RESOLUTION NO. 990

A RESOLUTION APPROVING THE INTERGOVERNMENTAL COOPERATIVE AGREEMENT BETWEEN THE PARTNERSHIP OF THE REGIONAL PROVIDERS' ADVISORY GROUP FOR THE PURPOSE OF FUNDING AND MANAGING THE SECOND PHASE OF THE REGIONAL WATER PLANNING STUDY.

WHEREAS, the City of Wilsonville is a member of the Regional Providers' Advisory Group (RPAG); and

WHEREAS, the City of Portland, in partnership with the RPAG completed a Phase I Study of regional water supply needs; and

WHEREAS, the future regional water supply is an issue of great interest to the City of Wilsonville and the membership of RPAG; and

WHEREAS, a Phase II Project has been developed to produce an integrated Resource Plan and phased implementation strategies for meeting the region's future water supply needs from the time of plan completion to the year 2050; and

WHEREAS, the members of RPAG have developed a process for adoption of an Intergovernmental Agreement to fund and manage the Phase II Project.

NOW, THEREFORE, the CITY OF WILSONVILLE RESOLVES AS FOLLOWS:

1. The Mayor is authorized to enter into an Intergovernmental Agreement to fund Phase II, Regional Water Supply Plan, a copy of which is marked "Exhibit "A", attached hereto and incorporated herein.

2. Authorize the expenditure of funds for the cost allocation to the City of Wilsonville in the sum of $84,000 (including a 4.0 per cent default contingency), for the Phase Two Regional Water Supply Plan and the terms of the Intergovernmental Agreement, a copy of which is marked Exhibit "A", attached hereto and incorporated herein.

3. Funding for this project is to be obtained through a transfer from Water Systems Development Charge revenues to the Water Capital Projects Fund, Line No. 5000-530-7703006. Scheduled payments for the proportionate share of the project cost shall occur as outlined below:

1992-1993	1993-1994	1994-1995
April 1993	August 1993	August 1994
$11,308.00	$58,154.00	$11,307.00

ADOPTED by the City Council of the City of Wilsonville at a regular meeting thereof the 19th day of April, 1993, and filed with the Wilsonville City Recorder this date.

GERALD A. KRUMMEL, Mayor

ATTEST:

VERA A. ROJAS, CMC/AAE, City Recorder

SUMMARY of Votes:

Mayor Krummel	AYE
Councilor Carter	AYE
Councilor Lehan	AYE
Councilor Van Eck	AYE
Councilor Hawkins	AYE

Dear,
Put the original agreement and a copy of the Res. in our file.
Put a copy of the agreement with the original resolution ~~to~~

City of
WILSONVILLE
in OREGON

30000 SW Town Center Loop E
Wilsonville, Oregon 97070
FAX (503) 682-1015
(503) 682-1011

PUBLIC WORKS DEPARTMENT

MEMORANDUM

DATE: **APRIL 13, 1993**

TO: **HONORABLE MAYOR AND CITY COUNCIL**

FROM: **STEVE STARNER, PUBLIC WORKS DIRECTOR**

SUBJECT: **PHASE II REGIONAL WATER SUPPLY PLAN**

SUMMARY:

The water purveyors of the Tri-County Metropolitan area (The Regional Providers Advisory Group -- RPAG) have developed a process for adoption of an Intergovernmental Agreement to fund and manage the second phase of the Regional Water Plan. The total cost of the project is $2.23 million. The proportionate share of the cost for the City of Wilsonville, based on the anticipated increase in peak day water demand in the year 2050, is $84,000. (This amount includes a 4 per cent contingency to cover the cost of a potential default by another participant during the course of the study period.)

The project is estimated to take two years to complete, or May 1994. All work performed by the consultant will be the property of the non-defaulting participants. Benefits for the City of Wilsonville participating in a Regional Water Supply Plan include:

*Develop local supply plan in context of regional view
*Phase-in supply development in cost effective manner
*Greater opportunity for effective conservation education and savings
*Minimize duplication of effort
*Better mitigation of environmental impacts
*Make efficient use of existing water resources

STAFF RECOMMENDATION:
Approve Resolution No. CB-R-674-93 as presented.

BACKGROUND:

On April 5, 1993, during the initial presentation and discussion of the RPAG Intergovernmental Agreement, there was general consensus that the concept of the Regional Water Planning Study demonstrated foresightedness and good stewardship of the existing resources in the Willamette Valley. However, specific to Wilsonville's financial participation in the study, two issues deserve additional background information:

1. Why did Wilsonville's cost increase from the February 1992 estimate of $40,340 to the 1993 Intergovernmental Agreement commitment of $80,769?

First, CH2M Hill recommended a Phase 2 scope of work as a component of the Phase 1 Water Source Options Study. Along with the scope of work, an estimate of cost totaling $1,190,000 was submitted.

In the months that followed, the RPAG established specific objectives and tasks, and then determined that the approach and levels of analysis proposed in the Water Source Options Study provided a good start, but did not sufficiently meet the objectives outlined. The RPAG developed its own scope of work resulting in a larger work program. A comparison of scope of work and cost may be presented as follows:

A. Integrated Resources Plan
(Involves analysis of demand management, systems efficiencies, and supply source development individually and in various combinations. RPAG scope of work included plan finalization after completion of systematic public review process.)

RPAG cost estimate. . . . $413,000--$453,000 CH2M Hill estimate $150,000

B. Public Involvement Element
(Consensus building through activities including meetings, workshops, interviews, surveys, newsletters. Identify public values for use in developing integrated supply scenarios. RPAG broadened and added detail to the original scope of work outline.)

RPAG cost estimate . . . . $200,000-$209,000 CH2M Hill estimate $150,000

C. Demand Management and Conservation Element
(Development of a conservation program based on analysis of peaking factors, consumption rates by class of use and unaccounted for water use. RPAG added more study detail in order to provide a comparison of system efficiencies and source options in such a way that cost-effective decisions can be made.)

RPAG cost estimate . . . .$332,000 CH2M Hill estimate $100,000

D. Regional System Efficiency and Transmission
(Examine the Regional System as part of the long-term supply planning effort. Phase 1 assumed that a regional pipeline is needed and that the general location of the pipeline is known. RPAG modified the scope of work to make no presumption about a regional pipeline and that a high quality analysis of the regional and sub-regional alternatives must be performed.)

RPAG cost estimate . . . . $249,000 CH2M Hill estimate. . . .$75,000

E. Source Options Analysis
(The Phase 1 Study identified six source "finalists" which must be subjected to considerable examination in the area of environmental impacts. RPAG expanded the analysis to include the transmission options and provide more detail about water treatment costs - - facility design, capital and O & M costs.)

RPAG cost estimate . . . . $773,000--$$890,000 CH2M Hill estimate $590,000

F. Institutional Arrangement Alternatives
(Formulates Intergovernmental Agreements for financing, study, design, construction, and operation of joint facilities. RPAG modified this element to include public involvement, a legal advisory group, and a thorough analysis of financing alternatives.)

RPAG cost estimate . . . .$116,000 CH2M Hill estimate $125,000

Total RPAG cost estimate . . . . $2,083,000--$2,249,000
Total CH2M Hill estimate $1,190,000
Negotiated Barakat and Chamberlin Project Cost $2,229,965

Second, in addition to changes in the scope of work, several RPAG members have declined to participate in funding the second phase of the Water Supply Study resulting in cost increases for the remaining members. Those entities not participating in the study may be presented as follows:

Clark County Public Utility District.	5.79%
City of Newberg	0.92%
City of Vancouver	15.11%
Boring Water District	0.66%
Hoodland Corridor	5.24%
Lusted Water District	0 .36%
Total	28.08%

Due to others not participating, the proportion of study cost for the remaining RPAG participants was adjusted. City of Wilsonville was adjusted from 2.75 to 3.62 per cent, or from $61,325 to $80,769 based on the $2.23 million project cost.

2. What if the City of Wilsonville should chose not to participate in the study effort?

First, the adopted 1986 Wilsonville Water System Master Plan outlined Water System improvements through 1997 which relied upon the continued development of a ground water supply source. However, while approving the City's application for a permit to use groundwater from 2 new wells in 1989, the Oregon Water Resources Department stipulated that the City develop a water conservation program and indicate the steps which the City intends to pursue to obtain a long-term water supply, understanding that reliance on ground water for a long-term water supply is unacceptable. Failure to demonstrate compliance with the conditions of the permit could result in a forfeiture of the new water right and jeopardize future applications for time extensions of the City's existing water rights.

In 1991, Wilsonville adopted a Water Conservation Program and a Capital Improvement Schedule identifying a surface water source connection by 1998. In 1992, Wilsonville joined with the City of Portland and the Tualatin Valley Water District to co-sponsor a Pilot Treatment Plant Study of the Willamette River. By formally and financially participating in the Regional Planning Study, Wilsonville will be further demonstrating a commitment to explore surface water source options and a willingness to obtain the best information available for cost-effective water management and conservation practices.

Second, as specified by the terms of the Intergovernmental Agreement, only "the non-defaulting participants shall own and all data, documents, plans, software, specifications, working papers, and any other materials the consultant produces in connection with its contract". To have the regional water study materials and information readily accessible to the City will avoid duplication of effort and reduce the cost of future studies or Master Plan reviews performed by the City.

Third, although the Regional Water Planing Study will include opportunity for public input, only non-defaulting participants will receive regular updates of the progress of the study, be allowed to assess the quality of the consultant's work, and have a voice in any proposed amendments to the scope of work.

Especially for Wilsonville, the Phase 1 Water Source Options Study identified a total of 27 options for new water sources. Each option was subjected to 14 different criteria for evaluation and relative ranking. The Wilsonville diversion option received a high ranking, as did additional Bull Run and Little Sandy River development. All other options ranked lower. (The Wilsonville diversion concept would withdraw 200 to 400 million gallons per day from the Willamette River at a location near the west boundary of the Wilsonville City limits. A transmission pipeline would carry treated water to the regional pipeline. Depending on the alternative chosen, the pipeline from the Willamette River could be sized from 5 feet to 11 feet in diameter.) Given that Wilsonville is a location of strong consideration as a cornerstone for a Regional Water System, it seems prudent to actively participate in the Regional Water Planning Process.

COPY

EXHIBIT "A"

Orig. Agreement is in Water Supply file # 91-2111-01

INTERGOVERNMENTAL AGREEMENT

TO FUND PHASE TWO,

REGIONAL WATER SUPPLY PLAN

PARTICIPANTS:

City of Beaverton
Canby Utilities Board, an independent governmental subdivision of the City of Canby
Clackamas Water District
City of Gladstone
Clairmont Water District
Damascus Water District
City of Fairview
City of Gresham
City of Hillsboro Utilities Commission
City of Forest Grove
City of Lake Oswego
City of Milwaukie
Mt. Scott Water District
Oak Lodge Water District
City of Portland
Powell Valley Road Water District
Raleigh Water District
Rockwood Water
City of Sandy
City of Sherwood
South Fork Water Board, City of Oregon City/City of West Linn
Tigard Water District
City of Troutdale
City of Tualatin
Tualatin Valley Water District
West Slope Water District
City of Wilsonville
City of Wood Village

TABLE OF CONTENTS

AGREEMENT

THIS INTERGOVERNMENTAL AGREEMENT (hereinafter "Agreement") is entered into by and among the following municipalities and districts, herein called "Participants:"

City of Beaverton; Canby Utilities Board, an independent governmental subdivision of the City of Canby; Clackamas Water District; City of Gladstone; Clairmont Water District; Damascus Water District; City of Fairview; City of Gresham; City of Hillsboro Utilities Commission; City of Forest Grove; City of Lake Oswego; City of Milwaukie; Mt. Scott Water District; Oak Lodge Water District; City of Portland; Powell Valley Road Water District; Raleigh Water District; Rockwood Water; City of Sandy; City of Sherwood; South Fork Water Board, City of Oregon City/City of West Linn; Tigard Water District; City of Troutdale; City of Tualatin; Tualatin Valley Water District; West Slope Water District; City of Wilsonville.

WHEREAS, future regional water supply is an issue of great interest to the Participants; and

WHEREAS, the City of Portland, in partnership with the Regional Providers' Advisory Group (RPAG), completed a Phase I study of regional water supply needs consisting of three planning studies: the Water System Demand Study, the Water Source Options Study and the City of Portland Conservation Study; and

WHEREAS, these Phase I studies predicted potential significant shortfalls in water supply region wide, and in all source subareas, by 2050 and demonstrated the need for additional, detailed study in a Phase II Project; and

WHEREAS, since the release of the Phase I studies members of RPAG have: 1) developed and participated in public outreach/public involvement programs, 2) developed a draft scope

of work for formulation of a regional water supply plan (Phase II); and 3) developed a process for adoption of an intergovernmental agreement to fund and manage the Phase II Project; and

WHEREAS, a Phase II Project description has been developed and approved by the Participants; and

WHEREAS, the purpose of the Phase II Project is to develop an integrated resource plan and phased implementation strategies for meeting the region's future water supply needs from the time of plan completion to the year 2050; and

WHEREAS, the Phase II Project objectives are to provide specific guidance to the region's water providers and decision makers regarding the implementation of: 1) demand management/ conservation programs; 2) regional system modifications for greater efficiency; 3) actions needed to develop specific new supply sources (e.g., environmental impact statements, water rights, permits, design); 4) appropriate institutional arrangements for providing water service throughout the Region; and

WHEREAS, a request for consultant qualifications was issued, consultant proposals were reviewed by an RPAG consultant selection committee and the firm of Barakat and Chamberlin, which put together a team of experts and consulting firms, was chosen as the prime consultant for the Phase II Project; and

WHEREAS, the RPAG agreed that a Steering Committee of the Participants would be responsible for overall Phase II Project direction; and

WHEREAS, the RPAG agree that it would be most efficient to have one of the Participants administer the Barakat and Chamberlin consultant contract (hereinafter the "contract") and manage the day-to-day aspects of the Phase II Project, and that this Participant shall be the City of Portland due to its greater staffing resources.

NOW, THEREFORE, the Participants agree to the following terms:

A. ROLE OF THE CITY OF PORTLAND

Portland shall:

1. Enter into a contract with Barakat and Chamberlin to conduct the work described in the attached scope of work.

2. Be responsible, through a designated project manager, for day-to-day administration of the Phase II Project contract, subject to review by the Steering Committee and the Participants as described elsewhere in this Agreement. In particular Portland will be available to the consultant to ensure that the consultant understands the obligations of the contract. Portland shall also monitor the scheduling and quality of the consultant's work.

3. Make progress payments to the consultant for work accomplished as provided in the contract with the consultant.

4. Review the consultant's work for compliance with the contract with the City.

5. Review and provide to the Steering Committee oral or written project progress reports as directed by the Steering Committee. Such reports shall include a discussion of work accomplished to date, significant discussions with the consultant, any modifications to the scope of the Project, and any other issues warranting Steering Committee review and discussion.

6. Manage the financial aspects of this Agreement including collection of Participant contributions.

7. Authorize its designated project manager to make such amendments to the contract scope of work as are approved by the Steering Committee or Participants Committee, pursuant to the provisions of Section E of this Agreement.

8. Be authorized to approve minor changes to the Project scope of work which will better accomplish Project purposes and objectives and will not result in substantial changes to the scope of work or any increase in consultant compensation under the contract. Examples of such changes might include substitutions of non-key consultant team personnel, product format and minor revising to the Project task order or methodology.

9. Advise the consultant in case of any Participant default.

10. Permit no assignment of rights under the consultant contract without approval of the Participants Committee.

11. Include within its contract with the consultant a provision prohibiting any Participant's employee from having any financial interest in the proceeds of the contract and prohibiting any Participant's employee who served upon the RPAG consultant selection committee from taking employment with the consultant or any of its subcontractors during the term of the contract.

B. ROLE OF THE STEERING COMMITTEE

1. The Steering Committee shall initially be made up of two Participants from each of the following areas:

Multnomah County (One member of which must be from the City of Portland Water Bureau);

Washington County;

Clackamas County.

2. Members of the Steering Committee shall be selected by the members of the Participants Committee from each of the listed geographic areas.

3. The Participants Committee may add no more than one member to the Steering Committee to represent late-joining water purveyor Participants from outside the already represented county areas or late-joining non-purveyor entities who become Participants pursuant to Section G.

4. The purpose of the Steering Committee is to provide the Participants with a body to review the work of the consultant and to participate, with Portland, in managing the Project contract.

5. It shall be cause for removal from the Steering Committee if a member fails on more than four occasions in any six month period to send a representative to the Steering Committee meetings. Members of the Participants Committee from each of the applicable geographic areas may, by majority vote, remove a member of the Steering Committee for cause as described in this paragraph. A Participant may resign its membership on the Steering Committee upon thirty days notice to all Participants. Participants from the applicable geographic area shall replace any resigning or removed Steering Committee member by majority vote.

6. The Steering Committee shall:

a. Have six (6) members unless others are added later by the Participants Committee.

b. Elect a Chair and Secretary, who may hold those positions until contract termination or completion; provided that the Steering Committee may decide at any time to have the Chair or Secretary serve for shorter terms and elect successors to the Chair and\or Secretary as needed.

c. Meet at least once a month. Until a chair is selected, Portland's project manager shall schedule and convene the meetings. Thereafter, the chair is authorized, and any three members of the Steering Committee may require the Chair, to schedule and convene meetings.

d. Shall act by majority vote only. Each Steering Committee member shall have one vote.

e. Prepare, maintain and make available to Participants minutes of each of its meetings.

f. Take action only if there is a quorum of members present at the applicable meeting or, if necessary, present on a conference telephone call. Four (4) members shall constitute a quorum.

g. Be authorized, at any time, to direct that Portland's designated project manager report to the Steering Committee on any issue regarding project administration, direction and progress.

h. Review the regular progress reports of Portland's designated project manager and of the consultant and provide policy direction to Portland and the consultant on aspects of the Project the control over which is not vested by this Agreement in the City of Portland project manager or the Participants Committee.

i. Review written materials submitted to it by the consultant and, through a process agreed to by the Steering Committee, provide commentary and suggestions on such materials.

j. Approve or disapprove minor amendments to the Project scope of work and recommend approval or disapproval of major amendments to the Participants Committee.

k. Advise the Participants Committee if a member of the Steering Committee resigns or fails to send a representative to the Steering Committee meetings more than four times in any six month period.

l. Designate, for purposes of Sections A.8. and E.1. of this Agreement, the "key personnel" of the consultants. This designation shall be accomplished within 45 days of the

final execution of this Agreement or all personnel shall be considered non-key personnel for purposes of Sections A.8. and E.1. of this Agreement.

7. Any Participant may request, and shall be granted, the right to appear and address, orally or in writing, the Steering Committee at any regular or specially scheduled Steering Committee meeting. Written communications received after any Steering Committee meeting shall be considered no later than at the next regularly scheduled Steering Committee meeting.

C. ROLE OF PARTICIPANTS COMMITTEE

1. All Participants in good financial standing under this Agreement shall have one representative on the Participants Committee.

2. The Participants Committee shall:

a. Act only by majority vote of a quorum of the entire Committee except as provided in Section C.2.d. and C.2.e. herein. At least two thirds of all Participants must be present to constitute a quorum. Each Participant shall have one vote.

b. Review and approve or disapprove Major Amendments to the Phase II Project work as proposed by the Steering Committee and approve Special Amendments to this Agreement.

c. Prepare, maintain, and make available to Participants minutes of each of its meetings.

d. By majority vote of the Participants from the applicable geographic areas, replace members of the Steering Committee should vacancies occur or add Steering Committee members to represent late-joining Participants as provided in Section B.3.

e. By majority vote of members from the applicable geographic areas, remove Steering Committee members for

failure to attend meetings as described in Section B. Financial default will result in automatic removal. (See section D.4.)

f. Meet as necessary to carry out its responsibilities. The first meeting shall be held within 45 days of the final execution of this Agreement and shall be scheduled and convened by the Portland project manager. Upon the selection of a Chair at the first Committee meeting, the Chair shall be authorized, and any four members of the Committee may require the Chair, to schedule and convene a Committee meeting.

g. Elect a chair and secretary who may hold those positions until contract termination or completion; provided that the Participants Committee may decide at any time to have the Chair or Secretary serve for shorter terms and elect successors to the Chair or Secretary as needed.

h. Approve any assignment of rights under the consultant contract.

3. Each Participant shall cooperate with the consultant and the City project manager to advance the goals of the Project and shall send representatives to such meetings or study sessions as the consultant or project manager shall reasonably convene and shall provide such assistance and such available information and data as the consultant or project manager may reasonably request.

D. FINANCIAL OBLIGATIONS

1. Initial Participant Contribution

Each of the original Participants to this Agreement shall make a financial contribution to the Phase II Regional Water Supply Plan Project costs. Allocation of the costs shall be proportional to the Participant's share of the increase in peak-day demand (high forecast) as projected in the Phase I - Water System Demand Study (CH2M Hill, 1992). As a result of this calculation, total contributions (except for additional or

reduced contributions required or agreed in the case of default or major contract amendment or the addition of new Participants pursuant to Section G herein) shall be as follows:

Beaverton	$ 61,971
Canby	$ 48,167
Clackamas WD	$ 72,541
Clairmont	$ 139,797
Damascus	$ 68,728
Fairview	$ 13,882
Forest Grove	$ 56,976
Gladstone	$ 7,626
Gresham	$ 116,003
Hillsboro	$ 153,890
Lake Oswego	$ 97,204
Milwaukie	$ 7,939
Mt. Scott WD	$ 71,069
Oak Lodge WD	$ 12,332
Portland	$ 528,055
Powell Valley WD	$ 18,219
Raleigh WD	$ 5,575
Rockwood Water	$ 19,089
Sandy	$ 20,850
Sherwood	$ 38,467
South Fork Water BD	$ 160,936
Tigard	$ 52,872
Troutdale	$ 39,649
Tualatin	$ 76,064
Tualatin Valley WD	$ 249,042
West Slope WD	$ 7,626
Wilsonville	$ 80,769
Wood Village	$ 4,627
TOTAL	$2,229,965

2. Payment Schedule

Each Participant shall pay its contribution to Portland in partial payments on or before dates and in the amounts presented below. Any Participant may accelerate its payments so as to pay

more than is indicated for any scheduled payment, and reducing subsequent payments accordingly.

	1992/1993 Apr 1, 1993	1993/1994 Aug 1, 1993	1994/1995 Aug 1, 1994
Beaverton	$ 8,676	$ 44,619	$ 8,676
Canby	6,743	34,680	6,743
Clackamas WD	10,156	52,229	10,156
Clairmont	19,572	100,654	19,572
Damascus	9,622	49,484	9,622
Fairview	1,943	9,995	1,944
Forest Grove	7,977	41,022	7,977
Gladstone	1,068	5,491	1,067
Gresham	16,240	83,522	16,241
Hillsboro	21,545	110,801	21,545
Lake Oswego	13,609	69,987	13,608
Milwaukie	1,111	5,716	1,112
Mt. Scott WD	9,950	51,170	9,950
Oak Lodge WD	1,726	8,879	1,727
Portland	73,928	380,200	73,927
Powell Valley WD	2,551	13,118	2,551
Raleigh WD	781	4,014	781
Rockwood Water	2,672	13,744	2,673
Sandy	2,919	15,012	2,919
Sherwood	5,385	27,696	5,385
South Fork WB	22,531	115,874	22,530
Tigard	7,402	38,068	7,402
Troutdale	5,551	28,547	5,551
Tualatin	10,649	54,766	10,649
Tualatin Valley WD	34,866	179,311	34,866
West Slope WD	1,068	5,491	1,067
Wilsonville	11,308	58,154	11,307
Wood Village	648	3,331	648
TOTAL	312,195	1,605,575	312,195

3. Payment Schedule - Amendments

Payment for authorized amendments shall be received by Portland within 45 days of approval by the Portland City Council of the contract amendment.

4: Payment Delinquencies

a. If payment has not been received within 30 days of the date due the delinquent Participant shall be considered in default of this Agreement. Portland shall notify the Participant of this default in writing, with a copy to all the other Participants. A failure to provide payment within 30 days of receipt of the notice from Portland will automatically remove the defaulting party as a Participant and, if it held a seat on the Steering Committee, shall automatically remove that party from the Steering Committee. The defaulting party will then be in breach of this Agreement and liable to the other parties to this Agreement for recovery of the defaulted payment and the defaulting party's entire remaining contribution under the Agreement as identified in Section D.1, or other remaining contribution applicable at the time of default as the result of others' defaults or the joining of new Participants under Section G, along with attorneys fees and costs incurred in a successful action to recover the defaulted contribution.

b. Upon default of any Participant, each non-defaulting Participant's share of the remaining consultant compensation shall be automatically increased pro rata with that of all other non-defaulting Participants to the extent of the deficiency created by the default, using the formula:

$$\text{Each Remaining Participant's Share of Remaining Obligations (as \% of Total Obligations)} = \frac{\text{Remaining Participant's Old Share (\%)}}{1 - \text{defaulting Share (\%)}}$$

provided, that the sum of all such increases for an individual, non-defaulting Participant shall not exceed, without consent of the Participant, an accumulated maximum of 4% of the Participant's original share of total consultant compensation.

c. In the event that the total defaults exceed 4% of the remaining non-defaulting Participants' original share of the consultant's compensation for the Project and one or more Participants do not consent, within 60 days of the default, to an increase in their pro rata share sufficient to cure the deficiency, this agreement will terminate and the City of Portland shall be authorized to terminate its contract with the consultant.

5. The Participants Committee may also vote to accept any other financial contributions from any other source to pay for work under the contract. If such financial contributions are made, the Participants Committee may determine to credit the money immediately to the Project Account, with Participants' share reduced accordingly as if the contribution came from a Participant buying in to the Project pursuant to Section G, or to place the money in the Project Account to cover defaults or contingencies, subject to the refund provisions of Section F.3.

E. AMENDMENTS TO THE PHASE II PROJECT

1. Minor Amendments

a. The Steering Committee is authorized to approve Minor Amendments to the contract scope of work.

b. A Minor Amendment is an amendment to the contract scope of work which does not increase the total consultant compensation for the Project contract by an amount that would exceed the total, original contributions made pursuant to Section D.1. above. Examples of possible Minor Amendment topics include but are not limited to:

Expansion of, or follow up to, Project tasks as warranted based on new information or insight which will enhance the quality of the product but which can be done by reprioritizing other task(s); replacement or substitution of key consultant personnel assigned to the Project, including addition of any subcontractors.

2. Major Amendments

a. By majority vote the Steering Committee may recommend Major Amendments to the scope of work to the Participants Committee. By majority vote, the Participants Committee may approve Major Amendments to the scope of work.

b. A Major Amendment is an amendment to the contract scope of work which increases the total consultant compensation by an amount that would exceed the total, original contributions made pursuant to Section D.1. above. Examples of possible Major Amendments might be:

Large expansions to the scope of contracted tasks or new Project tasks which are deemed essential to completion of Phase II purposes and objectives.

3. Major Amendment Cost Allocation

Allocations of the cost of Major Amendments will be arranged by the Participants. Portland will not execute any contract amendment until full financing is committed. An amendment may be fully financed by one or more of the Participants.

4. Amendment Approval Process

Subject to Section E.3. above and the agreement of the consultant, Portland's project manager shall execute any amendment to the scope of work approved pursuant to this Section E.

5. Special Amendments

Should all Participants listed in Section D not sign this Agreement or other parties not listed wish to sign, the signing Participants, acting as the Participants Committee, may approve Special Amendments to this Agreement as required to accomplish its purposes, provided, that no Participant shall be required without its consent to provide a greater contribution than the contribution shown in Section D, including the four percent default contingency provided in Section D.4.b.

F. REGIONAL WATER PLANNING ACCOUNT

1. All payments made to Portland shall be accounted for in a separate account within the City of Portland Water Fund. Consultant compensation shall be paid from this Regional Water Planning Account and it shall be used for no other purpose.

2. This account shall accrue interest earnings in accordance with the City of Portland's investment guidelines. Portland shall retain the interest accrued on the account to cover Portland's costs in administering the Phase II project.

3. Any monies remaining in the Regional Water Planning Account at the completion of the Phase II project, and not necessary for project contract expenses, shall be returned to the Participants in shares proportional to each Participant's overall contribution, (taking into account defaults or addition of Participants), except in the case of any defaulting Participant, which shall receive no refund.

G. BUY-IN OPTION

1. Any public water purveyor or other governmental or public entity that was not an original Participant may request, at any time, to become a Participant in this Agreement. Such entity shall make its interest known to the Participants Committee which shall act to accept or reject the entity as a Participant. The contribution of a late-joining purveyor whose share of peak-day demand was calculated in the Phase I - Water

System Demand Study shall be calculated based upon the amount it would have been charged to become a Participant at the time of contract execution, plus a pro rata share of any other costs incurred by the other Participants since that time, plus any additional amount that the Participants determine should be charged to reflect additional costs or other factors arising from the new Participant's buy-in; provided that if there have been previous defaults or new Participants or contact amendments, the share will be increased or decreased as appropriate.

2. The Participant's Committee shall establish the share to be paid by any water purveyor or other entity not included in the Phase I Demand Study taking into account at least the following factors:

a. Expected growth in population and/or water demand associated with the new Participant;

b. Any increased cost of the Project as the result of the new Participant's joining;

c. Original project contributions;

d. Special needs or status of the new Participant.

3. The new Participant shall be required to make its share of all previous partial payments at the time it joins. If a new Participant joins the Project, all Participants' shares will be re-calculated for the whole project, taking into account the additional contribution of the new Participant and those recalculated shares will control future payment obligations of the Participants. At the end of the applicable fiscal year all existing Participants shall receive a refund reflecting contributions from any new Participants. The refunds shall be allocated pro rata based on the existing Participants' contributions to that point.

4. The Participants Committee may enroll any new Participant as a full voting Participant or non-voting Associate Participant, under such conditions as it may establish, as it

deems appropriate, given the new Participant's financial contribution and potential role in the overall Study Project.

5. The Participants Committee may, but need not, add up to one Steering Committee Member to represent late-joining water purveyors outside Clackamas, Washington, and Multnomah Counties or late-joining non-purveyor entities.

H. TERMINATION

1. This agreement shall terminate upon the final payment to the consultant, unless otherwise extended by the unanimous vote of the Participants.

2. If this Agreement is terminated prior to the completion of the consultant's work pursuant to Section D.4., the remaining non-defaulting Participants shall be responsible for payment of the consultant for all contract work completed and not paid for at the time the contract is terminated and for which there are insufficient funds in the Regional Water Planning Account. Each Participant shall be responsible for its pro rata share of the remaining contractual obligations, calculated as shown in Section D.4.

3. Payment shall be made to Portland within 30 days of receipt of Portland's final termination notice and billing. This obligation upon termination does not reduce or restrict the right of remaining Participants to seek payments from any defaulting Participant(s).

I. SHARED LIABILITY

All Participants agree to share any costs or damages (including reasonable attorney's fees) from third party actions (including any action by the contractor) against any Participant arising out of or in any way related to the contract or this Agreement, except for an action challenging the legal authority of a Participant to enter into this Agreement. Payment obligations shall be proportional to each participant's original contribution or such other proportion as is applicable if

Participants have defaulted or other entities have joined as Participants pursuant to Paragraph G. Participants agree to assist and cooperate in the defense of such an action. Settlement of any action that would impose an obligation to pay upon the Participants under this provision must be approved by a majority of the Participants Committee. A defaulting Participant shall be liable to the other Participants for its pro rata share of any liability covered by this Section.

J. OWNERSHIP OF PHASE II STUDY PRODUCTS

Portland's contract with the consultant shall provide that all work the consultant performs under its contract shall be considered work made for hire, and shall be the property of the non-defaulting Participants. The non-defaulting Participants shall own any and all data, documents, plans, software, specifications, working papers, and any other materials the consultant produces in connection with its contract with the City. Upon request, consultant shall transfer any common law or statutory copyrights to the non-defaulting Participants at no charge. The agreement shall further provide that at any time upon request and, in any case, no later than upon completion or termination of its contract with the City, the consultant shall deliver to the City, on behalf of the non-defaulting Participants, these materials.

K. OREGON LAW AND FORUM

1. This Agreement shall be construed according to the law of the State of Oregon.

2. Any litigation between the Participants under this Agreement or arising out of work performed under this Agreement shall occur, if in the state courts, in the Multnomah County Court having jurisdiction thereof, and if in the federal courts, in the United States District Court for the District of Oregon.

L. DISPUTE RESOLUTION

1. All disputes that Participants cannot resolve arising out of this Agreement shall, in the first instance, be mediated.

2. Any Participant wishing to dispute application or interpretation of this Agreement shall immediately notify the Steering Committee, in writing, of the Participant's position.

3. Any issue which has not been resolved within 30 days of notification shall be submitted to mediation.

4. The function of the mediator shall be to assist the disputing Participant(s) in finding a mutually acceptable resolution.

5. The mediator shall be selected by a vote of the Steering Committee members within 45 days of a notice of dispute.

6. If, within 20 days of selection of the mediator, mediation fails to provide a satisfactory resolution the Participants will be free to seek all other legal forms of redress.

7. All Participants shall continue to perform fully during the mediation. If a question concerning financial obligations is an issue under dispute, and if a refund is due as a result of the mediation, the successful disputing Participant shall receive a refund. The disputing Participants or, in the case of a monetary dispute, any Participant who would gain or lose as a result of the outcome of the dispute, shall pay the fees and costs charged by the mediator. All disputing Participants, however, shall be responsible for their own costs for participation in the mediation, including attorneys fees.

M. NOTICE

Any notice provided for under this Agreement shall be sufficient if in writing and delivered personally to the designated Participant or deposited in the United States Mail,

postage prepaid, certified mail, return receipt requested, addressed to such person as the appropriate Participant has designated. Each Participant shall provide the other Participants with the name and address of the employee or office which should receive written notifications under this Agreement.

N. INTEGRATION

This Agreement contains the entire agreement between the Participants and supersedes any prior written or oral discussions or agreements.

O. EFFECTIVENESS OF AGREEMENT

This agreement shall become effective only upon its execution by all Participants named in the Preamble and listed in Section D, unless fewer than all the Participants, acting as the Participants Committee, approves a Special Amendment pursuant to Section E. 5.

P. COUNTERPARTS

This Agreement maybe signed in counterparts. Each Participant shall send one copy of this Agreement signed by its authorized signatory to Lorna Stickel, Project Manager, City of Portland Bureau of Water Works, 1220 SW Fifth Avenue, 6th Floor, Portland, OR 97204. Such copy shall also list the name and address of the person to whom all notices under this Agreement are to be sent on behalf of the signing Participant.

///

///

///

///

///

Q. NOTICE

All Notices under this Agreement to the City of Wilsonville shall be sent to:

Public Works Director
30000 Town Center Loop East
Wilsonville, OR 97070

Signed this 21st day of April, 1993.

The City has acted in this matter pursuant to Resolution No. 990, adopted by the City Council on the 19th day of April, 1993.

CITY OF WILSONVILLE by and through its City Officials

Mayor

City Recorder

Regional Water Supply — Phase 2 RPAG Shares Table

Participants *RPAG Members*	Full Participation Share amount Percent (%)	Adjusted Non Participation Percent (%)	Re Approtioned Participation Percent (%)	Full Participation Share amount Dollars ($)	4.00% Default Contingency	FY 92-93 * Payment	FY 93-94 Payment	FY 94-95 Payment	IGA Signed
JWC Beaverton	2.11	2.11	2.78%	61,971	64,450	8,676	44,619	8,676	Yes
Canby	1.64	1.64	2.16%	48,167	50,094	6,743	34,680	6,743	Yes
Clackamas WD	2.47	2.47	3.25%	72,541	75,443	10,156	52,229	10,156	Yes
Gladstone	0.26	0.26	0.34%	7,626	7,931	1,068	5,491	1,067	Yes
Clairmont	4.76	4.76	6.27%	139,797	145,389	19,572	100,654	19,572	Yes
Clark PUD		0.00	0.00%	0	0	0	0	0	
Damascus	2.34	2.34	3.08%	68,728	71,477	9,622	49,484	9,622	Yes
Fairview/Wood Village	0.63	0.63	0.83%	18,509	19,249	2,591	13,326	2,592	/Yes
Gresham	3.95	3.95	5.20%	116,003	120,643	16,240	83,522	16,241	
JWC Hillsboro	5.24	5.24	6.90%	153,890	160,046	21,545	110,801	21,545	Yes
JWC Forest Grove	1.94	1.94	2.56%	56,976	59,255	7,977	41,022	7,977	
Lake Oswego	3.31	3.31	4.36%	97,204	101,092	13,609	69,987	13,608	
Milwaukie	0.27	0.27	0.36%	7,939	8,257	1,111	5,716	1,112	Yes
Mt. Scott	2.42	2.42	3.19%	71,069	73,912	9,950	51,170	9,950	
Newberg		0.00	0.00%	0	0	0	0	0	
Oak Lodge	0.42	0.42	0.55%	12,332	12,825	1,726	8,879	1,727	Yes
Portland	17.98	17.98	23.6800%	528,055	549,177	73,928	380,200	73,927	
Rockwood	0.65	0.65	0.8560%	19,089	19,853	2,672	13,744	2,673	Yes
Sandy	0.71	0.71	0.9350%	20,850	21,684	2,919	15,012	2,919	
Sherwood	1.31	1.31	1.7250%	38,467	40,006	5,385	27,696	5,385	Yes
Oregon City	2.58	2.58	3.3980%	75,774	78,805	10,608	54,557	10,608	
West Linn	2.90	2.90	3.8190%	85,162	88,568	11,923	61,317	11,922	
Tigard	1.80	1.80	2.3710%	52,872	54,987	7,402	38,068	7,402	Yes
Troutdale	1.35	1.35	1.7780%	39,649	41,235	5,551	28,547	5,551	Yes
Tualatin	2.59	2.59	3.4110%	76,064	79,107	10,649	54,766	10,649	Yes
Tualatin Valley WD	8.48	8.48	11.1680%	249,042	259,004	34,866	179,311	34,866	Yes
Vancouver		0.00	0.00%	0	0	0	0	0	
Wilsonville	2.75	2.75	3.62%	80,769	84,000	11,308	58,154	11,307	
Boring WD		0	0.00%	0	0	0	0	0	
Hoodland Corridor		0	0.00%	0	0	0	0	0	
Lusted WD		0	0.00%	0	0	0	0	0	
Powell Valley WD	0.62	0.62	0.82%	18,219	18,948	2,551	13,118	2,551	
Raleigh WD	0.19	0.19	0.25%	5,575	5,798	781	4,014	781	Yes
West Slope WD	0.26	0.26	0.34%	7,626	7,931	1,068	5,491	1,067	Yes
TOTAL	75.93	75.93	100.00%	2,229,965	Cash Flow	312,195	1,605,575	312,195	

The shaded areas represent entities which have indicated that they will not participate

* Assumes an April 1 start date for the contract

4/1/93

Summary of Revised Scope of Work for the

Regional Water Supply Plan for the Portland Metropolitan Area
Phase 2

Barakat and Chamberlin et al.

January 12, 1993

prepared for the
Regional Providers Advisory Group

RESOURCE PLAN INTEGRATION

TASK 1: DEVELOP SCENARIO - FORMULATION FRAMEWORK

- Define "resource scenarios". Defining characteristics include logical groupings of long-term and short-term supply-side and demand-side resources that meet the test of common sense. They also, in some cases, include short-term curtailment strategies. They must include the dimensions of timing and sequencing of resource additions, as well as institutional and financing arrangements.

- Develop and refine a two-level scenario development process.

  - Screen individual resource options for technical, economic, environmental, institutional reasons.

  - Develop comprehensive set of resource combinations. Combine supply-side, transmission, and demand-side options to form inclusive list of resource combinations that reflect different resource development timing.

  - Define policy objectives. For example, policy objectives may include: minimizing retail rate increases, environmental damage, and/or customer out-of-pocket costs, and/or maximizing level of customer service or reliability, and/or public acceptability.

  - Evaluate / rank resource combinations against simplified policy objectives (first level).

  - Search for resource options that are included in a number of scenarios that are highly ranked for several policy objectives. Combine those options in a logical fashion, to develop a smaller number of higher-level scenarios that address several objectives from which the preferred alternative(s) are anticipated to be selected (second level).

TASK 2: DEVELOP SCENARIO EVALUATION CRITERIA

- Develop cost and financial evaluation criteria including but not limited to: cost/financial impacts, environmental externalities, customer service/supply reliability, flexibility/ability to manage risk, legal, regulatory, and public policy implications, public acceptability.

- Design approaches to incorporate environmental externalities.

- Develop approach to explicitly measure customer service impacts, including probabilistic specification of resource availability and development of alternative demand scenarios.

- Design, administer, and analyze a contingent valuation survey to determine the value that residential customers place on service reliability.

- Reach agreement on approach to reliability optimization.

- Develop approach to assessing the manner in which scenarios deal with uncertainty.

TASK 3: CONSIDER INTEGRATED RESOURCE PLANNING COMPUTER MODELS

- Define all points in the agreed-upon integrated resource planning process at which computer modeling will increase quality or efficiency.
- Work with RPAG to determine appropriate form and function of computer models.
- Examine existing models to assess the degree to which they can be adapted for our use.
- Develop, test, and document necessary modeling tools and train RPAG personnel in their use.

TASK 4: FORM RESOURCE SCENARIOS

- Apply agreed-upon analytical framework and evaluation criteria to form a set of resource scenarios.
- Present the scenarios, along with their evaluative results, to the RPAG.

TASK 5: PREPARE PRELIMINARY REGIONAL WATER SUPPLY PLAN

- Prepare and present to RPAG a proposed plan outline.
- Seek input on appropriate degree of "narrowing" of recommended set of scenarios.
- Prepare Preliminary Plan.

TASK 6: REVIEW OF PRELIMINARY PLAN

- Prepare a Public Involvement and Information Plan for completion of a process to provide critical public, stakeholder and agency input. Input will be used to prepare the Final Regional Water Supply Plan.

TASK 7: PREPARE A FINAL REGIONAL WATER SUPPLY PLAN

- Based on TASK 6 results, prepare the Final Plan.
- Develop suggested future steps to assist RPAG to continue the integrated resource planning process on an ongoing basis.

Summary of Deliverables:

- Report on First Level Scenario Development Process
- Report on Second-Level Scenario Development Process
- Report on Measurement and Incorporation of Environmental Externalities
- Summary of Agreed-Upon Reliability Indices
- Specification of Demand Forecast Scenarios
- Report of Probabilistic Description of Resource Availability
- Reliability Spreadsheet and Reliability Descriptors of Scenarios
- Report on Residential Customer Willingness to Pay
- Report on Optimal Level of Service Reliability
- Report on Risk Mitigation Strategies
- Narratives and Ranking Regarding Public Acceptability of Scenarios
- Detailed Report on IRP Modeling Process
- Technical Documentation of Model(s)
- Summary Report of Resource Formulation Process
- Preliminary Regional Water Supply Plan
- Public Involvement and Information Plan
- Final Regional Water Supply Plan

PUBLIC INFORMATION AND INVOLVEMENT ELEMENT

TASK 1: PREPARE AN OVERALL STRATEGY AND PLAN FOR PUBLIC INFORMATION AND INVOLVEMENT THROUGHOUT THE PHASE II PROJECT.

- Specific provisions will include a schedule and specifications for such items as the publication of newsletters and other materials, timing and nature of public meetings and workshops, media opportunities, events and other issues.
- Develop the public involvement strategy and plan in consultation with the RPAG Steering Committee or an RPAG participants public involvement subcommittee.

TASK 2: DEVELOP AND IMPLEMENT PROCESS OF GROUP INFORMATION EXCHANGE

- Meet regularly with RPAG Steering Committee.
- Maintain regular contact with remaining RPAG members through RPAG and other local or regional meetings.
- Conduct biweekly informal sessions.
- Incorporate Water Services Leadership Group into planning process.
- Convene existing committees or advisory groups on a regular basis.
- Establish Environmental Task Force and Regional Community Leaders Advisory Group.

TASK 3: DEVELOP INFORMATION ON PUBLIC VALUES AND OTHER ESSENTIAL ISSUES

- Design and administer a telephone survey. Ascertain with statistical reliability: priority public service issues, comparisons of water supply issues with other public service concerns, values pertaining to raw water quality, public health impacts, perceptions about sources, conservation, recreational preferences, instream and out-of.stream uses, fish, wildlife, and habitat, impacts of growth, reuse, governance and service territory
- Conduct focus groups to refine values, test the various aspects of public information and involvement plan, and explore the ramifications of alternative scenarios and institutional arrangements.
- Conduct community leader / stakeholder interviews to obtain in-depth information from a wide range of respondents. Potential interviewees include RPAG managers and elected officials, state and local officials, community leaders, stakeholders and interest groups (e.g., environmental organizations, land use planners, agricultural and nursery interests, irrigation districts, recreation enthusiasts, neighborhood associations and community planning organizations, business and industry representatives, developers, and representatives from organizations such as the Special Districts Association of Oregon, League of Oregon Cities. and Association of Oregon Counties.

- Conduct public meetings throughout the region at strategic points in the process to discuss evaluation criteria, the initial range of demand- and supply-side water management options, the water supply scenarios, and the Preliminary Regional Water Supply Plan.

TASK 4: MAINTAIN ONGOING PUBLIC INFORMATION AND INVOLVEMENT

- Prepare and distribute a periodic newsletter for interested parties.
- Prepare and distribute fact sheets to discuss overall progress or discrete topics.
- Prepare bill inserts that interested member agencies can include with customer water bills.
- Prepare and oversee the distribution of door-hangers.
- Prepare and distribute environmental white papers on specific issues that arise from the analysis.
- Prepare slides to assist in providing information to interested persons.
- Work closely with designated RPAG contact people throughout the project.

TASK 5: PREPARE AND CARRY OUT PUBLIC INFORMATION AND INVOLVEMENT PLAN (FOR REVIEW OF PRELIMINARY REGIONAL WATER SUPPLY PLAN)

- Prepare draft Public Information and Involvement Plan for RPAG and Water Services Leadership Group review.
- Upon completion of the Preliminary Water Supply Plan, carry out the agreed-upon activities to circulate, explain, and receive feedback on that document.

DEMAND MANAGEMENT AND CONSERVATION ELEMENT

TASK 1: IDENTIFY, COLLECT, AND ORGANIZE DATA

- Identify data sources
- Collect cartographic data (e.g., boundaries of water provider service areas, water supply/distribution system and distribution sub-areas, wastewater provider service areas, gas and electric utilities local jurisdictions, census tracts, land use plan/zoning build-out by year, planned service area annexations/expansions by year, etc.).
- Collect numerical data (e.g., census tract data, historical supply and demand data, water pricing arrangements, current conservation penetration and savings levels, water/wastewater hydraulic loading breakdown, projected population distribution from various sources, historical housing data and future housing projections, commercial and industrial growth projections, land use data, climatic characteristics across the metropolitan region, wastewater and energy utility current and projected capital and O & M cost data).
- Organize data in a computerized database.
- Identify and resolve data gaps.

TASK 2: IDENTIFY THE RELEVANT DEMAND-SIDE MEASURES

- Compile information on demand-side resource experience within the region and surrounding regions. Examine technologies and management practices, delivery mechanisms, measures, and resource options targeted and particular customer classes and use categories.
- Compile relevant experiences of other regions with respect to the performance of conservation measures.
- Develop a matrix describing relevant competing and complementary demand-side technologies, management practices, and delivery mechanisms, as pertaining to particular customer classes and end uses. The range of demand management options will include conservation technologies, process water recycling and reclamation, efficiency audits and management practices modifications, conservation rates and billing, water efficient landscaping, large area irrigation improvements, regulations and use restrictions, financial incentives for installation of technologies, financial arrangements, education and information activities. Supply-side conservation technologies to be considered include audits of unaccounted for water, leak detection and repair, operations improvements, wastewater recycling and reuse, stormwater runoff reuse.

TASK 3: DEFINE BASELINE FORECAST

- Disaggregate 1991 Water System Demand Study forecast to derive average, peak season, and peak day forecasts for each customer sector.
- Identify and fill data gaps in derived forecasts.

TASK 4: SCREEN DEMAND-SIDE MANAGEMENT TECHNOLOGIES AND MANAGEMENT PRACTICES BY QUALITATIVE, ECONOMIC AND MARKET CRITERIA.

- Screen Task 2 candidates by qualitative criteria (e.g., technological immaturity, poor utility match, better option available, nonquantifiable (savings variance), poor customer acceptance, environmental health concerns).

- Characterize candidates passing the qualitative screen (e.g., description, applicability (market and technical, performance, impacts on average, peak season and peak daily demand, useful life, incremental cost (operating, capital, and installation), expected changes in cost and performance over time, environmental effects).

- Screen characterized candidates by economic criteria (e.g., Total Resource Cost test, or comparison of lifetime benefits including avoided marginal costs of average and peak water supply; avoided O&M costs) with each measure's lifetime costs (incremental capital and installation costs, O&M costs).

- Screen surviving candidates by market acceptance criteria (e.g., limited market infrastructure, other competing measures, reduction in service quality, limited practical experience, limited utility resources, alternative financing potential).

TASK 5: ESTIMATE ACHIEVABLE POTENTIAL FOR DEMAND-SIDE MANAGEMENT

- Calculate the total demand reduction potential of measures which survive the Task 4 screening process.

- Scale this demand reduction potential to reflect the reasonable penetration rates for each measure.

TASK 6: DEVELOP CANDIDATE RESOURCE OPTIONS

- Categorize measures according to common characteristics such as impacts on average, peak season, and peak day demand.

- Assemble measures into candidate resource options considering segmentation of customer classes and sizes, special requirements of specific regions within the RPAG service area, shared distribution channels, existing water and energy utility demand-side management program designs, utility marketing capabilities, program experience of other utilities.

- Describe candidate resource options to enable detailed cost-effectiveness analysis in Task 7.

TASK 7: ASSESS COST-EFFECTIVENESS OF DEMAND-SIDE RESOURCE OPTIONS

- Assess the cost-effectiveness of demand-side resource options using a computerized cost-effectiveness model. Apply each of the following perspectives: societal test, total resource cost (TRC), utility cost (UC), ratepayer impact measure (RIM), and participant test.

- Iterative rebundling of demand-side measures to improve resource options cost-effectiveness or to create new resource options as cost-effectiveness test results indicate.

TASK 8: DEVELOP CURTAILMENT OPTIONS

- Identify types of curtailment options for specific customer classes and end-uses.
- Develop best available estimates of the associated demand reduction.
- Select packages of curtailment options for different shortage levels.
- Develop levelized costs associated with curtailment program scales for incorporation in the Preliminary Regional Water Supply Plan process.

TASK 9: DEVELOP PRELIMINARY RECOMMENDATIONS FOR IMPLEMENTATION

- Indicate levels of average, peak season, and peak day demand reductions that could be expected from each resource option to the year 2050, and at what level of cost-effectiveness.
- Summarize the differences in impacts of each resource option on the demand of particular customer classes, and administrative or geographic sub-areas.

REGIONAL SYSTEM EFFICIENCY AND TRANSMISSION ELEMENT

TASK 1: DEFINITION AND ANALYSIS OF EXISTING INFRASTRUCTURE

- Update and extend existing data on operational and engineering characteristics (e.g., sources of supply and treatment facilities, transmission line locations and sizes, transmission-related pumping stations and pressure reducing stations, reservoirs and elevations, interties and capacities, future "given" near-term capital supply and transmission related improvements).

- Assess geotechnical limitations that may affect transmission system design (e.g., shallow soils and near-surface bedrock, ground subsidence potential, unconsolidated or shifting and swelling soils, general land-slip or landslide susceptibility, high flood risks or groundwater levels).

- Prepare a technical memorandum with maps and accompanying engineering, supply and demand data tables.

TASK 2: DEVELOPMENT OF DESIGN AND OPERATING CRITERIA FOR MAJOR TRANSMISSION / STORAGE FACILITIES

- Develop appropriate design and operating criteria (e.g., for sizing, velocities, materials, storage, hydraulic gradients) that allow satisfaction of a range of objectives such as maximizing flexibility and/or reliability and/or gravity flow, and/or minimizing total, construction, and/or O&M costs, environmental impacts, and/or permitting/legal difficulties.

- Develop guidelines for system efficiency, reliability and flexibility (e.g., for configuration, alignment, reliability, backup flexibility, operational flexibility, expansion/upgrade potential).

- Establish a set of costing and comparison procedures (e.g., capital costs, environmental costs, O&M costs).

- Prepare a technical memorandum explaining the criteria, guidelines and costing.

TASK 3: DEVELOPMENT OF OPTIONS FOR TRANSMISSION, STORAGE AND PUMPING

- Divide local delivery systems into logical demand centers for efficient connection to transmission facilities. Develop logical providers' local delivery system groupings for major main line connections.

- Prepare a technical memorandum of the feasible options, their specifications, and costs.

TASK 4: DEVELOP EVALUATION CRITERIA

- Develop appropriate evaluation criteria and valuation methods (e.g., reliability, redundancy, operational flexibility, permitting requirements, land use compatibility, legal difficulties, water quality compatibility and treatment impacts, water quality equity issues, hydropower potential, system upgrade opportunities, impacts on existing water sales agreements, ease of construction, staged construction, staggering of capital funding requirements, environmental impacts and mitigation measures).

- Prepare a technical memorandum summarizing the criteria and their use.

TASK 5: EVALUATE OPTIONS

- Select the best criteria, method of valuation, and weighting, and apply the framework to judge the transmission options.

TASK 6: PREPARE FINAL REPORT

- Synthesize the technical memorandum on existing infrastructure, design and operation criteria and guidelines, option development evaluation criteria with the results of the full evaluation.

SOURCE OPTION ANALYSIS ELEMENT

Includes diversions from the Clackamas, Willamette, and Columbia rivers, a new dam and reservoir on the Bull Run River, expansion of the Barney Reservoir on the Trask River and diversion from the Tualatin River, and aquifer storage and recovery (ASR)

TASK 1: REVIEW OF EXISTING INFORMATION AND ASSUMPTIONS

- Review Phase 1 Water Supply Planning Reports
  - Water System Demand Study
  - Water Source Options Study
  - Portland Conservation Study
- Review Tri-County Pipeline Conceptual Study
- Identify and review other material and hold individual and group discussions in order to clearly establish "baseline" conditions and assumption.
- Prepare summary technical memorandum of findings, conclusions, recommendations, and significant planning criteria to establish "baseline" conditions.
- Review technical memorandum with RPAG Steering Committee to establish consensus on baseline conditions.

TASK 2: SPECIFY EXISTING, CURRENT, AND PLANNED LOCAL AND SUB-REGIONAL SUPPLY SOURCES

- Review and reassess the Phase 1 inventory of "regionally significant" supply sources and systems.
- Meet with RPAG members to achieve consensus on the appropriate assumptions regarding planned or under-construction supplies.
- Prepare report documenting assumptions to be made.

TASK 3: WATER AVAILABILITY ANALYSIS

- Evaluate water rights and permitting requirements for each of the supply options. Identify physical, institutional, legal, constitutional, and public policy limitations.
- Collect, qualify and complete hydrologic database. Contract the totalized water rights commitments against the streamflow conditions in each source to determine the probability distribution of unused, uncommitted and therefore, potentially available supply. Fill data gaps and create a computerized hydrological database to archive, report, and manage the data and results.

- Perform hydrologic analysis of alternatives to characterize the available supply from each component of each water supply option. The analysis will yield indicators such as anticipated average annual, 95% exceedance and minimum safe yield, paying close attention to the timing, duration, and probability of extreme low flow periods as compared with average or normal seasonal variations. Reservoir operations models will combine long-term data on streamflow, precipitation, evaporation and seepage losses, downstream flow requirements, etc. with rules for operation of the reservoir. The analysis will contribute to estimating various future water supply reliability indices and the scenario evaluation.

- Identify and explore a host of key specific issues for each of the source options.

TASK 4: GEOLOGIC AND HYDRAULIC ANALYSIS - FOR USE IN IDENTIFYING SUITABLE CONSTRUCTION SITES, DEVELOPING COST ESTIMATES, STUDYING ENVIRONMENTAL IMPACTS, SIZING OF PROJECT AND FACILITIES, AND DEVELOPING CONCEPTUAL DESIGNS.

- Analyze geologic and hydraulic issues associated with

  - River intakes - includes basic data collection, geologic and topographic data, hydraulic data, water quality data, intake site selection, development of conceptual intake design, and evaluation of hydraulic impact of intakes on river environment

  - Bull Run Dam option - include feasibility-level geotechnical evaluation for dam siting involving basic data collection, identification and screening of potential dam sites, selection of most favorable dam site, detailed geotechnical analysis at preferred site, and evaluation of water quality impacts associated with construction of a dam and reservoir

  - Aquifer storage and recovery - include development of a list of potential ASR sites based on regional hydrogeologic reconnaissance, screening of potential ASR sites, detailed analysis of key ASR sites, including potential recharge sources, evaluation of site-specific ASR methodologies and operational modes, and recommendations for further studies and pilot testing to fill data gaps.

- Prepare a report of the geologic and hydraulic analyses conducted for Task 1. Discuss results with RPAG.

TASK 5: ENVIRONMENTAL ANALYSIS

- Examine legislation and permitting requirements. Include a no-build alternative (per NEPA requirements), include all environmental issues, assess cumulative and long-term environmental impacts, identify key agencies, establish a record of public and agency involvement.

- Conduct environmental assessment of each of the supply options (except Barney Reservoir) and selected transmission alternatives based on evaluation of 14 environmental factors to include: fishery resources; wetlands; sensitive, threatened, or endangered species; cultural and historic resources; recreation resources; scenic resources; land use; socioeconomic impacts; water quality; riparian and aquatic habitats; hazardous waste and waste discharges; navigation; and geology. For each, assess the key issues for particular supply options, determine agency coordination needs, obtain relevant data and information from literature review; conduct appropriate field studies, identify mitigation measures, and provide documentation and report of results.

- Conduct an environmental analysis of supply options.

- Review Barney Reservoir environmental documentation for inclusion in the comparative analysis of supply options.
- Develop "white papers" on environmental issues.
- Coordinate development of environmental analysis with the Environmental Task Force.
- Develop environmental analysis report.

TASK 6: WATER QUALITY ANALYSIS REPORT

- Collect Water Quality Information from relevant sources.
- Evaluate water quality information for completeness and planning significance. Identify important data gaps, average and recorded maximum values for monitored constituents, observable trends in constituent levels, overall performance of each option relative to current minimum contaminant levels. Collect data in context of relevant water quality regulations, public acceptability issues, potential treatment costs and/or limitations, impacts on public health, and relative characteristics and compatibility between sources.
- Assess risks of water quality deterioration. Examine upstream land use characteristics, character and scale of potential point-sources and nonpoint sources of contamination within the supply option drainage basin, impacts of supply system construction. Identify sources of spill risk including frequency, volume and type of contamination, amount of warning time to close intake, length of shutdown period, potential long-term water quality impacts, measures to reduce risk.
- Review specific water quality issues for each supply option.
- Prepare report.

TASK 7: WATER TREATMENT ANALYSIS

- Review existing water quality data for all sources.
- Review potential treatment requirements for each source, based on water quality, compared to current and future anticipated SDWA regulations and public perception goals.
- Develop preliminary design criteria for treatment of each source option.
- Review and select potential treatment plant sites for each source option.
- Develop capital and O&M cost estimates for treatment facilities for each source option over a range of capacities.
- Prepare preliminary implementation schedules for treatment facilities for each option.

TASK 8: MIDPOINT REVIEW AND EVALUATION

- Identify issues or choices that emerge from the analyses. Narrow the focus to particular feasible size and scale ranges for each option based on consensus criteria.
- Consult with RPAG and assess preliminary results to streamline the engineering conceptual design task. Screen out a particular option if clear-cut "deal killers" exist (e.g., public acceptability, water availability, geologic or hydraulic constraints).

TASK 9: DEVELOP CONCEPTUAL DESIGNS

- Review outcome of Task 8 to specify remaining source options under consideration.
- Prepare water treatment conceptual designs.
- Develop ranges of capacities (maximum and minimum) for each source options.
- Review alternative treatment plant sites for each source option.
- Prepare preliminary design information for each source option including all aspects of the option necessary to deliver water to the treatment facility (pipelines, pump stations, intake structures).
- Develop capital, O&M and present worth cost estimates for all related delivery and treatment facilities for each source option over the range of determined capacities.
- Develop possible staging alternatives (timing sequence) for bringing each water source option up to its maximum capacity.

TASK 10: OPTION COMPARISON AND RECOMMENDATIONS

- Review outcome of Task 9 and initial analysis of Task 3 of the Regional System Efficiency and Transmission Element to develop an array of source combinations for consideration.
- Evaluate and rank the candidate list of combinations. Use criteria including but not limited to: geologic/hydraulic characteristics, environmental impacts, water quality considerations, water treatment requirements, cost and financial indicators, ability to maintain satisfactory future levels of service/water supply reliability, public stakeholder, and policy maker acceptability, flexibility, regulatory (local, state, federal) impediments, institutional constraints, public policy consistency (e.g., land use, growth management, etc.), equity, susceptibility to service interruption and risks, operational requirements and flexibility, permitting constraints.
- Work with RPAG to develop a final set of source/transmission combinations to pass to the integration element.

INSTITUTIONAL ARRANGEMENT ALTERNATIVES ELEMENT

TASK 1: IDENTIFY KEY ISSUES

- The consultant team and Steering Committee with meet at the outset of the project to identify key goals, criteria, options, and related issues.
- Conduct preliminary background research and preparatory work.

TASK 2: INVOLVE RPAG AND WATER SERVICES LEADERSHIP GROUP

- Meet regularly with both groups throughout the course of the project.

TASK 3: UTILIZE RESULTS OF PUBLIC INFORMATION AND INVOLVEMENT ELEMENT

- Ensure that institutional arrangement alternatives are incorporated carefully into the information exchange activities that occur as part of the Public Information and Involvement Element.

TASK 4: DEVELOP EVALUATION CRITERIA

- Consult with RPAG and other groups to attain consensus on appropriate evaluation criteria. Criteria may include issues pertaining to efficiency, equity, administrative feasibility, fiscal stability, political stability, costs, benefits, and effectiveness.
- Prepare a report on selected criteria.

TASK 5: DEVELOP AND EVALUATE ALTERNATIVES

- Develop a set of potential institutional management alternatives for review. This set may include cities, districts, PUDs, water supply authorities, regional governments, ORS Chapter 190 Agreements, contracts, and other formal and informal arrangements.
- Thoroughly research all options and carefully describe salient features.
- Work closely with the RPAG and Water Services Leadership Group.
- Prepare report on institutional arrangement alternatives evaluation and highlights linkages to resource options for use in integration element.

TASK 6: ESTABLISH AND UTILIZE LEGAL ADVISORY GROUP

- Establish group made up of representative legal counsel from RPAG participant agencies to obtain input regarding potential limitations facing the respective jurisdictions. Save costs by involving legal service providers on a limited basis early in the process

TASK 7: IDENTIFY AND EVALUATE FINANCING OPTIONS

- Determine options for financing the various institutional arrangement alternatives. Estimate relative costs and impacts on ability to finance ongoing operating costs and water system capital improvements.

- Produce a summary report providing a quantitative analysis and spreadsheet displaying the impacts of various financing options. This information will be used scenario analysis performed for the integration element.

Participants *RPAG Members*	Full Participation Share amount Percent (%)	Adjusted Non Participation Percent (%)	Re Approtioned Participation Percent (%)	Full Participation Share amount Dollars ($)	4.00% Default Contingency	FY 92-93 * Payment	FY 93-94 Payment	FY 94-95 Payment	IGA Signed
JWC Beaverton	2.11	2.11	2.78%	61,971	64,450	8,676	44,619	8,676	Yes
Canby	1.64	1.64	2.16%	48,167	50,094	6,743	34,680	6,743	Yes
Clackamas WD	2.47	2.47	3.25%	72,541	75,443	10,156	52,229	10,156	Yes
Gladstone	0.26	0.26	0.34%	7,626	7,931	1,068	5,491	1,067	Yes
Clairmont	4.76	4.76	6.27%	139,797	145,389	19,572	100,654	19,572	Yes
Clark PUD		0.00	0.00%	0	0	0	0	0	
Damascus	2.34	2.34	3.08%	68,728	71,477	9,622	49,484	9,622	Yes
Fairview/Wood Village	0.63	0.63	0.83%	18,509	19,249	2,591	13,326	2,592	/Yes
Gresham	3.95	3.95	5.20%	116,003	120,643	16,240	83,522	16,241	
JWC Hillsboro	5.24	5.24	6.90%	153,890	160,046	21,545	110,801	21,545	Yes
JWC Forest Grove	1.94	1.94	2.56%	56,976	59,255	7,977	41,022	7,977	
Lake Oswego	3.31	3.31	4.36%	97,204	101,092	13,609	69,987	13,608	
Milwaukie	0.27	0.27	0.36%	7,939	8,257	1,111	5,716	1,112	Yes
Mt. Scott	2.42	2.42	3.19%	71,069	73,912	9,950	51,170	9,950	
Newberg		0.00	0.00%	0	0	0	0	0	
Oak Lodge	0.42	0.42	0.55%	12,332	12,825	1,726	8,879	1,727	Yes
Portland	17.98	17.98	23.6800%	528,055	549,177	73,928	380,200	73,927	
Rockwood	0.65	0.65	0.8560%	19,089	19,853	2,672	13,744	2,673	Yes
Sandy	0.71	0.71	0.9350%	20,850	21,684	2,919	15,012	2,919	
Sherwood	1.31	1.31	1.7250%	38,467	40,006	5,385	27,696	5,385	Yes
Oregon City	2.58	2.58	3.3980%	75,774	78,805	10,608	54,557	10,608	
West Linn	2.90	2.90	3.8190%	85,162	88,568	11,923	61,317	11,922	
Tigard	1.80	1.80	2.3710%	52,872	54,987	7,402	38,068	7,402	Yes
Troutdale	1.35	1.35	1.7780%	39,649	41,235	5,551	28,547	5,551	Yes
Tualatin	2.59	2.59	3.4110%	76,064	79,107	10,649	54,766	10,649	Yes
Tualatin Valley WD	8.48	8.48	11.1680%	249,042	259,004	34,866	179,311	34,866	Yes
Vancouver		0.00	0.00%	0	0	0	0	0	
Wilsonville	2.75	2.75	3.62%	80,769	84,000	11,308	58,154	11,307	
Boring WD		0	0.00%	0	0	0	0	0	
Hoodland Corridor		0	0.00%	0	0	0	0	0	
Lusted WD		0	0.00%	0	0	0	0	0	
Powell Valley WD	0.62	0.62	0.82%	18,219	18,948	2,551	13,118	2,551	
Raleigh WD	0.19	0.19	0.25%	5,575	5,798	781	4,014	781	Yes
West Slope WD	0.26	0.26	0.34%	7,626	7,931	1,068	5,491	1,067	Yes
TOTAL	75.93	75.93	100.00%	2,229,965	Cash Flow	312,195	1,605,575	312,195	

The shaded areas represent entities which have indicated that they will not participate

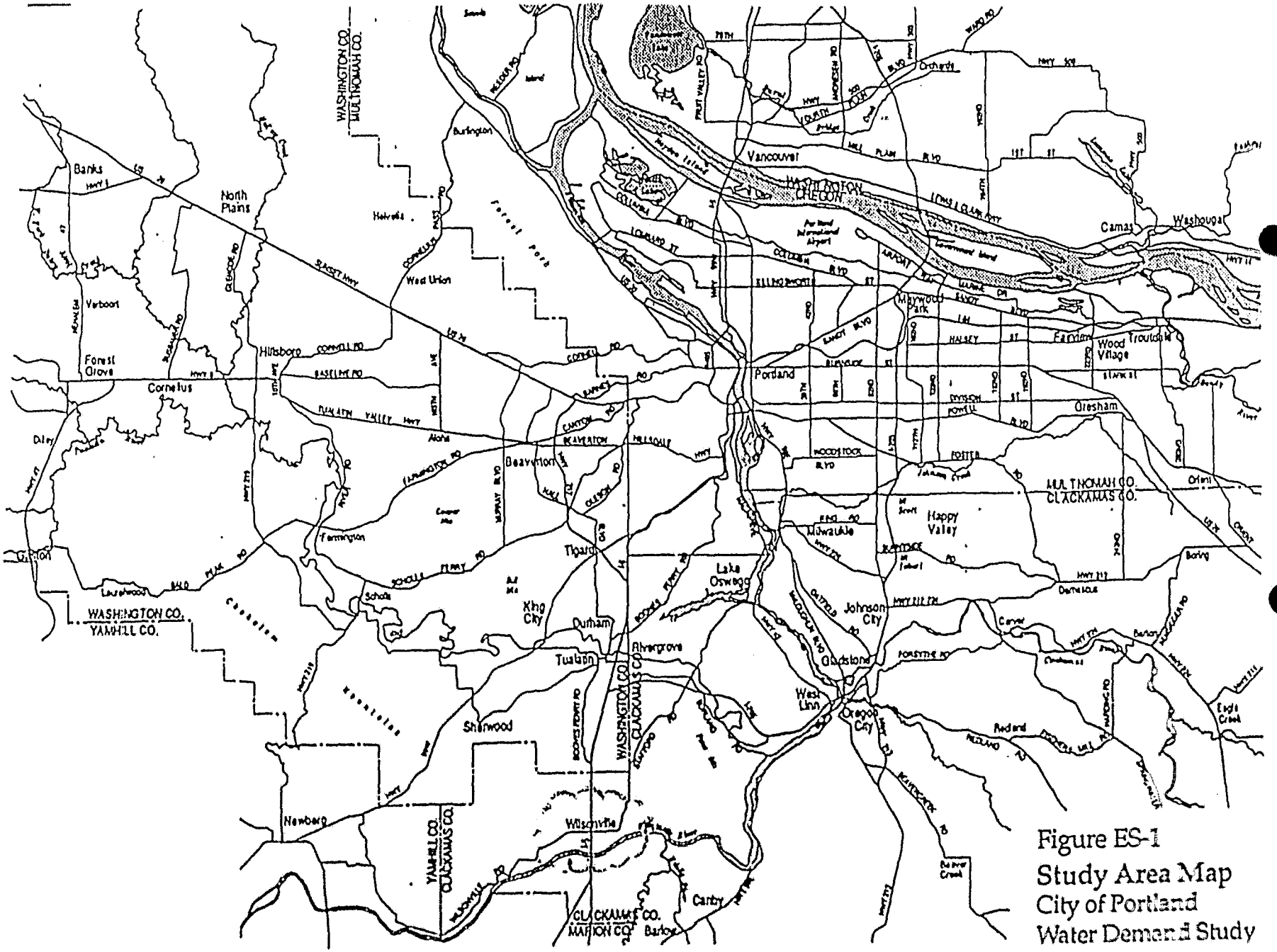

Figure ES-1
Study Area Map
City of Portland
Water Demand Study

CITY OF TIGARD
OREGON

Date: April 1, 1993

To: Washington County Mayors, Councilors and City Managers

From: Judy Fessler, M-PAC Representative

The month of March has been very busy with setting up several extra sub-committee meetings. We are well on our way to being a **REAL COMMISSION**. M-PAC now has Bylaws, Officers, and the Rules and Procedures will be voted on at the next M-PAC meeting in March.

Your New Officers	
Chair:	Gussie McRoberts, Mayor, Gresham
1st Vice	Bob Liddell, Mayor, West Linn
2nd Vice	Rob Mitchell, TVWD

At the last M-PAC meeting a representative from Portland Future Vision briefly updated us on the process for selection of Future Vision citizens. The lengthy application forms which were sent out to all of us appear to be a little intimidating, and as a result, response has not been as expected. Future Vision feels it is more important that people be nominated, even in the form of a letter, etc. I would urge you to personally nominate, by letter, a person in your community who has this "Visionary" philosophy. This could be a citizen who is not necessarily on any city committees and appears to be invisible to a community roster. However, they could have that talent to be visionary in general as to what could be done to improve liveability and quality of life, and one who would make the best candidate. Portland Future Visions would like to have application or nomination in ASAP. They want to get up and running by May, 1993.

Because M-PAC is a committee for input to Metro, it is equally important you keep me informed of any issues or concerns that you would like Metro to address or not address.

Let me know of your comments, issues, and concerns, and even how we are doing. I will be most willing to get it on the agenda.

Judy Fessler, Councilor
Home Phone and FAX: 639-1216
PO Box 23276
Tigard, OR 97281
City of Tigard FAX: 684 7297

h:\login\jo\mpac.ltr