water supply and storage in its Regional Framework Plan, and based on the fact that water conservation is the first major program to be implemented in each strategy, the Metro Council recommends two roles for Metro in implementing the plan:

a. **Water Conservation and Public Education**

Metro should actively participate and take leadership in the coordination of regional water conservation and public education programs to aggressively achieve water conservation targets outlined in the plan. For example, Metro can expand its highly successful Metro Recycling Hotline to include information about water conservation and refer the public to local water providers and landscape architects. The Metro hotline responded to over 87,000 calls last year. In fact, during the 1992 drought, the hotline received many calls inquiring about water conservation measures. In addition, Metro has extensive experience in public education workshops, working with industry and other regional strategies to achieve resource conservation goals.

b. **Land Use**

Metro should use its land use authority in coordination with local jurisdictions to implement regulations, standards, model codes and incentives for land use, building code and landscaping ordinances to achieve the goals of the ***Regional Water Supply Plan***. Metro should support and encourage watershed planning, wellhead protection and research to address any of the outstanding issues in plan implementation. Metro should also coordinate acquisition of regional Greenspaces with implementation of the water supply plan to ensure compatible land uses and to avoid conflicting land uses wherever possible. Region 2040 land use should also be compatible with and support implementation of the adopted plan.

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