ADDENDUM 7
Amended Agreement between City of Everett and PUD (1981)

AMENDED AGREEMENT BETWEEN

PUBLIC UTILITY DISTRICT NO. 1 OF SNOHOMISH COUNTY

AND THE CITY OF EVERETT

FOR MULTIPURPOSE DEVELOPMENT OF THE SULTAN RIVER

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AMENDED AGREEMENT BETWEEN

PUBLIC UTILITY DISTRICT No. 1 OF SNOHOMISH COUNTY

AND THE CITY OF EVERETT

FOR MULTIPURPOSE DEVELOPMENT OF THE SULTAN RIVER

THIS AGREEMENT, made and entered into this ____ day of _____, 1981, by and between PUBLIC UTILITY DISTRICT No. 1 OF SNOHOMISH COUNTY, WASHINGTON (hereinafter called the "District") and the CITY OF EVERETT, WASHINGTON, a municipal corporation (hereinafter called the "City"),

W I T N E S S E T H :

WHEREAS, the City and the District previously entered into an Agreement for multipurpose development of the Sultan River which was dated the 21st day of July, 1960, as amended; and

WHEREAS, subsequent to the initial Agreement a license was issued by the Federal Power Commission (FPC); and certain project facilities as agreed to were constructed and are presently in operation for furnishing water for domestic use to the residents of Everett and their customers residing in Snohomish County, Washington; and said Stage I dam will serve as a base for expansion to a Stage II dam and reservoir for the purpose of furnishing electrical energy to the residents of all Snohomish County; and

WHEREAS, subsequent to the issuance of the original FPC license order dated the 16th day of June, 1961, FPC has

issued supplemental orders and directives providing principally for fish water releases all in the manner as therein provided; and

WHEREAS, the District is desirous of raising Culmback Dam and the level of Spada Lake to the heights contemplated in said Agreement; however, it was determined by the District advisable to revise the plans for raising the dam and constructing power resources and facilities all as more specifically set forth in the Application for Amended License (Amended Application) filed by the District and City with the Federal Energy Regulatory Commission (FERC) (the successor of the Federal Power Commission); and.

WHEREAS, the order authorizing the amended license was issued on October 16, 1981; and

WHEREAS, it is also considered advisable by the parties and desirable by all directly affected agencies that a filtration plant be built in accordance with a plan designed by Gray & Osborne with some exceptions and which plant will filter the City's water for its consumers except paper and lumber mills. The District has agreed to aid in the costs of such construction, but such plant shall not be deemed as part of the Sultan Project as herein defined nor shall the District be involved in the operation or maintenance of the filtration plant except as may be specifically agreed to by the parties.

WHEREAS, although an Amended Application has presently

been filed with FERC and certain detailed and extensive studies have been done and applications have been made pertaining to permits, licenses, obtaining rights-of-way and all other related features, the Sultan Project may be delayed or discontinued because of financing difficulties or other conditions imposed by the license. Accordingly, the parties desire to provide for the conditions: first, in the event the Project proceeds in the general manner as herein outlined, and second, if the Sultan Project should fail to proceed as to the conditions then existent and controlling; and

WHEREAS, it was contemplated in the initial Agreement that the completion of the original application might be either for Stage 2A, Water Purposes, Stage 2B, Hydroelectric Purposes, Stage 2C, Joint Purposes. The parties now agree that the City does not need to raise the dam for the storage of additional water.

NOW, THEREFORE, it is hereby covenanted and agreed to as follows:

A R T I C L E I

DEFINITIONS

As used in this Agreement, the following words and phrases shall have the meanings hereinafter set forth unless the context shall clearly indicate that another meaning is intended:

(1) The term "Sultan Project" shall mean the complete Sultan River Hydroelectric Development, together with joint water and hydro facilities and such other facilities as may be for water purposes only and included in the Project but not included in the City's separate water system. Work to be done under the Amended Plan by the District is designated as the "Sultan Project". The term "Sultan Project" shall include all the matters contained in the Amended Application for the license filed with the FERC on the 6th day of July, 1979, together with any and all future amendments or revisions, changes or construction as may be approved by the parties or contained in the amended license issued by FERC which may be accepted by the parties. The term encompasses facilities consisting essentially of the following:

Raising Culmback Dam to approximately elevation 1470 feet, modifying the spillway and outlet works, the flood control facilities, if any, which may be incorporated into the Project, the power intake channel and structure, including gates, the power tunnel upstream portal section access road required by the Project, recreation facilities; reservoir clearing; the power tunnel and pipeline leading from Spada Lake to the powerhouse and the Sultan River; construction of the powerhouse and related facilities; the water return line and fish water return line for purposes of supplying the City's water supply and for fish water releases to a point near the Lake Chaplain end of the

diversion tunnel from the Sultan River to Lake Chaplain; all improvements to existing conduit between the diversion dam and tunnel to Lake Chaplain if necessary; all further electric transmission lines and roads to adequately complete and utilize the Project facilities.

(2) The term "Stage I" shall mean the facilities in the Sultan Basin as presently constructed, including Culmback Dam, Spada Lake and all other completed facilities, including the morning glory spillway, tunnels, valves, roads and completed structures, but not including matters specifically done in connection with the furtherance of the Sultan Project.

(3) The term "Joint Facility" shall mean those facilities and improvements, or portion thereof, contained in the construction of the Sultan Project which shall have value to both the District and the City and shall include but not be limited to the following: The raising of Culmback Dam to the elevation as presently contemplated in the amended application, the raising of the morning glory spillway without provision for multi-level water releases, and all roads and all clearing necessary to construct said dam and required by the raising of Spada Lake to its contemplated level. No facilities below Culmback Dam shall be deemed to be a joint facility unless expressly agreed to by the parties.

(4) The term "Joint Costs" shall mean the cost of

constructing as a part of this Project those improvements, a portion thereof, or their equivalents that are of value both to the District for hydroelectric purposes and to the City for water purposes or as described above under the term "Joint Facility."

(5) The term "Time of Minimum Water Usage" shall mean the first day of the month following any three consecutive calendar months during which the City shall use an amount of water equal to or in excess of 140,000,000 gallons per day as determined from the average total usage of the City measured at the City's intake works.

(6) The term "Lake Chaplain" shall mean the existing storage reservoir owned and operated by the City for water supply purposes or as the same may be altered.

(7) The term "Culmback Dam" shall mean the dam presently constructed on the Sultan River referred to in the Agreement as "Dam No. 1" and any additions or expansions which may be made by the Sultan Project.

(8) The term "Spada Lake" shall refer to all waters impounded behind Culmback Dam including the raised level of the lake as may be contemplated by the Sultan Project.

(9) The term "Diversion Dam" shall mean the presently existing diversion dam on the Sultan River extending in the Northeast Quarter of Section 32, Township 29 North, Range 8, E.W.M.

(10) The term "City Project" refers to the City of

Everett's separate water facilities shown in the studies of Gray & Osborne, dated April, 1978, or as shown in drawings and specification No. 79562 by Gray & Osborne, dated April, 1981, prepared for contractor bidding or as may be amended. Work to be done on the water filtration plant is designated as the "City Project" which shall include system separation facilities, sludge disposal facilities, pretreatment facilities and necessary appurtenant work for which final drawings have not been prepared.

(11) The term "Water Quality Control Plan" (WQCP) shall refer to that certain document prepared by Economic & Engineering Services, Inc. (EES) dated May, 1981 and consisting of text in the amount of twelve (12) pages together with exhibits attached being Exhibits 1 through 15. Copies of such WQCP are on file with both of the parties hereto and with FERC and with all parties interested in who have requested such WQCP. Wherever referred to herein, such WQCP shall apply to all of the terms and conditions thereof or the pertinent portions of the same and be recognized from time to time where changes may be made by the joint agreement of the parties and where necessary with approval of FERC or other affected agencies.

(12) The term "Water Supply Service Area" shall be the area projected to be served by the Sultan River Water Supply System as specifically designated on Exhibit A.

(13) The term "Permanent Emergency Treatment Facilities"

shall mean water treatment facilities at the outlet of the Diversion Tunnel to Lake Chaplain, as defined by E.E.S., in the WQCP - Ex. 12-B dated May, 1981, or as amended.

(14) The term "Temporary Emergency Treatment Facilities" shall mean water treatment facilities near the Diversion Dam at the inlet to the Diversion Tunnel to Lake Chaplain, as defined by E.E.S., in the WQCP - Ex. 12-A dated May, 1981, or as amended.

(15) The term "Uncontrollable Forces" shall mean any cause beyond the control of the party affected, including, but not limited to, floods, earthquakes, storms, lightning, fires, epidemics, wars, riots, civil disturbances, labor disputes, sabotage, failure of facilities, or restraint by court or public authority, which by the exercise of due diligence and foresight such party could not have reasonably been expected to avoid.

A R T I C L E II

BASIC PROVISIONS

Section 1. Water Quality to Have Precedence.

The City and the District agree to cooperate fully to maintain the water quality in accordance with the intent of this Agreement and with the existing contractual commitments of the City to its consumers and, further, to meet appropriate state and federal drinking water quality standards. It is contemplated that the City will construct a filtration plant

to assist in the protection of the quality of the drinking water during the period of construction and thereafter. The District will install and operate a temporary emergency treatment facility so that the water quality requirements of the City and the various regulatory agencies as defined in the Water Quality Control Plan are met during Sultan Project construction.

Section 2. Water Supply to Have Precedence.

The parties hereby expressly agree that the requirements of the City within the water supply service area shall have precedence over any Sultan Project requirement for power generation purposes up to a maximum water requirement of 225 MGD to the year 2020 provided the City stays within the service area described in Exhibit A. The parties agree that they will cooperate in the storage and release of waters from Spada Lake and from Lake Chaplain so that the water supply requirements of the City may be met.

Section 3. Use of Facilities and Holdings of the City.

The City now owns or holds certain real property and improvements, easements, licenses, permits, rights-of-way and other rights which are to be used for Sultan Project development. It is hereby agreed that the City shall retain title to all of its real property and improvements thereon, all of its easements, licenses, permits and rights-of-way and other rights which shall be used as a part of the Sultan Project. The District shall have the

right to use any and all such real property and improvements, easements, licenses, permits, rights-of-way, the use of the diversion dam and diversion tunnel with outlet, and other rights for any purpose consistent with the provisions and intent of this Agreement. The City will execute any such easements, licenses, permits or rights-of-way which may be required for such purposes, provided that by so doing, the City will lose none of its rights in the use of such property for City purposes in connection with the water supply herein contemplated. If any such easements, licenses, permits and rights-of-way and other rights are not by law, or by condition, contained herein, transferrable or assignable, then the City shall act on behalf of the District to provide such easements, licenses, permits and rights-of-way and other rights at the expense of the District. In exercising such right and privilege, the District hereby agrees to use and maintain such real property and the improvements thereon, easements, licenses, permits, rights-of-way and other rights which shall be used as a part of the Sultan Project in such manner as will be consistent with the best interests of the City.

In the event the District elects to use the City's rights-of-way between the Sultan River and the corporate limits of the City of Everett for the purpose of electrical transmission lines, the City agrees to grant to the District the right to use said rights-of-way, if assignable, provided

that in the opinion of the City such use will not interfere with the use of said easements by the City for municipal purposes. Provided, however, that once the District shall have constructed its facilities upon such rights-of-way, no future or contemplated use by the City shall require the District to remove or modify its facilities without the consent of the District.

The District shall be responsible for all damage to the City's installations on said rights-of-way which are attributable to the construction, operation and maintenance of District's facilities thereon. Provided, however, that in the event the construction and placement of the Sultan Project facilities in the City's rights-of-way cause increased cost to the City including construction, right-of-way and operating cost in the placement of additional water transmission lines and appurtenances, the District shall reimburse the City for any increased costs.

The present drawings in the possession of both the City and the District show the location of Sultan Project facilities upon rights-of-way and property of the City and the location of such facilities has been agreed to between the parties. In the event that the location of such facilities shall cause additional expense to the City, compensation shall be made to the City in accordance with this paragraph, and Article IV Section 3E.

Section 4. Maximum Beneficial Use.

The parties hereto recognize that the facilities developed hereunder, including the hydroelectric project and the filtration plant, will provide substantial and far-reaching benefits to all of the residents of Snohomish County and the City of Everett. The District and City hereby agree to take all steps reasonable and necessary to maximize the most economical development of their projects.

Section 5. Restriction of Use by Parties.

Unless otherwise provided for in this Agreement, the City shall be restricted in its use of the Sultan Project to the storage and supply of water for domestic, commercial and industrial needs, and for hydroelectric facilities which may be within the City's transmission or distribution lines. The District shall primarily use the Sultan Project for hydroelectric power production. The District may utilize the City Project and their Sultan River Supply System to provide water service to areas of Snohomish County not provided service by the City.

Section 6. Preliminary Planning and Engineering.

The parties agree that the Sultan Project has been initiated by the District for the purpose of obtaining the hydroelectric benefits. The District agrees to pay for all District costs, such engineering and planning (except as hereinafter mentioned) which may be necessary for the licensing, engineering, construction or other costs in

connection with the Sultan Project. The City shall design, construct, and pay for the facilities connected with the City Project, except such costs which shall be specifically agreed to be paid for by the District.

All costs of construction of the electrical facilities to the filtration plant shall be deemed a construction cost to the filtration plant. The filtration plant shall pay all normal cost of power necessary in the operation of such plant under tariffs already established by the District or as the same may be amended.

The District has entered into certain contracts for the engineering, plans, and specifications of the Sultan Project with R.W. Beck and Associates (Beck) and with Bechtel Civil & Minerals, Inc. (Bechtel). The City has entered into certain contracts for the engineering, plans, and specifications of the City Project with Gray & Osborne (G & O). The District agrees to indemnify the City for any loss or damages sustained by third parties by reason of acts done or performed for the District by Beck or Bechtel.

The City agrees to indemnify the District for any loss or damages sustained by third parties by reason of acts done or performed for the City by G & O.

Each party assumes its own risk of loss by reason of acts done by any of the above engineers or consultants under the agreements with them (Beck - Bechtel - G & O), except as said agreements may provide for actions against

such engineers or consultants.

Section 7. Final Plan of Construction.

The parties agree, as above mentioned, to cooperate fully to obtain the necessary licenses, permits, easements, agreements and rights-of-way deemed essential for completion of the Sultan Project. Such matters shall be paid for in the manner above provided under Section 6, Preliminary Planning and Engineering. The parties agree to exert best efforts to schedule and coordinate their respective projects in such manner as to provide maximum benefit and least interference to the other. Each party shall keep the other party fully informed at all times of its efforts and activities regarding its respective project, as provided for in the WQCP and this Agreement.

A R T I C L E III

CONSTRUCTION AND MAINTENANCE OF CITY PROJECT

Section 1. City Project Completion Schedule.

The parties hereto have agreed that in the interests of the City for water purposes and the District for hydroelectric purposes and for the benefit of electrical and water users in Snohomish County, it is to the advantage of the parties hereto and their customers to construct a water filtration plant. Plans and specifications for the water filtration plant have been prepared for the City by Gray & Osborne (G & O).

The City pursuant to its bidding procedures has called

for bids and bids have been received by the City. It is contemplated said bids will be awarded on or before December 16, 1981. The District has reviewed such bids and has approved the same. (No substantial changes will be made to said bid documents without the consent of the District being first obtained.)

Pursuant to the contract of the City with whomsoever shall build the filtration plant, it is agreed that the filtration plant will be operational on or before August 1, 1983 and will be completed on or before November 1, 1983. The City shall not be responsible to the District for any financial loss incurred by reason of delays in the City's construction for the filtration plant. Provided that the City will exercise all reasonable effort to proceed with this Project upon the schedule as presently outlined and provided the City will not take any willful or intentional actions to hinder or delay the progress of the Project.

Section 2. Temporary Emergency Treatment Facility.

Prior to the City Project becoming operational, the District will exert its best efforts to keep the water required for City purposes within reasonable limits of turbidity. Plans for water quality are spelled out in the WQCP. Included among such items to be performed by the District shall be the construction of a temporary emergency treatment facility at or about the location of the Diversion Dam wherein chemicals may be injected into the water flowing

into Lake Chaplain so that water taken from Lake Chaplain by the City shall meet State Drinking Water Standards or as provided in the WQCP. All cost of construction and operation of such temporary emergency treatment facility shall be borne by the District during the period of construction of the City Project and until the filtration plant and the water return line is operational.

Section 3. Costs of Operation and Maintenance of Permanent Emergency Treatment Facility and Filtration Plant.

After construction and commencement of operation of the filtration plant, the District for the first two years, will pay all incremental costs expended for the operation of the permanent emergency treatment facility or the filtration plant which are required by turbidities at the filtration plant in excess of 5 NTU. For the next three years, the District will pay the incremental costs required by operation of either the filtration plant or the permanent emergency treatment facility because of waters then in excess of 20 NTU as measured at the filtration plant.

Thereafter the District will pay all incremental costs of maintenance and operation of the permanent emergency treatment facility or the filtration plant if the same is operated to treat turbidities in excess of 20 NTU at the filtration plant if and only in the event that said turbidities are caused by recreational activities, fish and wildlife

mitigation and/or flood control operation related to FERC license requirements.

The District, at its discretion, may request the City to bypass Lake Chaplain or to operate the permanent emergency treatment facility to reduce the possibility of turbidities exceeding 20 NTU at the filtration plant. In such event the cost of operating the permanent emergency treatment facility shall be as provided in this Section unless the City demonstrates that it is less expensive to treat the high turbidity water at the filtration plant. If the District still requests use of the permanent emergency treatment system the cost shall be a District cost.

A R T I C L E I V

CONSTRUCTION AND MAINTENANCE OF SULTAN PROJECT

Section 1: Commencement of Construction - Sultan Project.

As above set forth, the parties will and are continuing to cooperate in attempting to obtain proper permits and licenses from the Federal Energy Regulatory Commission and other federal, state, county and local municipalities as they may require for the construction and operation of the Sultan Project. Upon the issuance of all such licenses or permits or other requirements as will make the Sultan Project feasible in terms of financial, political, engineering and other considerations, the District shall forthwith take all reasonable steps to complete the engineering plans,

designs, surveys and specifications and to acquire all necessary lands, easements, rights-of-way and other means of access for the construction and completion of the Sultan Project and shall proceed with construction as promptly thereafter as possible. All plans of construction will first be submitted to the City for its review prior to advertisement. The City will provide comment to District within two weeks of receipt. If the City should disagree in any way with the suggested plans or construction procedures, and the District's response is unsatisfactory, such matter will be submitted to arbitration as provided in the laws of the State of Washington. Provided, however that the request for such arbitration on the part of the City or the District in such matters shall not cause delay of the Project once the Project has commenced.

Section 2. Technical Management Team.

The District shall be responsible for all construction activities required for the Sultan Project and generally upstream from the inlet into Lake Chaplain. The City shall be responsible for the construction activities downstream from Lake Chaplain as described by the City's Project. The parties shall identify a Project Manager for their respective projects who shall be the primary contact for coordination of all construction activities and represent the respective party on a Technical Management Team in resolving conflicts or modifications to the previously agreed upon construction

schedule and design. Said team shall develop project operating procedures and reservoir rule curves based on the terms of this Agreement and the general objective of maximizing power production while protecting water supply and water quality.

In the event the District and the City's representatives disagree on project operating procedures, either party may give notice to the other of intent to arbitrate an issue regarding project operating procedures and such arbitration shall be conducted in the matter as contained in Article IX hereof.

Section 3. Special Design or Construction Provisions.

The design documents and specifications wll include the following considerations:

A. The District will install and maintain the Temporary Emergency Treatment Facilities at the City's Diversion Dam for use during construction of both projects or until such time as the water return line is operational (see WQCP).

B. The permanent emergency treatment facilities (pretreatment system) installation at the outlet of the City's diversion tunnel will not be installed until deemed necessary by the City.

C. The Diversion Dam and tunnel system will retain the ability to reverse the flows in the tunnel to enable diversion

for emergency water supply purposes at the diversion tunnel to Lake Chaplain.

D. The Sultan Project design will not include provisions for the City to modify operation of the valves between the water return line and the water filtration facilities or the Lake Chaplain Inlet, except for an emergency closure procedure.

E. The City agrees to placement of the powerhouse to Lake Chaplain water return line in City right-of-way, approximately 30 feet on center east from the City's Pipeline #5. The District agrees to reimburse the City for additional costs at the time of construction of a second City pipeline parallel to Pipeline #5 if the location of the District's water return line creates additional construction and right-of-way acquisition and maintenance costs for the City. The District's reimbursement to the City will be based upon the incremental difference in cost between constructing a pipeline in the existing right-of-way as compared to the cost of constructing the pipeline in a new location. If reimbursement is to be requested from the District, then the City shall select the route or location agreed to by the District or as determined by arbitration based upon the most economical construction and operational costs.

F. The District shall install as part of the Sultan Project a complete telemetering system which will indicate and record at the Project control center, among other things,

the water elevations at Spada Lake and Lake Chaplain. Complete copies of all records shall be made available to the City. This cost shall be a Sultan Project cost.

Section 4. Water Quality Control During Construction.

The terms and conditions of the WQCP for control of water shall be made a part hereof as though the same were set forth at length herein.

The WQCP outlines the responsibility of the Water Quality Control Supervisor as authorized jointly by the District and the City, and the responsibilities for operation of the Howell-Bunger Valve, the diversion dam facilities, and the watershed management program as a cooperative effort by the City and the District. The City will be responsible for maintaining the water elevation in Spada Lake during specified periods and at specified elevations, operating the diversion facilities at the diversion dam, and continuing with their current watershed control program. The District will be responsible for operating the Temporary Emergency Treatment Facilities at the diversion dam and ensuring that the Project construction activities do not preclude the City from diverting adequate water to meet their needs. The District will maintain all water quality monitoring stations except those normally operated by the City.

The parties may mutually agree to change such terms and conditions of the WQCP. In the event of disagreement of parties to desired changes in the WQCP the same shall be

submitted to arbitration as contained in Article IX.

Section 5. Project Start-up.

Modifications to the flow regime, operation of the Sultan Project facilities, and water quality impacts occurring during the initial filling of the Spada Reservoir and the start-up of the Sultan Project facilities will be guided by the criteria outlined in the Water Quality Control Plan to achieve the objectives of both the District and the City.

Section 6. Accounting for Construction Expenditures.

The District shall maintain complete records of account in accordance with the Federal Energy Regulatory Commission uniform system of accounts of all expenditures in connection with the cost of construction of projects and shall make such books and records as are applicable to facilities in which the City has an interest available to the City at such times as may be agreed upon by the parties hereto.

The City shall maintain complete records of account in accordance with the Washington State System of Accounts of all expenditures in connection with the cost of construction of projects and shall make such books and records as are applicable to facilities in which the District has an interest available to the District at such times as may be agreed upon by the parties hereto.

A R T I C L E V

OPERATION

Section 1. During Construction of the Sultan Project.

Until such time as herein designated "Time of Commencement of Construction - Sultan Project", the City shall continue to operate the flows from Spada Lake by the operation of the valves or other control mechanisms from Spada Lake down the Sultan River and the in-flow of waters through the diversion tunnel into Lake Chaplain.

Upon commencement of construction of the Sultan Project the control of flows from Spada Lake and the operation of all facilities from Spada Lake to the diversion dam shall be by the City as provided for in the WQCP.

The parties recognize that the District must regulate the Spada Lake water levels so that it can construct proper berms or cofferdams or do other things necessary and proper to render such construction technically feasible and to safeguard personnel and equipment. Insofar as it is possible the City agrees to maintain the water elevation in Spada Lake as provided for in the WQCP and specified in the Sultan Project construction contracts.

The parties agree that each shall pay one-half of the cost for salary of the Water Quality Control Supervisor.

Section 2. Operation following Completion of Sultan Project.

Upon commencement of operation of the Sultan Project for power purposes, the District will assume all operating

responsibilities upstream from Lake Chaplain, unless otherwise specified. The District will operate the Spada Lake facilities to obtain maximum power generation, subject to the conditions specified herein on meeting the City's Water Supply Service Area and instream flow requirements as specified by the water rights for the Sultan Project and the Sultan River.

The City will assume all operating responsibilities in Lake Chaplain and in the City's distribution system unless otherwise specified. This operating agreement will continue throughout Sultan Project operation. If the standard operating procedures are modified for purposes of maintenance or due to low flow conditions in the Sultan River, the District will notify the City of proposed modifications to the flow regime, but will maintain adequate diversions to meet the water supply requirements for the City, in preference to power generation (Article II, Section 2.). Operation of the diversion facilities to accommodate minimum instream flow requirements will be as required by the FERC license.

The District shall have the right to control the discharge of water from or into Spada Lake and, in any manner determined by the District, to realize the most advantageous operation of the Sultan Project, except as otherwise provided for in this Agreement and consistent with Article II, Section 1. Said operational practices of the District shall be directed toward achievement of the following water quality objectives:

(a) The District shall operate the Sultan Project to minimize turbidity or any other condition of the water which may materially increase the difficulty or cost to the City or its customers in the use of such water.

(b) Following completion of the Sultan Project the District will operate water facilities into Lake Chaplain and maintain Lake Chaplain between 641.6 and 646.6 MSL elevation, unless otherwise directed by the City or as provided for in this Agreement.

(c) In the event that the quality of the water in Lake Chaplain or the quality of the water being released to Lake Chaplain by the District pursuant to operation of the Sultan Project is below or inconsistent with standards to be developed by the Technical Management Team, the City may request the District to cease releasing water into Lake Chaplain. The District shall immediately divert such waters until the quality of the water meets the agreed standards or until the City authorizes the District to release the water into Lake Chaplain.

(d) Water quality tests shall be conducted by the City and the District at such times and places as may be agreed upon. Until further agreement, water samples shall be taken at least at four points; namely (1) the Spada Lake Power Intake; (2) the Powerhouse; (3) the Filtration Plant Intake and (4) at or near the westerly outlet of Lake Chaplain.

The expense of all tests required by the City to meet DSHS public water supply testing requirements shall be paid for by the City. At any time the District is not releasing water into Lake Chaplain under the terms of this section and desires to so do, it may make tests of the water at each sampling point to determine if the provisions of this section shall continue to apply.

(e) The City shall have access to all turbidity and temperature data at all times.

The District shall at all times have the right to release water from Spada Lake in such amounts and such quantities as may be necessary for hydroelectric purposes except as required for minimum water supply needs.

A R T I C L E VI

PAYMENT

Section 1. Payment of Balance for Stage I.

It is understood that the City, pursuant to existing agreement between the parties, is paying for the joint cost for Stage I. Such payment shall continue to be made in the manner as herein set forth. For record purposes it is understood that the total amount agreed to be paid by the City was in the principal amount of Four Million Nine Hundred Twenty-Two Thousand, One Hundred Forty-One and 29/100ths Dollars ($4,922,141.29) and that the balance due and owing as of 1st day of September, 1981 is in the amount

of Two Million One Hundred Ninety-Four Thousand Seven Hundred Fifty-Four and 00/100ths Dollars ($2,194,754.00). Payments for such balance shall continue at the rate of Twenty-Three Thousand One Hundred Thirty-One and 21/100ths Dollars ($23,131.21) per month together with interest at the rate of two point nine one seven seven percent (2.9177%) until payment in full of all principal and interest.

Section 2. Payment for Water Cost Included in Sultan Project.

As work progresses, if the City should request any changes or additions to the Sultan Project which are for water purposes only not otherwise contemplated to be shared by the parties pursuant to terms of this Agreement, such cost shall be paid by the City at the time the same are incurred.

At the time any such request for special or additional construction or facilities are made by the City, the parties shall agree to the nature of the construction and the manner in which the same shall be done. If the work is to be done by contractors employed by the City, special arrangements will be made to coordinate with the contractors for the District. If work is to be done by contractors employed by the District, a special addendum or agreement will be made segregating the amount to be done as a water cost from that work otherwise being done by such contractor for the District.

Section 3. Payment for Joint Costs for Sultan Project.

It is agreed that certain costs of the amended plan for the Sultan Project shall be joint costs of the District and the City. All of such joint costs shall be paid by the District, as incurred. Beginning at such time as the City shall attain a total usage of water in the quantity as described under the time "Minimum Water Usage", then and in that event the City will pay its proportionate share of such joint costs in the manner hereinafter set forth. Such joint costs are presently contemplated include the following:

(a) Raising of the dam.

(b) All necessary roads and changes to roads caused by the raising of the dam.

(c) Raising and making additions to the morning glory spillway to the presently contemplated height.

(d) Clearing and grading for raised Spada Lake level.

(e) The parties understand that upon clearing for the raised level of Spada Lake certain areas may be uncovered or be observed which can be expected to cause unusual turbidities within Spada Lake. The District agrees to exert reasonable efforts during construction to stabilize such conditions so that turbidities will be minimized. This cost will be a joint cost.

(i) The following shall not be a joint cost but shall be shared as herein set forth: The parties agree that after the completion of the

clearing for the raised lake area above elevation 1360, if it shall be shown that the raised Spada Lake level causes unstable conditions which shall result in turbidities in the water affecting the supply of water at Lake Chaplain and the turbidities as measured at the powerhouse are in excess of 20 NTU for an extended period of time and the source is identified, then the City may exert all reasonable efforts to correct such unstable conditions and for a period of five years the District shall reimburse the City 50% of the cost expended. After said five year period and until 2020 the District will reimburse the City 25% of the cost of such sums so expended.

(f) Litigation costs for the raising of the dam to Stage II.

The parties agree that in no event shall the City cost under this Article VI, Section 3 exceed the sum of $10,000,000. The total joint costs shall not bear interest until the time of minimum water usage. Thereafter the payment by the City to the District for such joint costs commencing at the time of minimum water usage shall bear interest at the rate equal to that paid by the District on its bonds or other evidence of indebtedness sold or issued by the District for the purpose of financing the construction

of the Sultan Project. Such total sum of joint costs shall be amortized over a period of thirty (30) years, including interest as aforesaid in an amount equal to that paid by the District for financing the said Sultan Project. The interest shall be the effective rate considering all financing for the Project as allocated under accounting procedures of the District.

Section 4. Description of Payments By City to District.

(a) The amounts which the City shall pay hereunder shall constitute payment for all storage and delivery of water to the City under the terms of this Agreement.

(b) All amounts payable by the City to the District hereunder shall not be, or constitute, a general obligation of the City and no portion thereof shall be payable from the general funds of the City, but all said amounts shall be paid exclusively from the net operating revenues of the City's Municipal Water System and other monies in the City's Water Revenue Fund in the following manner:

(i) The existing obligations of the City with respect to the payment of the costs of Stage I as set forth in Article VI Section 1 of this Agreement shall take precedence over and be paid before all other obligations of the Water Revenue Fund except for those obligations in the form of City Water Revenue Bonds which shall or may be outstanding as of the 21st day of July, 1960.

(ii) As to the balance which may become due and owing for Sultan Project joint costs, it is understood that the obligations to the District shall be prior to all revenue bonds payable from the Water Revenue Fund except for those revenue bonds outstanding at this time and such additional revenue bonds issued between the date of this Agreement and the time the City commences payment for joint cost as set forth in Article VI Section 3.

Section 5. Financing by District and City for City Project.

(a) General.

As hereinbefore mentioned it is contemplated that the District will make use of certain waters in the Sultan Basin for hydroelectric purposes and the City will make use of such waters for domestic, commercial and industrially related uses. Because of the benefits derived by the District from the use of such Sultan Basin waters, and the use of City properties as provided herein, the City and the District have agreed to contribute to the construction of the City Project as hereinafter set forth.

(b) DSHS Grants.

The parties understand that included in the financing of the entire City Project is approximately the sum of 1.3 Million Dollars presently considered a loan from DSHS to the City but which shall be converted to a grant

upon proceeding with construction. In addition DSHS has made a grant of approximately 8.5 Million Dollars which will be paid by DSHS to the City upon proceeding with construction.

(c) Sharing of Cost.

The parties agree that the City Project costs include construction cost, escalation, contingencies, sales tax, engineering, legal expense pertaining to construction matters only and other necessary expenses as agreed to between the parties shall be shared as follows:

The District agrees to pay a sum equal to 25% (but without deduction for DSHS grants) of said total City Project costs but not to exceed the sum of Eight Million One Hundred Ninety-three Dollars ($8,193,000). The City will pay the remainder of such costs, but not to exceed the sum of 75% of such Project cost, provided always, however, that the City's cash contribution will not exceed Eighteen Million Dollars ($18,000,000). The City has presently opened bids for the major portion of the filtration plant (not including sludge disposal, systems separation, and emergency pretreatment facilities). Exhibit B illustrates how cost sharing will be accomplished, and using the low bid for the Project which has been submitted but not yet accepted by the City, and which exhibit is made a part hereof as if set forth at length herein.

Using the method as set forth in such Exhibit B, as the cost is increased by addition of facilities or by overruns,

if any, then such costs will be borne 25% by the District and 75% by the City. Provided always, however, that when the total payments necessary to be paid by the District exceed $8,193,000, then the City will pay all balance until the City has paid its total commitment up to $18,000,000.) After such amounts have been paid by both the City and the District all additional costs for the City Project will be shared 25% by the District and 75% by the City. Before making any expenditures in excess of the above amounts such expenditures must be approved by both parties.

Section 6. Payment by District to City for City Project.

The City will pay all bills and costs of construction under the City Project. The 25% contribution to be made by the District to the City shall be paid periodically and within 25 days after receipt by the District of billing from the City showing invoices for work or materials actually delivered, constructed or performed by the City. All costs incurred prior to execution of this Agreement are due upon execution, but may be paid over a four (4) month period. Until such time as the District has obtained permanent financing, all contributions by the District to the City shall be made from current revenues or short term financing.

Section 7. Financing for City Costs.

The City and the District agree to adequately finance all costs of the City Project to be paid by the City and

the District and if for any reason such funds financed by bonding shall be insufficient to meet the incurred costs, each party warrants that it is able to take necessary measures to raise such funds as may be necessary for such purposes.

Section 8. Lake Chaplain Pipeline Connection to Filtration Plant at City Cost.

The Sultan Project drawings show approximately 75 feet of 60 inch diameter pipeline which taps off the District's powerhouse to Lake Chaplain pipeline solely to serve the filtration plant. The present cost estimate is $18,000 for this tap. This cost is to be a City water cost and should not be included in either the City Project cost nor any other cost to be borne by the District and the same as it is ultimately determined will be paid solely by the City.

Section 9. Lake Chaplain Pipeline.

The City's contract drawings include 2360 feet of 72" diameter pipeline and which purpose is to provide return water to Lake Chaplain and the Sultan River. The cost of this facility is presently estimated to be $750,000, and is agreed to be a District cost. The District agrees to reimburse the City for all costs related thereto, including District approved engineering, construction, and construction management costs. This amount is not included in Exhibit B

and is paid over the $8,193,000 commitment.

A R T I C L E VII

WATER RATES AND SERVICE

Section 1: If an area within Snohomish County desires to purchase water from the City or the District but the City is not selling water to it, and the potential customer has requested service of the District, and the District in its sole discretion determines that it is ready, able and willing to serve such potential customer, then insofar as water for domestic consumption may be available, the City will agree to sell to the District water for such purpose, provided the City shall have the first option to serve such community on the same terms and conditions as the District would serve.

City agrees to charge reasonable rates to all City water customers whether such customers are inside or outside the City of Everett. Further, the City agrees that it will establish separate accounting for costs and revenues related to water filtration and the City will charge rates for filtration based solely on the separate accounting for the filtration utility and will not include a surcharge chargeable only to customers outside the City. The basic water rate will be separate from the filtration rate.

Section 2. City Will Charge Adequate Rates.

The City and the District hereby covenant to charge

sufficient rates and to collect sufficient revenue to meet its obligation under this Agreement.

A R T I C L E VIII

GENERAL PROVISIONS

Section 1. Uncontrollable Forces.

Neither party hereto shall be considered to be in default in respect to any obligations hereunder if prevented from fulfilling such obligation by reason of uncontrollable forces. Either party rendered unable to fulfill any obligation hereunder by reason of an uncontrollable force shall exercise due diligence to deal with such uncontrollable force with all reasonable dispatch.

Section 2. Insurance.

The District shall maintain in connection with the construction and/or operation of the Sultan Project, including hydroelectric facilities, adequate insurance as determined by the District and the City with a responsible company or under a self-insurance program. This insurance will be used to protect the parties hereto against damages or liability resulting from either partial or complete failure of any of the structures or construction by the District. The costs of said insurance allocable to Stage I shall be shared by the parties and shall be paid at the time they are billed. In the event of dispute between the City and the District as to allocation of insurance cost, such matter may be submitted to

arbitration in accordance to Article IX herein.

All monies received from such insurance payments, if any, shall be used to repair or replace the damage or loss sustained by the Sultan Project.

Notwithstanding the foregoing, at time of minimum water usage, insurance upon the Spada Lake facilities, excluding hydroelectric facilities shall be deemed a joint cost.

Section 3. Term of Contract.

The term of this contract shall be for a period of years equal to the duration of the existing license, and for such additional time for which such license shall be extended, renewed, or a new license issued by FERC or its successors, and/or for any further time as may be allowed by law or regulation of the controlling governmental authority, provided that after the year 2031 the parties will renegotiate the terms and conditions of this Agreement and attempt to place the same in context with the conditions then existing.

Section 4. City to Apply for FERC License or Others.

The City agrees that it will join with the District in making all applications or amendment of applications to FERC for the issuance of a license for the above-contemplated Sultan Project and will further apply for any and all other licenses necessary to construct the City Project and the Sultan Project hereinabove described. If there shall be any delay in the issuance of any such license or permit, the parties will cooperate with each other on any necessary

amendments or changes or extensions to the license in this Agreement, provided the intent and purpose of this Agreement will not thereby be circumvented.

Section 5. Successors of Parties to Interest.

This Agreement shall apply to and be binding upon the successors and assigns of the parties hereto. All rights hereunder may be assigned to other responsible public utilities in their entirety, but not piecemeal without the consent of the other.

Section 6. Contract Reference in Future Bond Issues of City.

The City agrees that it shall make specific reference to this Agreement, and incorporate it, within any water revenue bond ordinance enacted subsequent to the execution of this Agreement and that any bonds issued hereafter payable from the City's Water Revenue Fund or general obligation bonds issued to provide facilities herein mentioned shall be made subject to the then existing financial commitments of the City under the applicable provisions of this Agreement.

Section 7. Agreement to Hold Harmless.

In the event any legal action is brought by a third party against either the District or the City, or both, concerning any subject matter arising out of their projects, the City or the District shall give notice of said action to the other and the parties shall determine by mutual agreement whether the cost of defense and/or payment of claims or

judgment shall be a water cost, hydroelectric cost, or a joint cost. The parties may agree to a cost-share formula before or after the completion of the action based on the parties' proportionate interest or relation to the subject matter of the action. In the event of failure to reach mutual agreement on the parties' share of costs of said action, the parties agree to submit the issue of sharing the costs of any legal action under the intent of this clause and this contract to arbitration (Article IX).

Section 8. Notice.

All notices complying with this Agreement shall be sent by registered mail as follows:

To the City:

Mayor
City of Everett
City Hall
3002 Wetmore Avenue
Everett, Washington 98201

To the District:

Manager
Public Utility District No. 1
of Snohomish County
Post Office Box 1107
Everett, Washington 98206

Section 9. Recision of Initial Agreement.

Insofar as this Agreement supersedes the initial Agreement of July 21, 1960, as amended in 1970, that Agreement is rescinded and the terms and conditions of this Agreement shall determine the rights and duties of the parties.

A R T I C L E IX

ARBITRATION

All claims, disputes, and other matters in question arising out of or relating to this contract or the performance or interpretation thereof shall be submitted to arbitration. Arbitration shall be commenced by a demand in writing made by one party to the contract upon the other and within a reasonable time after the dispute, claim, or other matter in question arose, but in no event after payment in full of the contract price has been made and accepted. The written demand shall contain a statement of the question to be arbitrated and the name of the independent arbitrator appointed by that party. The other party to the contract within 10 days of the receipt of the written demand shall appoint an independent arbitrator and give notice in writing thereof to the party who commenced arbitration. The two arbitrators appointed by the parties shall within 10 days of the date of the appointment of the second arbitrator select a third independent arbitrator who shall be designated as chairman and who immediately shall give written notice to the parties of his appointment. The third arbitrator shall select a time, date and place for hearing and give each party five days' notice in writing thereof. The date for hearing shall not be more than 15 days after the date of appointment of the third arbitrator. The arbitrators shall render their decision in writing to

each of the parties not more than 30 days after the date hearing shall commence unless the parties shall otherwise agree in writing. In the event the party of whom arbitration is demanded shall fail to appoint his arbitrator within the time specified or the two arbitrators appointed by the parties are unable to agree on an appointment of the third arbitrator within the time specified, either party may petition the presiding justice of the superior court to appoint a single arbitrator who shall hear the parties and make an award as provided herein. The petitioner shall give five days' notice in writing to the other party before filing his petition.

In the event of any need for legal interpretation, the laws of the State of Washington shall apply.

A R T I C L E X

CONDITION PRECEDENT IN THE EVENT DISTRICT IS UNABLE TO FINANCE OR CONSTRUCT PROJECT.

The parties understand that at the time of the execution of this Agreement the District has not arranged for its financing and has not yet received bids for the major construction of the Sultan Project and it is possible that events may occur which will prevent the District from proceeding at this time with the construction of the Sultan Project.

If such events should occur that the District cannot

commence to construct the Project, then the parties agree as follows:

1. The City will continue with its efforts to finance and construct the City Project.

2. The City will collect all DSHS grants presently awarded unto the City and in addition the City will contribute for plant construction the sum of up to $18 million.

3. The District will contribute toward the Project the sum of $4.75 million payable on the basis of 25% of City Project costs as provided in Article VI, Section 6, until the said sum to be paid hereunder by the District is fully paid. If the DSHS grants, the City contribution of up to $18 million and the $4.75 million contribution by the District do not equal enough to complete the City Project, then the District agrees that it will pay such other and additional sums on the basis of 25% by the District and 75% by the City as may be necessary to complete the City Project, but not to exceed the total sum of $8,193,000.

If the total contribution as above set forth by DSHS, City and District is still insufficient to complete the City Project, the City and the District will contribute toward such additional requirements for completion a sum equal to 75% of such costs by the City, and 25% of such costs by the District.

In the event the District is delayed in the construction

of the Sultan Project and the City proceeds on the basis of the above-mentioned contributions, all further obligations of the District hereunder shall be ineffective and unenforcable until such time as the District or its assignees shall proceed to construct the Sultan Project. In the meantime the Project will continue to be operated in the manner as provided for under the original Agreement.

Commencement of construction shall mean the time of beginning of construction of the dam, the powerhouse, the tunnel and the pipeline and shall not include incidental logging, clearing or road building. When the District or its assignees shall commence construction of the Sultan Project, then the District will notify the City and if there are no changes in the conditions under which the Project would proceed, then the parties would continue to operate in the manner above set forth, and the District or its assignees shall immediately pay the City the amount due under Article VI, Section 5, as provided in Article VI, Section 6. Provided, however, that after notice if the City determines that some particular provisions or compensation between the parties must be amended, then the City will give notice to the District of such changes it feels should be made in the Agreement. On the other hand, the District may give the City notice of such changes as it feels should be made in the Agreement,. provided that such changes shall in no event

reduce the amounts paid or to be paid under Article VI, Section 5. If the parties cannot agree upon the then existing conditions upon which the Sultan Project may be completed, then the parties agree to submit such differences to arbitration. Provided, always, it is agreed that such arbitration shall in no event increase the costs either of construction or of operation on the part of the City.

The City and the District agree to adequately finance all costs of the City Project to be paid by the City and the District and if for any reason such funds financed by bonding shall be insufficient to meet the incurred costs, each party warrants that it is able to take necessary measures to raise such funds as may be necessary for such purposes.

The City agrees to repay the District for the District's contributions to the City Project under the conditions of this Article only; provided that the City payment shall be as follows:

(i) The total amount of all monies received by the City from the District hereunder shall not be due for repayment until October 1, 2010.

(ii) Interest on such total amount to the date of commencement of repayment shall constitute the District's non-reimbursable contribution toward the City Project.

(iii) Repayment of the amount payable hereunder may be made by the City in monthly installments over a thirty (30) year period with interest on the declining balance at the same effective rate as the City's revenue bond issue for construction of the City Project or at such other interest rate as the City and District may agree.

DATED this 17th day of November, 1981.

CITY OF EVERETT

By _____
WILLIAM E. MOORE, Mayor

ATTEST

_____
Clerk

APPROVED AS TO FORM:

_____
Asst. CITY ATTORNEY

PUBLIC UTILITY DISTRICT NO. 1 OF SNOHOMISH COUNTY

By _____
W. G. HULBERT, JR., Manager

ATTEST

_____
Clerk

APPROVED AS TO FORM:

THE WILLIAMS, NOVACK & HANSEN LAW FIRM

BY _____
PARKER WILLIAMS, Attorneys

CITY OF EVERETT

WATER FILTRATION FACILITIES

SUPPLEMENTAL STUDIES

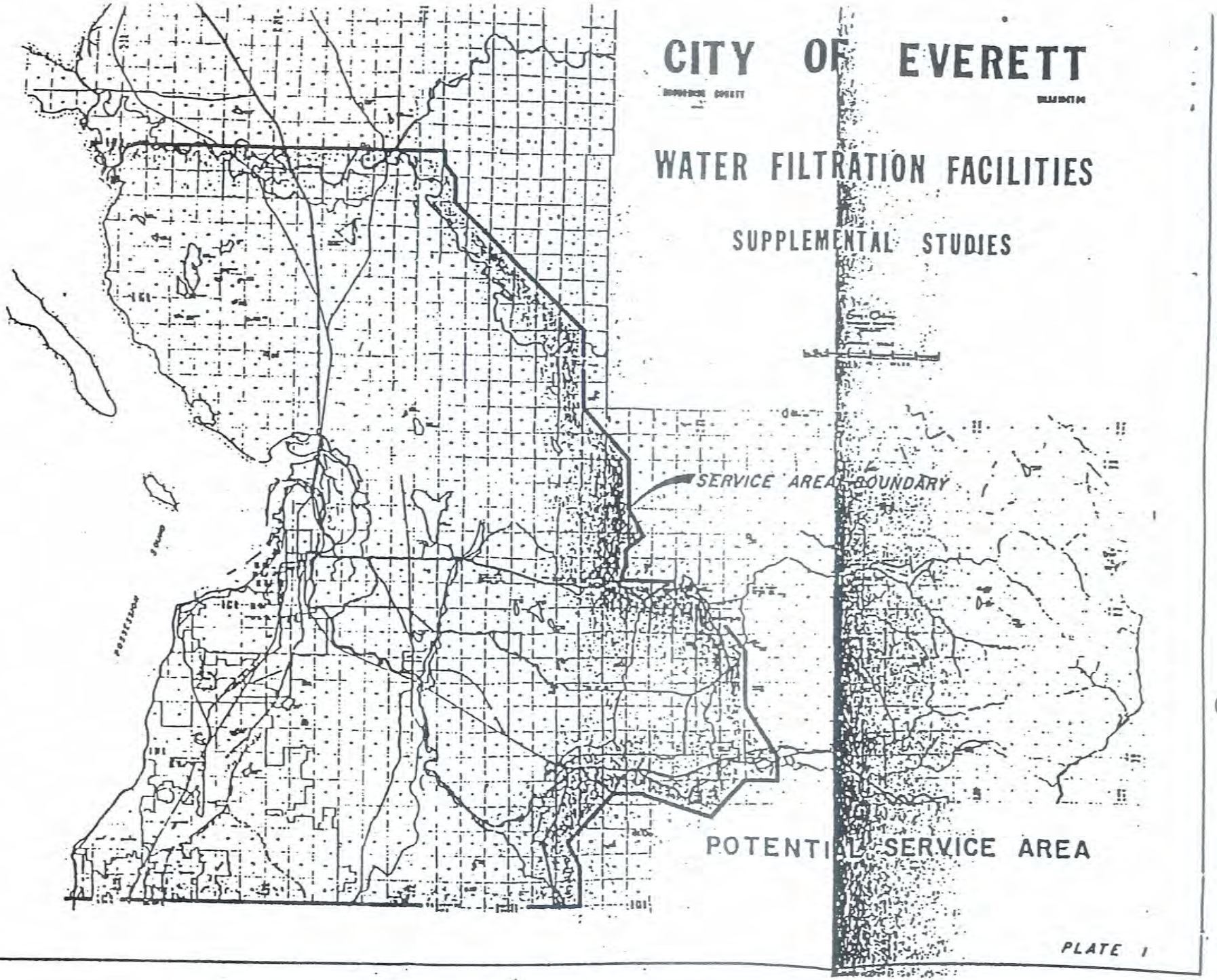

PLATE 1

CITY OF EVERETT FILTRATION PLANT COST

SNOHOMISH COUNTY PUBLIC UTILITY DISTRICT PARTICIPATION AT 25%

(In Thousands)

	District	City	Total Project
Project Costs			
Direct Construction Costs	$ 5,703	$17,111	$22,814
Escalation and Contingencies	750	2,250	3,000
Sales Tax	302	907	1,209
Engineering, Administration & Legal	850	2,550	3,400
System Separation, Sludge Disposal & Other	588	1,762	2,350
Total Project Costs	8,193	24,580	32,773
Less Grants	-	(9,800)	(9,800)
Total Project Costs	$ 8,193	$14,780	$22,973
Additional contribution of City if necessary		3,220	
Total Commitment	$ 8,193	$18,000	

EXHIBIT "B"

ADDENDUM 8
Additional Water Quality Data

Plant Influent (PLNTINFSP1, PLNTINSIPH)

		Aluminum (ug/L)	Antimony (ug/L)	Arsenic (ug/L)	Barium (ug/L)	Beryllium (ug/L)	Boron (ug/L)	Cadmium (ug/L)	Chromium (ug/L)	Copper (ug/L)	Iron (ug/L)	Lead (ug/L)	Manganese (ug/L)	Mercury (ug/L)	Molybdenum (ug/L)	Nickel (ug/L)	Selenium (ug/L)	Silica (ug/L)	Silver (ug/L)	Sodium (ug/L)	Thallium (ug/L)	Zinc (ug/L)
1995	Maximum	91	< 1	< 1	4	< 0.5	< 9	< 3	< 6	14	110	1	50	< 0.1	< 8	< 10	< 1	4214	< 5	767	< 1	< 8
	Minimum	29	< 0.5	< 0.3	4	< 0.5	< 8	< 3	< 6	< 3	30	< 0.3	4	< 0.1	< 1	< 10	< 1	3890	< 1	767	< 1	< 1
	Average	63	N/A	N/A	4	< 0.5	N/A	< 3	< 6	6	60	N/A	10	< 0.1	N/A	< 10	< 1	4054	N/A	767	< 1	N/A
1996	Maximum	228	< 1	< 1	4	< 0.5	< 10	< 3	< 6	11	294	3	27	< 0.2	< 10	< 12	< 1	4343	5	742	< 1	8
	Minimum	< 33	< 1	< 1	4	< 0.5	< 9	< 3	< 6	6	24	< 1	4	< 0.2	< 8	< 12	< 1	3624	< 2	742	< 1	< 8
	Average	77	< 1	< 1	4	< 0.5	N/A	< 3	< 6	8.3	107	< 1	12	< 0.2	N/A	< 12	< 1	4060	< 5	742	< 1	< 8
1997	Maximum	117	< 1	< 1	3	< 0.5	< 10	< 0.2	< 6	12	150	< 1	17	< 0.1	< 10	< 15	< 1	4446	< 5	798	< 1	< 8
	Minimum	20	< 1	< 1	3	< 0.5	< 10	< 0.2	< 6	4.3	31	< 1	3	< 0.1	< 10	< 15	< 1	3637	< 5	798	< 1	< 8
	Average	52	< 1	< 1	3	< 0.5	< 10	< 0.2	< 6	7.9	67	< 1	9	< 0.1	< 10	< 15	< 1	3974	< 5	798	< 1	< 8
1998	Maximum	66	< 1	1	ND	ND	ND	ND	ND	12	102	< 1	24	ND	< 10	ND	ND	4364	< 5	ND	ND	< 8
	Minimum	23	< 1	< 1	ND	ND	ND	ND	ND	6	5	< 1	5	ND	< 2	ND	ND	3936	< 1	ND	ND	2
	Average	42	< 1	< 1	ND	ND	ND	ND	ND	7.5	56	< 1	10	ND	N/A	ND	ND	4179	N/A	ND	ND	N/A
1999	Maximum	96	< 1	< 1	ND	ND	ND	ND	ND	6	101	< 1	31	ND	< 10	ND	ND	4514	< 5	ND	ND	< 8
	Minimum	22	< 1	< 1	ND	ND	ND	ND	ND	< 3	20	< 1	3	ND	< 10	ND	ND	4214	< 5	ND	ND	< 8
	Average	52	< 1	< 1	ND	ND	ND	ND	ND	< 3	61	< 1	11	ND	< 10	ND	ND	4364	< 5	ND	ND	< 8
2000	Maximum	62	< 5	23	< 100	< 3	ND	< 4	< 10	< 200	50	< 2	75	< 0.5	ND	< 40	< 5	4200	< 1	< 5000	< 2	< 200
	Minimum	< 10	< 1	< 1	3	< 0.5	ND	< 0.2	< 1	5	< 50	< 1	< 10	< 0.1	ND	< 1	< 1	3209	< 0.3	637	< 1	< 5
	Average	< 35	N/A	16	1	N/A	ND	N/A	N/A	21	31	1	12	N/A	ND	N/A	N/A	3819	N/A	686	N/A	N/A
2001	Maximum	62	< 1	< 3	5	< 0.5	16	< 0.2	< 6	10	96	< 1	13	< 0.1	< 10	< 15	< 1	4343	< 5	847	< 1	< 8
	Minimum	19	< 1	< 3	3	< 0.5	< 10	< 0.2	< 6	< 4	24	< 1	3	< 0.1	< 10	< 15	< 1	3594	< 0.3	760	< 1	< 8
	Average	23	< 1	< 3	4	< 0.5	< 10	< 0.2	< 6	< 4	47	< 1	8	< 0.1	< 10	< 15	< 1	3888	N/A	801	< 1	< 8
2002	Maximum	105	< 1	< 3	5	< 0.5	11	< 0.2	< 6	10	110	1	18	< 0.1	< 10	< 15	< 1	4257	< 5	858	< 1	17
	Minimum	14	< 1	< 2	3	< 0.5	< 10	< 0.2	< 6	< 4	27	< 1	3	< 0.1	< 10	< 15	< 1	3123	< 0.3	694	< 1	< 8
	Average	46	< 1	N/A	3.9	< 0.5	< 10	< 0.2	< 6	< 4	69	< 1	8	< 0.1	< 10	< 15	< 1	3763	N/A	782	< 1	< 8
2003	Maximum	298	< 1	< 2	7	< 0.5	21	< 0.2	< 6	< 12	304	< 1	29	< 0.1	< 10	< 15	< 1	5306	< 5	822	< 1	< 8
	Minimum	22	< 1	< 2	3	< 0.5	< 10	< 0.2	< 6	4	28	< 1	2	< 0.1	< 10	< 15	< 1	3359	< 5	735	< 1	< 8
	Average	80	< 1	< 2	4.3	< 0.5	< 10	< 0.2	< 6	< 4	102	< 1	10	< 0.1	< 10	< 15	< 1	3986	< 5	765	< 1	< 8
2004	Maximum	319	< 1	< 2	6	< 0.5	18	< 0.2	< 6	< 11	338	< 1	50	< 0.1	< 10	< 15	< 1	5134	< 5	872	< 1	< 8
	Minimum	< 9	< 1	< 2	4	< 0.5	4	< 0.2	< 6	4	36	< 1	3	< 0.1	< 10	< 15	< 1	3637	< 5	776	< 1	< 8
	Average	98	< 1	< 2	5.2	< 0.5	< 10	< 0.2	< 6	< 11	100	< 1	9	< 0.1	< 10	< 15	< 1	4553	< 5	826	< 1	< 8
2005	Maximum	162	< 1	< 2	6	< 0.5	11	< 0.5	< 6	13	170	< 1	37	< 0.1	< 10	< 15	< 1	4535	< 5	913	< 1	< 8
	Minimum	17	< 0.5	< 0.5	4.1	< 0.5	< 5	< 0.2	< 0.5	4	32	< 0.5	4	< 0.1	< 0.5	< 0.5	< 0.5	3594	< 0.5	776	< 0.5	< 5
	Average	67	< 0.5	< 0.5	4.9	< 0.5	< 10	< 0.2	< 0.5	7.5	96	< 0.5	14	< 0.1	< 0.5	< 15	N/A	3995	< 0.5	827	< 0.5	< 5

Averages are calculated setting all < values equal to zero

N/A: Two different detection limit values in data set and no values above either, thus making an average meaningless

ND: No Data

PUD Return Line (PUDRTNSP15)

		Aluminum (ug/L)	Antimony (ug/L)	Arsenic (ug/L)	Barium (ug/L)	Beryllium(ug/L)	Boron (ug/L)	Cadmium (ug/L)	Chromium (ug/L)	Copper (ug/L)	Iron (ug/L)	Lead (ug/L)	Manganese (ug/L)	Mercury(ug/L)	Molybdenum (ug/L)	Nickel (ug/L)	Selenium (ug/L)	Silica (ug/L)	Silver (ug/L)	Sodium (ug/L)	Thallium (ug/L)	Zinc (ug/L)
1995		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1996		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1997		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1998	Minimum	39	ND	ND	ND	ND	ND	ND	ND	ND	84.2	< 1	7.4	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Maximum	39	ND	ND	ND	ND	ND	ND	ND	ND	84.2	< 1	7.4	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Average	39	ND	ND	ND	ND	ND	ND	ND	ND	84.2	< 1	7.4	ND	ND	ND	ND	ND	ND	ND	ND	ND
1999	Minimum	31	< 1	< 1	ND	ND	ND	ND	ND	< 4	86	< 1	6.7	ND	ND	ND	ND	2717	< 5	ND	ND	ND
	Maximum	28	< 1	< 1	ND	ND	ND	ND	ND	< 4	23	< 1	4.0	ND	ND	ND	ND	2717	< 5	ND	ND	ND
	Average	29.5	< 1	< 1	ND	ND	ND	ND	ND	< 4	54.5	< 1	5.4	ND	ND	ND	ND	2717	< 5	ND	ND	ND
2001	Minimum	168	< 1	< 3	6	< 0.5	< 10	< 0.2	< 6	< 4	240	< 1	17.7	< 0.1	< 10	< 15	< 1	4407	< 5	867	< 1	< 8
	Maximum	< 35	< 1	< 1	4	< 0.5	< 10	< 0.2	< 6	< 4	37.7	< 1	4.0	< 0.1	< 10	< 15	< 1	3915	< 5	712	< 1	< 8
	Average	54	< 1	N/A	4.4	< 0.5	< 10	< 0.2	< 6	< 4	102	< 1	9.0	< 0.1	< 10	< 15	< 1	4071	< 5	797	< 1	< 8
2002	Minimum	651	< 1	< 2	8	< 0.5	< 10	< 0.2	< 6	< 4	585	< 1	28.6	< 0.1	< 10	< 15	< 2	5263	< 5	736	< 1	< 8
	Maximum	42	< 1	< 2	3	< 0.5	< 10	< 0.2	< 6	< 4	46.2	< 1	3.1	< 0.1	< 10	< 15	< 1	2867	< 0.3	569	< 1	< 8
	Average	174	< 1	< 2	5	< 0.5	< 10	< 0.2	< 6	< 4	240	< 1	11.4	< 0.1	< 10	< 15	N/A	3881	N/A	674	< 1	< 8
2003	Minimum	2770	< 1	< 2	23	< 0.5	16	< 0.2	< 6	6	2280	< 1	49.9	< 0.1	< 10	< 15	< 1	13136	< 5	876	< 1	< 8
	Maximum	41	< 1	< 2	4	< 0.5	< 10	< 0.2	< 6	< 4	73.3	< 1	3.8	< 0.1	< 10	< 15	< 1	3402	< 5	614	< 1	< 8
	Average	787	< 1	< 2	10	< 0.5	< 10	< 0.2	< 6	< 4	676	< 1	19.0	< 0.1	< 10	< 15	< 1	6335	< 5	717	< 1	< 8
2004	Minimum	764	< 1	< 2	9	< 0.5	< 10	< 0.2	< 6	< 4	740	1	24.6	< 0.1	< 10	< 15	< 1	5990	< 5	733	< 1	9
	Maximum	41	< 1	< 2	4	< 0.5	3	< 0.2	< 6	< 4	77	< 1	4.8	< 0.1	< 10	< 15	< 1	3808	< 5	698	< 1	< 8
	Average	273	< 1	< 2	7	< 0.5	< 10	< 0.2	< 6	< 4	286	< 1	11.7	< 0.1	< 10	< 15	< 1	5117	< 5	720	< 1	< 8
2005	Minimum	767	< 1	< 2	11	< 0.5	< 10	< 0.5	< 6	< 4	653	< 5	21.5	< 0.1	< 10	< 15	< 0.5	6611	< 0.5	868	< 1	< 8
	Maximum	42	< 0.5	< 0.5	4.9	< 0.5	< 5	< 0.2	< 0.5	0.8	70	< 0.5	4.0	< 0.1	< 0.5	< 0.5	< 0.5	3744	< 0.5	679	< 0.5	< 5
	Average	240	N/A	< 0.5	6.8	< 0.5	< 5	< 0.2	< 0.5	0.8	284	N/A	12.3	< 0.1	N/A	< 0.5	< 0.5	4637	< 0.5	753	N/A	N/A

Averages are calculated setting all < values equal to zero

N/A: there were two different detection limit values and no values above either, thus making an average meaningless

ND: No Data

Conventionals Data,1995-2005, collected at PLNTINFSP1 or PLNTINSIPH sample sites

Date	Alkalinity as CaCO3	Conductivity umhos/cm	pH s.u.	Temperature °C	Total Hardness mg/L as CaCO3	Ca Hardness mg/L as CaCO3	Dissolved Oxygen mg/L	Carbon Dioxide mg/L	Color c.u.	Cyanide mg/L	Fluoride mg/L	Chloride mg/L	Sulfate mg/L	TDS mg/L	Nitrate mg/L	Nitrite mg/L	OrthoPhosphate mg/L	TKN mg/L	Total Phosphate mg/L	Ammonia mg/L	Chlorohyll-a mg/m³	TOC mg/L	DOC	UV254
1/17/1995																						<1.5		
2/8/1995															0.136	<0.002								
2/22/1995	14.0	27	7.0		10.0	7.4	12.2	4.2							0.131	<0.002	0.004	0.084	0.008	0.007	0.74	<1.5		
2/27/1995																								
3/6/1995																						<1.5		
4/25/1995																						1.6		
5/9/1995																						2.1		
6/7/1995	9.0	25	6.5	14.1	10.5	7.9			<5		<0.01	<1.0		26	0.070	<0.002						1.8		
6/14/1995	16.0	25	7.1		9.2	8.2	10.1	4.2		<0.004					0.093	<0.002	0.004	0.067	<0.005	0.011	1.6			
7/13/1995																						1.6		
8/7/1995																						2.5		
8/9/1995															0.027	<0.002								
8/16/1995															0.031	<0.002	0.002	0.130	<0.005	0.020	1.3			
9/14/1995																						<1.5		
10/17/1995																						2.0		0.037
10/18/1995															0.063	<0.002	0.002	0.060	<0.005	0.020	1.3			
11/9/1995																						1.6		
11/27/1995																								0.039
12/7/1995															0.097	<0.002								
12/20/1995																						1.5		0.041
1/25/1996																0.006						<1.5		0.040
2/12/1996																						1.9		0.045
2/20/1996															0.130									
3/7/1996	7.1	28	7.0	6.0	5.8	7.6	11.2	3.8							0.094	<0.002	0.003	0.084	<0.005	0.009	0.78			
3/19/1996																						<1.5		0.044
4/23/1996																						<1.5		0.040
5/7/1996																						<1.5		0.390
6/11/1996	8.2	24	7.0	11.4	10.3	6.8			10	<0.004	0.04	1.2		<10	0.090	<0.002								
6/17/1996	7.5	24	6.8	13.8	9.8	8.2		4							0.055	<0.002	0.003	0.075	<0.005	<0.003	1.0			
6/18/1996																						1.5		0.038
7/30/1996																						0.9		0.032
8/7/1996																						0.9		0.031
8/8/1996	9.8	24	6.9	17.7	9.4	8	9.3	3.8													1.2			
9/18/1996	10				10.7	8.2																0.9		0.032
10/29/1996																						1.8		0.034
11/13/1996	7.9	27	6.7	11.7	9.6		9.3	4.4							0.115	<0.002	0.003	0.073	<0.005	<0.003	7.4			
11/19/1996	11		6.8	10.6	11.1	8.4																1.1		0.038
11/20/1996															0.088	<0.002								
12/10/1996																						1.8		0.038
1/22/1997	10.2	25			10.0	7.8																		
1/28/1997																						0.9		
2/19/1997																						0.9		0.037
2/20/1997																						1.0		
3/11/1997																						0.9		0.037
3/13/1997	6.6	25	6.7	6.8	9.2	7.2	13.1	3.8							0.131	<0.002	<0.002	0.151	<0.005	0.027				
4/14/1997																						0.9		

Conventionals Data,1995-2005, collected at PLNTINFSP1 or PLNTINSIPH sample sites

Date	Alkalinity as CaCO3	Conductivity umhos/cm	pH s.u.	Temperature °C	Total Hardness mg/L as CaCO3	Ca Hardness mg/L as CaCO3	Dissolved Oxygen mg/L	Carbon Dioxide mg/L	Color c.u.	Cyanide mg/L	Fluoride mg/L	Chloride mg/L	Sulfate mg/L	TDS mg/L	Nitrate mg/L	Nitrite mg/L	OrthoPhosphate mg/L	TKN mg/L	Total Phosphate mg/L	Ammonia mg/L	Chlorohyll-a mg/m3	TOC mg/L	DOC	UV254
5/7/1997																						1.4		0.034
5/12/1997	10	26			11.0	7.8			<5	<0.004	0.02	1.0		14	0.103	<0.002								
5/21/1997															0.090	<0.002	<0.005	0.096	0.031	<0.004	2.3			
6/9/1997																						1.3		
7/15/1997	10		6.8	15.4	11.0	8.1														0.017		0.9		0.029
8/4/1997	10					7.5									0.027	<0.002	<0.005	0.120	<0.016	0.026				
8/12/1997	20		6.8	18.8	10.0	7.6														0.007		1.1		0.024
8/18/1997																					2.0			
8/28/1997																						1.0		0.030
9/16/1997	9		6.7	18	9.4	7.1														<0.004		1.0		0.029
10/14/1997	11		6.7	14.8	9.9	7.1														0.050		1.2		0.036
10/21/1997																					2.6			
11/12/1997	9.4		6.9	12.3		7.5														<0.004		1.3		0.040
12/30/1997	11.2				10.0	7.6														<0.004		1.2		0.039
1/13/1998	9.8				10.0	7.5														0.016		1.2		0.041
2/10/1998	10.2				10.0	7.7														0.007		0.9		0.040
3/5/1998															0.127	<0.002	<0.005	0.133	0.004	0.011		<1.5		
3/10/1998	10.2		6.9	8	11.0	8.1														<0.004		0.9		0.039
4/14/1998	10.2				11.0	8.3														0.007		0.9		0.035
5/12/1998	9.4				11.0	8.4														0.005		0.8		0.030
6/2/1998																								
6/16/1998	9.2				9.0	7.2														0.009		0.8		0.032
7/14/1998	10.4				10.0	7.7														0.006		0.8		0.029
8/11/1998	10				9.3	7.5														<0.004		0.8		0.029
9/10/1998															0.027	<0.002	<0.005	0.075	0.002	<0.004	1.0	<1.5		
9/15/1998	11.6				11.0	8.6														0.010		0.9		0.025
10.13/1998	12.2				11.0	8.5														0.007		0.9		0.023
10/21/1998															0.052	<0.002	<0.005	0.054	0.003	0.010	1.1	<1.5		
11/10/1998	13.2				12.0	8.8														0.019		0.9		0.027
12/15/1998	11.6				11.0	8.4														0.017				
12/16/1998																						0.9		0.035
12/14/1999															0.124	<0.002	<0.005	0.052	0.003	0.009	<0.3			
1/4/2000	7.8	25							<5	<0.005	0.09	1.8	3.2	47	0.128	<0.002	<0.005							
1/24/2000	10	23			10.0				7	<0.05	<0.2			38		<0.002	<0.005							
2/1/2000	8.2	26							<5	<0.1	0.03	0.9	<1.0	24	0.125	<0.002	<0.005							
3/1/2000															0.121	<0.002	<0.005	0.116	0.004	0.005	1.5			
3/7/2000	6.4	25							<1	<0.1	0.13	0.6	1.6	12	n/a	<0.002	<0.005							
3/27/2000	12	21			10.0				10	<0.05	<0.2	<20	<1.0	13	<0.50	<0.002	0.009							
4/4/2000	10	26							8	<0.1	0.05	0.7	1.8	26	0.117	<0.002	<0.005							
5/9/2000	10.2	26							<5	<0.1	0.04	0.8	2.1	36	0.111	<0.002	<0.005							
6/13/2000	10.4	26							<1	<0.1	0.03	0.7	1.6	22	0.087	<0.002	<0.005							
7/11/2000	8.4	24							7	<0.1	0.1	0.7	1.5	26	0.057	<0.002	<0.005							
8/15/2000	9.6	23							<1	<0.1	0.02	0.5	1.5	18	0.042	<0.002	<0.002							
9/5/2000	9	23							7	<0.1	0.09	0.5	1.3	10	0.036	<0.002	<0.002							
10/3/2000	9.8	24							5	<0.1	0.03	0.4	1.7	22	0.031	<0.002	<0.002							
10/4/2000																	<0.002				1.5			

Conventionals Data,1995-2005, collected at PLNTINFSP1 or PLNTINSIPH sample sites

Date	Alkalinity as CaCO3	Conductivity umhos/cm	pH s.u.	Temperature °C	Total Hardness mg/L as CaCO3	Ca Hardness mg/L as CaCO3	Dissolved Oxygen mg/L	Carbon Dioxide mg/L	Color c.u.	Cyanide mg/L	Fluoride mg/L	Chloride mg/L	Sulfate mg/L	TDS mg/L	Nitrate mg/L	Nitrite mg/L	OrthoPhosphate mg/L	TKN mg/L	Total Phosphate mg/L	Ammonia mg/L	Chlorohyll-a mg/m^3	TOC mg/L	DOC	UV254
11/7/2000	11.2	25				7.4			10	<0.1	0.02	0.4	1.7	<10	0.066	<0.002	0.003							
12/6/2000	8.4	25							13	<0.04	0.04	0.6	2.0	14	0.122	<0.002	<0.002							
1/9/2001										<0.05														
2/13/2001	12.4																							
3/13/2001	12.4	28				8.5			7.0		0.05	0.6	2.1	20	0.137	<0.002	<0.002							
4/4/2001																								
5/22/2001										<0.04														
6/12/2001	13	28				8.5			10.0	<0.04	0.09	1.1	1.8	14	0.117	<0.002	<0.002							
7/10/2001	10.2	28				8.2			10.0	<0.05	<0.02	0.6	2.0	26	0.093	<0.002	<0.002							
8/15/2001	9.6	26				8.4			7.0	<0.05	0.11	0.6	2.0	22	0.056	<0.002	<0.002							
9/20/2001	11.6	nr				8.3			NR	<0.05	0.07	0.6	2.0	nr	0.050	<0.002	<0.002							
10/10/2001	10	27				8.5			5.0	<0.04	<0.02	0.6	2.0	32	0.041	<0.002	<0.002							
11/27/2001	8	27				8.4			10.0	<0.04	0.02	1.0	2.0	32	0.108	<0.002	<0.002							
12/17/2001	10	27				8.2			5.0	<0.05	<0.02	1.0	2.0	14	0.130	<0.002	<0.002							
1/23/2002	10.2	26				7.5			<5	<0.05	<0.02	0.8	2.0	30	0.131	<0.002	<0.002							
2/6/2002	9	27				7.8			5.0	<0.05	<0.02	0.8	2.0	38	0.134	<0.002	<0.002							
3/6/2002	12	26				8			5.0	<0.04	0.04	1.0	2.0	22	0.128	<0.002	<0.002							
4/4/2002	8.8	25				7.7			5.0	<0.04	0.098	1.1	2.0	18	0.111	<0.002	<0.002							
5/16/2002	16	26				7.8			<5	<0.04	<0.02	1.0	2.0	18	0.107	<0.002	<0.002							
6/5/2002	9.4	26				7.8			<5	<0.04	<0.02	0.8	2.0	12	0.088	<0.002	<0.002							
7/15/2002	11.2	25				7.4			<5	<0.04	<0.02	0.8	2.0	24	0.037	<0.002	<0.002							
8/28/2002	10.6	23				6.9			<5	<0.04	<0.02	0.6	2.0	20	0.027	<0.002	<0.002							
9/25/2002																								
10/30/2002	16	25				7.4			<5	<0.04	0.07	1.1	2.0	14	0.020	<0.002	<0.001							
11/18/2002	10	26				7.9			5.0	<0.04	0.1	0.8	2.0	<10	0.050	<0.002	<0.001							
12/30/2002	13.6	26				8.1			<5	<0.04	<0.02	0.7		22	0.096	<0.002	<0.001							
1/22/2003	10.8	26				7.6			<5	<0.04	0.063	0.9	2.0	26	0.116	<0.002	<0.001							
2/5/2003	11.2	26				7.5			5.0	<0.04	<0.02	1.1	2.0	22	0.104	<0.002	<0.001							
2/6/2003																						7.9		
3/20/2003	10.6	26				7.8			5.0	<0.04	<0.02	1.0	2.0	24	0.107	<0.002	<0.001							
3/31/2003																	<0.001					1.1	0.82	
4/9/2003	10.2	26				7.6			<5	<0.04	0.025	1.2	2.0	26	0.107	<0.002	<0.001							
4/28/2003																						0.9	<0.7	
5/5/2003	10.4	26				7.5			5.0	<0.04	<0.02	0.9	2.0	12	0.099	<0.002	<0.001							
7/16/2003	10	25				7.3			<5	<0.04	0.03	1.0	2.0	20	0.055	<0.002	<0.001							
8/25/2003									<5															
9/30/2003	15	27				8			<5	<0.04	<0.02	0.9	2.0	<10	0.019	<0.002	<0.001							
10/29/2003	14.8	27				8.3			<5	<0.04	<0.02	0.8	2.0	26	0.033	<0.002	<0.001							
11/13/2003	10.8	23				8.3			<5	<0.04	<0.02	0.8	2.0	14	0.054	<0.002	<0.001							
11/17/2003																						1.2	1.31	
12/3/2003	10.8	27				9			<5	<0.04	<0.02	0.8	2.0	<10	0.079	<0.002	<0.001							
1/27/2004	10.4	27				8.1			5	<0.04	<0.02	0.8	2.0	20	0.114	<0.002	0.002							
2/24/2004	7.2	28				8.2			<5	<0.04	<0.02	0.7	2.0	18	0.112	<0.002	<0.001							
2/26/2004																						0.97	1.08	
3/9/2004	11.6	28				8.2			<5	<0.04	0.05	0.8	2.0	24	0.116	<0.002	<0.001							
5/7/2004	8.8		6.4	12.4								0.9	2.0	14										

Conventionals Data,1995-2005, collected at PLNTINFSP1 or PLNTINSIPH sample sites

Date	Alkalinity as CaCO3	Conductivity umhos/cm	pH s.u.	Temperature °C	Total Hardness mg/L as CaCO3	Ca Hardness mg/L as CaCO3	Dissolved Oxygen mg/L	Carbon Dioxide mg/L	Color c.u.	Cyanide mg/L	Fluoride mg/L	Chloride mg/L	Sulfate mg/L	TDS mg/L	Nitrate mg/L	Nitrite mg/L	OrthoPhosphate mg/L	TKN mg/L	Total Phosphate mg/L	Ammonia mg/L	Chlorohyll-a mg/m³	TOC mg/L	DOC	UV254
5/16/2004																						0.65		
5/19/2004																						0.73		
5/24/2004	8.8		6.3	12								0.4	2.0	16										
6/23/2004	10.8	26				7.8			<5	<0.04		0.8	2.0	14	0.064	<0.002	<0.001							
7/20/2004																						0.85	0.78	
8/31/2004	8.1		6.3	18.4								0.7	2.0	20										
9/14/2004	7.6		6.2	17.2								0.6	2.0	14										
10/26/2004	7.9	27				8			<5	<0.04		0.9	2.0	28	0.052	<0.002	<0.001					0.92	0.91	
11/17/2004																						0.96	0.89	0.037
12/14/2004																								0.045
12/24/2004																						1.07	0.91	
1/18/2005																						0.81	0.87	0.050
2/8/2005																						0.88	0.79	0.046
2/16/2005	11.6					7.9			<5	<0.04		1.1	2.0	24	0.123	<0.002	<0.001							
3/9/2005																						0.82	0.80	0.047
4/12/2005	9	25	6.5	10.2	10.5	7.7	10.4								0.104	<0.002	<0.001	<.070	0.004	0.012		1.0	1.1	0.044
5/3/2005	8.2	27	6.4	11.9	11	8.1	10.9								0.100	<0.002	<0.001	0.074	0.004	<0.004				
5/11/2005	10.6	26	7.2						<5	<0.04		1.6	2.0	<10	0.095		<0.001					1.1	0.98	0.040
6/21/2005	8.4	30	6.5	15.6	10.2	7.7	10.1								0.084	<0.002	0.0015	0.089	0.003	<0.004		1.0	0.77	0.034
6/28/2005			6.6	13.5																				
7/6/2005	14.2				9.8																			
7/12/2005	9.2	23	6.5	16.4	10.6	7.9	9.7								0.059	<0.002	<0.001	<.070	0.003	<0.004	<1.0	1.0	0.86	0.032
8/2/2005	9.7	26	7.2		10.6				<5	<0.04	0.12	0.6	2.0	24	0.048	<0.002	<0.001							
8/23/2005																						0.96	1.0	0.031
8/24/2005	8.6	26	6.5	18.8	11.1	8.5									0.034	<0.002	<0.001	<.070	0.004	0.005	<1.0			
9/6/2005	13.4																							
9/13/2005					11.4																			
9/21/2005	9.8	27	6.4	18	11.4	8.7	8.1								0.020	<0.002	<0.001	0.07	0.004	<0.004	1.6			
9/28/2005																						1.1	0.93	0.031
10/4/2005	11.3				11.6																			
10/11/2005																						1.1	1.3	0.031
10/12/2005	8.8	31	6.4	16.4	11.6	8.8	8.3								0.040	<0.002	0.001	0.074	0.004	<0.004				
11/1/2005	11.2																							
11/7/2005	10.2		6.4	12.1																<0.004		1.6	1.8	0.042
11/22/2005	10.2	30	7.0		11.8	8.9			<5	<0.04	0.07	1.0	1.9	18	0.130	<0.002	<0.001							
11/30/2005	10.8	30	6.3	9.9	12.3	9.3	9.7								0.137	<0.002	<0.001	0.082	0.004	<0.004	<1.0			
12/6/2005	9				12.4																			
12/13/2005	10	29	6.3	8.8	11.9	9	10.2								0.139	<0.002	<0.001	0.078	0.004	<0.004	<1.0	1.2	1.1	0.041
Min (95-99)	6.6	24.0	6.5	6.0	5.8	6.8	9.3	3.8	<5	<0.004	0.02	1.0	n/a	14	0.027	<0.002	0.002	0.052	0.002	<0.003	0.7	0.8	n/a	0.023
Max(95-99)	20.0	28.0	7.1	18.8	12.0	8.8	13.1	4.4	10.0	<0.004	0.04	1.2	n/a	26	0.136	0.006	0.004	0.151	0.031	0.050	7.4	2.5	n/a	0.390
Avg(95-99)	10.5	25.5	6.7	12.8	10.1	7.8	10.9	4.0	10.0	<0.004	0.03	1.1	n/a	20	0.086	0.006	0.003	0.090	0.009	0.014	1.9	1.2	n/a	0.044
Min(00-05)	6.4	21.0	6.2	8.8	9.8	6.9	8.1	n/a	<5	<0.005	0.02	0.4	1.3	10	0.019	<0.002	0.001	<0.070	0.003	<0.004	<1.0	0.7	0.7	0.031
Max(00-05)	16.0	31.0	7.2	18.8	12.4	9.3	10.9	n/a	13	<0.1	0.13	1.8	3.2	47	0.139	<0.002	0.009	0.116	0.004	0.012	1.6	7.9	1.8	0.050
Avg(00-05)	10.4	26.1	6.4	14.1	11.1	8.1	9.7	n/a	7	-	0.06	0.8	2.0	22	0.086	<0.002	0.003	0.083	0.004	0.007	1.5	1.3	1.0	0.039

Conventionals Data,1995-2005, collected at PUDRTNSP15 sample site

Date	Alkalinity mg/L as CaCO3	Conductivity umhos/cm	pH s.u.	Temperature °C	Total Hardness mg/L as CaCO3	Ca Hardness mg/L as CaCO3	Dissolved Oxygen mg/L	Carbon Dioxide mg/L	Color c.u.	Cyanide ug/L	Fluoride mg/L	Chloride mg/L	Sulfate mg/L	TDS mg/L	Nitrate mg/L	Nitrite mg/L	OrthoPhosphate mg/L	TKN mg/L	Total Phosphate mg/L	Ammonia mg/L	Chlorophyll-a	TOC mg/L	DOC	UV254
2/22/1995	11.4	20			7.4	6.4	12.4	3.6							0.104	<0.002	0.003	0.125	0.025	<.006	<0.03	1.7		
6/14/1995	13.4	21			8.4	6.4	9.9	4							0.064	<0.002	0.004	0.006	<0.005	0.006	1.0			
8/16/1995															0.054	<0.002	0.002	0.103	<0.005	0.024	0.51			
10/18/1995															0.122	<0.002	0.002	0.089	0.013	0.018	0.26			
1/25/1996																						1.9		
2/12/1996																						1.9		
3/7/1996	5.6	21	6.9	5.0	5.4	5.8	11.4	4.0							0.079	<0.002	0.004	0.162	0.013	0.089				
3/19/1996																						<1.5		
4/23/1996																						<1.5		
5/7/1996																						1.8		
6/17/1996	6.9	20	6.8	11	8.0	6.6		3.8							0.051	<0.002	0.002	0.054	<0.005	0.007				
6/18/1996																						<1.5		
7/30/1996																						2.6		
7/30/1996																						0.7		
8/7/1996																						1.2		
8/8/1996	6.5	22	6.7	14.0	8.2	6.6	9.6	4.6																
9/18/1996																						1.0		
10/29/1996																						1.8		
11/13/1996	6.6	24	6.6	9.7	8.8		9.6	4.6							0.090	<0.002	0.003	0.110	<0.005	<0.003				
11/19/1996																						1.2		
12/10/1996																						1.3		
1/28/1997																						0.9		
2/19/1997																						1.4		
2/20/1997																						0.9		
3/11/1997																						0.8		
3/11/1997																						1.5		
3/13/1997	5.9	22	6.6	4.9	7.2	6.6	13.2	3.0							0.117	<0.002	<0.002	0.145	0.009	0.019				
4/14/1997																						1.0		
5/7/1997																						0.9		
5/21/1997															0.074	<0.002	<0.005	0.086	0.044	<0.004				
6/9/1997																						0.8		
8/4/1997	8					7.7									0.047	<0.002	<0.005	0.092	<0.016	0.018				
8/28/1997																						1		
3/5/1998															0.118	<0.002	<0.005	0.069	0.009	0.014		<1.5		
6/2/1998															0.095	<0.002	<0.005	<0.050	0.003	<0.004				
9/10/1998															0.062	<0.002	<0.005	0.094	0.005	0.008		<1.5		
10/21/1998															0.115	<0.002	<0.005	0.093	0.009	0.018		<1.5		
12/14/1999															0.119	<0.002	<0.005	<0.050	0.006	<0.004				
3/1/2000															0.111		<0.005	0.094	0.004	<0.004	1.1			
10/4/2000																					1.1			
1/9/2001	9.6	27				8.3			7.0	<0.04	0.04	0.8	2	<10	0.120	<0.002	<0.002							

Conventionals Data,1995-2005, collected at PUDRTNSP15 sample site

Date	Alkalinity mg/L as CaCO3	Conductivity umhos/cm	pH s.u.	Temperature °C	Total Hardness mg/L as CaCO3	Ca Hardness mg/L as CaCO3	Dissolved Oxygen mg/L	Carbon Dioxide mg/L	Color c.u.	Cyanide ug/L	Fluoride mg/L	Chloride mg/L	Sulfate mg/L	TDS mg/L	Nitrate mg/L	Nitrite mg/L	OrthoPhosphate mg/L	TKN mg/L	Total Phosphate mg/L	Ammonia mg/L	Chlorophyll-a	TOC mg/L	DOC	UV254
2/13/2001	10.4	28.2				8.5			6.0	<0.04	0.07	0.8	1.8	24	0.127	<0.002	<0.002							
4/4/2001	10.2	27.8				8.2			7.0	<0.04	0.04	0.8	2	16	0.137	<0.002	<0.002							
5/22/2001	10.8	28.1				8.5			8.0	<0.04	0.04	0.9	1.9	14	0.130	<0.002	<0.002							
10/10/2001	9.8	27				8.6			7.0	<0.04	<0.02	0.6	2	32	0.046	<0.002	<0.002							
11/27/2001	9.6	23.2				7.2			13.0	<0.04	0.04	1.2	2	38	0.130	<0.002	<0.002							
12/17/2001	9.2	23.8				7.4			10.0	<0.05	<0.02	1.0	2	16	0.139	<0.002	<0.002							
1/23/2002	7.2	20.7				6.4			5.0	<0.05	1.0	0.8	1	28	0.116	<0.002	<0.002							
2/6/2002	6.4	20.8				6.3			10.0	<0.05	<0.020	0.7	1	28	0.114	<0.002	<0.002							
3/6/2002	8	20.1				6.5			5.0	<0.04	0.17	0.8	2	18	0.116	<0.002	<0.002							
4/4/2002	8	21.9				6.9			5.0	<0.04	0.04	0.8	2	14	0.109	<0.002	<0.002							
5/16/2002	8	21.3				6.6			<5.0	<0.04	<0.02	1.0	2	12	0.091	<0.002	<0.002							
6/5/2002	7.6	21				6.6			<5.0	<0.04	<0.02	1.1	2	14	0.076	<0.002	<0.002							
7/15/2002	7.2	18.7				5.7			<5.0	<0.04	<0.02	0.6	1	20	0.051	<0.002	<0.002							
8/28/2002	8.4	19.7				6.3			<5.0	<0.04	<0.02	0.6	1	16	0.046	<0.002	<0.002							
9/25/2002	9.6	21.6				7.1			<5.0	<0.04	<0.02	0.5	2	20	0.032	<0.002	<0.002							
10/30/2002	12.4	25				7.8			5.0	<0.04	0.09	0.7	2	20	0.021	<0.002	<0.001							
11/18/2002	8.8	24.6				7.7			5.0	<0.04	0.03	0.9	2	12	0.112	<0.002	<0.001							
12/30/2002	8	23.2				7.4			<5.0	<0.04	<0.02	0.7	2	22	0.130	<0.002	<0.001							
1/22/2003	9.6	23.5				7.0			5.0	<0.04	<0.02	1.0	2	24	0.137	<0.002	<0.001							
2/5/2003	7.6	57.7				6.3			5.0	<0.04	<0.02	0.7	2	16	0.104	<0.002	<0.001							
3/20/2003	7.8	21.4				6.7			5.0	<0.04	<0.02	0.9	2	14	0.113	<0.002	<0.001							
4/9/2003	8.4	20.9				6.6			<5.0	<0.04	<0.02	0.9	2	12	0.108	<0.002	<0.001							
5/5/2003		21.2				6.7			5.0	<0.04	<0.02	0.7	1	12	0.082	<0.002	<0.001							
7/31/2003																						1.02	0.95	
8/25/2003	10.8	22.9				7.0			<5.0	<0.04	0.1	0.7	2	16	0.042	<0.002	<0.001							
8/29/2003																						0.71		
9/30/2003	11.4	26.3				8.1			<5.0	<0.04	<0.02	0.8	2	<10	0.041	<0.002	<0.001							
10/29/2003	7.6	21.5				7.5			10.0	<0.04	<0.02	0.8	2	38	0.138	<0.002	0.001							
11/13/2003	15.2	47.6				7.2			<5.0	<0.04	<0.02	0.7	2	14	0.129	<0.002	<0.001							
12/3/2003	9.2	21.6				7.4			10.0	<0.04	<0.02	0.7	2	<10	0.124	<0.002	0.002							
1/27/2004	9.2	23.2				8.1			5.0	<0.04	<0.02	1.0	2	18	0.123	<0.002	0.002							
2/24/2004	8.0	22.7				8.5			<5.0	<0.04	<0.02	0.5	2	16	0.107	<0.002	<0.001							
3/9/2004	9.4	23.4				7.2			<5.0	<0.04	0.04	0.6	2	28	0.110	<0.002	<0.001							
5/19/2004													2									0.65	0.58	
6/23/2004	7.8	22.5				6.8			<5.0	<0.04		0.7	2	16	0.079	<0.002	<0.001							
7/20/2004																						0.69	0.66	
10/26/2004	7.2	25.5				7.9			<5.0	<0.04		0.8	2	28	0.097	<0.002	<0.001						0.98	0.98	
11/17/2004																						1.05	1.12	0.049
12/14/2004																						0.99	0.97	0.073
1/18/2005																						0.89	0.95	0.064
2/8/2005																						0.88	0.79	0.070

Conventionals Data,1995-2005, collected at PUDRTNSP15 sample site

Date	Alkalinity mg/L as CaCO3	Conductivity umhos/cm	pH s.u.	Temperature °C	Total Hardness mg/L as CaCO3	Ca Hardness mg/L as CaCO3	Dissolved Oxygen mg/L	Carbon Dioxide mg/L	Color c.u.	Cyanide ug/L	Fluoride mg/L	Chloride mg/L	Sulfate mg/L	TDS mg/L	Nitrate mg/L	Nitrite mg/L	OrthoPhosphate mg/L	TKN mg/L	Total Phosphate mg/L	Ammonia mg/L	Chlorophyll-a	TOC mg/L	DOC	UV254
2/16/2005	7.2	22.3				6.4			<5.0	<0.04		0.7	2	24	0.118	<0.002	0.002							
3/9/2005																						0.91	0.87	0.063
4/12/2005	7.2	22	6.4		9.4	7.0	10.7									<0.002	<0.001	<0.070	0.007	<0.004		1.2	0.95	0.054
5/3/2005	7.6	23	6.3		10.0	7.6	11.1								0.106	<0.002	<0.001	0.071	0.005	<0.004				
5/11/2005	9.3	23.2	6.9						<5.0	<0.04	0.06	0.7	2	12	0.110	<0.002	<0.001					0.92	0.88	0.044
6/21/2005	8.2	24.5	6.4		8.8	7.0	10.1								0.086	<0.002	0.002	0.242	0.002	<0.004		1.3	0.91	0.038
7/12/2005	7.6	23	6.4		9.5	7.5	9.8								0.072	<0.002	<0.001	<0.070	0.003	<0.004	<1.0	1.1	0.79	0.038
8/2/2005	7.0	24.9	6.8		9.8				<5.0	<0.04	0.09	0.6	1.9	22	0.080	<0.002	<0.001							
8/23/2005																						0.94	0.87	0.038
8/24/2005	6.0	25.6	6.3		10.8	8.4									0.061	<0.002	<0.001	<0.070	0.004	0.005	<1.0			
9/13/2005					11.0																			
9/21/2005	10.1	25	6.2		11.5	8.9	8.0								0.050	<0.002	0.001	0.075	0.005	<0.004	<1.0			
9/28/2005																						0.94	1.1	0.037
10/11/2005																						1.5	1.3	0.056
10/12/2005	8.8	24	6.4		11.5	8.8	7.9								0.134	<0.002	0.001	0.082	0.008	0.006				
11/7/2005																						1.3	1.3	0.053
11/22/2005	7.5	26.3	6.8		10.6	8.1			<5.0	<0.04	0.05	0.9	2.2	16	0.162	<0.002	<0.001							
11/30/2005	9.4	25	6.3		11.1	8.6	10.6								0.159	<0.002	<0.001	0.096	0.006	<0.004	<1.0			
12/6/2005					11.1																			
12/13/2005	7.8	26	6.2		10.7	8.3	10.4								0.152	<0.002	<0.001	0.071	0.004	<0.004	<0.3	1.0	1.2	0.048
Min (95-99)	5.6	20	6.6	4.9	5.4	5.8	9.6	3	n/a	n/a	n/a	n/a	n/a	n/a	0.047	<0.002	0.002	0.006	0.003	0.006	<0.03	0.7	n/a	n/a
Max(95-99)	13.4	24	6.9	14	8.8	7.7	13	4.6	n/a	n/a	n/a	n/a	n/a	n/a	0.122	<0.002	0.004	0.162	0.044	0.089	1	2.6	n/a	n/a
Avg(95-99)	8.0	21	6.7	8.9	7.6	6.6	11	3.9	n/a	n/a	n/a	n/a	n/a	n/a	0.087	<0.002	0.003	0.094	0.014	0.022	0.59	1.32	n/a	n/a
Min(00-05)	6.0	19	6.2	n/a	8.8	5.7	7.9	n/a	5	<0.04	0.03	0.5	1	12	0.021	<0.002	0.001	0.071	0.002	0.005	<1.0	0.65	0.58	0.037
Max(00-05)	15.2	58	6.9	n/a	11.5	8.9	11	n/a	13	<0.05	1	1.2	2.2	38	0.162	<0.002	0.002	0.242	0.008	0.006	1.1	<1.5	1.3	0.073
Avg(00-05)	8.7	25	6.5	n/a	10.4	7.4	9.8	n/a	6.9	<0.04	0.13	0.8	1.9	19.7	0.102	<0.002	0.002	0.104	0.005	0.006	1.1	1	0.95	0.052