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II. FISCAL IMPACT ANALYSIS

A. Five Year Summary of Fiscal Impact:

Fiscal Years	2007	2008	2009	2010	2011
Capital Expenditures	<u>\$450,000.00</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
External Revenues		<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Program Income (County)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
In-Kind Match County	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
NET FISCAL IMPACT	<u>\$450,000.00</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
# ADDITIONAL FTE POSITIONS (Cumulative)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

Budget Account No.: Fund _____ Agency _____ Org. _____ Rev Source _____

Is Item Included in Current Budget?

No, therefore budget amendments are being requested.

Reporting Category N/A

B. Recommended Sources of Funds/Summary of Fiscal Impact:

One-time capital expenditure from user fees and balance brought forward.

C. Department Fiscal Review: Debra M West

III. REVIEW COMMENTS

A. OFMB Fiscal and/or Contract Development and Control Comments:

Elizabeth Blase 11/17/06
OFMB
Control
11/17/06 PM 11:20

Jan J. Jowett 11/20/06
Contract and Development
Done 11/17/06

This Contract complies with our contract review requirements.

B. Legal Sufficiency:

Assistant County Attorney

At the time of CDC's review, the contract documents were not expected.

C. Other Department Review:

Department Director

This summary is not to be used as a basis for payment.

Background and justification continued from Page 1: Concurrently, the SFWMD is now developing rules to restrict the allocation of surface and shallow groundwater withdrawals from the Central and Southern Florida Project to ensure water availability for Everglades's restoration under CERP or Acceler8. This new rule will administratively legislate what heretofore has been District policy to encourage water supply development from alternative sources.

Water supply planning requires the integration of numerous system drivers including biophysical (hydrologic and ecologic constraints), financial (economic and risk constraints), and operational (regulatory and capital improvement constraints). Existing water supply planning tools tend to focus on hydrologic or economic prediction and are limited in their potential to incorporate the full suite of challenges facing PBCWUD. In addition, models that attempt to achieve integration across system drivers tend to be very complex and are not user friendly when predicting the impact of needed and costly water utility improvements. The visual nature of the proposed collaborative tool anticipates ease of use, integration of diverse subsystems (surface water, groundwater, wetlands, etc.), and provision of risk analysis, making this a potentially powerful tool for resource planning, prioritization of capital improvements, visioning and consensus building with key stakeholders groups.

PBCWUD currently has the lowest residential water and wastewater service rates in the County and is committed to supplying a superior quality of water to its customers at the lowest possible cost, in keeping with bond covenants necessary to maintain its "AAA" rating status. Minimizing the cost associated with implementing a long-term alternative water supply over the next twenty years is an important consideration to keeping the County's rates as low as possible and this tool will help guide us to maintain affordable rates for our customers in Palm Beach County as we transition to Alternative Water Supply sources as mandated by the South Florida Water Management District.

CO-FUNDING AGREEMENT

between

Awwa Research Foundation
6666 West Quincy Avenue
Denver, CO 80235

and

Palm Beach County
PO Box 24740
West Palm Beach, FL 33416

for

Project 04074

This Agreement is entered into between the Awwa Research Foundation ("Foundation" or "AwwaRF"), a Delaware nonprofit corporation whose principal place of business is located at 6666 W. Quincy Avenue, Denver, Colorado 80235 and Palm Beach County ("County"), whose principal place of business is PO Box 24740, West Palm Beach, Florida 33416 in furtherance of their common interest to support research on behalf of the drinking water community.

Article 1: Responsibilities

- 1.1 AwwaRF, on behalf of the parties, has entered into Project Funding Agreement 04074 with PBS&J to conduct a collaboration project entitled "Refined Regional Data Decisions (R2D2) Support System." The agreement with PBS&J, the Participant, defines the roles and responsibilities of the parties in accomplishing the tasks of the collaboration project described in the Abstract in the attached Exhibit 1, which by this reference is made an integral part of this Agreement. In addition, the Project Funding Agreement 04074 describing responsibilities of the Principal Investigator Kathleen O'Neil is in the attached Exhibit 2 and is made an integral part of this Agreement. Communications regarding contract matters shall be through Peggy Falor at the Foundation, phone: (303) 734-3424, email: pfalor@awwarf.org and Bevin Beaudet, Palm Beach County at 8100 Forest Hill Blvd., West Palm Beach, Florida 33416, Phone: (516) 493-6001, email: bbeaudet@pbewater.com.
- 1.2 County shall provide co-funding for the Work in accordance with the provisions of 2.1 below.

Article 2: Co-funding/Payment

- 2.1 County agrees to pay AwwaRF an amount not to exceed \$450,000 in United States currency for costs associated with the collaboration project on or before the execution of this document. AwwaRF will invoice by communicating with Debra West of your accounting department at phone: (516) 493-6041.
- 2.2 AwwaRF will be solely responsible for payment of the Foundation's and the co-funding organization's funds to the Participant, upon receipt and approval of the Reimbursement Requests.
- 2.3 Payment(s) to AwwaRF should be made by check and sent to :
Accounting, Awwa Research Foundation, 6666 West Quincy Avenue, Denver, CO 80235

Article 3: Project Management/Reports

- 3.1 The Work will be conducted under AwwaRF's direction in coordination with a Project Advisory Committee (PAC) defined as expert volunteers selected by AwwaRF to provide technical review, assistance and/or expertise to AwwaRF regarding the Project.

- 3.2 Copies of all reports, including Periodic Reports, Draft Report, and the Final Report shall be furnished to AwwaRF and to County by the Participant.

Article 4: Intellectual Property Rights

- 4.1 Parties intend that the Foundation shall own all U.S. and world-wide copyright in the Scope of Work, all Periodic Reports, the Final Report, the Project Profile, all drafts of these works and reports, and all computer software developed as a deliverable for this Project as defined in the Project Funding Agreement. Such property is hereafter referred to as "Foundation's Intellectual Property." None of the Foundation's Intellectual Property shall be distributed by the County without the prior written approval of the Foundation.
- 4.2 The Foundation grants Palm Beach County use of an undivided equal share of Jointly Owned Intellectual Property Rights as defined in the Project Funding Agreement 04074.

Article 5: Intent to Publish

- 5.1 County understands that the purpose of the Project Funding Agreement 04074 is to further scientific and technological knowledge in the area of research covered by this Project. It is likely that data concerning County will result from the Project and may be published in the Final Report. County will have the right to review the Project's use and conclusions concerning that organization's data and/or test results and provide the Participant with the reasonable opportunity to correct, or if correction will take an unreasonably long time, to respond to, any problems or difficulties uncovered by the data, information, or test results, all of which must occur prior to the publication or use of such information as outlined in the Project Funding Agreement 04074.

Article 6: Indemnification

- 6.1 A copy of the indemnification provisions is found in the attached Exhibit 2. If the Participant shall be unwilling to agree to such indemnity provisions, due to such circumstances as state law or self insurance AwwaRF agrees to so inform the co-funder promptly and to advise the co-funder of the provisions that the Participant is willing to accept.
- 6.2 AwwaRF shall defend, indemnify and hold harmless the co-funder, its officers, directors, employees, agents and representatives, from and against any claim, suit or proceeding brought against the co-funder based on a claim that involves any intellectual property rights in existence as of this Agreement's execution date.

Article 7: Insurance

- 7.1 The Foundation shall require the Participant to provide the insurance coverage as set forth in the Project Funding Agreement 04074. Upon the co-funder's request, the

Foundation shall provide the co-funder with certificates of insurance evidencing the Participant's coverage.

Article 8: Time Frame

8.1 This Agreement shall commence on the Project Start Date and shall end on the Project End Date of the Project Funding Agreement 04074 between PBS&J and the Foundation.

Article 9: Miscellaneous

9.1 This Agreement represents the entire agreement of the parties and there are no promises or understandings other than those stated herein.

9.2 None of the provisions, terms and conditions contained in this Agreement may be added to, modified, superseded or otherwise altered, except by written instrument executed by the parties hereto.

9.3 This Agreement shall be construed and interpreted in accordance with the laws of the State of Florida.

9.4 Any notice given pursuant to the terms of this Agreement shall be in writing and sent to:

For Palm Beach County: Thomas Miller, Project Manager, at PO Box 24740, West Palm Beach, Florida 33416, phone: (561) 740-4600 , email: THMiller@pbcwater.com.

For AwwaRF: Roy Martinez, Project Manager, at 6666 West Quincy Avenue, Denver, Colorado, 80235, phone: (303)347-6125, email: rmartinez@awwarf.org.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed by their duly authorized representatives, effective as of the date of last signature below.

Awwa Research Foundation

Palm Beach County

By: Robert C. Renner, P.E.
Title: Executive Director

By: _____
Title: _____

Date: _____

Date: _____

IN WITNESS WHEREOF, the parties hereto have made and executed this Agreement on the date first above written.

ATTEST:

BY ITS

SHARON R. BOCK, CLERK AND
COMPTROLLER

PALM BEACH COUNTY, FLORIDA

BOARD

OF

COUNTY

By: _____
Deputy Clerk

By: _____
ADDIE L. GREENE, CHAIRPERSON

APPROVED AS TO FORM
AND LEGAL SUFFICIENCY

By: 
COUNTY Attorney

APPROVED AS TO TERMS AND
CONDITIONS

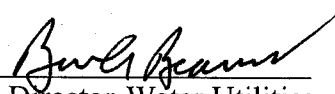
By: 
Director-Water Utilities

Exhibit 1 Abstract

ABSTRACT - Dynamic Decision Support System (D²S² - the Dynamic DSS)

Worldwide utilities and water managers are faced with the dilemma of potentially investing millions, or even billions, in capital improvements for developing alternative water supplies, often without a framework to evaluate the efficiency, sustainability, and potential regulatory compliance of these large-scale investments.

This project proposes research and development of a Dynamic Decision Support System (D²S²) for water utilities and resource managers. While aware of cumulative and unanticipated effects, water managers often do not have the tools at hand to perform scenario testing and rapid 'What-if' analysis. It is difficult to integrate the diverse variables that drive water management decisions (i.e., demand changes, costs, alternative supply sources, regulatory and resource constraints, and water budget components) without a dynamic model.

We propose an interactive, systems-based, decision support simulation tool that demonstrates possible outcomes and cumulative effects of water resource management and alternative water supply projects. Palm Beach County Water Utilities Department (PBCWUD) is the AwwaRF-member sponsor for the PBS&J and University of Florida (UF) research contractor team. The D²S² tool is intended to aid in sustainable resource planning; ideally, balancing between demands, supply, capital investment, and natural resource constraints. It is also a stakeholder mediation and consensus-building tool designed to allow rapid scenario testing, visual representations of outcomes, and a systematic and defensible manner of alternatives analysis.

This research proposes a unique combination of a dynamic decision support model with stakeholder involvement in multi-criteria decision analysis (MCDA). The work will use the following existing software as an initial platform: Stockholm Environment Institute's (SEI) Water Evaluation and Planning (WEAP) model, Watermark Numerical Computing PEST parameter estimation software, and Visual Decision© Visual Lab-2000 MCDA software. Portions of the WEAP model were developed by SEI under a previous AwwaRF grant; this proposed D²S² research extends the application of this model to a broader range of utilities, adds an alternative analysis dimension, and extends the alternative water supply options. In addition, parallel UF research may add natural resource valuation and cap and trade components.

Example analyses might include examining the trade-offs between investment in ASR, desalination, additional reservoirs, and deeper groundwater wells. Alternately, scenarios might display the effect of different policy options for re-use water discharge on resources, recharge, and costs. On a more regional basis, other examples might include an evaluation of the most efficient distribution of a dynamic source between utilities or the effect of recharge and conservation programs on supply over time.

The visual nature, ease of use, integration of diverse subsystems, and systematic alternatives analysis make this a potentially powerful tool for resource planning, prioritization of capital improvements, visioning, and consensus building. In summary, the goal is to simulate direct and cumulative effects of regional water management options. The approach will attempt to:

- Provide managers a tool that balances between detail, uncertainty ranges, and practical use;
- Engage stakeholders towards consensus-building and mediation; and
- Expand a framework for use in other regions.

Exhibit 2 Project Funding Agreement

DRAFT PROJECT FUNDING AGREEMENT 4074

<start date>

between

Awwa RESEARCH FOUNDATION
6666 West Quincy Avenue
Denver, CO 80235

and

PBS&J
482 S. Keller Road
Orlando, FL 32810

This Project Funding Agreement (hereafter the "Agreement") is effective as of ____ by and between Awwa Research Foundation (hereafter the "Foundation"), a Delaware non-profit corporation whose principal place of business is located at 6666 W. Quincy Avenue, Denver, Colorado 80235 and PBS&J (hereafter the "Participant"), whose principal place of business is located at 482 S. Keller Road, Orlando, Florida 32810.

* * *

The parties hereby agree to the following:

I. DEFINITIONS

For purposes of this Agreement, the terms and definitions detailed below, and throughout this Agreement shall control:

- A. The term "Collaborating Agencies" is defined as utilities or other organizations that provide cofunding, via the Foundation, for the project. These agencies shall not be considered Participants or Subcontractors.
- B. The term "Derivative Work" is defined as a work of authorship that is based on any pre-existing written report, study, test result or other work of authorship, and that modifies, transforms, or recasts that pre-existing work so as to alter it in any way.
- C. The term "Educational Purpose" is defined as any non-commercial and non-profit use of Intellectual Property including, but not limited to, a Foundation owned publication or report, as defined by Article I, Paragraph E below as a research tool and/or reference, or to inform the drinking water community, water utility personnel and the general public of the outcome of this Project.
- D. The "Foundation" is a non-profit corporation organized to sponsor practical applied research on behalf of the drinking water industry through planning, managing, and funding research and development regarding the subject of drinking water. It shall be defined to include all officers, directors, employees, volunteers, independent contractors (with the exception of the Participant), affiliates, agents, and related entities of the Awwa Research Foundation.
- E. The term "Intellectual Property" shall be defined as all inventions, innovations, creations, works, reports, figures, tables, processes, designs, methods, formulas, drawings, plans, technical data, specifications, logos, computer programs, computer chips and circuits, whether or not protectable through patent, copyright, trademark or mask work and whether produced in any medium now known or hereafter produced or developed.
- F. The "Participant" shall be defined as the named individual(s) and/or entity(ies) described in the introductory paragraph of this Agreement or the party(ies) entering into this Agreement with the Foundation. The singular form of Participant shall include all individuals and entities detailed herein. The Participant shall include all officers, directors, employees, affiliates, and agents of the Participant.

G. The "Principal Investigator" shall be defined as the Participant's employee, as specifically designated herein, with primary responsibility for ensuring that all terms and conditions of this Agreement are met and to who notice of insufficiencies shall be given by the Foundation.

H. The "Project" shall be defined as the work to be completed by the Participant and any Subcontractors pursuant to this Agreement and as described more specifically in the Project Proposal.

I. The "Project Advisory Committee" or "PAC" shall be defined as a group of volunteers gathered by the Foundation to provide technical review, assistance and/or expertise to the Foundation regarding the Project.

J. The "Project Manager" shall be defined as the Foundation's employee(s), as specifically designated herein, with responsibility for reviewing all actions taken by the Participant and as having authority to communicate all Foundation decisions concerning the process, procedure, scheduling requirements, funding requirements, and outcome of the Participant's Project.

K. A "Subcontractor" shall be defined as any individual or entity, with whom the Participant shall separately contract, to complete one or more specific tasks required by the Project.

II. AGREEMENT

1. **Project Proposal.** The "Project Proposal" shall be defined as the initial request by the Participant for funding and shall include all relevant correspondence and/or other written communications subsequent to that request but prior to the execution of this Agreement. The Participant shall perform research and prepare written reports concerning that research as detailed by the Project Proposal attached as Exhibit A to this Agreement.

2. **Scope of Work.** This document shall be prepared by the Participant as a Derivative Work of the Project Proposal. The Scope of Work shall be comprised of the Project Abstract, Project Description and Applications Potential sections of the Project Proposal, with revisions as necessary to reflect any changes negotiated prior to execution of this Agreement. The Scope of Work shall be provided by the Foundation to outside audiences for informational purposes; therefore, the Participant shall make a reasonable effort to exclude information from the Scope of Work that may be considered sensitive by organizations participating in the project. The Participant shall submit the Scope of Work to the Foundation electronically in Microsoft Word® format from a PC within thirty (30) days of the execution of this Agreement, as identified in Exhibit B to this Agreement. In the event any conflict exists between this Agreement and the Scope of Work, the terms of this Agreement shall control.

3. **Project Personnel.** The Principal Investigator shall be: Kathleen O'Neil located at PBS&J, 482 S. Keller Road, Orlando, Florida 32810, and Phone: (407) 647-4504 Fax: (407) 647-0624, Email: kmoneil@pbsj.com. No changes or substitutions for this position shall be made for any reason without the prior written approval of the Foundation including, but not limited to, sabbatical or other extended absences. Further, changes in any essential personnel (coinvestigators, subcontractors, etc.) identified in the Project Proposal, require prior written approval from the Foundation. The Project Manager shall be Roy Martinez located at Awwa

Research Foundation, 6666 W. Quincy Ave., Denver, CO 80235, Phone: (303) 347-6125, and Email: rmartinez@awwarf.org. However, the Foundation may change the Project Manager from time to time as deemed necessary by the Foundation without the Participant's approval. All technical communications by the Participant to the Foundation shall be conducted through the Principal Investigator and shall be directed to the Project Manager. Contractual matters should be directed to John Wodraska, Senior Vice President, located at PBS&J, 3230 Commerce Pl., Suite A., West Palm Beach, FL 33407, Phone: (561) 689-7275, Fax: (281) 363-4206, and Email: _____, and shall be directed to the Project Manager. Contractual matters for the Foundation shall be through Peggy Falor located at Awwa Research Foundation, 6666 W. Quincy Ave., Denver, CO 80235, Phone: (303) 734-3424, Fax: (303) 730-0851, and Email: pfalor@awwarf.org.

4. **Time of Performance.** All Project tasks, reports, and other obligations shall be completed by the Participant as detailed on Exhibit B to this Agreement and in accordance with the Timeliness Policy, unless amended by the mutual written agreement of the parties. The Timeliness Policy will be sent to the Participant upon signing of the final contract.

5. **Surveys.** Any and all questionnaires and/or survey instruments to be used in this Project must be submitted to the Foundation for review and approval prior to distribution.

6. **Periodic Reports.** Periodic Reports shall be submitted every three (3) months as defined by Exhibit B of this Agreement. The purpose of the Periodic Report is to allow the Foundation to evaluate, at their reasonable discretion, the Participant's progress and performance on the Project, and to provide a mechanism for ongoing review of technical findings by the Foundation and the Foundation's PAC. Periodic Reports shall include a Status Summary, Reimbursement Request, and Technical Summary as detailed in Article II, Paragraphs 6a, 6b, and 6c and shown in Exhibit H.

a. **Status Summary.** The Status Summary shall be submitted with every Periodic Report (every three months). The purpose of each Status Summary is to record the work completed and document the execution of the tasks and activities described in this Agreement in Exhibit A. The Status Summary shall describe the progress of the Project, document the tasks accomplished, and assess actual versus planned progress. It shall also detail any problems encountered by the Participant, provide supporting rationale for proposed changes to the scope of work or schedule, and provide a brief overview of the next period's work to be completed. Each Status Summary must be sufficiently detailed to allow the Foundation to monitor the Participant's progress and performance on the Project. A list of all presentations made or papers, reports, etc., submitted during the reporting period, including a copy of any such presentation, paper, manuscript, or report, as detailed in Article II, Paragraph 14.e, must be included in this section, including information on where and when presented or submitted.

b. **Reimbursement Request.** Reimbursement Requests shall be submitted no more frequently than every three months and in conjunction with a Periodic Report. Each Request shall be in the form detailed by Exhibit H to this Agreement. Any changes in budget line item(s) as described in Exhibit A of greater than ten percent (10%) of the total project award (Article II, Para. 12) must be approved in writing by the Foundation. Any

transfers of project funds of any amounts from direct to indirect costs or vice versa must be approved in writing. Any changes of budget line item(s) of any amounts that result in a change to the technical work outlined in the Project Proposal attached as Exhibit A must be approved in writing.

- (1) All expenses, whether for cash or in-kind services, must be detailed by these Requests.
- (2) The final Reimbursement Request submitted must reconcile all payments made, Project costs incurred, and all in-kind contributions as detailed in the Project Funding Agreement.
- (3) All Reimbursement Requests must be submitted on the letterhead of the Participant.

c. Technical Summary. The Technical Summary shall be submitted with every other Periodic Report (every six months). The purpose of the Technical Summary is to present methods and materials, results, analyses of data, significant findings, and discussion regarding the applicability of results to the drinking water community. It shall also address Foundation comments on the previous Technical Summary. Each Technical Summary must be sufficiently detailed to allow the Foundation to review the technical findings of the Project. Extensive data or supporting information should be reported as an appendix.

7. Draft/Final/Published Reports. The Final Report is the official report detailing the results of the Project. The report shall include all relevant materials and methodology, results, innovations, inventions, conclusions, and recommendations resulting from the Project. Further, the parties agree the target audience for these documents is the drinking water community. As a result, the report must include a clearly identified section explaining the practical benefits of the Project results to the drinking water community. The Participant shall submit a CD-ROM disc or Zip disk for each Draft Report and the Final Report contained on it in Microsoft Word® word processing format from a PC and with all figures, graphics and tables embedded in the text. Additional requirements for submission of the Draft and Final Report are as follows:

- a. Format.** The Foundation prefers that the content, form and format shall follow the Foundation's *Format-Style Guide for Preparing Research Reports*, as may be edited from time to time.
- b. Draft Report.** A Draft Report shall be submitted for review, in the format detailed by Article II, Paragraph 7.a. above, pursuant to the schedule detailed by Exhibit B. The Participant shall submit one (1) original (i.e., laser printer output) single-sided unbound report and six (6) copies of this draft, bound or on three-hole drilled paper. Additional drafts of this report may be required by the Foundation pursuant to Article II, Paragraph 9 below in order to address the Foundation's comments or questions.

c. Final Report. The Final Report shall be the acceptable revised Draft Report. The Participant shall submit one (1) original (i.e., laser printer output) Final Report and two (2) photocopies unbound and on undrilled paper, pursuant to the schedule detailed by Exhibit B, and with all explanations and/or revisions requested by the Foundation pursuant to Article II, Paragraph 9 of this Agreement. The Foundation strongly recommends the report be limited to four hundred (400) pages or less and requires that it be single spaced.

- (1) Additional form and/or style standards may be required and/or made by the Foundation.
- (2) The Participant shall respond to any PAC comments on the Draft Report within forty-five (45) days.
- (3) The Participant shall respond to any formatting or editorial questions posed by the Foundation within fourteen (14) days. The Participant shall also correct and/or change any camera-ready figures as required by the Foundation to conform to publishing formats as detailed by Article II, Paragraph 7.a.
- (4) The Foundation may forward the Final Report, as prepared for publication, to the Participant for review. In this event, the Participant shall use its best efforts to review the report in a timely manner as reasonably requested by the Foundation or its publisher.

d. Published Report. The Foundation reserves the right to determine which of several processes shall be used to publish the Final Report. If the Final Report is clearly organized and understandable, and has a neat and uniform appearance, then the quickest publishing process (the True-Camera Ready [TCR] process) shall be used. To improve chances that the TCR process might be selected for the Participant's Final Report, the Foundation encourages the Participant to use the Foundation's *Format-Style Guide for Preparing Research Reports*, as may be edited from time to time.

8. Project Profile. This Profile shall be provided to the Foundation in the format detailed by Exhibit E. The two (2) page Profile will be edited and formatted for inclusion in the Foundation's Project Profile Notebook. The parties agree that the target audience for this Project Profile is the drinking water community. As a result, the Profile must include a clearly identified section explaining the practical benefits of the Project results to water system operation.

9. Review of all Written Materials and Alterations. All drafts and final documents shall be reviewed by the Foundation. The Foundation shall have the right to require Participant to respond to the Foundation's (including the PAC's and cofunding organizations) technical review of written material either by providing explanations of technical information or by responding to reasonable requests for revisions to technical reports. The Foundation shall also have the right to require grammatical, stylistic or syntax revisions in any drafts of final documents submitted to the Foundation. Furthermore, the Participant agrees to respond to all technical and/or editorial comments made by the Foundation within the time periods detailed

on Exhibit B of this Agreement. In the event the Foundation requests that the Participant make alterations to any document detailed in Exhibit B, including, but not limited to, the Scope of Work, Periodic Reports, Draft Report, Final Report, or Project Profile, the Participant shall be required to submit another draft of the requested document, with the requested alterations, within six (6) weeks of any such request. Whether a new draft is required shall be determined at the sole reasonable discretion of the Foundation.

10. Accuracy of Testing. The Participant shall use its best efforts to ensure that all data and test results developed during the course of this Agreement and included, or relied upon, in the Final Report are accurate to the best of its knowledge, information and belief. Where applicable, environmental measurements must be made in accordance with recognized quality assurance protocols. In the event the Participant obtains any data, test result, information derived from such data or test results, or other information to be included in the Project from water utilities or any Subcontractor, the Participant will utilize reasonable and customary efforts to ensure the accuracy of the information obtained.

11. Participating Utility Review. The Participant shall, with each participating utility, (a) grant the participating utility the right to review the Project's use and conclusions concerning that organization's data and/or test results, and (b) provide the participating utility with the reasonable opportunity to correct, or if correction will take an unreasonably long time, to respond to any problems or difficulties uncovered by the data, information, or test results, all of which must occur prior to the publication or use of such information. This provision shall apply to each water utility participating in any manner with the Project, including, but not limited to, providing services, data, and materials for testing, test results, or documentation. The Participant shall be responsible for providing letters for each participating utility confirming that they have been made aware of the nature of the cooperative relationship and have reviewed all applicable data, information, or results as described in this Paragraph. Letters of confirmation, signed by a representative for the participating utility, must be received by the Foundation prior to submittal of the Final Report. If the Participant has made reasonable effort but is not able to obtain a Letter of Confirmation with the signature of a representative for the participating utility, the Principal Investigator may submit a signed letter stating that the participating utility was provided reasonable opportunity to correct or respond to any problems or difficulties as stated above.

12. Compensation. The total compensation to be paid by the Foundation to the participant for this project shall be \$550,000, including \$100,000 from the Research Foundation and \$450,000 from cofunding organizations, in United States currency. In no event shall compensation exceed this amount unless additional cofunders are added to the project. All disbursements shall be utilized solely for the purposes detailed by this Agreement. The utility cofunders have agreed to provide \$0.00 in in-kind services for the project. All disbursements to the Participant shall be mailed to the following address: J. Paul Oxe, Accountant, located at PBS&J 1800 Parkway Place, Suite 1200, Marietta, GA 30067, Phone: (770) 422-1902, Fax: (770) 426-5316, and Email: JPOxe@pbsj.com.

a. CoFunders include:		<u>Cash</u>	<u>Cash In-Kind</u>
RF		\$100,000	
Palm Beach County Utilities		<u>\$450,000</u>	
	Totals	\$550,000	

b. Advance. \$55,000 shall be paid to the Participant upon execution of this Agreement.

c. Payments. Payments are based on submission of the Interim or Periodic Reports or Status Reports detailing expenses incurred during the previous period and displayed according to the budget line items as included in Exhibit A. The Participant's request for payment must identify and display all cash and in-kind contributions committed to the Project during each period on the Foundation Reimbursement Request. No payment will be disbursed by the Foundation unless and until each Periodic Report is received and accepted as detailed by Article II, Paragraph 6.a.-c. above. The final request for payment must reconcile all payments made, Project costs incurred, and in-kind contributions.

- (1) The initial payment detailed by Article II, Paragraph 12.b. is to be carried over as an advance into each period and to be reconciled in the last period's request for payment.
- (2) The Foundation shall withhold twenty percent (20%) of the total compensation from disbursement to the Participant. One-half of this amount, or ten percent (10%), will be disbursed to the Participant upon receipt of the Draft Report. The other one-half or ten percent (10%) of the total compensation will be disbursed to the Participant after Participant responds to editor queries and provided all tasks are performed as detailed in this Agreement and termination is not caused by the Participant's breach of this Agreement.

d. Final Payments. Subsequent to response to editor queries but no later than within thirty (30) days of the Termination Date, as defined by Article II, Paragraph 16, provided termination is not caused by the Participant's breach of this Agreement which is not cured, the Foundation shall make all final payments required.

e. Payment of Subcontractors. Payment for services of any and all Subcontractors shall be the Participant's sole obligation and responsibility. The Participant hereby indemnifies the Foundation for any liability concerning such payment.

f. Allowable Expenses/Costs. The allowable expenses or costs of performing this Agreement will be determined in accordance with the terms herein and the principles set forth in the Federal Acquisition Regulation (FAR) at 48 CFR Subpart 31.3 governing expenses or costs incurred by for profit organizations, OMB Circular A-87 if a state, local government or Indian tribe, OMB Circular A-122 if a nonprofit organization or OMB Circular A-21 for a college or university. Cost incurred outside the duration of the grant are not cost reimbursable.

13. Accounting. The Participant and all Subcontractors shall maintain accurate accounting information and financial records regarding the Project according to Standards for Financial Management Systems set forth in Office of Management and Budget (OMB) Circular No. 2 CFR 215, Subpart C. 21 (1995) and the retention and access requirements for records set forth at 2 CFR 215, Subpart C. 53 (1995) if your organization is a nonprofit, a college or university or for profit. If your organization is a state, local government or an Indian tribe the OMB Circular A-102 applies. The Foundation and/or its agents shall have access to such records at any reasonable time during normal business hours.

14. Proprietary Rights to Intellectual Property. The Foundation's primary purpose in funding the Participant is to further scientific and technological knowledge in the area of research covered by this Project.

a. Foundation's Intellectual Property. Parties intend that the Foundation shall own all U.S. and world-wide copyright in the Scope of Work, all Periodic Reports, all Draft Reports, the Final Report, the Project Profile, all drafts of these works and reports, and all computer software developed as a deliverable for this Project. Such property is hereafter referred to as "Foundation's Intellectual Property." None of the Foundation's Intellectual Property shall be distributed by the Participant without the prior written approval of the Foundation. The Participant shall execute whatever documents are required in order to comply with this Paragraph, including, but not limited to, assignments as necessary for any world-wide copyright protection.

- (1) The Foundation hereby grants the Participant a royalty free, non-exclusive license to utilize the Foundation's Intellectual Property solely for Educational Purposes as defined in Article I, Paragraph C above.
- (2) Other than for Participant's use as specified in Article II, Paragraph 14.a.(1) above, any use, distribution, presentation, or publication of the Foundation's Intellectual Property may not occur without the prior written authorization of the Foundation. As the Foundation is highly interested in the distribution of the information developed through this agreement, reasonable requests to present portions of the Foundation's Intellectual Property will be seriously considered.

b. Participant's Intellectual Property. Except as otherwise detailed by Article II, Paragraph 14.a. above, all patentable inventions and improvements shall be considered Participant's Intellectual Property, including, but not limited to, the right to file for patent registration. If the Participant abandons its rights to any of Participant's Intellectual Property, Participant shall assign to the Foundation all of its right, title and interest in and to such Intellectual Property. Participant shall not withhold any findings based on Participant Intellectual Property, patentable or otherwise, from works and reports detailed in Article II, Paragraph 6 and 7 if such information is relevant to the project findings as detailed in Article II, Paragraph 7. If the Participant is using an existing patent owned by another party, the Participant must have written permission to use the patent on this project.

c. Jointly Owned Intellectual Property. For the purpose of allowing the Foundation, the Participant, and Collaborating Agencies to make use fully of all Intellectual Property which is not defined above as owned by the Foundation or the Participant solely, certain Intellectual Property shall be considered Jointly Owned Intellectual Property. The Foundation, the Participant, and Collaborating Agencies may utilize such property for any and all purposes throughout the world. Further, the Participant hereby grants to the Foundation's subscribers a nontransferable, nonterminable, and nonexclusive license, without royalty, to utilize Jointly Owned Intellectual Property. The Participant shall execute whatever documents are required in order to comply with this Paragraph, including, but not limited to, assignments as necessary for any world-wide copyright protection. Jointly Owned Intellectual Property is defined as:

(1) All Intellectual Property developed during the term of, and pursuant to, this Agreement which is not defined above as Foundation Intellectual Property or as Participant's Intellectual Property. Please note: the Foundation shall own only the copyright in those works, reports, and computer software detailed in Article II, Paragraph 14.a. above; information reported in these documents such as innovations, creations, processes, designs, methods, formulas, plans, technical data, and specifications shall be considered Jointly Owned Intellectual Property.

(2) The Project Proposal, excluding the statement of qualification and resumes.

d. Assignment. To assure the Foundation's ownership of the Intellectual Property above, the Participant hereby assigns all right, title, and interest in and to any and all of the documents detailed in Article II, Paragraph 14.a. above and an undivided equal share to the works detailed by Article II, Paragraph 14.c. above to the Foundation, including, but not limited to, the right to apply for registration of any copyright with the United States' Copyright Office or similar official repositories world-wide. The Participant agrees to execute whatever documents are required in order to comply with this Agreement. The execution should be at completion of Final Report as listed in Exhibit B.

e. Publication of Jointly Owned Intellectual Property. The Foundation encourages the Participant to publish Jointly Owned Intellectual Property based on this Project and to utilize Foundation's Intellectual Property for Educational Purposes as detailed in Article I, Paragraph C. Any publication of Foundation Intellectual Property must comply with the requirements of Article II, Paragraph 14.a.(1) and (2) above. The Participant agrees to comply with the following steps prior to such distribution, presentation, or publication:

(1) The Participant hereby agrees to provide to the Foundation copies of any such publication or presentation of Jointly Owned Intellectual Property at least three (3) weeks prior to submission of such publication or presentation.

(2) The Participant agrees and understands that it shall not dispose of or injure the Foundation's rights to Jointly Owned Intellectual Property or the Foundation's Intellectual Property, including, but not limited to, any computer software, by any

presentation or publication of such property and shall take all steps necessary to preserve such rights of the Foundation. This Paragraph shall not prevent the Participant, or the Foundation from transferring its undivided one-half share of the Jointly Owned Intellectual Property to a publication.

- (3) In the event the Participant publishes Jointly Owned Intellectual Property and is required by the publisher to assign its copyright ownership to the work, the Participant agrees to include the following or similar language on any copyright assignment: *The submitted manuscript [publication][presentation] has been made possible through funding from the Awwa Research Foundation and Cofunding Organizations. The information contained herein is based upon Intellectual Property which is jointly owned by PBS&J and the Foundation. The Foundation retains its right to publish or produce the Jointly Owned Intellectual Property in part or in its entirety.*

f. Student Thesis. In the event a college or graduate student is employed by Participant to work on the Project contemplated by this Agreement and that student completes a thesis, dissertation, or report relating to this Project, solely for Educational Purposes, the student shall own the copyright in that thesis or report. In the event a portion of Foundation Intellectual Property is included in that thesis or report, the Foundation hereby grants the student a nonexclusive license to utilize that Foundation Intellectual Property for the specific thesis or report. The student must obtain proper authorization from the U.S. government, where necessary, to utilize any Intellectual Property owned by the Federal government pursuant to OMB Circular A-102, 2 CFR 215, and 37 CFR 401 et seq.

g. Copyright Notice. Any Jointly Owned Intellectual Property, or Derivative Works thereof, utilized by the Participant or the Foundation shall include a United States' copyright notice of ownership as detailed below:

2005 [date of publication], Awwa Research Foundation and PBS&J
ALL RIGHTS RESERVED

h. Participant's Acknowledgment. Any public presentation or publication by the Participant, including a student writing a thesis, dissertation, or report, based on the parties' Jointly Owned Intellectual Property, Participant's Intellectual Property or any portion of the Foundation's Intellectual Property, shall include the following, or a similar, statement acknowledging the Foundation for providing financial and administrative support: *PBS&J gratefully acknowledges that the Awwa Research Foundation is the joint owner [owner] of the [certain] technical information upon which this publication [manuscript] [presentation] is based. PBS&J thanks the Foundation for its financial, technical, and administrative assistance in funding and managing the project through which this information was discovered.*

i. Disclaimer. All publications and presentations utilizing the Foundation's Intellectual Property or the Jointly Owned Intellectual Property shall include the following disclaimer: *The comments and views detailed herein may not necessarily reflect the views*

of the Awwa Research Foundation, its officers, directors, affiliates, Cofunding Organizations, or agents.

15. Originality. The Participant shall use its best efforts to warrant that it, and its Subcontractors, are the sole creator(s) and originator(s) of all the Foundation's Intellectual Property, Participant's Intellectual Property and Jointly Owned Intellectual Property as defined herein; none of those rights have been bargained, sold, or conveyed in any other manner to any person or entity except as detailed and permitted by this Agreement. Further, the Participant shall use its best efforts to ensure that no portion of this Project, including any portion completed by Subcontractors, infringes upon the Intellectual Property rights of any other person or entity or violates the common law or statutory right, title, or interest of any person or entity.

16. Termination. This Agreement, except for those provisions which, by their own terms, extend beyond the life of this Agreement, shall terminate upon the Foundation approving the Final Report and the completion of all scheduled events as detailed in Exhibit B. The Termination Date shall be the date upon which all scheduled events have occurred and no further work remains to be completed pursuant to this Agreement. This Agreement, however, may be terminated earlier if both parties agree the Project is no longer technically feasible or if Participant has failed to comply with the terms and conditions of this Agreement. If the Participant or any Subcontractor has any of the Foundation's and Cofunding Organizations funds remaining, such funds, excluding those committed for noncancellable obligations, shall be returned with the accounting. Further, the Foundation shall not be responsible for any expenditure made by the Participant or its Subcontractors after the Termination Date.

a. Breach/Below Standard Performance. If the Foundation reasonably determines that the Participant, or any Subcontractor, is not in compliance with its contractual obligations under this Agreement, the Foundation may so notify the Participant in writing at any time.

b. Failure to Cure. If the Participant fails to eliminate problems detailed by the Foundation, or fails to cure a breach of this Agreement, within thirty (30) days of the Foundation's notice, this Agreement shall terminate. The "Termination Date" shall be the date on which the thirtieth (30th) day falls.

17. Return of Property. In the event of early termination, the Participant shall provide, within thirty (30) days, to the Foundation legible copies of all Foundation Intellectual Property and Jointly Owned Intellectual Property. Further, Participant shall provide copies, and originals where the Participant has abandoned, or otherwise lost, its rights to patentable inventions or discoveries, as provided by 37 CFR 401 et. seq. Such information shall be provided in whatever medium is reasonably designated by the Foundation and shall be at Foundation's expense.

18. Indemnification. The responsibilities detailed by this Agreement in order to protect the parties' Intellectual Property rights shall continue throughout this Agreement and shall remain in effect after its termination. Further, in addition to the responsibilities detailed

elsewhere in this Agreement, each of the parties shall have the responsibilities detailed below:

a. Responsibilities of the Foundation. In the unlikely event of any liability, obligation, damage, loss, cost, claim, lawsuit, cause of action or demand whatsoever of any kind or nature arising from any actions taken by the Participant, or its Subcontractors, pursuant to this Agreement, the Foundation's responsibility shall be limited to providing the Participant with evidence of the existence of this Agreement and the amount of funds paid to the Participant. Notwithstanding this Paragraph, the Foundation shall be responsible for any and all proven damages caused by negligent or unintentional actions taken by its own officers, directors, employees or volunteers.

b. Responsibilities of the Participant. At all times, all obligations performed by the Participant or by any Subcontractors pursuant to this Agreement shall be performed in a manner consistent with professional standards governing such services. Further, the Participant shall be responsible for, and shall indemnify the Foundation, its officers, directors, affiliated organizations, employees, agents, volunteers, and publisher, from any and all liability, obligation, damage, loss, cost, claim, lawsuit, cause of action, or demand whatsoever of any kind or nature, including, but not limited to, attorneys fees and costs, arising from any actions taken or omissions by the Participant, its officers, directors, Subcontractors, employees, independent contractors, agents, or other related entities or individuals (i) arising from the Project or this Agreement in any manner, (ii) concerning use or misuse of Intellectual Property, or (iii) caused by the Participant's breach of this Agreement. Such indemnification shall be only in proportion and to the extent liability, obligation, damage, loss, cost claim, lawsuit, cause of action, or demand are caused by or result from the reckless, intentional, or negligent acts or omissions of the Participant, its officers, directors, Subcontractors, employees, independent contractors, agents or other related entities or individuals.

c. Insurance. The Participant shall, at its sole cost and expense, maintain a financially sound program of self-insurance or commercially purchased comprehensive general liability insurance covering unfair competition claims and all reckless, intentional and negligent actions or omissions of any and all of Participant's officers, directors, employees, agents, and independent contractors and/or Subcontractors in the amount of one million dollars (\$1,000,000.00). The Foundation shall be listed on any such insurance as a third-party insured. Proof of such insurance shall be presented to the Foundation pursuant to the schedule detailed by Exhibit B and clearly specify the project by number and title.

d. Worker's Compensation. The Participant shall, at its sole cost and expense, maintain Worker's Compensation Insurance which complies with the applicable state laws. Proof of such insurance shall be presented to the Foundation pursuant to the schedule detailed by Exhibit B. In the event Participant utilizes Subcontractors during the course of this Project, the Participant shall obtain proof that such Subcontractors maintain Worker's Compensation which proof shall be provided to the Foundation as well.

e. **Subcontractor Acceptance of Agreement.** Participant shall require any and all Subcontractors to comply with the applicable terms of this Agreement prior to working on the Project in any manner. The Participant shall execute a statement, as detailed by Exhibit F, ensuring that all Subcontractors have executed an agreement with the Participant regarding such compliance. Copies of all executed Exhibit H's shall be provided to the Foundation promptly upon Participant engaging the services of any Subcontractor.

19. Breach/Damages. The specific remedies detailed in this Agreement shall not operate as a waiver of any and all other rights and remedies available to the Foundation at law or equity. In the event the Participant fails to comply with this Agreement, and thus causes a breach of this Agreement, the Foundation may, in its reasonable discretion, remove that Participant from eligibility for receiving any and all funding for future research projects.

20. Equal Opportunity/Affirmative Action. The Foundation is an equal opportunity employer and, as such, does not discriminate on the basis of age, sex, race, religion, color, national origin, physical or mental disability, or veteran status. Upon execution of this Agreement, the Participant agrees to (a) support the Foundation's non-discrimination policy and require all Subcontractors to support this policy; and (b) abide by all laws, rules, and executive orders governing equal employment opportunity. The Participant also agrees to make available to the Foundation, upon reasonable request, proof of its efforts, as well as all Subcontractors' efforts, to comply with this Paragraph.

21. Relationship of the Parties. The Parties agree that the Participant is an independent contractor with respect to the Foundation. Nothing in this Agreement shall be construed to make the Parties partners or joint ventures or to create an employment relationship between the Parties. Any and all relationships created relating to Subcontractors shall be between the Participant and such Subcontractors only and shall not create any relationship between such Subcontractors and the Foundation.

22. Modification in Writing. This Agreement may not be modified or amended, nor may any term or provision be waived or discharged, including this particular Paragraph, except in writing, signed by the party or parties against whom such amendment, modification, waiver, or discharge is sought to be enforced. Any modification must be executed by the Foundation to be effective.

23. Transferability. This Agreement shall not be assignable by the Participant without the prior written authorization of the Foundation.

24. Monitoring. Sub-recipient monitoring by the Foundation will occur under the terms of this agreement. It may include such things as review of single audits, schedule a site visit, review Sub-recipient reports, or arrange a limited scope audit. The state government, local government, Indian tribe, nonprofit organization, college, university, for profit organization monitoring requirements is found in the attached Appendix. You have indicated your organization is a university organization therefore the grant principles for administration and cost for a university organization would apply as listed in the Appendix. If there is a change

in your organizational status please notify the Foundation. Any invoice submitted must have detailed, auditable information on all in-kind contributions.

25. Exhibits. All Exhibits attached to or made part of this Agreement are incorporated and agreed upon by the parties. In the event a conflict occurs between the terms of an Exhibit and this Agreement, the terms of this Agreement shall control.

26. Authority. The individuals executing this Agreement on behalf of their respective parties hereby represent and warrant that they have the right, power, legal capacity, and appropriate authority to enter into this Agreement on behalf of the entity for which they sign below.

IN WITNESS WHEREOF, the parties have caused this Agreement to be duly executed as of the day and year as indicated below.

Awwa RESEARCH FOUNDATION

PBS&J

By: Robert C. Renner, P.E.
Title: Executive Director

By: _____
Title: _____

Date: _____

Date: _____

Refined Regional Data Decision (R2D2) Support System

Total Number of Pages

Project proposal and all subsequent correspondence.

Refined Regional Data Decision (R2D2) Support System

<u>TASK</u>	<u>DUE DATE</u>
Begin Project	October 15, 2006
Foundation receipt of all Subcontractors' Acceptance of Project Agreement (II.18.e)	October 15, 2006
Scope of Work (II.2)	November 15, 2006
Participant presents Proof of Insurance(s) or Certificate of Self Insurance (II.18.c)	November 15, 2006
Participant presents Proof of Worker's Compensation Insurance (II.18.d)	November 15, 2006
Periodic Report 1	January 15, 2007
Periodic Report 2 (includes Technical Summary)	April 15, 2007
Periodic Report 3	July 15, 2007
Periodic Report 4 (includes Technical Summary)	October 15, 2007
Periodic Report 5	January 15, 2008
Periodic Report 6 (includes Technical Summary)	October 15, 2008
Draft Report (II.7)	January 15, 2009
Final Report	June 15, 2009
Letters of Confirmation for participating utilities (II.11)	June 15, 2009
Published Report & Project Profile (II.7 & II.8)	June 15, 2009
Execution of Assignment Documents for Foundation Intellectual Property & Jointly Owned Intellectual Property (II.14.a. & c.)	June 15, 2009
Termination Date (II.16)	November 15, 2009
Document transfer for Intellectual Property, and Final Compensation (II.14.d & II.12.d)	January 15, 2010

NOTE: Final payment will be disbursed subsequent to response to editor queries on the final report, as defined in the AwwaRF "Guidelines for Solicited Proposals," and submission of a final invoice detailing final Project costs including cost share and in-kind contributions. Please submit # of copies shown for each report. For each report an invoice must be submitted for payment using Exhibit H – printed on your company letterhead.



BUDGET SUMMARY

Exhibit C
Project 4074

Contractor: PBS&J
482 S. Keller Road
Orlando, FL 32810

ORGANIZATION	CASH	CASH IK
Co-Funders		
Contractor		
PBS&J		
Sponsor		
Palm Beach County Utilities	\$50,000	
Research Foundation		
AwwaRF	\$100,000	
TOTAL	\$550,000	

Contract Amount: \$550,000
20% Retainage: \$110,000
Project Advance: \$ 55,000

Exhibit D – Invoice Form

For access to the Awwa Research Foundation website please see:

<http://www.awwarf.org>

To download Exhibit H – Invoice Form please see:

<http://www.awwarf.org/research/projectAdmin/contractsAndForms.aspx>

The invoice form was created under MS Excel and is a protected worksheet. Please fill in the yellow highlighted areas.

Project Title

Project Profile Information Form

(Please provide the following on a 3.5" disk, CD-ROM disc or Zip disk in Microsoft Word® from a PC)

Project Title: _____
Project Number: _____
Principal Investigators: _____

Objectives:
(State the relevant objectives of the project; 75 words or less.)

Background:
(Provide background information; 75 words or less.)

Highlights:
(Provide "at a glance" the main findings of the research [minimum of three]; 100 words or less.)

Approach:

(Describe the research approach for this project. May use subject subheads; *125 words or less.*)

Results/Findings:

(Describe the results/findings of the research. May use subject subheads; *200 words or less.*)

Impact:

(Describe the relevant impacts that the research results may have on the water industry. Use general subheads such as recommendations or benefits. Subheads more specific to the project may also be used, such as treatment, analytical development, regulatory implications, and so forth; *100 words or less.*)

Participating Utilities (if applicable; maximum of five):

SUBCONTRACTORS ENGAGED BY PARTICIPANT

Refined Regional Data Decision (R2D2) Support System

The Participant acknowledges that the following have been engaged to complete certain work on the Project as detailed by the Project Funding Agreement between the Awwa Research Foundation and _____ dated _____. The Participant states that this/these Subcontractor(s) are required by the Participant to comply with all terms of the Project Funding Agreement specifically relating to Subcontractors, as well as agreeing not to injure the Foundation's ownership rights to the Foundation's Intellectual Property or any Jointly Owned Intellectual Property:

Name [Print]: _____

Date: _____

Address: _____

Title: _____

Employer: _____

Statement of this Subcontractor's duties on behalf of the Project:

Refined Regional Data Decision (R2D2) Support System

AwwaRF

PERIODIC REPORT FORMAT AND CONTENT

(See Exhibit B of Project Funding Agreement for Due Dates)

I. Title Page – 1 page (every 3 months)

- Project Title and Number
- Principal Investigator and Organization
- Project Start Date and End Date
- Participating Utilities and Organizations
- Project Funding
- Project Objective

II. Status Summary – 2 to 5 pages (every 3 months)

- Summary of work tasks completed and accomplishments in reporting period
- Assessment of actual versus planned progress for each work task
- Tasks proposed to be completed in the upcoming period
- Problems encountered
- Rationale for proposed changes (if any) to the scope of work
- Presentations, Papers, Reports
 - List of submitted/published reports (title, author, journal/conference, date)
 - Copy of submitted/published reports and presentations

III. Reimbursement Request (no more frequently than every 3 months)

Must use Exhibit H of Project Funding Agreement and submit on letterhead or with cover letter.

IV. Technical Summary – 5 to 20 pages (every 6 months – i.e., every other periodic report)

- Response to Foundation's (includes PAC's) questions and comments on previous technical report
- Methods and materials
- Data and analysis
- Significant findings
- Applicability of findings to the drinking water community

Note: If extensive data or supporting information is included, please use appendix

Assignment of Copyright/Trademark

Whereas _____ ["Assignor"] of
_____ has created and authored an original expression of an idea and/or
design described as follows:

_____ (hereafter the "Work"); and

The Assignor claims and warrants exclusive ownership, with no transfers having occurred prior
to this Assignment, of all right, title and interest in and to the Work, including the copyright and
any potential trademark rights;

Whereas _____ ["Assignee"] of
_____ is desirous of obtaining all rights, title and interest in and to
the Work, including the copyright and trademark rights;

NOW, THEREFORE, for good and valuable consideration, receipt of which is hereby
acknowledged, said Assignor does hereby assign unto the said Assignee all world-wide right,
title and interest in and to the said Work, including the right to apply for copyright and/or
trademark registration for that Work as sole Owner.

Signature of Assignor

State of _____ }
County of _____ } ss.

On this _____ day of _____, 20____, before me appeared
_____, the person who signed this instrument, who acknowledged that
he/she signed it as a free act on his/her own behalf (or on behalf of the identified corporation or
other juristic entity with authority to do so).

Notary Public Comm'n. Exp.

Appendix

I. Public Laws that apply

E.O. 11246. amended by E.O. 11375 and supplemented by regulations 41CFR, Part 60

Clean Air Act, 42 U.S.C. 7401

Federal Water Pollution Control Act, 33 U.S. C. 1251

Byrd Anti Lobbying Amendment, 31 U.S. C. 1352

Debarment and Suspension, E.O. 12549, 12689

Civil Rights Act 42 U.S.C. § 2000, 10 C.F. R. Part 4 Subpart A

Rehabilitation Act, 1973 29 U.S.C. § 794

Age Discrimination Act 1975, 42 U.S.C. § 6101

Freedom of Information Act, 5 U.S.C. § 552, 10 C.F.R., Part 1008

Privacy Act, 1974, 5 U.S.C. § 522a

Drug Free Workplace Act, 1988, 10 C.F.R. Parts 606, 607

Contract Work Hours & Safety Standards Act of 1962

Title IX of Education Amendments of 1972, 20 U.S.C. § 1681

Individuals with Disabilities Act of 1975, 20 U.S.C. § 1400

Family Education Rights & Privacy Act, 1974, 20 U.S.C. § 1232g

Bayh – Dole Act 37 C.F.R. Part 401

Protection for human research subjects 10 C.F.R. Part 745

Age Discrimination in Employment Act 20 U.S.C. § 621

Equal Pay Act 29 U.S.C. § 206(d)

Fair Labor Standards Act 29 CFR Chapters V

Uniformed Services Employment and Re-employment Rights Act, 1994, 38 U.S.C. § 4301

Fly American Act 49 U.S.C. Sec. 1371

Paperwork Reduction Act of 1995 44 U.S.C. 3501 et. seq.

Animal Welfare Act of 1966 P.L. 89-544

II. No specific provisions

III. Administrative and cost principle information

Sub-recipients expending over \$300,000 under OMB Circular A-133 for States, Local Governments and Nonprofit Organizations are required to follow single audit guidelines

Administrative requirements required to follow as defined by your organization

1. State, local government or Indian tribe, OMB Circular A-102
2. Nonprofit organization, OMB Circular 2 CFR 215
3. Colleges and universities, OMB Circular 2 CFR 215
4. For profit organizations, OMB Circular 2 CFR 215

Federal Cost principles required to follow as defined by your organization

1. State, local government or Indian tribe, OMB Circular A-87
2. Nonprofit organization, OMB Circular A-122
3. Colleges and universities, OMB Circular A-21
4. For profit organizations, FAR 48 CFR part 31

Proposed Contract Between:

**American Water Works Association Research Foundation (AwwaRF) and
Palm Beach County Water Utilities Department (PBCWUD)**

Scope of Work

This project proposes research and development of a Dynamic Decision Support System (D²S²) for water utilities and resource managers. It is difficult to integrate the diverse variables that drive water management decisions (i.e., demand changes, costs, alternative supply sources, regulatory and resource constraints, and water budget components) without a dynamic model. D²S² offers water managers a unique visual tool to perform scenario testing and rapid 'What-if' analysis. Palm Beach County Water Utilities Department (PBCWUD) is the AwwaRF-member sponsor for the PBS&J and University of Florida (UF) research contractor team.

The D²S² tool is intended to aid in sustainable resource planning; ideally, balancing between demands, supply, capital investment, and natural resource constraints. It is also a stakeholder mediation and consensus-building tool designed to allow rapid scenario testing, visual representations of outcomes, and a systematic and defensible manner of alternatives analysis. The concept includes a unique combination of a dynamic decision support model with stakeholder involvement in multi-criteria decision analysis (MCDA).

The conceptual model consists of a baseline set of variables that define the water budget, sets of constraints, and feedbacks that dynamically re-adjust the system over time. This scope of work includes 5 tasks: 1. Build Baseline Model, 2. Build Scenarios into the Model, 3. Stakeholder Weighting and Decision Criteria, 4. What-IF Analysis and UF Valuation Modules, and 5. Reports and Presentations.

The method integrates stakeholder involvement in selecting and weighting decision criteria with dynamic systems modeling and MCDA. In this tool, the hydrologic water balance provides the engine for alternative testing and drives economic responses; regulatory constraints can be fixed or variable inputs that direct routing of water in the water budget. For example, stakeholder workshops verify critical system interactions and establish weights for decision criteria (such as cost, water quality, etc.).

Example analyses might include examining the trade-offs between investment water supply alternatives (e.g., ASR, desalination, additional reservoirs, etc) or the effect of different policy options on resources and rate structures. On a more regional basis, other examples might include an evaluation of the most efficient distribution of a dynamic source between utilities or the effect of conservation programs on supply over time. The visual nature, ease of use, integration of diverse subsystems, and systematic alternatives analysis make this a potentially powerful tool for resource planning, prioritization of capital improvements, visioning, and consensus building.

Budget

PBCWUD	\$450,000
AwwaRF	<u>\$100,000 matching funds</u>
Total	\$550,000

Timeframe

November 2006 to June 2007 Functional Model Prototype

May 2007 to January 2010 Completion of AwwaRF Documentation

Additional Regional Analysis - Possible Related Work with Other County Utilities

Concurrent discussions are in progress with the major utilities in Broward, Miami-Dade, Monroe, and Duval counties. These counties may elect to submit an addendum to this proposal or to submit separate individual proposals to AwwaRF to build off the prototype established with PBCWUD.

If Broward, Miami-Dade, and Monroe counties should all agree to contribute individually or jointly to subsequent proposals, this would provide a Lower East Coast regional decision support tool and may fund verification of this tool using regional hydrologic models. Building on the PBCWUD tool benefits all, including PBCWUD, by providing additional functions and a regional perspective to water supply scenarios.

This additional work would not contractually involve or obligate Palm Beach County or PBCWUD. It is noted here as general information intended to give a full perspective of the larger picture currently under consideration.

Goals and Objectives – Current and Future Work

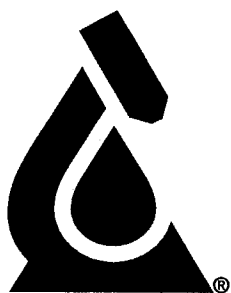
The objective of this proposal is to establish a prototype project that forms the framework of a unique and valuable decision support tool. This may also form the framework for a larger regional tool. Both this initial prototype and the future expanded tool will be useful and applicable to the utility community as a whole.

Differentiators

In summary, this proposed research adds to the body of knowledge and is unique from on-going research for the following primary reasons:

- The model will be designed to test a tenet that systems are frequently regulated by a small number of variables that, in their interactions with other system components, exert direct and indirect control on processes and that there may be an optimum range of detail beyond which accuracy is not increased with increasing complexity for larger scale analyses.
- The research proposes a dynamic integration of bio-physical, economic, and regulatory data and system drivers into a tool that is proposed to incorporate a formal treatment of uncertainty across model domains, allowing users to estimate uncertainty in terms of both single variable sensitivity and integrated confidence bounds on the model output.
- The product is focused on water supply alternative planning for utilities and on consensus-building between utilities, regulatory authorities, public interest groups, and other stakeholders.
- The product is a dynamic integration of MCDA and Systems Dynamics modeling – producing a visual-based tool for decision analysis of complex systems.

About the



**Awwa
Research
Foundation**



Advancing the science of water...

...By sponsoring a centralized, practical research program. The Foundation's research program is anticipatory and responsive to the needs of the drinking water community. It is highly respected as one of the most scientifically credible and best-coordinated programs in the world. Since its inception in 1966, the Foundation has sponsored more than \$370 million in research, producing more than 500 completed research projects.

...By developing and sharing knowledge. The Foundation identifies the practical benefits of research findings and delivers this knowledge to stakeholders throughout the water supply community through research reports, conferences, periodicals, and the Internet.

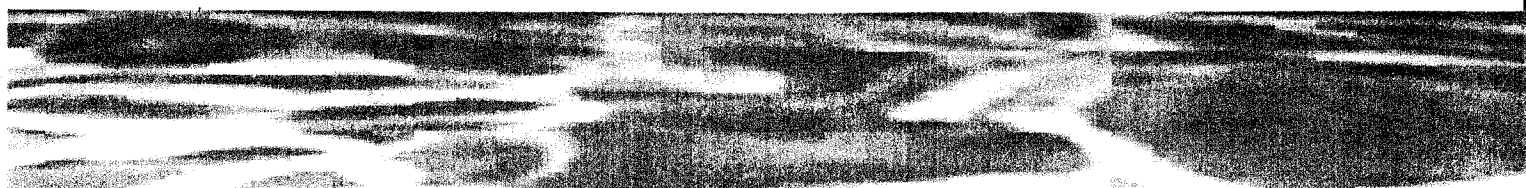
...Through the power of collaboration. The Foundation cultivates partnerships with organizations around the world to leverage funding and share expertise. Funding from subscribers—approximately

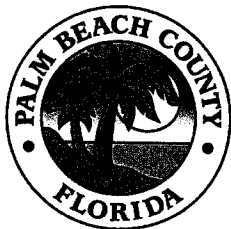
\$10 million annually—is supplemented each year by several million dollars allocated by the U.S. government and often leveraged through collaborative projects with other research organizations.

...By providing value to subscribers. Close to 900 public and private water utilities, which serve over 200 million drinking-water consumers worldwide, currently subscribe to the Foundation. In addition, more than 50 water-related consulting firms and manufacturing companies are subscribers.

Main goal areas of the Foundation's research programs:

- High-quality water
- Efficient and customer-responsive organization
- Infrastructure reliability
- Environmental leadership





Palm Beach County
Water Utilities
Department
Service Area (SA) and
Major Facilities

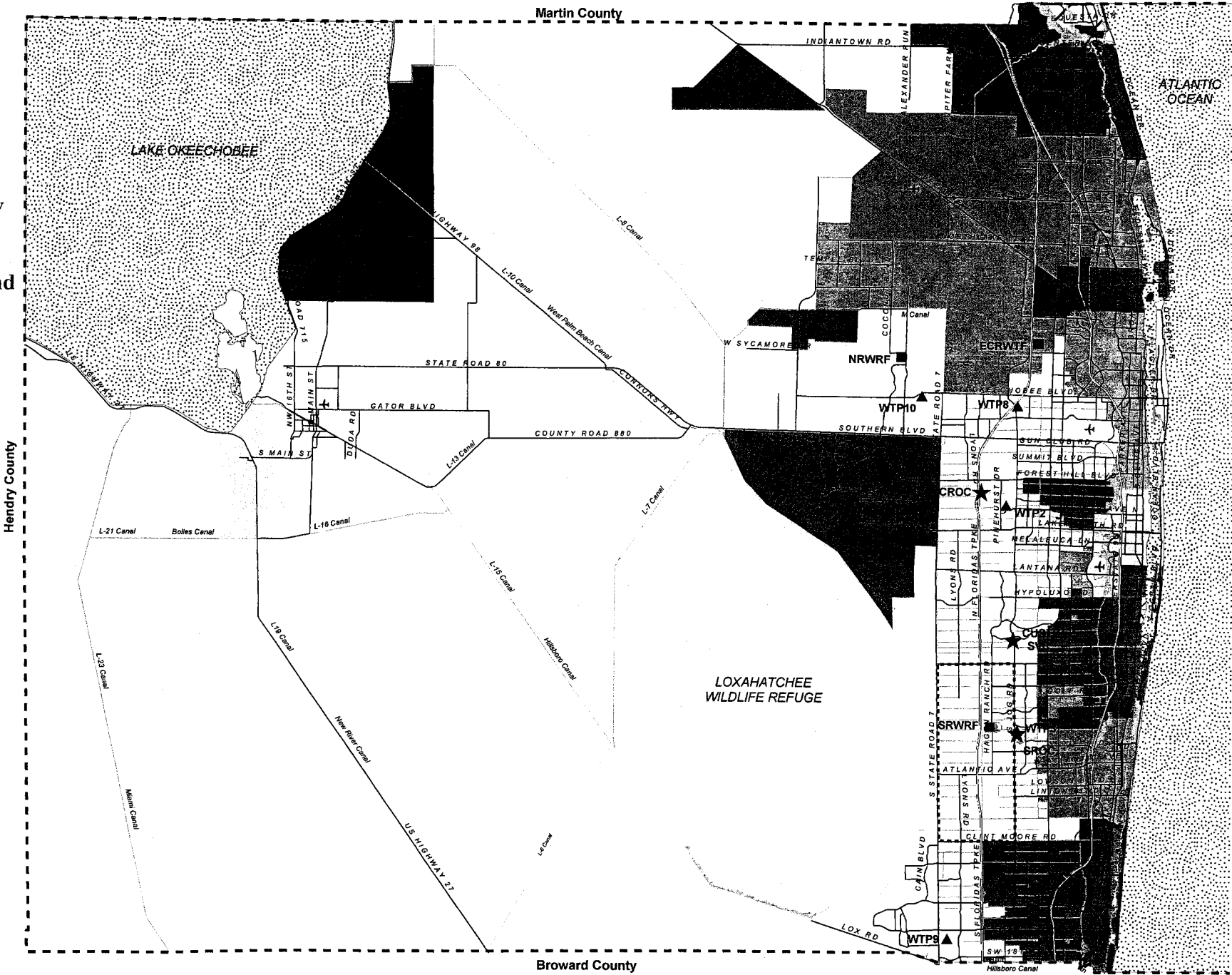
Attachment 3

Legend

- P.B.C.W.U.D. SA
- Mandatory Reclaimed SA
- Palm Beach County Limits
- Administration
- Water Reclamation Facility
- Water Treatment Facility
- Wetlands



NOT TO SCALE



07 - 0221

BOARD OF COUNTY COMMISSIONERS
PALM BEACH COUNTY, FLORIDA
BUDGET: TRANSFER
FUND 4000: Water Utilities Department Revenue Fund

Use this form for items not anticipated in the budget

Account		Original Budget	Current Budget	Increase	Decrease	Adjusted Budget	Encumbered As of 10/02/06	Remaining Balance
Number	Name							
<u>Expenditures and Reserves (BGEX 720 3332 100206*26)</u>								
40008209000-9209	Transfer to O&M Fund 4001	87,304,525	87,304,525	450,000	0	87,754,525	7,275,377	80,479,148
40008209000-9211	Transfer to CIP Fund 4011	1,940,675	1,940,675		450,000	1,490,675		1,490,675
Total expenditures and reserves		<u>89,245,200</u>	<u>89,245,200</u>	<u>450,000</u>	<u>450,000</u>	<u>89,245,200</u>	<u>7,275,377</u>	<u>81,969,873</u>

Water Utilities Department

Initiating Department/Division

Administration/Budget Department Approval

OFMB and Budget Department - Posted

Signatures

Date

By Board of County Commissioners

At Meeting of 11-21-06

Barbara
Elizabeth
11/17/06

10/11/06
11/17/06

Deputy Clerk to the
Board of County Commissioners

07 - 0222

Page 1 of 1 pages

BOARD OF COUNTY COMMISSIONERS
PALM BEACH COUNTY, FLORIDA
BUDGET: AMENDMENT

FUND 4001: Water Utilities Department Operations and Maintenance Fund

Use this form for items not anticipated in the budget

Account		Original Budget	Current Budget	Increase	Decrease	Adjusted Budget	Encumbered As of 10/02/06	Remaining Balance
Number	Name							
<u>Receipts and Revenues (BGRV 720 3332 100206*5)</u>								
40018004200-8208	Transfer from Fund 4000	87,304,525	87,304,525	450,000	0	87,754,525		
Total receipts and revenues		87,304,525	87,304,525	450,000	0	87,754,525		
<u>Expenditures and Reserves (BGEX 720 3332 100206*27)</u>								
40017203240-5121	Data Processing Software/ Access	638,400	638,400	450,000	0	1,088,400	78,463	1,009,937
Total expenditures and reserves		638,400	638,400	450,000	0	1,088,400	78,463	1,009,937

Water Utilities Department

Initiating Department/Division

Administration/Budget Department Approval

OFMB and Budget Department - Posted

Signatures

Date

By Board of County Commissioners

At Meeting of 11/21/06

Deputy Clerk to the

Board of County Commissioners

Bruce Brown
Elizabeth Brown
11/17/06

10/11/06
11/17/06

07 - **0223**

Page 1 of 1 pages

BOARD OF COUNTY COMMISSIONERS
PALM BEACH COUNTY, FLORIDA
BUDGET: AMENDMENT

FUND 4011: Water Utilities Department Capital Improvement Fund

Use this form for items not anticipated in the budget

Account		Original Budget	Current Budget	Increase	Decrease	Adjusted Budget	Encumbered As of 10/02/06	Remaining Balance
Number	Name							
<u>Receipts and Revenues (BGRV 720 3332 100206*6)</u>								
40118004211-8208	Transfer from WUD Revenue Fund 4000	1,940,675	1,940,675		450,000	1,490,675		
Total receipts and revenues		<u>1,940,675</u>	<u>1,940,675</u>	<u>0</u>	<u>450,000</u>	<u>1,490,675</u>		
<u>Expenditures and Reserves (BGEX 720 3332 100206*28)</u>								
40117209900-9909	Reserve for improvement program	18,061,975	18,061,975		450,000	17,611,975	0	17,611,975
Total expenditures and reserves		<u>18,061,975</u>	<u>18,061,975</u>	<u>0</u>	<u>450,000</u>	<u>17,611,975</u>	<u>0</u>	<u>17,611,975</u>

Water Utilities Department

Initiating Department/Division

Administration/Budget Department Approval

OFMB and Budget Department - Posted

Beryl Brann 10/11/06
Elizabeth Boes 11/17/06
11/17/06

At Meeting of 11-21-06Deputy Clerk to the
Board of County Commissioners