BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF CALIFORNIA

Application of California-American Water Company (U210W) for Approval of the Monterey Peninsula Water Supply Project and Authorization to Recover All Present and Future Costs in Rates.	A.12-04- (Filed April 23, 2012)

DIRECT TESTIMONY OF F. MARK SCHUBERT, P.E.

Lori Anne Dolqueist
Jack Stoddard
Manatt, Phelps & Phillips, LLP
One Embarcadero Center, 30th Floor
San Francisco, CA 94111
(415) 291-7400
ldolqueist@manatt.com

Attorneys for Applicant
California-American Water Company

Sarah E. Leeper
California-American Water Company
333 Hayes Street
Suite 202
San Francisco, CA 94102
(415) 863-2960
sarah.leeper@amwater.com

Attorney for Applicant
California-American Water Company

April 23, 2012

TABLE OF CONTENTS

BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF CALIFORNIA

Application of California-American Water Company (U210W) for Approval of the Monterey Peninsula Water Supply Project and Authorization to Recover All Present and Future Costs in Rates.	A.12-04- (Filed April 23, 2012)

DIRECT TESTIMONY OF F. MARK SCHUBERT, P.E.

I. WITNESS QUALIFICATIONS

Q1. Please state your name, business address and telephone number.

A1. My name is F. Mark Schubert, my business address is 1033 B Avenue, Suite 200, Coronado, California 92118, and my telephone number is 619-435-7407.

Q2. By whom are you employed and in what capacity?

A2. I am employed by California-American Water Company ("California American Water") as the Manager of Capital Assets and Planning.

Q3. What are your responsibilities?

A3. My role as Manager of Capital Assets and Planning includes: 1) the supervision and management of capital planning activities on a state-wide basis; 2) the management of asset planning on a state-wide basis; 3) the supervision of engineering colleagues in three separate offices; and 4) providing rate case support and testimony as an expert witness on capital project planning in California.

Q4. Briefly describe your educational background.

A4. I graduated in 1978 with a Bachelor of Science degree in Civil and Environmental Engineering from Clarkson University, Potsdam, New York. In 1984, I earned a Master

of Science degree in Civil Engineering from Northeastern University, Boston, Massachusetts.

Q5. Please describe your professional experience.

A5. In 1978, I joined R. W. Beck and Associates in Wellesley, Massachusetts, as an Assistant Engineer and was promoted to the position of Engineer and Senior Engineer in the Power Supply and Special Studies Department. During this period, I was involved in a variety of consulting assignments in the civil, environmental and electrical engineering areas, which included water, wastewater, solid waste and hydroelectric projects. In 1984, I accepted a transfer to work in the Utilities Services Design office of R. W. Beck and Associates in Seattle, Washington. During that period, my duties consisted of engineering design for various water, wastewater and solid waste projects.

In 1985, I joined Economic and Engineering Services, Inc., in Olympia, Washington as a Senior Engineer. My duties during the period 1985 to 1987 consisted of preparing water supply plans for several different water utilities and conducting associated engineering design/analysis.

In 1987, I joined the System Engineering Department of American Water Works Service Company (Service Company) as a Senior Planning Engineer in Voorhees, New Jersey. My duties included the development of comprehensive planning studies for several subsidiary operating water companies of American Water Works Company, Inc. In 1989, I assumed the position of Assistant Director - Rate Studies, which involved preparing reports and studies in the areas of cost of service, depreciation and rate design for these same water companies. In 1994, I was promoted to the position of Director - Regulatory Studies for New Jersey-American Water Company ("NJAWC") in Haddon Heights, New Jersey. In 1995, I assumed the responsibilities of Director - Business Development for NJAWC. In 2000, I returned to the System Engineering Department of the Service

Company in Voorhees, New Jersey as a Senior Planning Engineer. My responsibilities included overseeing the capital planning and engineering activities of the Western Region on an interim basis. These activities included the development and maintenance of the annual and five-year capital investment plans. In November 2001, I was promoted to the position of Director of Engineering for the Western Region and assumed these responsibilities on a permanent basis.

In 2004, I joined RBF Consulting as a Senior Project Manager, where I was primarily responsible for preparing strategic master plans and helping to implement capital improvement projects for various clients of RBF Consulting. In addition, I was responsible for assisting private utility clients on rate case applications due to my extensive experience dealing with public utilities commissions in the states of California, Hawaii and New Mexico. I then rejoined American Water in January 2006 as a Regulatory Engineering Manager in the rates and regulatory planning department. I was named Director of Engineering for American Water for the Western Region in June 2007, and in January 2008, I was named to the role of Director of Engineering for California American Water. In July 2010, I assumed my current role as Manager of Capital Assets and Planning for California American Water.

Q6. Have you testified before any regulatory agencies?

A6. Yes. I have testified as an expert witness on capital project planning on numerous occasions before state public utility commissions in California and New Mexico. I have also submitted expert testimony on capital project planning in the state of Hawaii. In addition, I have testified as an expert witness on depreciation issues in the states of Indiana, Missouri, New Jersey and Pennsylvania. I have also submitted expert testimony on depreciation issues in the states of Arizona and California. Finally, I have testified as an expert witness on water system issues before the California State Water Resources Control Board ("SWRCB").

Q7. Are you a registered professional engineer?

A7. Yes. I am a registered professional engineer (Civil) in the Commonwealth of Massachusetts and the States of California, Hawaii, Idaho, New Jersey, New Mexico, Oregon and Washington.

Q8. Are you a member of any professional associations?

A8. Yes. I am a member of the American Water Works Association and the American Society of Civil Engineers.

II. PURPOSE OF TESTIMONY

Q9. What is the purpose of this direct testimony?

A9. The purpose of my direct testimony is to provide a description of all necessary infrastructure that will need to be constructed in order to deliver finished water from the desalination plant (via major transmission pipelines) to distribution storage facilities and customers in the Monterey system, and other facilities such as additional Aquifer Storage and Recovery ("ASR") facilities that will also need to be constructed. This infrastructure is commonly known as the California American Water-only facilities.

Q10. What is your understanding of California American Water's request in this new application as it pertains to the infrastructure facilities that need to be constructed in order to deliver water into the Monterey County District, store desalinated water, and deliver water to customers as a result of the proposed desalination project?

A10. It is my understanding that California American Water is requesting that ratemaking treatment afforded to the California American Water-only facilities in D.10-12-016 be authorized in this application.

III. CALIFORNIA AMERICAN WATER-ONLY FACILITIES

Q11. What is the general composition of the California American Water-only facilities?

A11. The California American Water-only facilities are clearly summarized in D.10-12-016, which states "The Cal-Am facilities consist of three large diameter conveyance pipelines (the Transfer Pipeline, the Seaside Pipeline, and the Monterey Pipeline, which also includes the Valley Greens Pump Station), two distribution storage reservoirs (the Terminal Reservoirs), and aquifer storage and recovery facilities." (Page 141)

A. Pipelines

Q12. Please describe the three large diameter conveyance pipelines, beginning with the Transfer Pipeline.

A12. The Transfer Pipeline component of the California American Water-only facilities is anticipated to be a 36-inch diameter pipeline approximately 15,000 feet in length. The Transfer Pipeline will allow for the delivery of desalinated water to the Monterey Peninsula from the desalination plant. This pipeline alignment would begin in the general vicinity of Beach Range Road and the Highway 1/First Street interchange in Marina. The pipeline alignment would continue in a southerly direction, generally paralleling the Transportation Agency for Monterey County ("TAMC") right-of-way through unincorporated Monterey County and into Seaside. At one point, the pipeline alignment would pass under Highway 1 at the Seaside border, while continuing in the TAMC right-of-way just north of Del Monte Boulevard. Eventually, the pipeline alignment would reach a point in the TAMC right-of-way that is just north of the intersection of Auto Center Parkway and Del Monte Boulevard. The Transfer Pipeline would connect with the Seaside and Monterey Pipelines in this general location.

Q13. Please describe the Seaside Pipeline.

A13. The Seaside Pipeline component of the California American Water-only facilities is anticipated to be a 36-inch diameter pipeline approximately 13,000 feet in length. The Seaside Pipeline will allow for: 1) the movement of extracted ASR water from the ASR facilities through the Terminal Reservoirs and ultimately to the Monterey Pipeline; 2) the

movement of Carmel River water to the Terminal Reservoirs and ultimately to the ASR facilities for injection; and 3) the movement of desalinated water to the Terminal Reservoirs to help balance distribution system operation during periods of high customer demand. In general, the pipeline alignment runs east on Auto Center Parkway for approximately 1,125 feet, and then changes to LaSalle Avenue. The pipeline alignment continues east on La Salle Avenue for approximately 3,675 feet to Yosemite Street. Thereafter, the pipeline alignment turns south on Yosemite Street for approximately 5,400 feet to Hilby Avenue, where the pipeline alignment then turns east on Hilby Avenue. The pipeline alignment follows Hilby Avenue and crosses General Jim Moore Boulevard, where the pipeline would ultimately tie-in to the Terminal Reservoirs and the ASR System facilities. This pipeline alignment contains two trenchless crossings on Auto Center Parkway of 500 feet each, namely at Del Monte Boulevard and at Fremont Street. Approximately 1,000 lineal feet of 30-inch diameter main was installed in Hilby Avenue in 2006 as part of another capital project.

Q14. Please describe the Monterey Pipeline.

A14. The Monterey Pipeline component of the California American Water-only facilities is anticipated to be a 36-inch diameter pipeline approximately 28,700 feet in length. The Monterey Pipeline will allow for the delivery of desalinated water and ASR water to Forest Lake Tanks, which would ultimately feed into Carmel Valley. This pipeline alignment has nine segments that are described in more detail below. In general, the pipeline alignment begins at the intersection of Auto Center Parkway and Del Monte Boulevard. This three-way interconnection also includes the Seaside Pipeline and Transfer Pipeline. The alignment generally follows the TAMC railroad alignment in a westerly direction, continues along the Monterey Regional Park District bike path, and passes under Highway 1, while continuing through the Naval Postgraduate School ("NPS") and El Estero Park. Shortly thereafter, the pipeline alignment crosses Del Monte Avenue utilizing trenchless construction to Cortes Street, and then continues west on

Franklin Street to Van Buren Street. The pipeline alignment heads north on Van Buren Street and crosses the Presidio property in an existing pipeline easement. The pipeline alignment would continue on to Laine Street, turn southwest on Dickman Drive, and then turn north on Spencer Street all the way to Eardley Street. Finally, the pipeline alignment would turn southwest on Eardley Street, and connect to an existing pipeline near the Eardley Pump Station.

Q15. Please provide additional information on each of the nine segments comprising the Monterey Pipeline, including the Valley Greens Pump Station.

A15. Pipeline Segment Number 1 (Sand City) is approximately 4,000 feet in length, and it originates at the junction of the Product Pipeline and the Seaside Pipeline in Sand City, just north of the intersection of Auto Center Parkway and Del Monte Boulevard in Sand City, within the TAMC right-of-way. This pipeline segment is planned to parallel the existing TAMC right-of way in a westerly direction, and features crossings at Tioga Avenue, Contra Costa Street and Olympia Avenue. This pipeline segment would generally end in the proximity of the Sand City/Seaside border.

Pipeline Segment Number 2 (Seaside) is approximately 3,000 feet in length, and it begins at Olympia Avenue (border of Sand City and Seaside). This pipeline segment is planned to parallel the existing TAMC right-of-way for approximately 1,500 feet, and would also be located within the Monterey Regional Parks District bike path for approximately 1,500 feet. There are several crossings along this westerly route, namely the Laguna Grande Bridge, and trenchless construction is planned across Highway 218 (Canyon Del Rey Boulevard) and the TAMC railroad tracks. This pipeline segment would generally end in the proximity of the Seaside/Monterey border.

Monterey Pipeline Segment Number 3 (Monterey – East of NPS) is approximately 5,000 feet in length, and it begins at Roberts Avenue (border of Seaside and Monterey). This

pipeline segment is planned to parallel the existing Monterey Regional Parks District bike path, just north of Del Monte Boulevard. There are several crossings along this westerly route, namely Roberts Avenue, passing beneath the Highway 1 Overpass, and Casa Verde Way. This pipeline segment would generally end in the proximity of the Monterey/NPS border (which is Federal land).

Monterey Pipeline Segment Number 4 (NPS) is approximately 3,000 feet in length, and begins just north of the intersection of Palo Verde avenue and Del Monte Boulevard (border of Monterey and the NPS). This pipeline segment is planned to parallel the existing Monterey Regional Parks District bike path, just north of Del Monte Boulevard. There is one deep crossing along this westerly route, a storm drain just south of the abandoned Monterey sewer treatment plant. This pipeline segment would generally end in the proximity of the NPS/Monterey border (near the intersection of Sloat Avenue and Del Monte Boulevard).

Monterey Pipeline Segment Number 5 (Monterey – West of NPS) is approximately 2,600 feet in length, and begins just north of the intersection of Sloat Avenue and Del Monte Boulevard (border of NPS and Monterey. This pipeline segment continues to parallel the existing Monterey Regional Parks District bike path, just north of Del Monte Boulevard for about 2,000 feet. The pipeline segment would then turn south for approximately 600 feet toward and down Cortes Street. There is one deep crossing along this westerly route, a storm drain from El Estero Park, a crossing for Park Avenue, and also includes approximately 300 feet of trenchless crossing beneath Del Monte Boulevard and the TAMC right-of-way. This pipeline segment would generally end at the intersection of Cortes Street and East Franklin Street, within the City of Monterey.

Monterey Pipeline Segment Number 6 (Downtown Monterey) is approximately 4,500 feet in length, and begins at the intersection of Cortes Street and Franklin Street in Monterey.

This pipeline segment follows Franklin Street in a westerly direction for approximately 3,000 feet, and then turns north on Van Buren Street for approximately 1,500 feet to the boundary of Monterey and the Presidio of Monterey (Federal Land). There is one deep crossing along this pipeline segment, a storm drain located within Figueroa Street. There is also a creek crossing on Van Buren Street, just south of the Presido of Monterey boundary. This pipeline segment would generally end in the vicinity of Van Buren Street and Artillery Street (border of Monterey and Presidio of Monterey).

Monterey Pipeline Segment Number 7 (Presidio of Monterey) is approximately 1,500 feet in length, and generally follows an existing 20 foot wide easement granted for use to California American Water by the Presidio of Monterey. The pipeline segment begins in the general vicinity of Artillery Street and Van Buren Street (southern border of Monterey and the Presido of Monterey), and ends at the intersection of Private Bolio Road and Laine Street (northwestern border of Presidio of Monterey and Monterey). It should be recognized that alternate routes might need to be explored/negotiated with the Presidio of Monterey, which could result in a longer pipeline segment and increased construction costs.

Monterey Pipeline Segment Number 8 (Western Monterey) is approximately 3,100 feet in length, and begins at the intersection of Private Bolio Road and Laine Street (northwestern border of Presidio of Monterey and Monterey. The pipeline segment follows Laine Street approximately 500 feet north to Dickman Avenue, where the pipeline segment turns southwest on Dickman Avenue for approximately 600 feet to Spencer Street, where the pipeline segment turns north again on Spencer Street for approximately 2,000 feet to the intersection of Spencer Street and Eardley Avenue, which is about 200 feet east of the Monterey/Pacific Grove border.

Monterey Pipeline Segment Number 9 (Pacific Grove) is approximately 2,200 feet in length, and begins on Spencer Street at the border between Monterey and Pacific Grove. The pipeline segment follows Spencer Street for about 200 feet to the intersection of Eardley Street, where the pipeline segment would turn southwest on Eardley Street for 2,000 feet until it terminates near the existing Eardley Pump Station in Pacific Grove. This pipeline segment would interconnect to an existing pipeline that connects to the Forest Lake Tanks (three 5 million gallon reservoirs in Pacific Grove).

The Valley Greens Pump Station is a booster station that will pump water to the Segunda Tanks (Number 1 and Number 2), to help provide operational flexibility in maintaining storage levels in the Forest Lake Tanks, while also allowing the transfer of treated water from Begonia Iron Removal Plant to Seaside for ASR injection and for meeting system demands.

B. Terminal Reservoirs

Q16. Please continue with a description of the Terminal Reservoirs.

A16. Yes. The Terminal Reservoirs component of the California American Water-only facilities are planned to be twin, 3 million gallon pre-stressed concrete water storage tanks located within the City of Seaside, just east of General Jim Moore Boulevard, and generally across from Hilby Avenue. It should be recognized that the Commission's D.10-12-016 took note that the Settlement Agreement said, "all tank options (i.e., at-grade, partially buried, or completely buried) will be investigated for technical feasibility, practicality, economic viability and appearance." (page 146) This component of the California American Water-only facilities will also include a pump station identified as the ASR Pump Station, which is currently planned to have a pumping capacity of 8.4 million gallons per day. The cost estimate and final design will be based on final design injection capacity of the ASR well facilities. This component of the California American Water-only facilities will also include approximately 4,000 lineal feet of 30-inch diameter

and 36-inch diameter pipeline for transferring stored water in the Terminal Reservoirs to the ASR facilities or into the California American Water distribution system via the Seaside Pipeline. Finally, this component of the California American Water-only facilities will also include ASR discharge pipeline, yard piping, overflow piping, and a valve structure adjacent to General Jim Moore Boulevard.

C. ASR Facilities

Q17. Finally, please describe the ASR Facilities.

A17. The ASR Facilities portion of the California American Water-only facilities includes the following components: 1) 5,000 feet of 30-inch diameter pipeline in General Jim Moore Boulevard for transferring water to the ASR wells (for injection) and from the ASR wells (after extraction); 2) 5,000 feet of 12-inch diameter pipeline in General Jim Moore Boulevard for recirculation purposes (keep water quality from degrading); 3) 3,000 feet of 20-inch diameter pipeline in General Jim Moore Boulevard for backflushing purposes; 4) a 400,000 gallon reclamation basin for storage after backflushing; 5) two ASR production wells located generally in Fitch Park; and 6) a monitoring well also located in Fitch Park for purposes of tracking groundwater aquifer levels going into the future.

IV. COST CAP

Q18. Please discuss the cost cap for the California American Water-only facilities that the Commission approved in D.10-12-016.

A18. In D.10-12-016, the Commission said "On balance, we find that it is reasonable to approve a capital cost cap of $106.875 million for the Cal-Am-owned facilities. As we did with the Regional facilities, Cal-Am may only seek recovery from ratepayers of costs exceeding $106.875 million under extraordinary circumstances." (Page 135)

Q19. What is the basis for the cost cap of $106.875 million and what protections does the cost cap ensure?

A19. The basis of the cost cap is that it is a total amount midway between the most probable cost estimate and the high-cost scenario for the California American Water-only facilities. The estimated capital costs are just that – estimates. To the extent that actual costs are lower than the cost cap adopted by the Commission, it is my understanding that the lower amount will be reflected in rate base. Similarly, if actual costs are greater than the proposed cost cap, and the Commission approves these higher amounts, then these amounts will be recorded in rate base.

Q20. Is it your opinion that the original cost cap of $106.875 million remains reasonable at this time for the California American Water-only facilities?

A20. Yes, absolutely. At this point, it is reasonable for the Commission to adopt once again the cost estimate of $106.875 million for the California American Water-only facilities. The Commission has a prior decision and support to make this determination. D.10-12-016 provides solid reasoning and support for continued reliance upon this cost cap amount of $106.875 million for the California American Water-only facilities. First, this amount is midway between the most probable cost estimate and the high-cost scenario estimate. Second, as mentioned by Mr. Stephenson in his testimony, it is reasonable to adopt a capital cost ceiling to provide certainty for ratepayers and investors. Third, although the Commission in D.10-12-016 provided California American Water the opportunity to recover any costs in excess of the cost cap, it would do so only upon a showing that these costs were the result of extraordinary circumstances and subject to a heightened level of scrutiny. This provides an extra protection to ensure that costs above the cap are absolutely necessary and prudent.

Q21. Are there other protections in D.10-12-016 to ensure that the facilities are built cost effectively?

A21. Yes. In fact, the Commission took notice in D.10-12-016 of the following with respect to the ratemaking adopted therein: “cost containment and project management measures,

including establishing measurable goals and objectives, setting design criteria to meet those goals and objectives, freezing the project size and configuration as early as possible, utilizing a transparent system of review, and utilizing value engineering in order to reduce costs." (Page 142)

Q22. Does California American Water still support these cost containment and project management measures, as described previously for the California American Water-only facilities in D.10-12-016?

A22. Yes.

Q23. Does this conclude your direct testimony?

A23. Yes it does.