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**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Application of California-American Water Company (U210W) for Authorization to increase its Revenues for Water Service by \$4,134,600 or 2.55% in the year 2011, by \$33,105,800 or 19.68% in the year 2013, and by \$10,874,600 or 5.16% in the year 2014.

A.10-07-007
(Filed July 1, 2010)

**JOINT MOTION FOR THE ADOPTION OF PARTIAL SETTLEMENT
AGREEMENT BETWEEN THE DIVISION OF RATEPAYER
ADVOCATES, THE NATURAL RESOURCES DEFENSE COUNCIL, AND
CALIFORNIA-AMERICAN WATER COMPANY ON NON-REVENUE
ISSUES IN THE GENERAL RATE CASE**

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Dated: July 28, 2011

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I. INTRODUCTION AND SUMMARY OF REQUESTED RELIEF

Pursuant to Rule 12.1 of the California Public Utilities Commission's ("Commission") Rules of Practice and Procedure, the Division of Ratepayer Advocates ("DRA"), The Natural Resources Defense Council ("NRDC") and California-American Water Company ("California American Water") (collectively "the Parties") have agreed on resolution of the issues set forth in the *Partial Settlement Agreement Between the Division of Ratepayer Advocates, The Natural Resources Defense Council and California-American Water Company on Non-Revenue Water Issues in the General Rate Case*, attached as Exhibit A (referred to hereafter as the "Non-Revenue Water Settlement Agreement"). Accordingly, the Parties hereby submit the attached Non-Revenue Water Settlement Agreement for Commission approval and adoption.

In particular, the Parties represent to the Commission as follows: (1) That the Non-Revenue Water Settlement Agreement commands the sponsorship of the Parties; (2) That the Parties are fairly representative of the affected interests;¹ (3) That no terms of the Non-Revenue Water Settlement Agreement contravene any statutory provision or any decision of the Commission; and (4) That the Non-Revenue Water Settlement Agreement, together with the record in the proceeding, conveys to the Commission sufficient information to permit the Commission to discharge its regulatory obligations on the issues addressed by the Non-Revenue Water Settlement Agreement.

¹ The Parties include DRA, which represents the interests of residential and small business customers, NRDC, which seeks to promote conservation and efficient use of water resources, and California American Water, which represents the interests of the utility. Pursuant to Rule 12.1 (b), on April 4, 2011, an all-party settlement conference was held at 505 Van Ness Avenue, San Francisco, California, and settlement discussions continued for the following month. The Parties participated in the settlement negotiations.

The Non-Revenue Water Settlement Agreement is reasonable in light of the entire record, and it fulfills the criteria that the Commission requires for approval of such a settlement. The Commission should grant this Motion and authorize the Non-Revenue Water Settlement Agreement.

A. Procedural Background

California American Water filed its statewide general rate case (“Statewide GRC”) for all its districts on July 1, 2010. California American Water filed an update to the application on October 11, 2010 to provide updated and corrected information regarding employee benefits, labor and labor-related costs, and lead lag working cash.

On March 28, 2011, DRA provided notice of an all-party settlement conference to be held April 4, 2011 and to continue day-to-day until concluded, at the Commission’s offices in San Francisco. DRA, California American Water, , the Natural Resources Defense Council (“NRDC”), The Utility Reform Network (“TURN”), the Monterey Peninsula Water Management District (“MPWMD”), the Mark West Area Community Services Committee (“MWACSC”), and the City of Bradbury participated in the all-party settlement conference. Administrative Law Judge (“ALJ”) Regina DeAngelis acted as the Commission-assigned mediator to facilitate the settlement discussions. Settlement discussions continued through successive meetings up until May 6, 2011, and the Parties worked to complete the Non-Revenue Water Settlement Agreement thereafter. At the June 28, 2011 hearing, ALJ Rochester directed the parties to submit any settlement agreements no later than July 28, 2011.² The Settlement Agreement was made final and executed by the Parties on July 28, 2011.³

² DRA, California American Water, NRDC, and The Utility Reform Network asked for a one-week extension of the deadline to submit a stipulation on rate design issues. On July 26, 2011, ALJ Rochester telephonically granted the request so that parties could submit the rate design stipulation on or before August 5, 2011. Rule 12.1 requires a settlement to include (1) the

II. OVERVIEW OF THE SETTLEMENT AGREEMENT

The Non-Revenue Water Settlement Agreement confirms the commitments made for adopting non-revenue water for ratemaking purposes during 2012-2014 in each California American Water District; converting non-revenue water targets established in D.09-07-021 from percentages to volumes; establishing annual progress reporting of non-revenue water program accomplishments; adjusting the calculation methods for the Unaccounted For Water Incentive Program reward or penalty; supporting the partial settlement between NRDC and California American Water dated May 20, 2011 by incorporating the terms and conditions of Section I, Water Loss Reporting, from that Partial Settlement Agreement; documenting the current and future plans for all the non-revenue water activities, and raising awareness with the Division of Ratepayer Advocates (“DRA”), the Division of Water and Audits (“DWA”), and any other Commission staff about the American Water Works Association (“AWWA”) Water Loss Audit and its related recommendations, which are relatively new requirements of the Commission’s Rate Case Plan adopted in D.07-05-062; and recognizing Cal Am accomplishments to date.

An extensive record supports the attached Settlement Agreement. As part of this proceeding, the Parties have submitted extensive testimony concerning non-revenue water issues that are the subject of the Settlement Agreement, including, but not limited to, California American Water’s direct testimony submitted with the application, DRA’s direct GRC

original positions of the Parties on various non-revenue water issues; (2) the differences between the Parties' positions; and (3) the settlement terms. Per the assigned ALJ’s permission, these comparison tables for the Non-Revenue Water Settlement Agreement will be supplied in a supplemental filing.

³ California American Water, DRA, and TURN will concurrently file a partial settlement agreement that addresses most significant elements of the revenue requirement in this general rate case, including number of customers, operating expenses, maintenance expense, administrative and general expenses, allocated expenses, utility plant additions, depreciation expense and reserve, working cash allowance, various taxes, and California American Water’s special requests.

testimony, NRDC’s direct testimony and California American Water’s rebuttal testimony. The Non-Revenue Water Settlement Agreement further provides for the development of water loss reduction action plans, the development of consistent industry standards for estimating leak volumes and potential water savings, defines data and performance metrics, requires that California American Water propose specific water loss targets for each 3 year GRC, and modifies the non-revenue water penalty/reward mechanism.

The Non-Revenue Water Settlement Agreement also includes 3 Attachments: Attachment A, “California American Water NRW Capital Projects and Reduction Efforts/Activities”; Attachment B, “Monterey County District Non-Revenue Water Report – 12 Month Rolling Total (as of May 2011)”; and, Attachment C, “Non-Revenue Water Volumes Adopted for Ratemaking in All Districts other than Monterey County.”

III. THE SETTLEMENT AGREEMENT IS FAIR AND REASONABLE AND ITS ADOPTION WILL SERVE THE PUBLIC INTEREST

Rule 12.1 (d) requires that Commission approval of a settlement be based upon a finding that “the settlement is reasonable in light of the whole record, consistent with law, and in the public interest.”⁴ The Settlement Agreement meets these requirements.

A. The Settlement Agreement is Reasonable in Light of the Whole Record

The Settlement Agreement is reasonable in light of the whole record, as required by Rule 12.1(d). The resolution of the non-revenue water issues set forth in the Settlement Agreement represents substantial adjustments by the Parties, but those adjustments do not place at risk the utility’s ability to provide adequate service to its customers. The terms and

⁴ D.09-03-007, *Decision Authorizing General Rate Increases for Suburban Water Systems and Approving a Related Settlement Agreement with the Division of Ratepayer Advocates*, 2009 Cal. PUC Lexis 148, *15.

requirements proposed in the Settlement Agreement are just and reasonable and will benefit California American Water's customers.

B. The Settlement Agreement is Consistent with the Law and in the Public Interest

In accordance with Rule 12.1(d), the Settlement Agreement is consistent with the law and will serve the public interest. The Parties are aware of no statutory provision or prior Commission decision that would be contravened or compromised by the proposed Non-Revenue Water Settlement Agreement. The issues resolved in the Non-Revenue Water Settlement Agreement are within the scope of the proceeding.

The Non-Revenue Water Settlement Agreement is in the public interest. The Non-Revenue Water Settlement Agreement will benefit customers by establishing clear policies and targets for reducing water losses in a cost-effective manner. The Settlement Agreement's public benefits are consistent with the Commission's policy objectives as articulated in the Water Action Plan.⁵ The Parties have worked to develop a record supporting the objectives in the Water Action Plan, such as maintaining the highest standard of water quality, promoting water infrastructure investment, and setting rates to balance investment, conservation, and affordability.

In addition, the Parties agree that the Settlement Agreement benefits ratepayers by sparing the expense and time of litigating each of the settled items. Commission approval of the proposed Settlement will provide speedy resolution of contested issues, will save unnecessary litigation expense, and will conserve Commission resources. The Commission has

⁵ *Water Action Plan*, California Public Utilities Commission, December 15, 2005, p. 4, available at ftp://ftp.cpuc.ca.gov/PUC/hottopics/3water/water_action_plan_final_12_27_05.pdf.

EXHIBIT A

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Application of California-American Water Company (U210W) for Authorization to increase its Revenues for Water Service by \$4,134,600 or 2.55% in the year 2011, by \$33,105,800 or 19.68% in the year 2013, and by \$10,874,600 or 5.16% in the year 2014.

A.10-07-007
(Filed July 1, 2010)

**PARTIAL SETTLEMENT AGREEMENT BETWEEN THE DIVISION OF
RATEPAYER ADVOCATES, THE NATURAL RESOURCES DEFENSE COUNCIL
AND CALIFORNIA-AMERICAN WATER COMPANY ON NON-REVENUE WATER
ISSUES**

Pursuant to Article 12 of the Rules of Practice and Procedure of the California Public Utilities Commission (“Commission”), the Division of Ratepayer Advocates (“DRA”) California-American Water Company (“California American Water”), the Natural Resources Defense Council (“NRDC”) (collectively, “Parties”) have agreed on the terms of this partial settlement agreement (the “Settlement Agreement”), which they now submit for approval. This Settlement Agreement addresses certain limited issues related to non-revenue water in each of California American Water’s districts as a compromise of many of the differences presented by the testimony and exhibits submitted into evidence by Parties.

Parties, desiring to avoid the expense, inconvenience, and the uncertainty attendant to litigation of matters in dispute between them, have agreed on this Settlement Agreement, which they now submit for approval.

Because this Settlement represents a compromise by them, Parties have entered into each stipulation contained in the Settlement Agreement on the basis that its approval by the Commission not be construed as an admission or concession by any Party regarding any fact or matter of law in dispute in this proceeding. Furthermore, Parties intend that the approval of this Settlement Agreement by the Commission not be construed as a precedent or statement of policy of any kind for or against any Party in any current or future proceeding. (See Rule 12.5, Commission’s Rules of Practice and Procedure.)

Parties agree that no signatory to the Settlement Agreement assumes any personal liability as a result of their agreement. All rights and remedies of Parties are limited to those available before the Commission. Furthermore, the Settlement Agreement is being presented as an integrated package such that Parties are agreeing to the Settlement Agreement as a whole, as

opposed to agreeing to specific elements of the Settlement Agreement. If the Commission adopts the Settlement Agreement with modification, all Parties must consent to the modifications or the Settlement Agreement is void. As between Parties, this Settlement Agreement may be amended or changed only by a written agreement signed by Parties.

This Settlement Agreement may be executed in counterparts, each of which shall be deemed an original, and the counterparts together shall constitute one and the same instrument.

Parties agree to use their best efforts to obtain Commission approval of the Settlement Agreement. Parties shall request that the Commission approve the Settlement Agreement without change and find the Settlement Agreement to be reasonable, consistent with the law, and in the public interest.

1. Background:

- 1.1. Water loss reduction programs are part of operational effectiveness, and can be viewed as part of effective asset management strategy and a key component of water conservation programs. By incorporating water conservation and water loss reduction programs into long-term planning, the company demonstrates a commitment towards evaluating these two programs in concert with, and on more equal footing with other traditional capital investment alternatives when creating new sources of water supply.
- 1.2. The Monterey County District is subject to water supply limitations imposed by the State Water Resources Control Board as well as the Seaside Basin Adjudication. Effective October 1, 2011, the available withdrawal from the Carmel River is reduced by 121 acre-feet (“AF”) to 10,308. The same reduction will occur on October 1, 2012, and October 1, 2013. Further, on October 1, 2012 the allowed withdrawal from the Seaside Groundwater Basin (Coastal and Laguna Seca Subarea) will be reduced from 3,333 AF to 2,816 AF, a reduction of 517 AF. These water production limitations are a driving force behind California American Water’s commitment to running its Monterey County District water system as effectively and efficiently as possible.

Table 1 – Title: Monterey County District Allocation

| Source | Allocation prior to October 1, 2011 (AF) | Allocation as of October 1, 2013 (AF) | Total Reduction (AF) |
|-----------------|--|---------------------------------------|----------------------|
| Carmel River | 10,429 | 10,066 | 363 |
| Seaside Basin | 3,333 | 2,816 | 517 |
| Total all areas | 13,762 | 12,882 | 880 |

Data Source: State Water Resource Control Board Cease and Desist Order; Seaside Basin Adjudication

Note: Any production from the Sand City desalination plant or the Aquifer Storage and Recovery system is subtracted from the above totals.

- 1.3. For the greatest impact, it will benefit California American Water and its customers by having a water loss reduction program that is clearly documented and incorporated

within California American Water's Operations and Maintenance Plan required by General Order 103-A ("GO 103-A"), as part of demand management within California American Water urban water management plans, comprehensive planning studies, (or any other capital investment planning document related to infrastructure or water supply planning) that evolves to the extent that it becomes fully integrated into the normal course of doing business throughout California American Water's service territory, within the next 4-5 years.¹

- 1.4. Through the potential actions identified in this Settlement Agreement, California American Water can show its firm commitment to economically optimize the water loss reduction in Monterey County District.

2. Purpose/Objective:

The purpose of this Settlement Agreement is to confirm the commitments made for adopting non-revenue water for ratemaking purposes during 2012-2014 in each California American Water district; converting non-revenue water targets established in D.09-07-021 from percentages to volumes; establishing annual progress reporting of non-revenue water program accomplishments; adjusting the calculation methods for the Unaccounted For Water Incentive Program reward or penalty; supporting the partial settlement agreement between NRDC and California American Water, dated May 19, 2011 by incorporating the terms and conditions of Section I. Water Loss Reporting from that Partial Settlement Agreement;² documenting the current and future plans for all the non-revenue water activities; raising awareness with the Division of Ratepayer Advocates ("DRA"), the Division of Water and Audits ("DWA"), and any other Commission staff about the American Water Works Association ("AWWA") Water Loss Audit and its related recommendations, which are relatively new requirements of the Commission's Rate Case Plan adopted in D.07-05-062; and recognizing California American Water accomplishments to date,

- 2.1. Statewide Districts -- Attachment A highlights California American Water's current plans and accomplishments to date, by providing water loss reduction projects completed or planned in each California American Water district.

2.2 Monterey County District -- California American Water stated in its April 2011 Non-revenue Water Report³ for the Monterey District that it strives to employ an active, cost effective program to control leakage, expedite repair to control identified leakage, and has an aggressive

¹ The Parties acknowledge that these various documents may be on different time schedules for revision and it is the Parties intention that the preliminary action plans related to the Non-Revenue Water program activities will have a due date by October 1, 2012 as stated in the Partial Settlement between Natural Resources Defense Council (NRDC) and California American Water ("CAW/NRDC Partial Settlement Agreement"). *See* Motion For Adoption Of Partial Settlement Agreement Between The Natural Resources Defense Council And California-American Water Company On Certain Issues Presented In The General Rate Case, dated May 19, 2011, filed May 20, 2011.

² CAW/NRDC Partial Settlement Agreement, at p. 13-15, Section I. Water Loss Reporting, para. 1-3.

³ Monterey District Report on Non-Revenue Water, prepared by California American Water Operations and Engineering Staff, April 2011, in compliance with D.09-07-021, Ordering Paragraph 20.

program for replacement and/or rehabilitation of poorly performing mains, such as the Seaside Main Replacement Program. Attachment B provides the Monterey County District Non-Revenue Water Report – 12 Month Monterey Rolling Total as of May 2011. Significant reductions have been achieved in Monterey’s Main System where non-revenue water decreased from 2300 Acre Feet in 2005 to 1241 Acre Feet in 2009, a 46% reduction over the past 4 years.⁴

3. Settlement of Non-Revenue Water Volumes:

3.1. Parties agree to settle the non-revenue water volumes in Monterey County and other districts, and Special Request # 15, with terms and conditions for all California American Water districts, and additionally more specific terms and conditions for the Monterey County District, as follows:

3.1.1. Parties agree for ratemaking purposes to the non-revenue water volumes in Attachment C in each of the California American Water districts other than its Monterey County District.

3.1.2. For purposes of determining water production related expenses (power and purchased water) during the A.10-07-007 GRC, Parties agree to adopt non-revenue water volumes for the Monterey County District (includes Monterey Main system and the sub-systems) for years 2012-2014 as shown in Table 2 below. Parties agree that the non-revenue water volumes for the Carmel Valley – Seaside (Monterey Main) system will be set to the 2009 actual non-revenue water volume reduced by the water savings expected from main replacement projects.

Table 2 – Non-Revenue Water by System (Ratemaking)

| Sub-System | Actual End of Year 2009 (acre-feet) | Actual End of Year 2010 (acre-feet) | Proposed Test Year 2012 (acre-feet) | Calendar Year 2013 (acre-feet) | Calendar Year 2014 (acre-feet) |
|-------------------|--|--|--|---------------------------------------|---------------------------------------|
| Monterey Main | 1261 | 1419 | 1252 | 1251 | 1251 |
| Ambler Park | 12 | 17 | 12 | 12 | 12 |
| Bishop | 3 | 6 | 3 | 3 | 3 |
| Chualar | (31) | 3 | 3 | 3 | 3 |
| Hidden Hills | 33 | 20 | 33 | 33 | 33 |
| Ralph Lane | 1 | 1 | 1 | 1 | 1 |
| Ryan Ranch | 3 | 4 | 3 | 3 | 3 |
| Toro Service Area | 25 | 21 | 25 | 25 | 25 |

Data Source: Monterey County District Non-Revenue Water Report – 12-Month Rolling Total

⁴ See A.10-07-007, Exhibit D, Minimum Data Requirement II.E.3 and Exhibit A, Table 3.13.

- 3.1.3. Special Request # 15 – Expressing Non-Revenue Water as Volumes rather than as Percentages. Parties agree that California American Water shall monitor, record, and report specific volumetric amounts for non-revenue water instead of by percentage, for ratemaking purposes. Non-revenue water volumes are used in ratemaking calculations for purchased water, purchased power, and chemicals. Using percentage indicators to assess water loss standing in water utilities gives misleading and unreliable measures of utility performance because a) It is impossible to reliably represent multiple types of non-revenue water typically occurring in a water utility with a single simplistic percentage; b) A simple percentage reveals nothing about water volumes and costs, the two most important factors in water loss assessments of water utilities; and c) The mathematical flaws of the percentage indicator stem from the fact that the percentage is unduly affected by varying levels of customer consumption.⁵ Using a specific volumetric amount, instead of a percentage, will produce a more accurate result for ratemaking purposes.
- 3.1.4. Considerations for the Monterey County District - Parties agree that using the last recorded year of water production data as the forecast for ratemaking purposes in this General Rate Case (“GRC”) for its Monterey County District is inappropriate, given the significance of water loss reduction programs in Monterey County. Parties agree that it is appropriate for California American Water to use the results of the AWWA Water Loss Audit Report for each of its sub-systems in its Monterey County District, including trends in water loss efficiency metrics, volumetric quantities, and the known feasible cost-effective methods available to reduce non-revenue water. Using those results to calculate the NRW volumes for forecasting water losses will result in a more accurate forecast for Monterey District water production.

4. Develop Action Plans:

- 4.1. Parties agree to adopt the non-revenue water settlement terms and conditions developed by NRDC and California American Water. Parties agree that California American Water shall establish fully justified water loss reduction plans based on an economically derived business case or cost benefit analysis that will assist California American Water in ensuring that economically feasible priorities are set for further water loss reduction projects in all of its districts. This step will ensure that priorities are made with the goals of cost effectiveness for optimal customer benefits.
- 4.2. The Parties intend for the action planning to evolve over the next four years as follows:

⁵ See <http://www.awwa.org/Resources/WaterLossControl.cfm?ItemNumber=47846&&navItemNumber=48155>

- 4.2.1. Summary of non-revenue water reduction efforts and activities that are already underway, and being implemented from July 2009 through September 30, 2012) [see Attachment A and A.10-07-007, Exhibit D, Minimum Data Requirement II.E.4]⁶
- 4.2.2. Preliminary action plan (this action plan covers the period from October 1, 2012 through December 31, 2014, coinciding with the end of the three year GRC implementation timeframe) This plan is to be submitted by October 1, 2012. The Parties agree to review and comment on the preliminary action plan no later than March 31, 2013 so that a finalized Action Plan for all non-revenue water activities can be submitted for Commission approval in the California American Water 2013 General Rate Case (scheduled filing date on July 1, 2013).
- 4.2.3. Fully economically justified action plan as described in the Partial Settlement Agreement between NRDC and California American Water,⁷ p 13-15, section I. Water Loss Reporting, paragraphs 1-3. and request for inclusion in rates during the Test Year 2015 of the next GRC, or, the timeframe 2015-2017. (Developed by California American Water and transmitted to CPUC in next GRC Application by July 1, 2013 for implementation beginning January 1, 2015.)

4.3. Define Data and Performance Metrics

The Parties agree that for ratemaking purposes, California American Water shall use the term known as “non-revenue water” in accordance with the AWWA Water Loss Audit in lieu of the outdated term “Unaccounted for Water”. California American Water shall use the definitions and nomenclature defined by the AWWA Water Loss Audit for uniformity and consistency throughout the service territory. The AWWA water loss audit report spreadsheets calculate several performance indicators that Parties agree may be used for monitoring, reporting and trending purposes. Parties agree that Cal Am shall as a minimum, track, monitor and report, one performance indicator that is consistent with terms used in the 20 by 2020 Water Conservation Plan -- “real losses per service connection per day.”⁸ The Parties understand that with the Commission, non-revenue water program data is used in several ways that include, but are not limited to the following:

⁶ See document titled: “California American Water NRW Capital Projects and Reduction Efforts/Activities”

⁷ CAW/NRDC Partial Settlement Agreement, at p. 13-15, Section I. Water Loss Reporting, paragraphs 1-3.

⁸ The State of California 20 x 2020 Water Conservation Plan, February 2010, recommends that non-revenue water should be expressed in terms of gallons per connection per day.

- a) To calculate and track the following costs in the Modified Cost Balancing Account (“MCBA”): water treatment or water production expenses such as chemicals, purchased water, purchased power, etc.;
- b) To set targets for the estimated water loss reductions to be achieved by California American Water’s non-revenue water program.
- c) To calculate the values defined in the Unaccounted for Water Incentive Program promulgated by D.09-07-021;

Parties recognize that non revenue water volumes forecasted for ratemaking purposes will be used for calculating certain costs of service;
Parties acknowledge that NRW ratemaking forecasts are separate and distinct from the water loss targets included in the Unaccounted for Water Incentive Program

4.4. Education and Communication

The Parties acknowledge that key team members from both DRA and California American Water will need to familiarize themselves with this Agreement. Accordingly, during the 2012-2014 GRC implementation periods, the Parties agree to meet annually after the Annual Report has been transmitted to the CPUC (in 2012, 2013, and 2014). The meeting objective will be to ensure Parties effectively implement this Settlement Agreement and address any issues and concerns to ensure a common understanding of the non-revenue water activities in the next General Rate Case.

4.5. Develop or Adopt and Communicate the method for estimating leak volumes and Estimating Potential Water Savings

The Parties agree that they need a common understanding of California American Water’s methods for estimating leak volumes and for estimating potential water savings from proposed NRW interventions. Parties recognize that although water utilities may need to apply operations or engineering judgment in these determinations, that a consistent uniform industry standard should be adopted. Parties agree to adopt a consistent industry standard agreeable to all parties as the company-wide method for estimating leak volumes and estimating potential water savings in conjunction with the Preliminary Non Revenue Water Action Plan development that shall be performed by October 1, 2012. The Parties agree to review and comment on the Preliminary Non Revenue Water Action Plan no later than March 31, 2013 so that a finalized Action Plan for all non-revenue water activities can be submitted for Commission approval in the California American Water 2013 General Rate Case (scheduled filing date of July 1, 2013).

4.6. Propose Specific Water Loss Targets

California American Water Statewide Considerations – The Parties acknowledge that reducing NRW is a continuous improvement process - not an end state, and that there are practical limitations as to what can reasonably be achieved. And, that as California American Water

approaches improved levels of Infrastructure Leakage Indices⁹ (“ILI”) in each district, and starts to reach the zone of unavoidable real losses as well as technological system accuracy limitations for apparent losses, that there are practical and financial limitations to what can be cost effectively achieved. The parties agree that California American Water shall set specific water loss targets for each three-year GRC period, with the objective of targeting the lowest volume of non-revenue water that can be achieved on a cost-effective basis.

Parties agree that as part of its fully economically justified Non-revenue Water Loss Reduction action plan to be submitted to CPUC on July 1, 2013 as part of the next California American Water GRC Application, that California American Water shall ensure that they propose **specific water loss targets**, based on economic justifications, for each of its districts.¹⁰

For specific Monterey County District consideration – California American Water shall propose specific water loss targets for each of its Monterey subsystems, including but not limited to those with Monterey Peninsula Water Management District oversight such as: the Monterey Main (Carmel/Seaside), Bishop, Hidden Hills, and Ryan Ranch Systems, as well as the Toro Service Area, which was not assigned a specific water loss target in D.09-07-021. This means that California American Water will propose specific targets for Real Losses and Apparent Losses. Accordingly, since the targets will be considered during the next California American Water GRC, these targets shall be subject to review and approval by the Commission, following review and comment by DRA and other parties to that GRC.

Considerations for California American Water Monterey District – Parties acknowledge that as California American Water gets closer to the point of diminishing returns, the cost of achieving additional reductions increases. Because portions of the Monterey County District operate under water supply constraints that may impose significant financial penalties for noncompliance (see section 1.2), this situation underscores the compelling need for California American Water to ensure it conducts cost benefit analysis and provides economic justifications for its Monterey subsystems.

4.7. Modify the Calculation of the D.09-07-021 Mechanism:

The Parties agree that unintended consequences appear to be created by the existing mechanism, such that the penalty calculated for 2010 is higher than the typical water utility fine or penalties recently imposed upon California American Water by the Commission.¹¹ Parties agree that the

⁹ The Infrastructure Leakage Index is one of the performance indicators calculated by the AWWA Water Loss Audit Report spreadsheets and is defined as the Ratio of Current Annual Real Losses (CARL) to Unavoidable Annual Real Losses (UARL).

¹⁰ Reference: CAW/NRDC Partial Settlement Agreement, p. 15, paragraphs 3.f and 3.g.

¹¹ According to the 2010 Monterey District WRAM and MCBA Report of California American Water, the 2010 Unaccounted for Water Incentive Program resulted in a \$628,982 penalty amount that is tracked in the Monterey District MCBA. For example, the Commission has imposed other fines or penalties to California American Water during other GRC proceedings, such as: \$40,000 for not filing Quarterly Reports of Customer Service performance indicators and \$10,000 for inadequate customer notification of proposed rate increases.

mechanism needs to be changed on a prospective basis.¹² The Parties agree that changes to the financial incentive mechanism set by D.09-07-021 are required because the current penalty structure is unrealistic and is resulting in excessively high penalties. The parties agree and believe that the intent of the decision was to identify a NRW target that would not be subject to significant fluctuation over time. Because reductions in system demand due to conservation can mask the system efficiency, Parties recommend that the percentage targets should be converted to their volumetric equivalents based on California American Water production in each subsystem at the time of the decision, July 2009. For example, the calculated value for the Monterey Main subsystem will be set at 1,187 acre feet. Parties agree the financial incentive calculation shall also be modified to be based upon marginal production cost plus a 10% incentive premium as opposed to using the retail cost of water to customers. Further, the Parties agree that California American Water shall provide information in its next GRC, whose application is scheduled to be submitted on July 1, 2013, to substantiate the appropriateness of the modified NRW financial incentive mechanism and determine whether it should continue in its modified form.

Table 3 – Non-Revenue Water Loss Penalty/Reward Calculation Targets

| Monterey County District | July 2009 Target | July 2009 Target |
|---|------------------------------|-----------------------------------|
| D.09-07-021 Unaccounted for Water Targets | Expressed as a Percentage | Expressed as a Volume (Acre Feet) |
| Monterey Main System | 9% | 1,187 |
| Ambler | 13.5% | 29 |
| Hidden Hills | 13.8% | 29 |
| Bishop | 9% | 19 |
| Chualar | 9% | 12 |
| Ralph Lane | 15.5% | 1.4 |
| Ryan Ranch | Not addressed by D.09-01-027 | NA |
| Toro | Not addressed by D.09-01-027 | NA |

¹² This means that the effective period for the existing incentive/penalty mechanism under D.09-07-021 shall remain active until such time that the Commission authorizes a modification.

4.7.1. Considerations for Monterey – Parties agree that California American Water needs a modification to the financial reward or penalty. The calculation will use the marginal production cost for a facility like Ord Grove (\$ 250/ AF).¹³ The Parties intentionally are using the marginal production cost of Ord Grove because the resulting incentive or penalty becomes more reasonable. Parties are intentionally *not* using the system average marginal cost of production and intentionally *not* using the marginal cost of the Regional Desalination Plant, which is not currently producing water. The revised amount is therefore set at \$275/AF (\$250 marginal production cost at Ord Grove plus 10% of \$250 or \$25). The Parties agree that \$275 per acre-foot is a reasonable amount to be used to calculate the financial reward or penalty.

Table 4: Data Used to Calculate Per Acre-Foot Amount

| Production (Acre Feet) | Total Costs | Cost per Acre Foot |
|-------------------------------|--------------------|---------------------------|
| 369.24 | \$101,541 | \$275 |

Date Source: Spreadsheet of Ord Grove Treatment Plant Cost To Produce Water 6/22/2011

The California Urban Water Conservation Council’s (CUWCC) Memorandum of Understanding, amended June 9, 2010 requires signatory utilities to quantify their current volume of real and apparent loss by using the American Water Works Association (AWWA) Water Loss software. AWWA’s “Water Audits and Loss Control Programs” (M36) manual describes this software as the tool for conducting a standard water audit in accordance with IWA/AWWA Water Audit Method. This method, published in 2000, is considered by the AWWA Water Loss Control Committee to be the current best management practice for reliably tracking water consumption and losses. Accordingly, the Parties recommend adopting a fixed volumetric target for each of the eight Monterey County District sub-systems.

4.7.2. Convert the existing targets from percentages to volumes and establish them as fixed targets rather than constantly changing targets:

Parties agree that the percentage targets shall be converted to their volumetric equivalents that existed as of the date of D.09-07-021. The resulting targets shall be used in the calculations set in the incentive program established by D.09-07-021.

¹³ Ord Grove was selected as a higher production cost facility due to the application of Ozone for hydrogen sulfide (H2S) control. At the time of settlement, these Ord Grove expenses were greater than the production costs at the Begonia Iron Removal Plant.

**Table 5 - Volumetric Equivalents for the Monterey System Unaccounted For Water Targets
Originally Adopted by D.09-07-021**

| Monterey County District | July 2009 Target | 2012 Target | 2013 Target | 2014 Target |
|---|-------------------------|--------------------|--------------------|--------------------|
| D.09-07-021 Unaccounted for Water Targets | (Acre Feet) | | | |
| Monterey Main System | 1,187 | 1,187 | 1,187 | 1,187 |
| Ambler | 29 | 29 | 29 | 29 |
| Hidden Hills | 29 | 29 | 29 | 29 |
| Bishop | 19 | 19 | 19 | 19 |
| Chualar | 12 | 12 | 12 | 12 |
| Ryan Ranch | NA | 8 | 8 | 8 |
| oph Lane | 1.4 | 1.4 | 1.4 | 1.4 |
| Toro | TBD in next GRC | | | |

Data Source: D.09-07-021, p. 56, converted to acre-feet.

4.8. Monitor and Report Accomplishments Periodically

Parties agree to periodically monitor the status of the non-revenue water programs and water conservation programs on a mutually convenient basis, no less frequently than annually. Parties will work collaboratively to determine useful and mutually agreed-upon reports. California American Water Statewide Response - The AWWA Water Audit shall be completed annually for each system and compared to previous years.

To ensure that DRA is able to track progress towards managing levels of NRW, California American Water will provide at least annually (coincident with March 31 annual report to CPUC) the accomplishments of the NRW program,

- NRW Volume for the 12-month Period (source: AWWA Audit Software)
- Periodic Summary Reports¹⁴:
 - Leak Report – Service and Main Leaks
 - Leak Detection Report
 - Meter Testing / Meter Replacement

¹⁴ CAW/NRDC Partial Settlement Agreement, at p. 14, paragraphs 2.a and 3.b recommends modifications to the Repair Crew Leak Report Forms which are a key data source for these Periodic Summary Reports.

- Activities Report -- (California American Water will report accomplishments compared to plans, based on the Action Plans identified in section 5.2)

4.9. Evaluate the Accomplishments

Parties commit to evaluating the accomplishments of the NRW program and commit to including an interim evaluation based on the preliminary action plan that is to be submitted by October 1, 2012 in the next GRC, whose application is scheduled to be submitted on July 1, 2013.

4.10. Revise the Rate Case Plan

Parties agree to work collaboratively to support and advocate for the necessary revisions to the Rate Case Plan adopted by D.07-05-062 related to the requirements for AWWA Water Loss Audits and water loss reduction goals.

Parties agree that the Appendix in the Rate Case Plan decision must be revised to comport with the intention of the AWWA Water Loss guidance in this paragraph, which uses outdated terminology such as “unaccounted for water”:

“In connection with the water loss audit described above, the utility shall conduct and submit the results of a cost/benefit analysis for reducing the level of unaccounted water reported in the water loss audit. If unaccounted water is more than approximately 7% for each district or service area, submit a plan to reduce unaccounted water to a specific amount.”¹⁵

Parties recommend that the underlined phrases above should be revised to delete references to “unaccounted for water” and instead clarify the requirements related to “non-revenue water”. Additionally, the revisions should clarify that the Commission will expect the utilities to develop water loss reduction programs in accordance with AWWA Water Loss guidelines, and that the utilities shall submit goals for maximizing water loss reduction to the extent cost effective.

5. **Conclusion** – This Settlement Agreement was Executed by the Parties as of the date first set forth below.

6. Attachments

- 7.1. Attachment A: “California American Water NRW Capital Projects and Reduction Efforts/Activities”.
- 7.2. Attachment B: “Monterey County District Non-Revenue Water Report – 12 Month Rolling Total (as of May 2011)”.
- 7.3. Attachment C: “Non-Revenue Water Volumes Adopted for Ratemaking in All Districts other than Monterey County”.

¹⁵ D.07-05-062, page A-28, paragraph E.4.

This Settlement Agreement may be executed in counterparts, each of which shall be deemed an original, and the counterparts together shall constitute one and the same instrument.

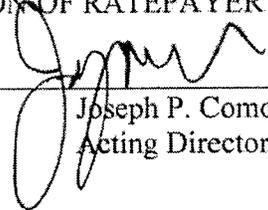
This Settlement Agreement was executed by the parties as of the date first set forth below.

Dated: July 28, 2011

Respectfully submitted,

DIVISION OF RATEPAYER ADVOCATES

By:



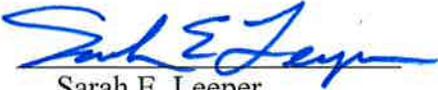
Joseph P. Como
Acting Director

This Settlement Agreement was executed by the parties as of the date first set forth above.

Dated: July 28, 2011

Respectfully submitted,

CALIFORNIA AMERICAN WATER

By: 
Sarah E. Leeper
Vice President-Legal, Regulatory

This Settlement Agreement was executed by the parties as of the date first set forth above.

Dated: July 28, 2011

Respectfully submitted,

NATURAL RESOURCES DEFENSE COUNCIL

By: Edward R. Osann
Edward R. Osann
Senior Policy Analyst

ATTACHMENT A

California American Water NRW Capital Projects and Reduction Efforts/Activities

**Attachment A:
California American Water NRW Capital Projects and Reduction Efforts/Activities**

This attachment provides California American's investment and recurring projects which we believe will assist in our efforts to reduce non revenue water. It also provides the past and future activities California American has or plans to complete in its effort to reduce non revenue water.

NOTE: The investment and recurring dollar amounts noted are subject to change based upon the Commissions Final GRC Order.

SOUTHERN DIVISION Investment Projects in 2010 GRC Focused on Non Revenue Water Reduction:

Main replacement projects are identified as part of each district's Condition Based Assessment, which is part of the Comprehensive Planning Study. Leak history is a large component of the prioritization scoring and therefore these projects help reduce the real loss component of NRW.

SAN DIEGO

IP-0530-1 / Small Main Replacement program / Requested \$250,000 per year, settlement dollars will reduce by 5% or \$237,500 per year

IP-0530-29 / Hollister Street Transmission Main Replacement Phase 3 / Requested \$2,905,000, settlement dollars will reduce by 5% or \$2,759,750

IP-0530-6 / Hollister Street Transmission Main Replacement Phase 2 / Requested \$1,436,000, settlement dollars will reduce by 5% or \$1,364,200

LOS ANGELES

IP-0550-129 / Install 1,600 feet of 8-inch main (Baldwin Hills) - Requested \$588,060, no change in dollars expected from settlement

IP-0550-138 / Install 2,700 feet of 8-inch main (Duarte) - Requested \$912,129, settlement dollars will reduce by 5% or \$868,410

IP-0550-140 / Install 2,000 feet of 12-inch main (San Marino) - Requested \$695,469, no change in dollars expected from settlement

IP-0550-147 / Install 2,700 feet of 8-inch main (Duarte) - Requested \$930,441, no change in dollars expected from settlement

IP-0550-152 / Install 2,800 feet of 8-inch main (Duarte) - Requested \$960,000, settlement dollars will reduce by 5% or \$915,000

VENTURA

IP-0551-92 / Calle Yucca Turnout 14-inch Main Improvements - Requested \$500,000, settlement dollars will reduce by 5% or \$475,000

CENTRAL DIVISIONS (MONTEREY) - Investment Projects in 2010 GRC Focused on Non Revenue Water Reduction:

IP-0540-154, 210,235 / Mainline Distribution Valve Replacement - Requested \$300,000 per year – Mainline distribution valve replacement will continue our program to replace vales that have failed to allow leaks to be isolated quickly to reduce losses.

Attachment A:

California American Water NRW Capital Projects and Reduction Efforts/Activities

IP-0540-277, 278, 280 / Pressure Regulating Station and Diaphragm Valve Replacement - Requested \$100,000 per year to ensure pressures are maintained in the distribution system and reduce the number of leaks due to pressure spikes.

IP-0540-249 / Seaside Main Replacement - Requested \$2,400,000 per year, (total main replacement is 19,000 feet, or about 6,300 feet a year) to continue replacement of old steel mains in Seaside that have a historically high break rate and are beyond their useful life.,

IP-0540-283 / Carmel Valley Transmission Main - Requested \$1,560,000, (reflects 5,500 feet of transmission main being replaced) to replace older sections of the transmission main that are prone to failure.

IP-0540-297 / Carmel Valley Main Replacement - Requested \$1,194,000, (reflects 4,693 feet of small mains being replaced) to replace smaller mains in Carmel Valley that have a historically high break rate and are beyond their useful life.

IP-0540-201, 212, 213 / Polybutylene Service Replacements - Requested \$650,000 per year to replace PB services that have been shown to become brittle and fail prematurely.

NORTHERN DIVISION - Investment Projects in 2010 GRC Focused on Non Revenue Water Reduction:

Sacramento - Three IP projects (0560-154, 155 and 156) will replace old AC mains in Parkway. We have experienced leaks due to service saddle failures in this area as well as line failures resulting in house flooding (insurance claim and lawsuit still pending for one customer). These projects will eliminate the future liability as well as help reduce NRW.

SOUTHERN DIVISION - Recurring Projects in 2010 GRC Focused on Non Revenue Water Reduction:

All Districts submitted budgets for RP Item C Mains – Unscheduled, and Item H Services – Replaced. These Line Items are funded for the purpose of replacing leaking assets and the budget developed based on actual historical experience. Lack of adequate funding will result in the deferral of some leaks, thereby increasing real losses in the system. Therefore it is critical to preserve the requested funding for these items as a tool for managing the real loss component of NRW.

All Districts also submitted budgets for RP Item J Meters – Replaced, which is funded to replace meters that have exceeded their useful life or are found to have malfunctioned. Older meters under register usage and contribute to a higher amount of apparent loss in a water system. Therefore it is critical to preserve the requested funding for this item as a tool to minimize the apparent loss component of NRW.

CENTRAL DIVISION (MONTEREY) - Recurring Projects in 2010 GRC Focused on Non Revenue Water Reduction:

RP-0540-B, C / - Requested \$ 1,647,686 to replace mains determined by Operations to have a high break rate, or to repair emergency failures in the distribution system.

Attachment A:

California American Water NRW Capital Projects and Reduction Efforts/Activities

RP-0540-F / - Requested \$ 641,696 to replace valves determined by Operations to have failed in the distribution system.

RP-0540-H / - Requested \$ 2,312,690 to replace service lines that exhibit a high break rate, or to repair emergency failures in the distribution system.

RP-0540-J / - Requested \$ 3,786,692 to replace customer meters to ensure accuracy and compliance with GO 103A.

RP-0548-H / - Requested \$ 310,349 to replace mains determined by Operations to have a high break rate, or to repair emergency failures in the Toro distribution system.

RP-0548-J / - Requested \$ 66,753 to replace customer meters to ensure accuracy and compliance with GO 103A in the Toro system.

NORTHERN DIVISION - Recurring Projects in 2010 GRC Focused on Non Revenue Water Reduction:

Larkfield has a very low NRW % and we are reaching a point of diminishing returns for this system. There are a couple of areas in Larkfield where we would like to install mains to provide loops to avoid present dead ends and the associated flushing and water quality issues. All of these are relatively short and we intend to do them as RP's. Two of those areas are along Larkfield Drive. We did one last year and are developing plans to do one this year, if the budget allows. Another is along Old Redwood Highway north of Airport Rd. A developer is proposing a pipeline extension for a new project. If that project moves forward, we would contribute some funds to extend the line about another 250 feet to make the closure. That would use all our RP allowance for "pipe lines - new " this year so the Larkfield Drive Project will be postponed until next year.

SOUTHERN DIVISION Non Revenue Water Reduction Activities/Efforts as of June 2011:

1. Testing or replacement of all production and customer meters on a standard periodicity based on meter size (apparent losses).
2. Redesign and upgrading of large meter stations to allow testing in place while maintaining service (apparent losses).
3. Evaluating large users to confirm proper meter application or the need for retrofit (e.g. replacing turbine meters with compound meters to capture a wider range of flows) (apparent losses).
4. Assiduous investigation of active zero consumption accounts (apparent losses).
5. Prompt yet prudent repair of identified leaks, i.e. severity measured against the need to repair during regular vs. overtime hours (real losses).

CENTRAL DIVISION (MONTEREY) Non Revenue Water Reduction Activities/Efforts as of June 2011:

- a) Customer Database/GIS Mapping System/Google Earth Overlay: Monterey has implemented a program that merges its customer database with its GIS maps. This information is then merged with Google Earth to provide an accurate picture of existing homes, service lines, and consumption data for each premise. When a home or business is identified via Google Earth, and appears to have landscaping or activity that might require a source of water but yet lacks

Attachment A:

California American Water NRW Capital Projects and Reduction Efforts/Activities

- consumption data from the OROCOM database an investigation occurs to determine the true situation.
- b) Implementation of the American Water Works Association Water Audit Software: California American Water uses the water audit software to review and classify system losses as “real” or “apparent.” In accordance with AWWA definitions, contributors to apparent losses include unauthorized consumption, meter inaccuracies, and data handling errors. Real losses are defined as the total system losses minus apparent losses. Based on the audit results, California American Water identified a significant portion of system losses as real losses and has focused its efforts appropriately.
 - c) American Water Works Association – Partnership Distribution Optimization Program: In 2011 California American Water became a charter member of AWWA’s Partnership Distribution Optimization Program (the program was officially announced by the AWWA on January 14, 2011). The program includes base line data gathering for the distribution system (pressures, chlorine residuals, flow velocity, etc), a self assessment, and the achievement of optimized performance for its distribution system. The program evaluates distribution systems pressure management, main break frequency, water quality preservation, and physical security. While the program is new to the industry, California American Water believes that the focus on distribution system operations will provide significant benefit to its customers.
 - d) Employee Reward Program: California American Water implemented a reward program for employees recognizing and reporting cases of water theft and unmetered consumption. The program consists of a reporting form that is submitted by employees recognizing cases of theft, unmetered accounts, illegal connections, etc. The form is approved by management and a \$ 25 dollar gift card issued to the employee as an incentive.
 - e) Public Outreach: California American Water has issued press released in its Central Division service areas advising the public of its program to reduce non-revenue water. The release included details on efforts taken to prevent theft from fire hydrants, and requested customers to be “on the look out” for suspicious activity.
 - f) Main Line Replacement – California American Water completed a condition-based assessment of its buried infrastructure in conjunction with its consultant, Hatch Mott MacDonald. The final draft of the condition-based assessment report issued in September 2009 identified distribution system piping and prioritized replacement based on leak history, pipe age, materials of construction, and other similar factors. Based on the results of this assessment, California American Water embarked on an aggressive main replacement project in the Seaside area. The distribution system in Seaside consists of thin-walled steel water mains.
1. Acoustic Leak Detection – California American Water continues to pursue an aggressive leak detection program throughout the main system. In 2009, California American Water installed 4,100 MLOG acoustic leak detection devices on customer service lines.

Attachment A:

California American Water NRW Capital Projects and Reduction Efforts/Activities

2. Active Leak Detection - California American Water has contracted with Utility Services, Inc. to provide a comprehensive leak detection survey that will “sweep” the entire main system every three years. 200 miles were checked in 2010.
3. Service Line Replacement – Polybutylene service lines fail at a much higher rate than other materials. Installation of occurred between 1978 and 1987 before discontinuance because of poor performance and frequent breaks. California American Water has replaced approximately 2,500 Polybutylene service lines and 2,500 remain in the system.
4. Regulating and Altitude Valve Repair and Replacement – There are approximately 70 pressure-reducing valves in the main system. General Order 103-A requires system pressure maintenance of between 40 psi and 125 psi. Properly operating pressure-reducing valves ensures maintenance of this standard. Excessive system pressure, e.g. greater than 125 psi, results in adverse impacts on system loss volumes. California American Water is pursuing a number of projects to repair and replace pressure-reducing valves throughout the system.
5. Meter Replacement - California American Water continues with its meter replacement project to ensure meter accuracy and compliance with the General Order 103-A.
6. Data Handling Errors – California American Water has a process to review customer accounts and billing to ensure that erroneous data is recognized and corrected. The current billing software is able to “flag” accounts and meter readings where consumption deviates from historical levels. This process also helps in alerting customers to possible leaks on their side of the meter.
7. Unauthorized Consumption – California American Water, in cooperation with the Monterey Peninsula Water Management District (“MPWMD”), implemented an aggressive program to reduce unauthorized consumption. Aspects of the program require all contractors to provide a MPWMD permit prior to receiving a temporary construction meter.
8. California American Water has installed over 5000 hydrant rings throughout the service area warning that tampering with a hydrant is theft. California American Water has contacted local law enforcement agencies to advise them of the program and to assist in prosecuting violators.

NORTHERN DIVISION Non Revenue Water Activities/Efforts to Reduce Non Revenue Water as of June 2011:

We conduct annual leak surveys (by a third party). Operations identify suspect areas for investigation. The survey identifies leaks on both the California American Water mains and on the customers’ side of the system. Identified leaks on California American Water pipe are repaired ASAP. Customers are notified of identified leaks on their service lines. If it is a flat rate customer, and they don’t repair their leak in a reasonable time, we notify and install a meter (haven’t had to do that yet, but that is our plan). We make every attempt to balance the cost vs. the extent of these surveys. Generally our systems are fairly “tight”. In the future we could spend more on surveys but think at least for now the level of effort is appropriate given the fact that we still have significant numbers of flat rate customers.

Attachment A:

California American Water NRW Capital Projects and Reduction Efforts/Activities

It is not truly possible to calculate our NRW in Sacramento until the meter retro fit project is complete (2014). In the past an assumed allowance of 9.5% has been utilized. We believe this to be reasonable given industry norms.

SOUTHERN DIVISION - Planned 2012-2014 Activities/Efforts to Reduce Non Revenue Water:

1. All Districts: Continuation of all the above activities.
2. All Districts: Completion of all IP's listed above, if approved in this GRC (real losses).
3. LA: Completion of the "System Improvements" IP in the Duarte System, if approved in this GRC, will allow for the eventual retirement of the Duarte/Bradbury Irrigation System.
4. LA and SD: The move to monthly reading in LA and SD if approved in this GRC will result in more timely identification and investigation of active zero consumption accounts, but it will not have a perceptible impact on improving apparent losses.

CENTRAL DIVISION (MONTEREY) - Planned 2012-2014 Activities/Efforts to Reduce Non Revenue Water:

In the area of main breaks and service leaks is believed that continued replacement of mains that have reached the end of their useful life is an important and effective method to reduce non-revenue water. The magnitude of this reduction is difficult to quantify, but replacing mains that have little remaining service life will result in fewer breaks which will lead to a reduction of non-revenue water.

1. California American Water will continue to locate leaks by using the Mloggers as a general leak location tool followed by leak correlation that is and will continue to be an effective method to pinpoint areas of the distribution system in which leaks are occurring. We believe the Mlogger system serves essentially the same function as the sub-metered zone in that it helps locate areas of increased leakage, thus even though sub-metered zones will not work well in Monterey, the use of Mloggers will assist in pinpointing area of growing number of leaks.
2. Reduced Pressure Zones (RPZ) will be investigated as an option as they can have a dramatic effect on the reduction of non-revenue water as the lowered operating pressure may result in fewer system leaks and potentially a lower UARL. California American Water as a part of the Phase I ASR project is installing its first large RPZ and will use information gathered from this zone to determine the effectiveness on non-revenue reduction. A large number of main breaks occur in the northern portion of Seaside which lies just to the north of the newly installed RPZ for the Phase I ASR. California American Water will further investigate as part of its update to the Condition Based Assessments and its Comprehensive Planning Studies the creations of RPZ in northern Seaside versus other programs such as main replacement to determine which program yields the better long term reduction of NRW.
3. California American Water will continue its current practices of yearly testing of all meters larger than 2-inch and is considering a pilot program to replace certain turbine meters with single-jet meters. The pilot program will be a smaller

Attachment A:
California American Water NRW Capital Projects and Reduction Efforts/Activities

replacement capital project used to replace meters that have exceeded their service life.

4. California American Water will continue to focus on reducing its Infrastructure Leakage Index (ILI) (computed as the amount of “real losses” divided by the “UARL”) as close to 1.0 as possible (which basically means that the amount of real losses is equal to the amount of unavoidable real losses). The costs of obtaining this goal need to be factored into the decision of setting this goal. The computed ILI for Monterey is currently 1.08.
1. The Monterey District will continue to conduct water loss audits using the AWWA methodology.
2. Focus on the replacement of mains with high consequence of failure. Examples of high impacts include the potential to threaten human health and safety, cause extraordinary damage to above or below ground structures, cause extensive or extended interruption of water service or disrupt transportation or commerce. The strategy to address these concerns in the Monterey system include Identifying high risk mains; performing regular condition assessments and periodic leak detection of high risk mains to determine their condition (probability of failure) and monitor as necessary
3. Continue focus on mitigating leak losses - The Monterey District has the ability to quickly implement quality repairs and considers this an important aspect of its comprehensive NRW plan. Furthermore, timely pipeline renewal of aging pipes is essential to controlling NRW. Effective asset management tools are employed to determine the appropriate time for pipe renewal and this data is incorporated into each general rate case. Generally, proper active leakage control, and effective repairs ensure that installed pipelines meet their full service life before the ultimate rehabilitation or replacement becomes necessary.
4. Reductions to authorized unmetered losses - unmetered losses include the use of blowoffs and flushing operations for water quality purposes, the filling of mains and storage facilities when installed or rehabilitated, and the use of fire services and hydrants for firefighting. The Monterey District’s comprehensive NRW strategy includes a continued focus on this use of water to see that they are efficiently employed, including periodic evaluation of the flow rate and duration of blowoff operations; testing shorter runs of new or rehabilitated mains to minimize loss in the event of a pressure test failure; working with authorized users (Fire Departments) to quantify authorized, unmetered losses and educating them on the use of hydrants, especially during training exercises.
5. Water Research Foundation Pressure Study in the Company’s Toro Distribution System: California American Water is participating in the Water Research Foundation’s Project # 4321 – Pressure Management Baseline / Optimized Utility Case Study that will be used as a basis in support of AWWA’s Distribution Partnership program for distribution systems mentioned above. The systems selected for actual case studies in California include both the Toro system and the Larkfield system. Following data collection, the goal of the study is to integrate optimized pressure management with other distribution system activities including main breaks/repairs, water losses, backflow sensing metering,

Attachment A:

California American Water NRW Capital Projects and Reduction Efforts/Activities

flow monitoring, hydraulic modeling, and water quality monitoring. The case studies will be used to develop guidance on national best practices and the cost/benefit of implementing the programs in support.

SOUTHERN DIVISION - Long Term Planned Efforts/Activities to Reduce Non Revenue Water

1. LA: The eventual retirement of Duarte/Bradbury Irrigation System, if approved in this GRC, will reduce undetected non-surfacing leakage and eliminate evaporation from open reservoirs.
2. LA: Cost recovery to implement mobile acoustic leak detection surveys may be requested for the 2015-17 GRC, but anecdotal evidence from the Central and Northern Divisions who are using such services now indicates that the number and severity of leaks discovered as measured against the cost of the service may not justify doing so. It certainly doesn't make sense for the SD and VN districts where the very low leak incident rates and extremely low NRW percentages are already near if not at the physically unavoidable apparent and real loss rate.

NORTHERN DIVISION - Long Term Planned Efforts/Activities to Reduce Non Revenue Water:

1. Fire Flow Tests - In the future if we were to charge for the actual water and identify it as a part of the service and fee and send that portion of the collected funds to our "water sales - revenue", then that water would not be NRW (because we were paid for it). Similarly for engineering projects and developers projects we could require them to pay for all water used for pipe line filling, flushing and testing (sometime we provide it as a part of the contract). In the case of our contractor they will just increase their project cost to us by that amount, but because we were paid for it it's no longer NRW. By using controls such as these we could reduce our NRW % - it's a game, serves little practical purpose but would make us look better on paper!
2. Make sure we are consistent with our completion of the AWWA forms. i.e. use of default values vs. estimates for losses.
3. Clarify how write offs for bad debts are carried in the NRW accounting forms. I'm not sure how this is treated. Maybe another reason to reduce bad debts!
4. Reduce system operating pressures in Sacramento. Going forward install VFD's and SCADA systems with the goal to reduce pressures.

ATTACHMENT B

**CALIFORNIA AMERICAN WATER
Monterey Co. District
Non-Revenue Water Report - 12 Month Rolling Total
(1000 Gallons)**

Attachment B:

**CALIFORNIA AMERICAN WATER
Monterey Co. District
Non-Revenue Water Report - 12 Month Rolling Total
(1000 Gallons)**

CV-Seaside-Sand City

| | Monthly Total | | | | 12 Month Rolling | | | |
|--------|-----------------|-------------|---------|-------|------------------|--------------|---------|-------|
| | System Delivery | Consumption | NRW | NRW % | System Delivery | Cons (ORCOM) | NRW | NRW % |
| Sep-08 | 452,453 | 390,683 | 61,770 | 13.7% | 4,558,300 | 3,958,774 | 599,526 | 13.2% |
| Oct-08 | 406,301 | 365,208 | 41,093 | 10.1% | 4,583,829 | 3,940,905 | 642,924 | 14.0% |
| Nov-08 | 312,579 | 321,134 | (8,555) | -2.7% | 4,551,851 | 3,955,583 | 596,268 | 13.1% |
| Dec-08 | 279,572 | 259,652 | 19,920 | 7.1% | 4,534,680 | 3,922,161 | 612,519 | 13.5% |
| Jan-09 | 283,846 | 239,660 | 44,186 | 15.6% | 4,532,428 | 3,921,956 | 610,472 | 13.5% |
| Feb-09 | 254,196 | 245,552 | 8,644 | 3.4% | 4,512,880 | 3,930,730 | 582,150 | 12.9% |
| Mar-09 | 311,319 | 206,846 | 104,473 | 33.6% | 4,484,583 | 3,903,326 | 581,257 | 13.0% |
| Apr-09 | 353,524 | 281,874 | 71,650 | 20.3% | 4,463,817 | 3,860,251 | 603,566 | 13.5% |
| May-09 | 379,165 | 324,557 | 54,608 | 14.4% | 4,412,090 | 3,841,142 | 570,948 | 12.9% |
| Jun-09 | 387,525 | 354,661 | 32,864 | 8.5% | 4,346,336 | 3,825,725 | 520,611 | 12.0% |
| Jul-09 | 419,827 | 400,955 | 18,872 | 4.5% | 4,298,229 | 3,792,987 | 505,242 | 11.8% |
| Aug-09 | 425,920 | 390,078 | 35,842 | 8.4% | 4,266,227 | 3,780,859 | 485,368 | 11.4% |
| Sep-09 | 395,182 | 394,287 | 895 | 0.2% | 4,208,956 | 3,784,463 | 424,493 | 10.1% |
| Oct-09 | 343,054 | 345,782 | (2,728) | -0.8% | 4,145,709 | 3,765,036 | 380,673 | 9.2% |
| Nov-09 | 313,883 | 283,406 | 30,477 | 9.7% | 4,147,013 | 3,727,309 | 419,704 | 10.1% |
| Dec-09 | 269,796 | 258,640 | 11,156 | 4.1% | 4,137,237 | 3,726,296 | 410,941 | 9.9% |
| Jan-10 | 253,424 | 235,361 | 18,063 | 7.1% | 4,106,815 | 3,721,997 | 384,818 | 9.4% |
| Feb-10 | 234,487 | 197,920 | 36,567 | 15.6% | 4,087,106 | 3,674,365 | 412,741 | 10.1% |
| Mar-10 | 275,041 | 209,190 | 65,851 | 23.9% | 4,050,828 | 3,676,709 | 374,119 | 9.2% |
| Apr-10 | 279,257 | 259,333 | 19,924 | 7.1% | 3,976,561 | 3,656,216 | 320,345 | 8.1% |
| May-10 | 344,932 | 269,800 | 75,132 | 21.8% | 3,942,328 | 3,607,987 | 334,341 | 8.5% |
| Jun-10 | 387,121 | 315,175 | 71,946 | 18.6% | 3,941,924 | 3,579,629 | 362,294 | 9.2% |
| Jul-10 | 415,610 | 355,711 | 59,899 | 14.4% | 3,937,707 | 3,544,199 | 393,508 | 10.0% |
| Aug-10 | 408,039 | 350,855 | 57,185 | 14.0% | 3,919,826 | 3,522,977 | 396,849 | 10.1% |
| Sep-10 | 387,041 | 355,859 | 31,182 | 8.1% | 3,911,685 | 3,496,357 | 415,328 | 10.6% |
| Oct-10 | 349,644 | 338,203 | 11,441 | 3.3% | 3,918,275 | 3,495,415 | 422,860 | 10.8% |
| Nov-10 | 287,226 | 279,775 | 7,451 | 2.6% | 3,891,618 | 3,492,029 | 399,589 | 10.3% |
| Dec-10 | 240,913 | 233,082 | 7,831 | 3.3% | 3,862,735 | 3,469,528 | 393,207 | 10.2% |
| Jan-11 | 271,774 | 279,775 | (8,001) | -2.9% | 3,881,085 | 3,454,386 | 426,699 | 11.0% |
| Feb-11 | 261,120 | 223,950 | 37,170 | 14.2% | 3,907,718 | 3,485,127 | 422,591 | 10.8% |
| Mar-11 | 284,507 | 227,690 | 56,817 | 20.0% | 3,917,184 | 3,500,093 | 417,091 | 10.6% |
| Apr-11 | 305,508 | 236,874 | 68,634 | 22.5% | 3,943,435 | 3,480,258 | 463,177 | 11.7% |
| May-11 | 369,172 | 287,859 | 81,313 | 22.0% | 3,967,675 | 3,491,849 | 475,826 | 12.0% |

*Carmel Valley Wells - ASR Injection deducted

Attachment B:

CALIFORNIA AMERICAN WATER
Monterey Co. District
Non-Revenue Water Report - 12 Month Rolling Total
(1000 Gallons)

Ryan Ranch

| | Monthly Total | | | | 12 Month Rolling | | | |
|--------|-----------------|-------------|---------|--------|------------------|--------------|-------|-------|
| | System Delivery | Consumption | NRW | NRW % | System Delivery | Cons (ORCOM) | NRW | NRW % |
| Sep-08 | 2,717 | 2,294 | 423 | 15.6% | 26,698 | 25,534 | 1,164 | 4.4% |
| Oct-08 | 2,924 | 2,921 | 3 | 0.1% | 27,528 | 26,163 | 1,365 | 5.0% |
| Nov-08 | 2,890 | 2,555 | 335 | 11.6% | 28,480 | 26,884 | 1,596 | 5.6% |
| Dec-08 | 2,848 | 3,140 | (292) | -10.3% | 29,641 | 28,495 | 1,146 | 3.9% |
| Jan-09 | 2,307 | 2,149 | 158 | 6.8% | 30,517 | 29,269 | 1,248 | 4.1% |
| Feb-09 | 1,489 | 1,598 | (109) | -7.3% | 30,461 | 29,547 | 914 | 3.0% |
| Mar-09 | 1,603 | 1,410 | 193 | 12.0% | 30,175 | 29,067 | 1,108 | 3.7% |
| Apr-09 | 2,070 | 1,875 | 195 | 9.4% | 30,219 | 28,926 | 1,293 | 4.3% |
| May-09 | 2,059 | 2,051 | 8 | 0.4% | 29,578 | 28,236 | 1,343 | 4.5% |
| Jun-09 | 2,518 | 2,108 | 410 | 16.3% | 29,319 | 27,263 | 2,056 | 7.0% |
| Jul-09 | 2,886 | 2,970 | (84) | -2.9% | 29,183 | 27,906 | 1,278 | 4.4% |
| Aug-09 | 2,792 | 2,615 | 177 | 6.3% | 29,103 | 27,686 | 1,417 | 4.9% |
| Sep-09 | 2,231 | 2,325 | (94) | -4.2% | 28,617 | 27,717 | 900 | 3.1% |
| Oct-09 | 1,749 | 1,708 | 41 | 2.3% | 27,442 | 26,504 | 938 | 3.4% |
| Nov-09 | 1,746 | 1,589 | 157 | 9.0% | 26,298 | 25,538 | 760 | 2.9% |
| Dec-09 | 1,421 | 1,420 | 1 | 0.1% | 24,871 | 23,818 | 1,053 | 4.2% |
| Jan-10 | 1,054 | 917 | 137 | 13.0% | 23,618 | 22,586 | 1,032 | 4.4% |
| Feb-10 | 1,074 | 1,105 | (31) | -2.9% | 23,203 | 22,093 | 1,110 | 4.8% |
| Mar-10 | 1,485 | 1,134 | 351 | 23.6% | 23,085 | 21,817 | 1,268 | 5.5% |
| Apr-10 | 1,369 | 1,471 | (102) | -7.5% | 22,384 | 21,406 | 978 | 4.4% |
| May-10 | 1,555 | 1,373 | 182 | 11.7% | 21,880 | 20,735 | 1,145 | 5.2% |
| Jun-10 | 2,069 | 1,539 | 530 | 25.6% | 21,431 | 20,166 | 1,265 | 5.9% |
| Jul-10 | 2,142 | 1,871 | 271 | 12.7% | 20,687 | 19,282 | 1,405 | 6.8% |
| Aug-10 | 1,863 | 1,920 | -56.51 | -3.0% | 19,758 | 18,687 | 1,071 | 5.4% |
| Sep-10 | 2,288 | 2,034 | 254.43 | 11.1% | 19,815 | 18,396 | 1,419 | 7.2% |
| Oct-10 | 1,745 | 1,569 | 176.36 | 10.1% | 19,811 | 18,257 | 1,554 | 7.8% |
| Nov-10 | 1,115 | 1,025 | 89.91 | 8.1% | 19,180 | 17,811 | 1,369 | 7.1% |
| Dec-10 | 943 | 1,056 | -112.74 | -12.0% | 18,702 | 17,447 | 1,255 | 6.7% |
| Jan-11 | 881 | 813 | 68.2 | 7.7% | 18,529 | 17,343 | 1,186 | 6.4% |
| Feb-11 | 929 | 1,050 | -120.86 | -13.0% | 18,384 | 17,288 | 1,096 | 6.0% |
| Mar-11 | 943 | 879 | 63.74 | 6.8% | 17,842 | 17,033 | 809 | 4.5% |
| Apr-11 | 1,064 | 980 | 84.39 | 7.9% | 17,537 | 16,573 | 964 | 5.5% |
| May-11 | 1,478 | 1,508 | -30.29 | -2.0% | 17,460 | 16,709 | 751 | 4.3% |

* Ryan Ranch System Delivery - blow-off deducted

Attachment B:

CALIFORNIA AMERICAN WATER
Monterey Co. District
Non-Revenue Water Report - 12 Month Rolling Total
(1000 Gallons)

Hidden Hills

| | Monthly Total | | | | 12 Month Rolling | | | |
|--------|-----------------|-------------|-------|-------|------------------|--------------|--------|-------|
| | System Delivery | Consumption | NRW | NRW % | System Delivery | Cons (ORCOM) | NRW | NRW % |
| Sep-08 | 7,908 | 6,617 | 1,291 | 16.3% | 74,272 | 59,839 | 14,433 | 19.4% |
| Oct-08 | 6,979 | 5,797 | 1,182 | 16.9% | 75,246 | 60,053 | 15,193 | 20.2% |
| Nov-08 | 4,958 | 3,840 | 1,118 | 22.5% | 74,958 | 59,177 | 15,781 | 21.1% |
| Dec-08 | 3,915 | 3,766 | 149 | 3.8% | 74,806 | 59,654 | 15,152 | 20.3% |
| Jan-09 | 3,797 | 2,482 | 1,315 | 34.6% | 75,071 | 59,401 | 15,670 | 20.9% |
| Feb-09 | 2,945 | 2,513 | 432 | 14.7% | 74,339 | 59,617 | 14,722 | 19.8% |
| Mar-09 | 3,488 | 2,602 | 886 | 25.4% | 71,629 | 58,920 | 12,709 | 17.7% |
| Apr-09 | 5,355 | 4,375 | 980 | 18.3% | 70,873 | 58,486 | 12,387 | 17.5% |
| May-09 | 6,417 | 4,892 | 1,525 | 23.8% | 69,693 | 58,172 | 11,521 | 16.5% |
| Jun-09 | 7,000 | 6,269 | 731 | 10.4% | 68,821 | 58,344 | 10,477 | 15.2% |
| Jul-09 | 8,346 | 6,646 | 1,700 | 20.4% | 69,223 | 57,627 | 11,596 | 16.8% |
| Aug-09 | 7,874 | 6,578 | 1,296 | 16.5% | 68,982 | 56,377 | 12,605 | 18.3% |
| Sep-09 | 7,375 | 6,548 | 827 | 11.2% | 68,449 | 56,308 | 12,141 | 17.7% |
| Oct-09 | 5,140 | 4,784 | 356 | 6.9% | 66,610 | 55,295 | 11,315 | 17.0% |
| Nov-09 | 4,593 | 3,905 | 688 | 15.0% | 66,245 | 55,360 | 10,885 | 16.4% |
| Dec-09 | 3,484 | 3,388 | 96 | 2.8% | 65,814 | 54,982 | 10,832 | 16.5% |
| Jan-10 | 3,293 | 2,361 | 932 | 28.3% | 65,310 | 54,861 | 10,449 | 16.0% |
| Feb-10 | 2,612 | 2,376 | 236 | 9.0% | 64,977 | 54,724 | 10,253 | 15.8% |
| Mar-10 | 3,205 | 2,602 | 603 | 18.8% | 64,694 | 54,724 | 9,970 | 15.4% |
| Apr-10 | 3,016 | 2,839 | 177 | 5.9% | 62,355 | 53,124 | 9,231 | 14.8% |
| May-10 | 4,818 | 3,383 | 1,435 | 29.8% | 60,756 | 51,690 | 9,066 | 14.9% |
| Jun-10 | 6,132 | 6,105 | 27 | 0.4% | 59,888 | 51,571 | 8,317 | 13.9% |
| Jul-10 | 6,552 | 5,471 | 1,081 | 16.5% | 58,094 | 50,259 | 7,835 | 13.5% |
| Aug-10 | 6,495 | 6,017 | 478 | 7.4% | 56,715 | 49,909 | 6,806 | 12.0% |
| Sep-10 | 6,471 | 5,439 | 1,032 | 15.9% | 55,811 | 48,883 | 6,928 | 12.4% |
| Oct-10 | 5,037 | 4,701 | 336 | 6.7% | 55,708 | 48,808 | 6,900 | 12.4% |
| Nov-10 | 3,493 | 3,446 | 47 | 1.4% | 54,608 | 48,375 | 6,233 | 11.4% |
| Dec-10 | 2,981 | 2,464 | 517 | 17.3% | 54,105 | 47,508 | 6,597 | 12.2% |
| Jan-11 | 3,049 | 2,225 | 824 | 27.0% | 53,861 | 47,372 | 6,489 | 12.0% |
| Feb-11 | 2,871 | 2,461 | 410 | 14.3% | 54,120 | 47,457 | 6,663 | 12.3% |
| Mar-11 | 3,057 | 2,356 | 701 | 22.9% | 53,972 | 47,257 | 6,715 | 12.4% |
| Apr-11 | 3,778 | 3,006 | 772 | 20.4% | 54,734 | 47,553 | 7,181 | 13.1% |
| May-11 | 4,501 | 3,945 | 556 | 12.4% | 54,417 | 47,910 | 6,507 | 12.0% |

Attachment B:

CALIFORNIA AMERICAN WATER
Monterey Co. District
Non-Revenue Water Report - 12 Month Rolling Total
(1000 Gallons)

Bishop

| | Monthly Total | | | | 12 Month Rolling | | | |
|--------|-----------------|-------------|---------|--------|------------------|--------------|---------|-------|
| | System Delivery | Consumption | NRW | NRW % | System Delivery | Cons (ORCOM) | NRW | NRW % |
| Sep-08 | 7,921 | 8,206 | (285) | -3.6% | 74,006 | 73,385 | 621 | 0.8% |
| Oct-08 | 6,976 | 7,808 | (832) | -11.9% | 74,343 | 73,872 | 471 | 0.6% |
| Nov-08 | 4,793 | 4,051 | 742 | 15.5% | 73,679 | 72,471 | 1,208 | 1.6% |
| Dec-08 | 3,153 | 2,955 | 198 | 6.3% | 72,782 | 71,225 | 1,557 | 2.1% |
| Jan-09 | 3,426 | 3,115 | 311 | 9.1% | 73,029 | 71,482 | 1,547 | 2.1% |
| Feb-09 | 2,370 | 2,468 | (98) | -4.1% | 72,503 | 71,044 | 1,459 | 2.0% |
| Mar-09 | 3,475 | 2,591 | 884 | 25.4% | 71,262 | 69,595 | 1,667 | 2.3% |
| Apr-09 | 6,018 | 6,304 | (286) | -4.8% | 70,732 | 69,472 | 1,260 | 1.8% |
| May-09 | 6,981 | 6,972 | 9 | 0.1% | 70,230 | 69,127 | 1,103 | 1.6% |
| Jun-09 | 7,657 | 7,933 | (276) | -3.6% | 69,530 | 68,571 | 960 | 1.4% |
| Jul-09 | 8,812 | 9,624 | (812) | -9.2% | 69,876 | 69,459 | 418 | 0.6% |
| Aug-09 | 9,081 | 8,626 | 455 | 5.0% | 70,663 | 70,652 | 11 | 0.0% |
| Sep-09 | 8,259 | 8,771 | (512) | -6.2% | 71,001 | 71,217 | (216) | -0.3% |
| Oct-09 | 5,962 | 5,744 | 218 | 3.7% | 69,987 | 69,152 | 835 | 1.2% |
| Nov-09 | 5,302 | 4,579 | 723 | 13.6% | 70,496 | 69,680 | 816 | 1.2% |
| Dec-09 | 3,519 | 3,178 | 341 | 9.7% | 70,862 | 69,903 | 959 | 1.4% |
| Jan-10 | 3,201 | 2,636 | 565 | 17.7% | 70,637 | 69,423 | 1,214 | 1.7% |
| Feb-10 | 2,408 | 2,118 | 290 | 12.0% | 70,675 | 69,074 | 1,601 | 2.3% |
| Mar-10 | 3,343 | 2,363 | 980 | 29.3% | 70,543 | 68,845 | 1,698 | 2.4% |
| Apr-10 | 3,939 | 3,523 | 416 | 10.6% | 68,464 | 66,065 | 2,399 | 3.5% |
| May-10 | 5,732 | 9,913 | (4,181) | -72.9% | 67,215 | 69,298 | (2,083) | -3.1% |
| Jun-10 | 7,438 | 5,873 | 1,565 | 21.0% | 66,996 | 67,158 | (162) | -0.2% |
| Jul-10 | 8,127 | 6,951 | 1,176 | 14.5% | 66,311 | 65,304 | 1,007 | 1.5% |
| Aug-10 | 7,886 | 7,044 | 842 | 10.7% | 65,116 | 63,728 | 1,388 | 2.1% |
| Sep-10 | 7,632 | 7,563 | 69 | 0.9% | 64,489 | 62,521 | 1,968 | 3.1% |
| Oct-10 | 6,007 | 5,781 | 226 | 3.8% | 64,534 | 62,559 | 1,975 | 3.1% |
| Nov-10 | 4,089 | 3,567 | 522 | 12.8% | 63,321 | 61,547 | 1,774 | 2.8% |
| Dec-10 | 2,924 | 2,379 | 545 | 18.6% | 62,726 | 60,748 | 1,978 | 3.2% |
| Jan-11 | 2,962 | 2,459 | 503 | 17.0% | 62,487 | 60,572 | 1,915 | 3.1% |
| Feb-11 | 2,898 | 2,797 | 101 | 3.5% | 62,977 | 61,281 | 1,696 | 2.7% |
| Mar-11 | 2,970 | 2,373 | 597 | 20.1% | 62,604 | 61,291 | 1,313 | 2.1% |
| Apr-11 | 4,739 | 3,706 | 1,033 | 21.8% | 63,404 | 61,478 | 1,926 | 3.0% |
| May-11 | 6,534 | 5,577 | 957 | 14.6% | 64,206 | 56,930 | 7,276 | 11.3% |

Attachment B:

CALIFORNIA AMERICAN WATER
Monterey Co. District
Non-Revenue Water Report - 12 Month Rolling Total
(1000 Gallons)

Ambler

| | Monthly Total | | | | 12 Month Rolling | | | |
|--------|-----------------|-------------|-------|-------|------------------|--------------|-------|-------|
| | System Delivery | Consumption | NRW | NRW % | System Delivery | Cons (ORCOM) | NRW | NRW % |
| Sep-08 | 8,044 | 8,149 | (105) | -1.3% | 76,069 | 69,796 | 6,273 | 8.2% |
| Oct-08 | 6,616 | 6,869 | (253) | -3.8% | 75,940 | 69,577 | 6,363 | 8.4% |
| Nov-08 | 3,951 | 3,752 | 199 | 5.0% | 74,560 | 68,556 | 6,004 | 8.1% |
| Dec-08 | 3,164 | 3,125 | 39 | 1.2% | 72,996 | 68,523 | 4,473 | 6.1% |
| Jan-09 | 3,016 | 2,549 | 467 | 15.5% | 72,842 | 67,485 | 5,357 | 7.4% |
| Feb-09 | 2,436 | 2,336 | 100 | 4.1% | 72,469 | 67,839 | 4,630 | 6.4% |
| Mar-09 | 3,296 | 2,575 | 721 | 21.9% | 71,322 | 66,992 | 4,330 | 6.1% |
| Apr-09 | 6,170 | 5,882 | 288 | 4.7% | 71,321 | 67,345 | 3,977 | 5.6% |
| May-09 | 7,717 | 6,995 | 722 | 9.4% | 70,603 | 67,137 | 3,466 | 4.9% |
| Jun-09 | 8,248 | 7,626 | 622 | 7.5% | 70,210 | 66,602 | 3,608 | 5.1% |
| Jul-09 | 9,326 | 9,554 | (228) | -2.4% | 70,472 | 67,537 | 2,935 | 4.2% |
| Aug-09 | 9,127 | 8,130 | 997 | 10.9% | 71,111 | 67,542 | 3,569 | 5.0% |
| Sep-09 | 8,070 | 8,291 | (221) | -2.7% | 71,137 | 67,684 | 3,453 | 4.9% |
| Oct-09 | 5,306 | 5,345 | (39) | -0.7% | 69,827 | 66,161 | 3,667 | 5.3% |
| Nov-09 | 3,799 | 3,430 | 369 | 9.7% | 69,675 | 65,838 | 3,837 | 5.5% |
| Dec-09 | 2,948 | 2,925 | 23 | 0.8% | 69,459 | 65,638 | 3,821 | 5.5% |
| Jan-10 | 2,806 | 2,546 | 260 | 9.3% | 69,249 | 65,636 | 3,614 | 5.2% |
| Feb-10 | 2,380 | 2,191 | 189 | 7.9% | 69,193 | 65,490 | 3,703 | 5.4% |
| Mar-10 | 3,081 | 2,774 | 307 | 10.0% | 68,978 | 65,689 | 3,289 | 4.8% |
| Apr-10 | 3,391 | 3,120 | 271 | 8.0% | 66,199 | 60,864 | 5,335 | 8.1% |
| May-10 | 5,361 | 5,366 | (5) | -0.1% | 63,843 | 61,307 | 2,536 | 4.0% |
| Jun-10 | 7,666 | 6,020 | 1,646 | 21.5% | 63,261 | 59,753 | 3,508 | 5.5% |
| Jul-10 | 8,310 | 8,093 | 217 | 2.6% | 62,245 | 58,352 | 3,893 | 6.3% |
| Aug-10 | 7,892 | 6,221 | 1,671 | 21.2% | 61,010 | 56,503 | 4,507 | 7.4% |
| Sep-10 | 7,305 | 7,162 | 143 | 2.0% | 60,245 | 56,533 | 3,712 | 6.2% |
| Oct-10 | 5,231 | 5,085 | 146 | 2.8% | 60,170 | 56,272 | 3,898 | 6.5% |
| Nov-10 | 3,357 | 2,904 | 453 | 13.5% | 59,728 | 55,702 | 4,026 | 6.7% |
| Dec-10 | 2,966 | 2,826 | 140 | 4.7% | 59,746 | 55,603 | 4,143 | 6.9% |
| Jan-11 | 3,038 | 2,361 | 678 | 22.3% | 59,978 | 55,418 | 4,560 | 7.6% |
| Feb-11 | 2,725 | 2,579 | 146 | 5.4% | 60,323 | 55,811 | 4,512 | 7.5% |
| Mar-11 | 2,864 | 2,513 | 351 | 12.2% | 60,106 | 55,550 | 4,556 | 7.6% |
| Apr-11 | 4,444 | 3,647 | 797 | 17.9% | 61,159 | 56,082 | 5,077 | 8.3% |
| May-11 | 6,787 | 6,029 | 758 | 11.2% | 62,585 | 57,530 | 5,055 | 8.1% |

Attachment B:

CALIFORNIA AMERICAN WATER
Monterey Co. District
Non-Revenue Water Report - 12 Month Rolling Total
(1000 Gallons)

Chualar

| | Monthly Total | | | | 12 Month Rolling | | | |
|--------|-----------------|-------------|---------|--------|------------------|--------------|----------|--------|
| | System Delivery | Consumption | NRW | NRW % | System Delivery | Cons (ORCOM) | NRW | NRW % |
| Sep-08 | 3,942 | 3,433 | 509 | 12.9% | 40,822 | 34,490 | 6,332 | 15.5% |
| Oct-08 | 3,564 | 3,396 | 168 | 4.7% | 41,142 | 34,736 | 6,406 | 15.6% |
| Nov-08 | 3,057 | 2,392 | 665 | 21.8% | 41,205 | 34,283 | 6,922 | 16.8% |
| Dec-08 | 2,796 | 2,461 | 335 | 12.0% | 41,312 | 34,962 | 6,350 | 15.4% |
| Jan-09 | 2,826 | 2,707 | 119 | 4.2% | 41,848 | 35,162 | 6,686 | 16.0% |
| Feb-09 | 2,419 | 2,367 | 52 | 2.1% | 41,866 | 35,537 | 6,329 | 15.1% |
| Mar-09 | 3,248 | 2,653 | 595 | 18.3% | 42,241 | 36,058 | 6,183 | 14.6% |
| Apr-09 | 3,668 | 3,704 | (36) | -1.0% | 42,321 | 36,953 | 5,368 | 12.7% |
| May-09 | 4,075 | 3,953 | 122 | 3.0% | 42,215 | 39,779 | 2,436 | 5.8% |
| Jun-09 | 4,313 | 4,151 | 162 | 3.8% | 42,274 | 41,974 | 300 | 0.7% |
| Jul-09 | 4,453 | 4,688 | (235) | -5.3% | 42,619 | 44,990 | (2,371) | -6.6% |
| Aug-09 | 4,521 | 4,162 | 359 | 7.9% | 42,882 | 47,698 | (4,816) | -11.2% |
| Sep-09 | 3,959 | 3,966 | (7) | -0.2% | 42,899 | 50,163 | (7,264) | -16.9% |
| Oct-09 | 3,444 | 3,777 | (333) | -9.7% | 42,779 | 52,219 | (9,440) | -22.1% |
| Nov-09 | 3,377 | 2,824 | 553 | 16.4% | 43,099 | 52,651 | (9,552) | -22.2% |
| Dec-09 | 2,601 | 2,877 | (276) | -10.6% | 42,904 | 53,067 | (10,163) | -23.7% |
| Jan-10 | 2,783 | 2,708 | 76 | 2.7% | 42,861 | 53,068 | (10,207) | -23.8% |
| Feb-10 | 2,416 | 2,507 | (91) | -3.8% | 42,858 | 53,207 | (10,349) | -24.1% |
| Mar-10 | 2,979 | 2,555 | 425 | 14.2% | 42,589 | 53,109 | (10,520) | -24.7% |
| Apr-10 | 3,047 | 3,200 | (153) | -5.0% | 41,968 | 51,651 | (9,683) | -23.1% |
| May-10 | 3,670 | 3,145 | 525.29 | 14.3% | 41,563 | 49,523 | (7,960) | -19.2% |
| Jun-10 | 3,910 | 3,772 | 137.9 | 3.5% | 41,160 | 47,703 | (6,543) | -15.9% |
| Jul-10 | 4,092 | 4,278 | -185.68 | -4.5% | 40,799 | 45,330 | (4,531) | -11.1% |
| Aug-10 | 3,945 | 3,555 | 389.63 | 9.9% | 40,223 | 42,921 | (2,698) | -6.7% |
| Sep-10 | 3,806 | 3,801 | 4.91 | 0.1% | 40,070 | 40,824 | (754) | -1.9% |
| Oct-10 | 3,238 | 3,102 | 135.64 | 4.2% | 39,864 | 38,632 | 1,232 | 3.1% |
| Nov-10 | 2,873 | 2,749 | 124.07 | 4.3% | 39,360 | 38,558 | 802 | 2.0% |
| Dec-10 | 2,479 | 2,610 | -131.41 | -5.3% | 39,238 | 38,291 | 947 | 2.4% |
| Jan-11 | 2,715 | 2,423 | 292.25 | 10.8% | 39,170 | 38,006 | 1,164 | 3.0% |
| Feb-11 | 2,784 | 2,286 | 498.34 | 17.9% | 39,538 | 37,785 | 1,753 | 4.4% |
| Mar-11 | 2,715 | 2,484 | 231.05 | 8.5% | 39,274 | 37,715 | 1,559 | 4.0% |
| Apr-11 | 3,045 | 3,820 | -775.35 | -25.5% | 39,272 | 38,340 | 932 | 2.4% |
| May-11 | 3,711 | 3,323 | 387.99 | 10.5% | 39,313 | 37,616 | 1,697 | 4.3% |

Attachment B:

**CALIFORNIA AMERICAN WATER
Monterey Co. District
Non-Revenue Water Report - 12 Month Rolling Total
(1000 Gallons)**

Ralph Lane

| | Monthly Total | | | | 12 Month Rolling | | | |
|--------|-----------------|-------------|------|--------|------------------|--------------|-----|-------|
| | System Delivery | Consumption | NRW | NRW % | System Delivery | Cons (ORCOM) | NRW | NRW % |
| Sep-08 | 331 | 234 | 97 | 29.3% | 3,225 | 2,545 | 680 | 21.1% |
| Oct-08 | 237 | 263 | (26) | -11.0% | 3,163 | 2,572 | 591 | 18.7% |
| Nov-08 | 231 | 168 | 63 | 27.3% | 3,095 | 2,524 | 571 | 18.4% |
| Dec-08 | 184 | 159 | 25 | 13.6% | 3,075 | 2,523 | 552 | 18.0% |
| Jan-09 | 184 | 154 | 30 | 16.3% | 3,077 | 2,533 | 544 | 17.7% |
| Feb-09 | 138 | 124 | 14 | 10.1% | 3,011 | 2,482 | 529 | 17.6% |
| Mar-09 | 192 | 129 | 63 | 32.8% | 2,999 | 2,452 | 547 | 18.2% |
| Apr-09 | 226 | 199 | 27 | 11.9% | 2,948 | 2,449 | 499 | 16.9% |
| May-09 | 262 | 209 | 53 | 20.2% | 2,915 | 2,411 | 504 | 17.3% |
| Jun-09 | 309 | 242 | 67 | 21.7% | 2,892 | 2,391 | 502 | 17.3% |
| Jul-09 | 347 | 311 | 36 | 10.4% | 2,928 | 2,429 | 499 | 17.1% |
| Aug-09 | 286 | 248 | 38 | 13.3% | 2,927 | 2,440 | 487 | 16.6% |
| Sep-09 | 284 | 238 | 46 | 16.2% | 2,880 | 2,444 | 436 | 15.1% |
| Oct-09 | 207 | 203 | 4 | 1.9% | 2,850 | 2,384 | 466 | 16.4% |
| Nov-09 | 206 | 161 | 45 | 21.8% | 2,825 | 2,377 | 448 | 15.8% |
| Dec-09 | 183 | 148 | 35 | 19.1% | 2,824 | 2,366 | 458 | 16.2% |
| Jan-10 | 221 | 180 | 41 | 18.6% | 2,861 | 2,392 | 469 | 16.4% |
| Feb-10 | 200 | 177 | 23 | 11.5% | 2,923 | 2,445 | 478 | 16.4% |
| Mar-10 | 203 | 167 | 36 | 17.7% | 2,934 | 2,483 | 451 | 15.4% |
| Apr-10 | 207 | 192 | 15 | 7.2% | 2,915 | 2,477 | 439 | 15.0% |
| May-10 | 233 | 195 | 38 | 16.3% | 2,886 | 2,463 | 423 | 14.7% |
| Jun-10 | 304 | 257 | 47 | 15.5% | 2,881 | 2,478 | 403 | 14.0% |
| Jul-10 | 285 | 278 | 7 | 2.5% | 2,819 | 2,444 | 375 | 13.3% |
| Aug-10 | 332 | 271 | 61 | 18.2% | 2,865 | 2,467 | 398 | 13.9% |
| Sep-10 | 335 | 290 | 45 | 13.4% | 2,916 | 2,519 | 397 | 13.6% |
| Oct-10 | 262 | 266 | (4) | -1.7% | 2,971 | 2,583 | 388 | 13.1% |
| Nov-10 | 255 | 198 | 57 | 22.3% | 3,020 | 2,620 | 400 | 13.3% |
| Dec-10 | 188 | 222 | (34) | -18.1% | 3,025 | 2,715 | 310 | 10.3% |
| Jan-11 | 232 | 249 | (17) | -7.3% | 3,036 | 2,784 | 252 | 8.3% |
| Feb-11 | 208 | 186 | 22 | 10.7% | 3,044 | 2,793 | 252 | 8.3% |
| Mar-11 | 209 | 178 | 31 | 14.7% | 3,050 | 2,804 | 246 | 8.1% |
| Apr-11 | 227 | 202 | 25 | 11.2% | 3,070 | 2,813 | 257 | 8.4% |
| May-11 | 267 | 244 | 23 | 8.6% | 3,104 | 2,862 | 242 | 7.8% |

Attachment B:

CALIFORNIA AMERICAN WATER
Monterey Co. District
Non-Revenue Water Report - 12 Month Rolling Total
(1000 Gallons)

Toro

| | Monthly Total | | | | 12 Month Rolling | | | |
|--------|-----------------|-------------|---------|---------|------------------|--------------|-------|-------|
| | System Delivery | Consumption | NRW | NRW % | System Delivery | Cons (ORCOM) | NRW | NRW % |
| Sep-08 | 10,363 | 10,247 | 116 | 1.1% | 68,672 | 65,550 | 116 | 0.2% |
| Oct-08 | 8,552 | 8,060 | 492 | 5.8% | 77,224 | 73,610 | 608 | 0.8% |
| Nov-08 | 5,561 | 690 | 4,871 | 87.6% | 82,785 | 74,300 | 5,479 | 6.6% |
| Dec-08 | 4,206 | 8,703 | (4,497) | -106.9% | 86,991 | 83,003 | 982 | 1.1% |
| Jan-09 | 4,259 | 3,171 | 1,088 | 25.5% | 87,934 | 83,175 | 2,070 | 2.4% |
| Feb-09 | 3,134 | 2,763 | 371 | 11.8% | 91,068 | 83,096 | 2,441 | 2.7% |
| Mar-09 | 4,155 | 3,523 | 632 | 15.2% | 89,486 | 81,846 | 3,073 | 3.4% |
| Apr-09 | 7,795 | 6,500 | 1,295 | 16.6% | 89,227 | 82,106 | 4,368 | 4.9% |
| May-09 | 9,339 | 8,088 | 1,251 | 13.4% | 89,371 | 89,678 | 5,619 | 6.3% |
| Jun-09 | 9,937 | 10,378 | (441) | -4.4% | 89,022 | 82,365 | 5,178 | 5.8% |
| Jul-09 | 11,194 | 10,150 | 1,044 | 9.3% | 89,353 | 81,656 | 6,222 | 7.0% |
| Aug-09 | 10,967 | 10,216 | 751 | 6.8% | 89,462 | 82,489 | 6,973 | 7.8% |
| Sep-09 | 9,878 | 9,176 | 702 | 7.1% | 88,977 | 81,417 | 7,559 | 8.5% |
| Oct-09 | 6,834 | 6,227 | 607 | 8.9% | 87,259 | 79,584 | 7,674 | 8.8% |
| Nov-09 | 6,055 | 5,483 | 572 | 9.4% | 87,753 | 84,377 | 3,375 | 3.8% |
| Dec-09 | 3,547 | 3,134 | 413 | 11.6% | 87,094 | 78,808 | 8,285 | 9.5% |
| Jan-10 | 3,153 | 2,417 | 736 | 23.3% | 85,988 | 78,054 | 7,933 | 9.2% |
| Feb-10 | 2,592 | 2,093 | 499 | 19.3% | 85,446 | 77,384 | 8,061 | 9.4% |
| Mar-10 | 3,975 | 3,195 | 780 | 19.6% | 85,266 | 77,056 | 8,209 | 9.6% |
| Apr-10 | 4,253 | 3,977 | 276 | 6.5% | 81,724 | 71,116 | 7,190 | 8.8% |
| May-10 | 7,010 | 6,516 | 494 | 7.0% | 79,395 | 72,961 | 6,433 | 8.1% |
| Jun-10 | 9,010 | 8,314 | 696 | 7.7% | 78,468 | 70,907 | 7,570 | 9.6% |
| Jul-10 | 10,004 | 9,617 | 387 | 3.9% | 77,278 | 70,375 | 6,913 | 8.9% |
| Aug-10 | 9,963 | 9,505 | 458 | 4.6% | 76,274 | 69,421 | 6,619 | 8.7% |
| Sep-10 | 9,052 | 8,063 | 989 | 10.9% | 75,448 | 68,315 | 6,906 | 9.2% |
| Oct-10 | 6,989 | 6,188 | 801 | 11.5% | 75,603 | 68,375 | 7,100 | 9.4% |
| Nov-10 | 4,375 | 3,965 | 410 | 9.4% | 73,923 | 66,945 | 6,939 | 9.4% |
| Dec-10 | 3,258 | 2,787 | 471 | 14.4% | 73,634 | 66,805 | 6,996 | 9.5% |
| Jan-11 | 3,478 | 2,372 | 1,106 | 31.8% | 73,959 | 66,711 | 7,366 | 10.0% |
| Feb-11 | 3,890 | 3,244 | 646 | 16.6% | 75,257 | 67,872 | 7,513 | 10.0% |
| Mar-11 | 3,419 | 2,408 | 1,011 | 29.6% | 74,701 | 67,085 | 7,743 | 10.4% |
| Apr-11 | 5,404 | 4,101 | 1,303 | 24.1% | 75,852 | 67,209 | 8,771 | 11.6% |
| May-11 | 7,889 | 6,802 | 1,087 | 13.8% | 76,731 | 67,758 | 9,363 | 12.2% |

ATTACHMENT C

**Non-Revenue Water Volumes Adopted for Ratemaking in All Districts
other than Monterey County**

2005-2010 NRW FOR ALL CALIFORNIA DISTRICTS WITH DRA RECOMMENDATIONS FOR 2010 (in CCF)

(ALL HISTORICAL NRW 2005-2009 INFORMATION IS FROM EXHIBIT A CHAPTER 3 REVENUES - TABLE 3.13) - updated w/ NOTED Cal Am Proposal for 2012-2013

Larkfield District

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|-----------|--------|--------|--------|--------|--------|--------|
| Larkfield | 54,711 | 37,675 | 59,827 | 34,803 | 28,717 | 23,560 |
| DRA | | | | | 28,717 | |

NOTE: Cal Am agrees with DRA's proposed 28,717 for 2012-2013

Los Angeles County District

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|---------------|---------|---------|--------|--------|--------|---------|
| Baldwin Hills | 186,079 | 111,393 | 69,253 | 90,385 | 58,507 | 110,082 |
| DRA | | | | | 58,507 | |

NOTE: Cal Am agrees with DRA's proposed 58,507 for 2012-2013

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|--------|---------|---------|---------|---------|---------|---------|
| Duarte | 575,918 | 411,072 | 583,610 | 587,904 | 425,868 | 295,790 |
| DRA | | | | | 306,576 | |

NOTE: Cal Am agrees with DRA's proposed 306,576 for 2012-2013

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|------------|---------|-----------|--------|---------|---------|---------|
| San Marino | 653,412 | (170,178) | 43,994 | 269,626 | 380,179 | 265,790 |
| DRA | | | | | 233,000 | |

NOTE: Cal Am recommends DRA removes the 2006 negative number and use the four year average of 336,803 for 2012-2013

Sacramento County District

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|------------|-----------|-----------|-----------|-----------|-----------|-----------|
| Sacramento | 1,861,161 | 1,968,700 | 1,857,262 | 1,836,214 | 1,841,304 | 1,792,705 |
| DRA | | | | | 1,841,304 | |

NOTE: Cal Am agrees with DRA's proposed 1,841,304 for 2012-2013

San Diego County District

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|-----------|--------|---------|----------|--------|---------|---------|
| San Diego | 97,000 | 118,300 | (51,900) | 96,700 | 210,400 | 182,084 |
| DRA | | | | | 93,516 | |

NOTE: Cal Am recommends DRA removes the 2007 negative number and use the four year average of 130,600 for 2012-2013

Ventura County District

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|---------|---------|---------|---------|---------|---------|---------|
| Ventura | 916,316 | 258,181 | 134,511 | 272,845 | 518,402 | 136,332 |
| DRA | | | | | 416,193 | |

NOTE: Cal Am agrees with DRA's proposed 416,193 for 2012-2013