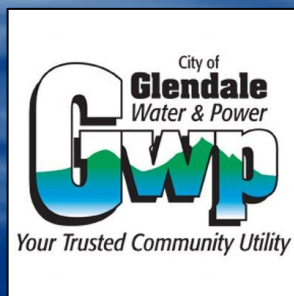


2015 URBAN WATER MANAGEMENT PLAN APPENDICES



April 2016
Draft Copy



APPENDIX A:

References

References

1. City of Glendale 2010 Urban Water Management Plan
http://www.water.ca.gov/urbanwatermanagement/2010uwmps/Glendale,%20City%20of/GWP-UWMP_Volume1-v2-web%20The%20Plan.pdf
2. Metropolitan Water District of Southern California: “2015 MWD Regional Urban Water Management Plan,” March 2016
3. Metropolitan Water District of Southern California “2015 MWD Integrated Water Resources Plan”
http://www.mwdh2o.com/Reports/2.4.1_Integrated_Resources_Plan.pdf
4. 2016 Glendale Water Mater Plan
5. National Oceanic and Atmospheric Administration (NOAA) for weather, rainfall, and temperature data. <http://www.ncdc.noaa.gov/>
6. California Irrigation Management Information System (CIMIS) for evapotranspiration data. <http://www.cimis.water.ca.gov/>
7. Upper Los Angeles River Area Watermaster – Annual Report, December 2014.
http://ularawatermaster.com/public_resources/WY-2012-13-ULARA-WM-Rpt-12-2014.pdf
8. California Department of Water Resources: “Guidebook to Assist Urban Water Suppliers to Prepare a 2015 Urban Water Management Plan,” March 2016.
http://www.water.ca.gov/urbanwatermanagement/docs/2015/UWMP_Guidebook_Mar_2016_FINAL.pdf
9. City of Glendale “Water Shortage Contingency Plan and Ordinances”
10. City of Glendale “Department of Water and Power – Water System Statistics” (Annual Report Showing Production & Sales), 2009-2015



APPENDIX B:

Urban Water Management Planning Act & Water Conservation Act (SB x7-7)

CALIFORNIA WATER CODE DIVISION 6

PART 2.6. URBAN WATER MANAGEMENT PLANNING

All California Codes have been updated to include the 2010 Statutes.

CHAPTER 1.	GENERAL DECLARATION AND POLICY	10610-10610.4
CHAPTER 2.	DEFINITIONS	10611-10617
CHAPTER 3.	URBAN WATER MANAGEMENT PLANS	
Article 1.	General Provisions	10620-10621
Article 2.	Contents of Plans	10630-10634
Article 2.5.	Water Service Reliability	10635
Article 3.	Adoption and Implementation of Plans	10640-10645
CHAPTER 4.	MISCELLANEOUS PROVISIONS	10650-10656

WATER CODE

SECTION 10610-10610.4

10610. This part shall be known and may be cited as the "Urban Water Management Planning Act."

10610.2. (a) The Legislature finds and declares all of the following:

- (1) The waters of the state are a limited and renewable resource subject to ever-increasing demands.
- (2) The conservation and efficient use of urban water supplies are of statewide concern; however, the planning for that use and the implementation of those plans can best be accomplished at the local level.
- (3) A long-term, reliable supply of water is essential to protect the productivity of California's businesses and economic climate.
- (4) As part of its long-range planning activities, every urban water supplier should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry water years.
- (5) Public health issues have been raised over a number of contaminants that have been identified in certain local and imported water supplies.
- (6) Implementing effective water management strategies, including groundwater storage projects and recycled water projects, may require specific water quality and salinity targets for meeting groundwater basins water quality objectives and promoting beneficial use of recycled water.
- (7) Water quality regulations are becoming an increasingly important factor in water agencies' selection of raw water sources, treatment alternatives, and modifications to existing treatment facilities.
- (8) Changes in drinking water quality standards may also impact the usefulness of water supplies and may ultimately impact supply reliability.
- (9) The quality of source supplies can have a significant impact

on water management strategies and supply reliability.

(b) This part is intended to provide assistance to water agencies in carrying out their long-term resource planning responsibilities to ensure adequate water supplies to meet existing and future demands for water.

10610.4. The Legislature finds and declares that it is the policy of the state as follows:

(a) The management of urban water demands and efficient use of water shall be actively pursued to protect both the people of the state and their water resources.

(b) The management of urban water demands and efficient use of urban water supplies shall be a guiding criterion in public decisions.

(c) Urban water suppliers shall be required to develop water management plans to actively pursue the efficient use of available supplies.

WATER CODE

SECTION 10611-10617

10611. Unless the context otherwise requires, the definitions of this chapter govern the construction of this part.

10611.5. "Demand management" means those water conservation measures, programs, and incentives that prevent the waste of water and promote the reasonable and efficient use and reuse of available supplies.

10612. "Customer" means a purchaser of water from a water supplier who uses the water for municipal purposes, including residential, commercial, governmental, and industrial uses.

10613. "Efficient use" means those management measures that result in the most effective use of water so as to prevent its waste or unreasonable use or unreasonable method of use.

10614. "Person" means any individual, firm, association, organization, partnership, business, trust, corporation, company, public agency, or any agency of such an entity.

10615. "Plan" means an urban water management plan prepared pursuant to this part. A plan shall describe and evaluate sources of supply, reasonable and practical efficient uses, reclamation and demand management activities. The components of the plan may vary according to an individual community or area's characteristics and its capabilities to efficiently use and conserve water. The plan shall address measures for residential, commercial, governmental, and industrial water demand management as set forth in Article 2 (commencing with Section 10630) of Chapter 3. In addition, a strategy and time schedule for implementation shall be included in the plan.

10616. "Public agency" means any board, commission, county, city

and county, city, regional agency, district, or other public entity.

10616.5. "Recycled water" means the reclamation and reuse of wastewater for beneficial use.

10617. "Urban water supplier" means a supplier, either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually. An urban water supplier includes a supplier or contractor for water, regardless of the basis of right, which distributes or sells for ultimate resale to customers. This part applies only to water supplied from public water systems subject to Chapter 4 (commencing with Section 116275) of Part 12 of Division 104 of the Health and Safety Code.

WATER CODE

SECTION 10620-10621

10620. (a) Every urban water supplier shall prepare and adopt an urban water management plan in the manner set forth in Article 3 (commencing with Section 10640).

(b) Every person that becomes an urban water supplier shall adopt an urban water management plan within one year after it has become an urban water supplier.

(c) An urban water supplier indirectly providing water shall not include planning elements in its water management plan as provided in Article 2 (commencing with Section 10630) that would be applicable to urban water suppliers or public agencies directly providing water, or to their customers, without the consent of those suppliers or public agencies.

(d) (1) An urban water supplier may satisfy the requirements of this part by participation in areawide, regional, watershed, or basinwide urban water management planning where those plans will reduce preparation costs and contribute to the achievement of conservation and efficient water use.

(2) Each urban water supplier shall coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.

(e) The urban water supplier may prepare the plan with its own staff, by contract, or in cooperation with other governmental agencies.

(f) An urban water supplier shall describe in the plan water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions.

10621. (a) Each urban water supplier shall update its plan at least once every five years on or before December 31, in years ending in five and zero.

(b) Every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days prior to the public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water

supplier will be reviewing the plan and considering amendments or changes to the plan. The urban water supplier may consult with, and obtain comments from, any city or county that receives notice pursuant to this subdivision.

(c) The amendments to, or changes in, the plan shall be adopted and filed in the manner set forth in Article 3 (commencing with Section 10640).

WATER CODE

SECTION 10630-10634

10630. It is the intention of the Legislature, in enacting this part, to permit levels of water management planning commensurate with the numbers of customers served and the volume of water supplied.

10631. A plan shall be adopted in accordance with this chapter that shall do all of the following:

(a) Describe the service area of the supplier, including current and projected population, climate, and other demographic factors affecting the supplier's water management planning. The projected population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier and shall be in five-year increments to 20 years or as far as data is available.

(b) Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a). If groundwater is identified as an existing or planned source of water available to the supplier, all of the following information shall be included in the plan:

(1) A copy of any groundwater management plan adopted by the urban water supplier, including plans adopted pursuant to Part 2.75 (commencing with Section 10750), or any other specific authorization for groundwater management.

(2) A description of any groundwater basin or basins from which the urban water supplier pumps groundwater. For those basins for which a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree. For basins that have not been adjudicated, information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current official departmental bulletin that characterizes the condition of the groundwater basin, and a detailed description of the efforts being undertaken by the urban water supplier to eliminate the long-term overdraft condition.

(3) A detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(4) A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the urban water supplier. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(c) (1) Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage, to the extent practicable, and provide data for each of the following:

- (A) An average water year.
- (B) A single dry water year.
- (C) Multiple dry water years.

(2) For any water source that may not be available at a consistent level of use, given specific legal, environmental, water quality, or climatic factors, describe plans to supplement or replace that source with alternative sources or water demand management measures, to the extent practicable.

(d) Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.

(e) (1) Quantify, to the extent records are available, past and current water use, over the same five-year increments described in subdivision (a), and projected water use, identifying the uses among water use sectors, including, but not necessarily limited to, all of the following uses:

- (A) Single-family residential.
- (B) Multifamily.
- (C) Commercial.
- (D) Industrial.
- (E) Institutional and governmental.
- (F) Landscape.
- (G) Sales to other agencies.
- (H) Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof.

(I) Agricultural.

(2) The water use projections shall be in the same five-year increments described in subdivision (a).

(f) Provide a description of the supplier's water demand management measures. This description shall include all of the following:

(1) A description of each water demand management measure that is currently being implemented, or scheduled for implementation, including the steps necessary to implement any proposed measures, including, but not limited to, all of the following:

- (A) Water survey programs for single-family residential and multifamily residential customers.
- (B) Residential plumbing retrofit.
- (C) System water audits, leak detection, and repair.
- (D) Metering with commodity rates for all new connections and retrofit of existing connections.
- (E) Large landscape conservation programs and incentives.
- (F) High-efficiency washing machine rebate programs.
- (G) Public information programs.
- (H) School education programs.
- (I) Conservation programs for commercial, industrial, and institutional accounts.

(J) Wholesale agency programs.

(K) Conservation pricing.

(L) Water conservation coordinator.

(M) Water waste prohibition.

(N) Residential ultra-low-flush toilet replacement programs.

(2) A schedule of implementation for all water demand management measures proposed or described in the plan.

(3) A description of the methods, if any, that the supplier will use to evaluate the effectiveness of water demand management measures implemented or described under the plan.

(4) An estimate, if available, of existing conservation savings on water use within the supplier's service area, and the effect of the savings on the supplier's ability to further reduce demand.

(g) An evaluation of each water demand management measure listed in paragraph (1) of subdivision (f) that is not currently being implemented or scheduled for implementation. In the course of the evaluation, first consideration shall be given to water demand management measures, or combination of measures, that offer lower incremental costs than expanded or additional water supplies. This evaluation shall do all of the following:

(1) Take into account economic and noneconomic factors, including environmental, social, health, customer impact, and technological factors.

(2) Include a cost-benefit analysis, identifying total benefits and total costs.

(3) Include a description of funding available to implement any planned water supply project that would provide water at a higher unit cost.

(4) Include a description of the water supplier's legal authority to implement the measure and efforts to work with other relevant agencies to ensure the implementation of the measure and to share the cost of implementation.

(h) Include a description of all water supply projects and water supply programs that may be undertaken by the urban water supplier to meet the total projected water use as established pursuant to subdivision (a) of Section 10635. The urban water supplier shall include a detailed description of expected future projects and programs, other than the demand management programs identified pursuant to paragraph (1) of subdivision (f), that the urban water supplier may implement to increase the amount of the water supply available to the urban water supplier in average, single-dry, and multiple-dry water years. The description shall identify specific projects and include a description of the increase in water supply that is expected to be available from each project. The description shall include an estimate with regard to the implementation timeline for each project or program.

(i) Describe the opportunities for development of desalinated water, including, but not limited to, ocean water, brackish water, and groundwater, as a long-term supply.

(j) For purposes of this part, urban water suppliers that are members of the California Urban Water Conservation Council shall be deemed in compliance with the requirements of subdivisions (f) and (g) by complying with all the provisions of the "Memorandum of Understanding Regarding Urban Water Conservation in California,"

dated December 10, 2008, as it may be amended, and by submitting the annual reports required by Section 6.2 of that memorandum.

(k) Urban water suppliers that rely upon a wholesale agency for a source of water shall provide the wholesale agency with water use projections from that agency for that source of water in five-year increments to 20 years or as far as data is available. The wholesale agency shall provide information to the urban water supplier for inclusion in the urban water supplier's plan that identifies and quantifies, to the extent practicable, the existing and planned sources of water as required by subdivision (b), available from the wholesale agency to the urban water supplier over the same five-year increments, and during various water-year types in accordance with subdivision (c). An urban water supplier may rely upon water supply information provided by the wholesale agency in fulfilling the plan informational requirements of subdivisions (b) and (c).

10631.1. (a) The water use projections required by Section 10631 shall include projected water use for single-family and multifamily residential housing needed for lower income households, as defined in Section 50079.5 of the Health and Safety Code, as identified in the housing element of any city, county, or city and county in the service area of the supplier.

(b) It is the intent of the Legislature that the identification of projected water use for single-family and multifamily residential housing for lower income households will assist a supplier in complying with the requirement under Section 65589.7 of the Government Code to grant a priority for the provision of service to housing units affordable to lower income households.

10631.5. (a) (1) Beginning January 1, 2009, the terms of, and eligibility for, a water management grant or loan made to an urban water supplier and awarded or administered by the department, state board, or California Bay-Delta Authority or its successor agency shall be conditioned on the implementation of the water demand management measures described in Section 10631, as determined by the department pursuant to subdivision (b).

(2) For the purposes of this section, water management grants and loans include funding for programs and projects for surface water or groundwater storage, recycling, desalination, water conservation, water supply reliability, and water supply augmentation. This section does not apply to water management projects funded by the federal American Recovery and Reinvestment Act of 2009 (Public Law 111-5).

(3) Notwithstanding paragraph (1), the department shall determine that an urban water supplier is eligible for a water management grant or loan even though the supplier is not implementing all of the water demand management measures described in Section 10631, if the urban water supplier has submitted to the department for approval a schedule, financing plan, and budget, to be included in the grant or loan agreement, for implementation of the water demand management measures. The supplier may request grant or loan funds to implement the water demand management measures to the extent the request is consistent with the eligibility requirements applicable to the water management funds.

(4) (A) Notwithstanding paragraph (1), the department shall

determine that an urban water supplier is eligible for a water management grant or loan even though the supplier is not implementing all of the water demand management measures described in Section 10631, if an urban water supplier submits to the department for approval documentation demonstrating that a water demand management measure is not locally cost effective. If the department determines that the documentation submitted by the urban water supplier fails to demonstrate that a water demand management measure is not locally cost effective, the department shall notify the urban water supplier and the agency administering the grant or loan program within 120 days that the documentation does not satisfy the requirements for an exemption, and include in that notification a detailed statement to support the determination.

(B) For purposes of this paragraph, "not locally cost effective" means that the present value of the local benefits of implementing a water demand management measure is less than the present value of the local costs of implementing that measure.

(b) (1) The department, in consultation with the state board and the California Bay-Delta Authority or its successor agency, and after soliciting public comment regarding eligibility requirements, shall develop eligibility requirements to implement the requirement of paragraph (1) of subdivision (a). In establishing these eligibility requirements, the department shall do both of the following:

(A) Consider the conservation measures described in the Memorandum of Understanding Regarding Urban Water Conservation in California, and alternative conservation approaches that provide equal or greater water savings.

(B) Recognize the different legal, technical, fiscal, and practical roles and responsibilities of wholesale water suppliers and retail water suppliers.

(2) (A) For the purposes of this section, the department shall determine whether an urban water supplier is implementing all of the water demand management measures described in Section 10631 based on either, or a combination, of the following:

(i) Compliance on an individual basis.

(ii) Compliance on a regional basis. Regional compliance shall require participation in a regional conservation program consisting of two or more urban water suppliers that achieves the level of conservation or water efficiency savings equivalent to the amount of conservation or savings achieved if each of the participating urban water suppliers implemented the water demand management measures. The urban water supplier administering the regional program shall provide participating urban water suppliers and the department with data to demonstrate that the regional program is consistent with this clause. The department shall review the data to determine whether the urban water suppliers in the regional program are meeting the eligibility requirements.

(B) The department may require additional information for any determination pursuant to this section.

(3) The department shall not deny eligibility to an urban water supplier in compliance with the requirements of this section that is participating in a multiagency water project, or an integrated regional water management plan, developed pursuant to Section 75026 of the Public Resources Code, solely on the basis that one or more of

the agencies participating in the project or plan is not implementing all of the water demand management measures described in Section 10631.

(c) In establishing guidelines pursuant to the specific funding authorization for any water management grant or loan program subject to this section, the agency administering the grant or loan program shall include in the guidelines the eligibility requirements developed by the department pursuant to subdivision (b).

(d) Upon receipt of a water management grant or loan application by an agency administering a grant and loan program subject to this section, the agency shall request an eligibility determination from the department with respect to the requirements of this section. The department shall respond to the request within 60 days of the request.

(e) The urban water supplier may submit to the department copies of its annual reports and other relevant documents to assist the department in determining whether the urban water supplier is implementing or scheduling the implementation of water demand management activities. In addition, for urban water suppliers that are signatories to the Memorandum of Understanding Regarding Urban Water Conservation in California and submit biennial reports to the California Urban Water Conservation Council in accordance with the memorandum, the department may use these reports to assist in tracking the implementation of water demand management measures.

(f) This section shall remain in effect only until July 1, 2016, and as of that date is repealed, unless a later enacted statute, that is enacted before July 1, 2016, deletes or extends that date.

10631.7. The department, in consultation with the California Urban Water Conservation Council, shall convene an independent technical panel to provide information and recommendations to the department and the Legislature on new demand management measures, technologies, and approaches. The panel shall consist of no more than seven members, who shall be selected by the department to reflect a balanced representation of experts. The panel shall have at least one, but no more than two, representatives from each of the following: retail water suppliers, environmental organizations, the business community, wholesale water suppliers, and academia. The panel shall be convened by January 1, 2009, and shall report to the Legislature no later than January 1, 2010, and every five years thereafter. The department shall review the panel report and include in the final report to the Legislature the department's recommendations and comments regarding the panel process and the panel's recommendations.

10632. (a) The plan shall provide an urban water shortage contingency analysis that includes each of the following elements that are within the authority of the urban water supplier:

(1) Stages of action to be undertaken by the urban water supplier in response to water supply shortages, including up to a 50 percent reduction in water supply, and an outline of specific water supply conditions that are applicable to each stage.

(2) An estimate of the minimum water supply available during each of the next three water years based on the driest three-year historic

sequence for the agency's water supply.

(3) Actions to be undertaken by the urban water supplier to prepare for, and implement during, a catastrophic interruption of water supplies including, but not limited to, a regional power outage, an earthquake, or other disaster.

(4) Additional, mandatory prohibitions against specific water use practices during water shortages, including, but not limited to, prohibiting the use of potable water for street cleaning.

(5) Consumption reduction methods in the most restrictive stages. Each urban water supplier may use any type of consumption reduction methods in its water shortage contingency analysis that would reduce water use, are appropriate for its area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply.

(6) Penalties or charges for excessive use, where applicable.

(7) An analysis of the impacts of each of the actions and conditions described in paragraphs (1) to (6), inclusive, on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts, such as the development of reserves and rate adjustments.

(8) A draft water shortage contingency resolution or ordinance.

(9) A mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis.

(b) Commencing with the urban water management plan update due December 31, 2015, for purposes of developing the water shortage contingency analysis pursuant to subdivision (a), the urban water supplier shall analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas, as defined in subdivision (a) of Section 115921 of the Health and Safety Code.

10633. The plan shall provide, to the extent available, information on recycled water and its potential for use as a water source in the service area of the urban water supplier. The preparation of the plan shall be coordinated with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area, and shall include all of the following:

(a) A description of the wastewater collection and treatment systems in the supplier's service area, including a quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.

(b) A description of the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.

(c) A description of the recycled water currently being used in the supplier's service area, including, but not limited to, the type, place, and quantity of use.

(d) A description and quantification of the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse, groundwater recharge, indirect potable reuse, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses.

(e) The projected use of recycled water within the supplier's

service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected pursuant to this subdivision.

(f) A description of actions, including financial incentives, which may be taken to encourage the use of recycled water, and the projected results of these actions in terms of acre-feet of recycled water used per year.

(g) A plan for optimizing the use of recycled water in the supplier's service area, including actions to facilitate the installation of dual distribution systems, to promote recirculating uses, to facilitate the increased use of treated wastewater that meets recycled water standards, and to overcome any obstacles to achieving that increased use.

10634. The plan shall include information, to the extent practicable, relating to the quality of existing sources of water available to the supplier over the same five-year increments as described in subdivision (a) of Section 10631, and the manner in which water quality affects water management strategies and supply reliability.

WATER CODE

SECTION 10635

10635. (a) Every urban water supplier shall include, as part of its urban water management plan, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and multiple dry water years. The water service reliability assessment shall be based upon the information compiled pursuant to Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier.

(b) The urban water supplier shall provide that portion of its urban water management plan prepared pursuant to this article to any city or county within which it provides water supplies no later than 60 days after the submission of its urban water management plan.

(c) Nothing in this article is intended to create a right or entitlement to water service or any specific level of water service.

(d) Nothing in this article is intended to change existing law concerning an urban water supplier's obligation to provide water service to its existing customers or to any potential future customers.

WATER CODE

SECTION 10640-10645

10640. Every urban water supplier required to prepare a plan pursuant to this part shall prepare its plan pursuant to Article 2 (commencing with Section 10630).

The supplier shall likewise periodically review the plan as required by Section 10621, and any amendments or changes required as a result of that review shall be adopted pursuant to this article.

10641. An urban water supplier required to prepare a plan may consult with, and obtain comments from, any public agency or state agency or any person who has special expertise with respect to water demand management methods and techniques.

10642. Each urban water supplier shall encourage the active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan. Prior to adopting a plan, the urban water supplier shall make the plan available for public inspection and shall hold a public hearing thereon. Prior to the hearing, notice of the time and place of hearing shall be published within the jurisdiction of the publicly owned water supplier pursuant to Section 6066 of the Government Code. The urban water supplier shall provide notice of the time and place of hearing to any city or county within which the supplier provides water supplies. A privately owned water supplier shall provide an equivalent notice within its service area. After the hearing, the plan shall be adopted as prepared or as modified after the hearing.

10643. An urban water supplier shall implement its plan adopted pursuant to this chapter in accordance with the schedule set forth in its plan.

10644. (a) An urban water supplier shall submit to the department, the California State Library, and any city or county within which the supplier provides water supplies a copy of its plan no later than 30 days after adoption. Copies of amendments or changes to the plans shall be submitted to the department, the California State Library, and any city or county within which the supplier provides water supplies within 30 days after adoption.

(b) The department shall prepare and submit to the Legislature, on or before December 31, in the years ending in six and one, a report summarizing the status of the plans adopted pursuant to this part. The report prepared by the department shall identify the exemplary elements of the individual plans. The department shall provide a copy of the report to each urban water supplier that has submitted its plan to the department. The department shall also prepare reports and provide data for any legislative hearings designed to consider the effectiveness of plans submitted pursuant to this part.

(c) (1) For the purpose of identifying the exemplary elements of the individual plans, the department shall identify in the report those water demand management measures adopted and implemented by specific urban water suppliers, and identified pursuant to Section

10631, that achieve water savings significantly above the levels established by the department to meet the requirements of Section 10631.5.

(2) The department shall distribute to the panel convened pursuant to Section 10631.7 the results achieved by the implementation of those water demand management measures described in paragraph (1).

(3) The department shall make available to the public the standard the department will use to identify exemplary water demand management measures.

10645. Not later than 30 days after filing a copy of its plan with the department, the urban water supplier and the department shall make the plan available for public review during normal business hours.

WATER CODE

SECTION 10650-10656

10650. Any actions or proceedings to attack, review, set aside, void, or annul the acts or decisions of an urban water supplier on the grounds of noncompliance with this part shall be commenced as follows:

(a) An action or proceeding alleging failure to adopt a plan shall be commenced within 18 months after that adoption is required by this part.

(b) Any action or proceeding alleging that a plan, or action taken pursuant to the plan, does not comply with this part shall be commenced within 90 days after filing of the plan or amendment thereto pursuant to Section 10644 or the taking of that action.

10651. In any action or proceeding to attack, review, set aside, void, or annul a plan, or an action taken pursuant to the plan by an urban water supplier on the grounds of noncompliance with this part, the inquiry shall extend only to whether there was a prejudicial abuse of discretion. Abuse of discretion is established if the supplier has not proceeded in a manner required by law or if the action by the water supplier is not supported by substantial evidence.

10652. The California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code) does not apply to the preparation and adoption of plans pursuant to this part or to the implementation of actions taken pursuant to Section 10632. Nothing in this part shall be interpreted as exempting from the California Environmental Quality Act any project that would significantly affect water supplies for fish and wildlife, or any project for implementation of the plan, other than projects implementing Section 10632, or any project for expanded or additional water supplies.

10653. The adoption of a plan shall satisfy any requirements of state law, regulation, or order, including those of the State Water Resources Control Board and the Public Utilities Commission, for the preparation of water management plans or conservation plans; provided, that if the State Water Resources Control Board or the Public Utilities Commission requires additional information concerning water conservation to implement its existing authority, nothing in this part shall be deemed to limit the board or the commission in obtaining that information. The requirements of this part shall be satisfied by any urban water demand management plan prepared to meet federal laws or regulations after the effective date of this part, and which substantially meets the requirements of this part, or by any existing urban water management plan which includes the contents of a plan required under this part.

10654. An urban water supplier may recover in its rates the costs incurred in preparing its plan and implementing the reasonable water conservation measures included in the plan. Any best water management practice that is included in the plan that is identified in the

"Memorandum of Understanding Regarding Urban Water Conservation in California" is deemed to be reasonable for the purposes of this section.

10655. If any provision of this part or the application thereof to any person or circumstances is held invalid, that invalidity shall not affect other provisions or applications of this part which can be given effect without the invalid provision or application thereof, and to this end the provisions of this part are severable.

10656. An urban water supplier that does not prepare, adopt, and submit its urban water management plan to the department in accordance with this part, is ineligible to receive funding pursuant to Division 24 (commencing with Section 78500) or Division 26 (commencing with Section 79000), or receive drought assistance from the state until the urban water management plan is submitted pursuant to this article.

California Water Code

Sustainable Water Use and Demand Reduction

California Water Code Division 6, Part 2.55.

- Chapter 1. General Declarations and Policy §10608-10608.8
- Chapter 2. Definitions §10608.12
- Chapter 3. Urban Retail Water Suppliers §10608.16-10608.44
- Chapter 4. Agricultural Water Suppliers §10608.48
- Chapter 5. Sustainable Water Management §10608.50
- Chapter 6 Standardized Data Collection §10608.52
- Chapter 7 Funding Provisions §10608.56-10608.60
- Chapter 8 Quantifying Agricultural Water Use Efficiency §10608.64

Chapter 1. General Declarations and Policy

SECTION 10608-10608.8

10608. The Legislature finds and declares all of the following:

- (a) Water is a public resource that the California Constitution protects against waste and unreasonable use.
- (b) Growing population, climate change, and the need to protect and grow California's economy while protecting and restoring our fish and wildlife habitats make it essential that the state manage its water resources as efficiently as possible.
- (c) Diverse regional water supply portfolios will increase water supply reliability and reduce dependence on the Delta.
- (d) Reduced water use through conservation provides significant energy and environmental benefits, and can help protect water quality, improve streamflows, and reduce greenhouse gas emissions.
- (e) The success of state and local water conservation programs to increase efficiency of water use is best determined on the basis of measurable outcomes related to water use or efficiency.
- (f) Improvements in technology and management practices offer the potential for increasing water efficiency in California over time, providing an essential water management tool to meet the need for water for urban, agricultural, and environmental uses.
- (g) The Governor has called for a 20 percent per capita reduction in urban water use statewide by 2020.

- (h) The factors used to formulate water use efficiency targets can vary significantly from location to location based on factors including weather, patterns of urban and suburban development, and past efforts to enhance water use efficiency.
- (i) Per capita water use is a valid measure of a water provider's efforts to reduce urban water use within its service area. However, per capita water use is less useful for measuring relative water use efficiency between different water providers. Differences in weather, historical patterns of urban and suburban development, and density of housing in a particular location need to be considered when assessing per capita water use as a measure of efficiency.

10608.4. It is the intent of the Legislature, by the enactment of this part, to do all of the following:

- (a) Require all water suppliers to increase the efficiency of use of this essential resource.
- (b) Establish a framework to meet the state targets for urban water conservation identified in this part and called for by the Governor.
- (c) Measure increased efficiency of urban water use on a per capita basis.
- (d) Establish a method or methods for urban retail water suppliers to determine targets for achieving increased water use efficiency by the year 2020, in accordance with the Governor's goal of a 20-percent reduction.
- (e) Establish consistent water use efficiency planning and implementation standards for urban water suppliers and agricultural water suppliers.
- (f) Promote urban water conservation standards that are consistent with the California Urban Water Conservation Council's adopted best management practices and the requirements for demand management in Section 10631.
- (g) Establish standards that recognize and provide credit to water suppliers that made substantial capital investments in urban water conservation since the drought of the early 1990s.
- (h) Recognize and account for the investment of urban retail water suppliers in providing recycled water for beneficial uses.
- (i) Require implementation of specified efficient water management practices for agricultural water suppliers.
- (j) Support the economic productivity of California's agricultural, commercial, and industrial sectors.
- (k) Advance regional water resources management.

10608.8. (a) (1) Water use efficiency measures adopted and implemented pursuant to this part or Part 2.8 (commencing with Section 10800) are water conservation measures subject to the protections provided under Section 1011.

- (2) Because an urban agency is not required to meet its urban water use target until 2020 pursuant to subdivision (b) of Section 10608.24, an urban retail water supplier's failure to meet those targets shall not establish a violation of law for purposes of any state administrative or judicial proceeding prior to January 1, 2021. Nothing in this paragraph limits the use of data reported to the department or the board in litigation or an administrative proceeding. This paragraph shall become inoperative on January 1, 2021.
- (3) To the extent feasible, the department and the board shall provide for the use of water conservation reports required under this part to meet the requirements of Section 1011 for water conservation reporting.
- (b) This part does not limit or otherwise affect the application of Chapter 3.5 (commencing with Section 11340), Chapter 4 (commencing with Section 11370), Chapter 4.5 (commencing with Section 11400), and Chapter 5 (commencing with Section 11500) of Part 1 of Division 3 of Title 2 of the Government Code.
- (c) This part does not require a reduction in the total water used in the agricultural or urban sectors, because other factors, including, but not limited to, changes in agricultural economics or population growth may have greater effects on water use. This part does not limit the economic productivity of California's agricultural, commercial, or industrial sectors.
- (d) The requirements of this part do not apply to an agricultural water supplier that is a party to the Quantification Settlement Agreement, as defined in subdivision (a) of Section 1 of Chapter 617 of the Statutes of 2002, during the period within which the Quantification Settlement Agreement remains in effect. After the expiration of the Quantification Settlement Agreement, to the extent conservation water projects implemented as part of the Quantification Settlement Agreement remain in effect, the conserved water created as part of those projects shall be credited against the obligations of the agricultural water supplier pursuant to this part.

Chapter 2 Definitions

SECTION 10608.12

10608.12. Unless the context otherwise requires, the following definitions govern the construction of this part:

- (a) "Agricultural water supplier" means a water supplier, either publicly or privately owned, providing water to 10,000 or more irrigated acres, excluding recycled water. "Agricultural water supplier" includes a supplier or contractor for water, regardless of the basis of right, that distributes or sells water for ultimate resale to customers. "Agricultural water supplier" does not include the department.
- (b) "Base daily per capita water use" means any of the following:

- (1) The urban retail water supplier's estimate of its average gross water use, reported in gallons per capita per day and calculated over a continuous 10-year period ending no earlier than December 31, 2004, and no later than December 31, 2010.
 - (2) For an urban retail water supplier that meets at least 10 percent of its 2008 measured retail water demand through recycled water that is delivered within the service area of an urban retailwater supplier or its urban wholesale water supplier, the urban retail water supplier may extend the calculation described in paragraph (1) up to an additional five years to a maximum of a continuous 15-year period ending no earlier than December 31, 2004, and no later than December 31, 2010.
 - (3) For the purposes of Section 10608.22, the urban retail water supplier's estimate of its average gross water use, reported in gallons per capita per day and calculated over a continuous five-year period ending no earlier than December 31, 2007, and no later than December 31, 2010.
- (c) "Baseline commercial, industrial, and institutional water use" means an urban retail water supplier's base daily per capita water use for commercial, industrial, and institutional users.
- (d) "Commercial water user" means a water user that provides or distributes a product or service.
- (e) "Compliance daily per capita water use" means the gross water use during the final year of the reporting period, reported in gallons per capita per day.
- (f) "Disadvantaged community" means a community with an annual median household income that is less than 80 percent of the statewide annual median household income.
- (g) "Gross water use" means the total volume of water, whether treated or untreated, entering the distribution system of an urban retail water supplier, excluding all of the following:
- (1) Recycled water that is delivered within the service area of an urban retail water supplier or its urban wholesale water supplier.
 - (2) The net volume of water that the urban retail water supplier places into long-term storage.
 - (3) The volume of water the urban retail water supplier conveys for use by another urban water supplier.
 - (4) The volume of water delivered for agricultural use, except as otherwise provided in subdivision (f) of Section 10608.24.
- (h) "Industrial water user" means a water user that is primarily a manufacturer or processor of materials as defined by the North American Industry Classification

System code sectors 31 to 33, inclusive, or an entity that is a water user primarily engaged in research and development.

- (i) "Institutional water user" means a water user dedicated to public service. This type of user includes, among other users, higher education institutions, schools, courts, churches, hospitals, government facilities, and nonprofit research institutions.
- (j) "Interim urban water use target" means the midpoint between the urban retail water supplier's base daily per capita water use and the urban retail water supplier's urban water use target for 2020.
- (k) "Locally cost effective" means that the present value of the local benefits of implementing an agricultural efficiency water management practice is greater than or equal to the present value of the local cost of implementing that measure.
- (l) "Process water" means water used for producing a product or product content or water used for research and development, including, but not limited to, continuous manufacturing processes, water used for testing and maintaining equipment used in producing a product or product content, and water used in combined heat and power facilities used in producing a product or product content. Process water does not mean incidental water uses not related to the production of a product or product content, including, but not limited to, water used for restrooms, landscaping, air conditioning, heating, kitchens, and laundry.
- (m) "Recycled water" means recycled water, as defined in subdivision (n) of Section 13050, that is used to offset potable demand, including recycled water supplied for direct use and indirect potable reuse, that meets the following requirements, where applicable:
 - (1) For groundwater recharge, including recharge through spreading basins, water supplies that are all of the following:
 - (A) Metered.
 - (B) Developed through planned investment by the urban water supplier or a wastewater treatment agency.
 - (C) Treated to a minimum tertiary level.
 - (D) Delivered within the service area of an urban retail water supplier or its urban wholesale water supplier that helps an urban retail water supplier meet its urban water use target.
 - (2) For reservoir augmentation, water supplies that meet the criteria of paragraph (1) and are conveyed through a distribution system constructed specifically for recycled water.

- (n) "Regional water resources management" means sources of supply resulting from watershed-based planning for sustainable local water reliability or any of the following alternative sources of water:
 - (1) The capture and reuse of stormwater or rainwater.
 - (2) The use of recycled water.
 - (3) The desalination of brackish groundwater.
 - (4) The conjunctive use of surface water and groundwater in a manner that is consistent with the safe yield of the groundwater basin.
- (o) "Reporting period" means the years for which an urban retail water supplier reports compliance with the urban water use targets.
- (p) "Urban retail water supplier" means a water supplier, either publicly or privately owned, that directly provides potable municipal water to more than 3,000 end users or that supplies more than 3,000 acre-feet of potable water annually at retail for municipal purposes.
- (q) "Urban water use target" means the urban retail water supplier's targeted future daily per capita water use.
- (r) "Urban wholesale water supplier," means a water supplier, either publicly or privately owned, that provides more than 3,000 acre-feet of water annually at wholesale for potable municipal purposes.

Chapter 3 Urban Retail Water Suppliers

SECTION 10608.16-10608.44

- 10608.16. (a) The state shall achieve a 20-percent reduction in urban per capita water use in California on or before December 31, 2020.
 - (b) The state shall make incremental progress towards the state target specified in subdivision (a) by reducing urban per capita water use by at least 10 percent on or before December 31, 2015.
- 10608.20. (a) (1) Each urban retail water supplier shall develop urban water use targets and an interim urban water use target by July 1, 2011. Urban retail water suppliers may elect to determine and report progress toward achieving these targets on an individual or regional basis, as provided in subdivision (a) of Section 10608.28, and may determine the targets on a fiscal year or calendar year basis.
 - (2) It is the intent of the Legislature that the urban water use targets described in paragraph (1) cumulatively result in a 20-percent reduction from the baseline daily per capita water use by December 31, 2020.

- (b) An urban retail water supplier shall adopt one of the following methods for determining its urban water use target pursuant to subdivision (a):
- (1) Eighty percent of the urban retail water supplier's baseline per capita daily water use.
 - (2) The per capita daily water use that is estimated using the sum of the following performance standards:
 - (A) For indoor residential water use, 55 gallons per capita daily water use as a provisional standard. Upon completion of the department's 2016 report to the Legislature pursuant to Section 10608.42, this standard may be adjusted by the Legislature by statute.
 - (B) For landscape irrigated through dedicated or residential meters or connections, water efficiency equivalent to the standards of the Model Water Efficient Landscape Ordinance set forth in Chapter 2.7 (commencing with Section 490) of Division 2 of Title 23 of the California Code of Regulations, as in effect the later of the year of the landscape's installation or 1992. An urban retail water supplier using the approach specified in this subparagraph shall use satellite imagery, site visits, or other best available technology to develop an accurate estimate of landscaped areas.
 - (C) For commercial, industrial, and institutional uses, a 10-percent reduction in water use from the baseline commercial, industrial, and institutional water use by 2020.
 - (3) Ninety-five percent of the applicable state hydrologic region target, as set forth in the state's draft 20x2020 Water Conservation Plan (dated April 30, 2009). If the service area of an urban water supplier includes more than one hydrologic region, the supplier shall apportion its service area to each region based on population or area.
 - (4) A method that shall be identified and developed by the department, through a public process, and reported to the Legislature no later than December 31, 2010. The method developed by the department shall identify per capita targets that cumulatively result in a statewide 20-percent reduction in urban daily per capita water use by December 31, 2020. In developing urban daily per capita water use targets, the department shall do all of the following:
 - (A) Consider climatic differences within the state.
 - (B) Consider population density differences within the state.
 - (C) Provide flexibility to communities and regions in meeting the targets.
 - (D) Consider different levels of per capita water use according to plant water needs in different regions.

- (E) Consider different levels of commercial, industrial, and institutional water use in different regions of the state.
 - (F) Avoid placing an undue hardship on communities that have implemented conservation measures or taken actions to keep per capita water use low.
- (c) If the department adopts a regulation pursuant to paragraph (4) of subdivision (b) that results in a requirement that an urban retail water supplier achieve a reduction in daily per capita water use that is greater than 20 percent by December 31, 2020, an urban retail water supplier that adopted the method described in paragraph (4) of subdivision (b) may limit its urban water use target to a reduction of not more than 20 percent by December 31, 2020, by adopting the method described in paragraph (1) of subdivision (b).
 - (d) The department shall update the method described in paragraph (4) of subdivision (b) and report to the Legislature by December 31, 2014. An urban retail water supplier that adopted the method described in paragraph (4) of subdivision (b) may adopt a new urban daily per capita water use target pursuant to this updated method.
 - (e) An urban retail water supplier shall include in its urban water management plan due in 2010 pursuant to Part 2.6 (commencing with Section 10610) the baseline daily per capita water use, urban water use target, interim urban water use target, and compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.
 - (f) When calculating per capita values for the purposes of this chapter, an urban retail water supplier shall determine population using federal, state, and local population reports and projections.
 - (g) An urban retail water supplier may update its 2020 urban water use target in its 2015 urban water management plan required pursuant to Part 2.6 (commencing with Section 10610).
 - (h) (1) The department, through a public process and in consultation with the California Urban Water Conservation Council, shall develop technical methodologies and criteria for the consistent implementation of this part, including, but not limited to, both of the following:
 - (A) Methodologies for calculating base daily per capita water use, baseline commercial, industrial, and institutional water use, compliance daily per capita water use, gross water use, service area population, indoor residential water use, and landscaped area water use.
 - (B) Criteria for adjustments pursuant to subdivisions (d) and (e) of Section 10608.24.
 - (2) The department shall post the methodologies and criteria developed pursuant to this subdivision on its Internet Web site, and make written copies available, by October 1, 2010. An urban retail water supplier shall use the methods developed by the department in compliance with this part.

- (i) (1) The department shall adopt regulations for implementation of the provisions relating to process water in accordance with subdivision (l) of Section 10608.12, subdivision (e) of Section 10608.24, and subdivision (d) of Section 10608.26.
- (2) The initial adoption of a regulation authorized by this subdivision is deemed to address an emergency, for purposes of Sections 11346.1 and 11349.6 of the Government Code, and the department is hereby exempted for that purpose from the requirements of subdivision (b) of Section 11346.1 of the Government Code. After the initial adoption of an emergency regulation pursuant to this subdivision, the department shall not request approval from the Office of Administrative Law to readopt the regulation as an emergency regulation pursuant to Section 11346.1 of the Government Code.
- (j) (1) An urban retail water supplier is granted an extension to July 1, 2011, for adoption of an urban water management plan pursuant to Part 2.6 (commencing with Section 10610) due in 2010 to allow the use of technical methodologies developed by the department pursuant to paragraph (4) of subdivision (b) and subdivision (h). An urban retail water supplier that adopts an urban water management plan due in 2010 that does not use the methodologies developed by the department pursuant to subdivision (h) shall amend the plan by July 1, 2011, to comply with this part.
- (2) An urban wholesale water supplier whose urban water management plan prepared pursuant to Part 2.6 (commencing with Section 10610) was due and not submitted in 2010 is granted an extension to July 1, 2011, to permit coordination between an urban wholesale water supplier and urban retail water suppliers.

10608.22. Notwithstanding the method adopted by an urban retail water supplier pursuant to Section 10608.20, an urban retail water supplier's per capita daily water use reduction shall be no less than 5 percent of base daily per capita water use as defined in paragraph(3) of subdivision (b) of Section 10608.12. This section does not apply to an urban retail water supplier with a base daily per capita water use at or below 100 gallons per capita per day.

- 10608.24. (a) Each urban retail water supplier shall meet its interim urban water use target by December 31, 2015.
- (b) Each urban retail water supplier shall meet its urban water use target by December 31, 2020.
- (c) An urban retail water supplier's compliance daily per capita water use shall be the measure of progress toward achievement of its urban water use target.
- (d) (1) When determining compliance daily per capita water use, an urban retail water supplier may consider the following factors:
- (A) Differences in evapotranspiration and rainfall in the baseline period compared to the compliance reporting period.

(B) Substantial changes to commercial or industrial water use resulting from increased business output and economic development that have occurred during the reporting period.

(C) Substantial changes to institutional water use resulting from fire suppression services or other extraordinary events, or from new or expanded operations, that have occurred during the reporting period.

(2) If the urban retail water supplier elects to adjust its estimate of compliance daily per capita water use due to one or more of the factors described in paragraph (1), it shall provide the basis for, and data supporting, the adjustment in the report required by Section 10608.40.

(e) When developing the urban water use target pursuant to Section 10608.20, an urban retail water supplier that has a substantial percentage of industrial water use in its service area may exclude process water from the calculation of gross water use to avoid a disproportionate burden on another customer sector.

(f) (1) An urban retail water supplier that includes agricultural water use in an urban water management plan pursuant to Part 2.6 (commencing with Section 10610) may include the agricultural water use in determining gross water use. An urban retail water supplier that includes agricultural water use in determining gross water use and develops its urban water use target pursuant to paragraph (2) of subdivision (b) of Section 10608.20 shall use a water efficient standard for agricultural irrigation of 100 percent of reference evapotranspiration multiplied by the crop coefficient for irrigated acres.

(2) An urban retail water supplier, that is also an agricultural water supplier, is not subject to the requirements of Chapter 4 (commencing with Section 10608.48), if the agricultural water use is incorporated into its urban water use target pursuant to paragraph (1).

10608.26. (a) In complying with this part, an urban retail water supplier shall conduct at least one public hearing to accomplish all of the following:

(1) Allow community input regarding the urban retail water supplier's implementation plan for complying with this part.

(2) Consider the economic impacts of the urban retail water supplier's implementation plan for complying with this part.

(3) Adopt a method, pursuant to subdivision (b) of Section 10608.20, for determining its urban water use target.

(b) In complying with this part, an urban retail water supplier may meet its urban water use target through efficiency improvements in any combination among its customer sectors. An urban retail water supplier shall avoid placing a disproportionate burden on any customer sector.

(c) For an urban retail water supplier that supplies water to a United States Department of Defense military installation, the urban retail water supplier's

implementation plan for complying with this part shall consider the conservation of that military installation under federal Executive Order 13514.

- (d) (1) Any ordinance or resolution adopted by an urban retail water supplier after the effective date of this section shall not require existing customers as of the effective date of this section, to undertake changes in product formulation, operations, or equipment that would reduce process water use, but may provide technical assistance and financial incentives to those customers to implement efficiency measures for process water. This section shall not limit an ordinance or resolution adopted pursuant to a declaration of drought emergency by an urban retail water supplier.
- (2) This part shall not be construed or enforced so as to interfere with the requirements of Chapter 4 (commencing with Section 113980) to Chapter 13 (commencing with Section 114380), inclusive, of Part 7 of Division 104 of the Health and Safety Code, or any requirement or standard for the protection of public health, public safety, or worker safety established by federal, state, or local government or recommended by recognized standard setting organizations or trade associations.

10608.28. (a) An urban retail water supplier may meet its urban water use target within its retail service area, or through mutual agreement, by any of the following:

- (1) Through an urban wholesale water supplier.
 - (2) Through a regional agency authorized to plan and implement water conservation, including, but not limited to, an agency established under the Bay Area Water Supply and Conservation Agency Act (Division 31 (commencing with Section 81300)).
 - (3) Through a regional water management group as defined in Section 10537.
 - (4) By an integrated regional water management funding area.
 - (5) By hydrologic region.
 - (6) Through other appropriate geographic scales for which computation methods have been developed by the department.
- (b) A regional water management group, with the written consent of its member agencies, may undertake any or all planning, reporting, and implementation functions under this chapter for the member agencies that consent to those activities. Any data or reports shall provide information both for the regional water management group and separately for each consenting urban retail water supplier and urban wholesale water supplier.

10608.32. All costs incurred pursuant to this part by a water utility regulated by the Public Utilities Commission may be recoverable in rates subject to review and approval by the Public Utilities Commission, and may be recorded in a memorandum account and reviewed for reasonableness by the Public Utilities Commission.

- 10608.36. Urban wholesale water suppliers shall include in the urban water management plans required pursuant to Part 2.6 (commencing with Section 10610) an assessment of their present and proposed future measures, programs, and policies to help achieve the water use reductions required by this part.
- 10608.40. Urban water retail suppliers shall report to the department on their progress in meeting their urban water use targets as part of their urban water management plans submitted pursuant to Section 10631. The data shall be reported using a standardized form developed pursuant to Section 10608.52.
- 10608.42. (a) The department shall review the 2015 urban water management plans and report to the Legislature by July 1, 2017, on progress towards achieving a 20-percent reduction in urban water use by December 31, 2020. The report shall include recommendations on changes to water efficiency standards or urban water use targets to achieve the 20-percent reduction and to reflect updated efficiency information and technology changes.
- (b) A report to be submitted pursuant to subdivision (a) shall be submitted in compliance with Section 9795 of the Government Code.
- 10608.43. The department, in conjunction with the California Urban Water Conservation Council, by April 1, 2010, shall convene a representative task force consisting of academic experts, urban retail water suppliers, environmental organizations, commercial water users, industrial water users, and institutional water users to develop alternative best management practices for commercial, industrial, and institutional users and an assessment of the potential statewide water use efficiency improvement in the commercial, industrial, and institutional sectors that would result from implementation of these best management practices. The taskforce, in conjunction with the department, shall submit a report to the Legislature by April 1, 2012, that shall include a review of multiple sectors within commercial, industrial, and institutional users and that shall recommend water use efficiency standards for commercial, industrial, and institutional users among various sectors of water use. The report shall include, but not be limited to, the following:
- (a) Appropriate metrics for evaluating commercial, industrial, and institutional water use.
- (b) Evaluation of water demands for manufacturing processes, goods, and cooling.
- (c) Evaluation of public infrastructure necessary for delivery of recycled water to the commercial, industrial, and institutional sectors.
- (d) Evaluation of institutional and economic barriers to increased recycled water use within the commercial, industrial, and institutional sectors.
- (e) Identification of technical feasibility and cost of the best management practices to achieve more efficient water use statewide in the commercial, industrial, and institutional sectors that is consistent with the public interest and reflects past investments in water use efficiency.
- 10608.44. Each state agency shall reduce water use at facilities it operates to support urban retail water suppliers in meeting the target identified in Section 10608.16.

Chapter 4 Agricultural Water Suppliers

SECTION 10608.48

- 10608.48. (a) On or before July 31, 2012, an agricultural water supplier shall implement efficient water management practices pursuant to subdivisions (b) and (c).
- (b) Agricultural water suppliers shall implement all of the following critical efficient management practices:
- (1) Measure the volume of water delivered to customers with sufficient accuracy to comply with subdivision (a) of Section 531.10 and to implement paragraph (2).
 - (2) Adopt a pricing structure for water customers based at least in part on quantity delivered.
- (c) Agricultural water suppliers shall implement additional efficient management practices, including, but not limited to, practices to accomplish all of the following, if the measures are locally cost effective and technically feasible:
- (1) Facilitate alternative land use for lands with exceptionally high water duties or whose irrigation contributes to significant problems, including drainage.
 - (2) Facilitate use of available recycled water that otherwise would not be used beneficially, meets all health and safety criteria, and does not harm crops or soils.
 - (3) Facilitate the financing of capital improvements for on-farm irrigation systems.
 - (4) Implement an incentive pricing structure that promotes one or more of the following goals:
 - (A) More efficient water use at the farm level.
 - (B) Conjunctive use of groundwater.
 - (C) Appropriate increase of groundwater recharge.
 - (D) Reduction in problem drainage.
 - (E) Improved management of environmental resources.
 - (F) Effective management of all water sources throughout the year by adjusting seasonal pricing structures based on current conditions.

- (5) Expand line or pipe distribution systems, and construct regulatory reservoirs to increase distribution system flexibility and capacity, decrease maintenance, and reduce seepage.
 - (6) Increase flexibility in water ordering by, and delivery to, water customers within operational limits.
 - (7) Construct and operate supplier spill and tailwater recovery systems.
 - (8) Increase planned conjunctive use of surface water and groundwater within the supplier service area.
 - (9) Automate canal control structures.
 - (10) Facilitate or promote customer pump testing and evaluation.
 - (11) Designate a water conservation coordinator who will develop and implement the water management plan and prepare progress reports.
 - (12) Provide for the availability of water management services to water users. These services may include, but are not limited to, all of the following:
 - (A) On-farm irrigation and drainage system evaluations.
 - (B) Normal year and real-time irrigation scheduling and crop evapotranspiration information.
 - (C) Surface water, groundwater, and drainage water quantity and quality data.
 - (D) Agricultural water management educational programs and materials for farmers, staff, and the public.
 - (13) Evaluate the policies of agencies that provide the supplier with water to identify the potential for institutional changes to allow more flexible water deliveries and storage.
 - (14) Evaluate and improve the efficiencies of the supplier's pumps.
- (d) Agricultural water suppliers shall include in the agricultural water management plans required pursuant to Part 2.8 (commencing with Section 10800) a report on which efficient water management practices have been implemented and are planned to be implemented, an estimate of the water use efficiency improvements that have occurred since the last report, and an estimate of the water use efficiency improvements estimated to occur five and 10 years in the future. If an agricultural water supplier determines that an efficient water management practice is not locally cost effective or technically feasible, the supplier shall submit information documenting that determination.
- (e) The data shall be reported using a standardized form developed pursuant to Section 10608.52.

- (f) An agricultural water supplier may meet the requirements of subdivisions (d) and (e) by submitting to the department a water conservation plan submitted to the United States Bureau of Reclamation that meets the requirements described in Section 10828.
- (g) On or before December 31, 2013, December 31, 2016, and December 31, 2021, the department, in consultation with the board, shall submit to the Legislature a report on the agricultural efficient water management practices that have been implemented and are planned to be implemented and an assessment of the manner in which the implementation of those efficient water management practices has affected and will affect agricultural operations, including estimated water use efficiency improvements, if any.
- (h) The department may update the efficient water management practices required pursuant to subdivision (c), in consultation with the Agricultural Water Management Council, the United States Bureau of Reclamation, and the board. All efficient water management practices for agricultural water use pursuant to this chapter shall be adopted or revised by the department only after the department conducts public hearings to allow participation of the diverse geographical areas and interests of the state.
- (i) (1) The department shall adopt regulations that provide for a range of options that agricultural water suppliers may use or implement to comply with the measurement requirement in paragraph (1) of subdivision (b).
- (2) The initial adoption of a regulation authorized by this subdivision is deemed to address an emergency, for purposes of Sections 11346.1 and 11349.6 of the Government Code, and the department is hereby exempted for that purpose from the requirements of subdivision (b) of Section 11346.1 of the Government Code. After the initial adoption of an emergency regulation pursuant to this subdivision, the department shall not request approval from the Office of Administrative Law to readopt the regulation as an emergency regulation pursuant to Section 11346.1 of the Government Code.

Chapter 5 Sustainable Water Management

Section 10608.50

- 10608.50. (a) The department, in consultation with the board, shall promote implementation of regional water resources management practices through increased incentives and removal of barriers consistent with state and federal law. Potential changes may include, but are not limited to, all of the following:
- (1) Revisions to the requirements for urban and agricultural water management plans.
 - (2) Revisions to the requirements for integrated regional water management plans.

- (3) Revisions to the eligibility for state water management grants and loans.
 - (4) Revisions to state or local permitting requirements that increase water supply opportunities, but do not weaken water quality protection under state and federal law.
 - (5) Increased funding for research, feasibility studies, and project construction.
 - (6) Expanding technical and educational support for local land use and water management agencies.
- (b) No later than January 1, 2011, and updated as part of the California Water Plan, the department, in consultation with the board, and with public input, shall propose new statewide targets, or review and update existing statewide targets, for regional water resources management practices, including, but not limited to, recycled water, brackish groundwater desalination, and infiltration and direct use of urban stormwater runoff.

Chapter 6 Standardized Data Collection

SECTION 10608.52

- 10608.52. (a) The department, in consultation with the board, the California Bay-Delta Authority or its successor agency, the State Department of Public Health, and the Public Utilities Commission, shall develop a single standardized water use reporting form to meet the water use information needs of each agency, including the needs of urban water suppliers that elect to determine and report progress toward achieving targets on a regional basis as provided in subdivision (a) of Section 10608.28.
- (b) At a minimum, the form shall be developed to accommodate information sufficient to assess an urban water supplier's compliance with conservation targets pursuant to Section 10608.24 and an agricultural water supplier's compliance with implementation of efficient water management practices pursuant to subdivision (a) of Section 10608.48. The form shall accommodate reporting by urban water suppliers on an individual or regional basis as provided in subdivision (a) of Section 10608.28.

Chapter 7 Funding Provisions

Section 10608.56-10608.60

- 10608.56. (a) On and after July 1, 2016, an urban retail water supplier is not eligible for a water grant or loan awarded or administered by the state unless the supplier complies with this part.

- (b) On and after July 1, 2013, an agricultural water supplier is not eligible for a water grant or loan awarded or administered by the state unless the supplier complies with this part.
 - (c) Notwithstanding subdivision (a), the department shall determine that an urban retail water supplier is eligible for a water grant or loan even though the supplier has not met the per capita reductions required pursuant to Section 10608.24, if the urban retail water supplier has submitted to the department for approval a schedule, financing plan, and budget, to be included in the grant or loan agreement, for achieving the per capita reductions. The supplier may request grant or loan funds to achieve the per capita reductions to the extent the request is consistent with the eligibility requirements applicable to the water funds.
 - (d) Notwithstanding subdivision (b), the department shall determine that an agricultural water supplier is eligible for a water grant or loan even though the supplier is not implementing all of the efficient water management practices described in Section 10608.48, if the agricultural water supplier has submitted to the department for approval a schedule, financing plan, and budget, to be included in the grant or loan agreement, for implementation of the efficient water management practices. The supplier may request grant or loan funds to implement the efficient water management practices to the extent the request is consistent with the eligibility requirements applicable to the water funds.
 - (e) Notwithstanding subdivision (a), the department shall determine that an urban retail water supplier is eligible for a water grant or loan even though the supplier has not met the per capita reductions required pursuant to Section 10608.24, if the urban retail water supplier has submitted to the department for approval documentation demonstrating that its entire service area qualifies as a disadvantaged community.
 - (f) The department shall not deny eligibility to an urban retail water supplier or agricultural water supplier in compliance with the requirements of this part and Part 2.8 (commencing with Section 10800), that is participating in a multiagency water project, or an integrated regional water management plan, developed pursuant to Section 75026 of the Public Resources Code, solely on the basis that one or more of the agencies participating in the project or plan is not implementing all of the requirements of this part or Part 2.8 (commencing with Section 10800).
- 10608.60. (a) It is the intent of the Legislature that funds made available by Section 75026 of the Public Resources Code should be expended, consistent with Division 43 (commencing with Section 75001) of the Public Resources Code and upon appropriation by the Legislature, for grants to implement this part. In the allocation of funding, it is the intent of the Legislature that the department give consideration to disadvantaged communities to assist in implementing the requirements of this part.
- (b) It is the intent of the Legislature that funds made available by Section 75041 of the Public Resources Code, should be expended, consistent with Division 43 (commencing with Section 75001) of the Public Resources Code and upon appropriation by the Legislature, for direct expenditures to implement this part.

Chapter 8 Quantifying Agricultural Water Use Efficiency

SECTION 10608.64

10608.64. The department, in consultation with the Agricultural Water Management Council, academic experts, and other stakeholders, shall develop a methodology for quantifying the efficiency of agricultural water use. Alternatives to be assessed shall include, but not be limited to, determination of efficiency levels based on crop type or irrigation system distribution uniformity. On or before December 31, 2011, the department shall report to the Legislature on a proposed methodology and a plan for implementation. The plan shall include the estimated implementation costs and the types of data needed to support the methodology. Nothing in this section authorizes the department to implement a methodology established pursuant to this section.



APPENDIX C:

DWR Checklist

Table I-1 Urban Water Management Plan checklist, organized by legislation number

No.	UWMP requirement ^a	Calif. Water Code reference	Subject ^b	Additional clarification	UWMP location
1	Retail suppliers shall adopt a 2020 water use target using one of four methods.	10608.20(b)	Baselines and Targets		Section 4.4
2	Retail suppliers shall provide baseline daily per capita water use, urban water use target, interim urban water use target, and compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.	10608.20(e)	Baselines and Targets		Section 4.4
3	Retail suppliers' per capita daily water use reduction shall be no less than 5 percent of base daily per capita water use of the 5 year baseline. This does not apply if the suppliers base GPCD is at or below 100.	10608.22	Baselines and Targets		Section 4.4
4	Retail suppliers shall meet their interim target by December 31, 2015.	10608.24(a)	Baselines and Targets		Section 4.4
5	If the retail supplier adjusts its compliance GPCD using weather normalization, economic adjustment, or extraordinary events, it shall provide the basis for, and data supporting the adjustment.	10608.24(d)(2)	Baselines and Targets		Section 4.4
6	Retail suppliers shall conduct a public hearing to discuss adoption, implementation, and economic impact of water use targets.	10608.26(a)	Plan Adoption, Submittal, and Implementation		Section 1.2 Appendix J Appendix M
7	<i>Wholesale suppliers</i> shall include an assessment of present and proposed future measures, programs, and policies to help their retail water suppliers achieve targeted water use reductions.	10608.36	Baselines and Targets	Retail and wholesalers have slightly different requirements	Section 5.4 Section 5.5 Appendix I
8	Retail suppliers shall report on their progress in meeting their water use targets. The data shall be reported using a standardized form.	10608.40	Not applicable	Standardized form not yet available	Not Applicable
9	Every person that becomes an urban water supplier shall adopt an urban water management plan within one year after it has become an urban water supplier.	10620(b)	Plan Preparation		Section 1.1
10	Each urban water supplier shall coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.	10620(d)(2)	Plan Preparation		Section 1.2 Appendix J
11	An urban water supplier shall describe in the plan water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions.	10620(f)	Water Supply Reliability Assessment		Section 1.6 Section 2.5

No.	UWMP requirement ^a	Calif. Water Code reference	Subject ^b	Additional clarification	UWMP location
12	Every urban water supplier required to prepare a plan pursuant to this part shall notify, at least 60 days prior to the public hearing, any city or county within which the supplier provides water that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan.	10621(b)	Plan Adoption, Submittal, and Implementation		Section 1.2 Appendix J
13	Each urban water supplier shall update and submit its 2015 plan to the department by July 1, 2016.	10621(d)	Plan Adoption, Submittal, and Implementation		Section 1.1 Section 1.2 Appendix J Section 1.7
14	Describe the service area of the supplier	10631(a)	System Description		Section 1.8
15	(Describe the service area) climate	10631(a)	System Description		Section 1.8
16	Indicate the current population of the service area.	10631(a)	System Description	Provide the most recent population data possible. Use the method described in "Baseline Daily Per Capita Water Use." See Section M.	Section 1.9 Projections based on most recent US Census and City's growth rate.
17	Identify and quantify the existing and planned sources of water available for 2015, 2020, 2025, 2030, and 2035.	10631(a)	System Description	2035 and 2040 can also be provided to support consistency with Water Supply Assessments and Written Verification of Water Supply documents.	Section 1.10 Section 2.2 Section 2.5
18	Describe other demographic factors affecting the supplier's water management planning	10631(a)	System Description		Section 1.7 City does not have significant demographic factors. Affecting its water management planning

No.	UWMP requirement ^a	Calif. Water Code reference	Subject ^b	Additional clarification	UWMP location
19	Identify and quantify the existing and planned sources of water available for 2015, 2020, 2025, 2030, and 2035.	10631(b)	System Supplies	The 'existing' water sources should be for the same year as the "current population" in line 10. 2035 and 2040 can also be provided to support consistency with Water Supply Assessments and Written Verification of Water Supply documents.	Section 1.10 Section 2.2 Section 2.5
20	Indicate whether groundwater is an existing or planned source of water available to the supplier.	10631(b)	System Supplies	Source classifications are: surface water, groundwater, recycled water, storm water, desalinated sea water, desalinated brackish groundwater, and other.	Section 2 Yes groundwater is a source of supply
21	Indicate whether a groundwater management plan has been adopted by the water supplier or if there is any other specific authorization for groundwater management. Include a copy of the plan or authorization.	10631(b)(1)	System Supplies		Groundwater Management Plan is not available.
22	(Provide a) description of any groundwater basin or basins from which the urban water supplier pumps groundwater.	10631(b)(2)	System Supplies		Section 2.2.2 "Groundwater"
23	Indicate if the basin has been adjudicated and include a copy of the court order or decree and a description of the amount of water the supplier has the legal right to pump.	10631(b)(2)	System Supplies		Section 2.2.2 Appendix F
24	For unadjudicated basins, indicate whether or not the department has identified the basin as overdrafted, or projected to become overdrafted. Describe efforts by the supplier to eliminate the long-term overdraft condition.	10631(b)(2)	System Supplies		Not Applicable
25	(Provide a) detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years.	10631(b)(3)	System Supplies		Section 2.2.2 "Groundwater" Groundwater Production Pages 2-11
26	(Provide a) detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the urban water supplier.	10631(b)(4)	System Supplies	Provide projections for 2015, 2020, 2025, and 2030.	Section 2.4 Table 2.6 Section 5.4 (Tables 5.4-5.10)

No.	UWMP requirement ^a	Calif. Water Code reference	Subject ^b	Additional clarification	UWMP location
27	Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage.	10631(c)(1)	Water Supply Reliability Assessment		Section 5
28	(Provide) data for an average water year, a single dry water year, and multiple dry water years.	10631(c)(1)	Water Supply Reliability Assessment		Section 5 (Tables 5.4-5.10)
29	For any water source that may not be available at a consistent level of use, describe plans to supplement or replace that source.	10631(c)(2)	Water Supply Reliability Assessment		Section 5; Section 7 During times of groundwater or imported supply interruption, City will import or extract water and implement its Conservation Plan
30	Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.	10631(d)	System Supplies		Section 2.7
31	Quantify, to the extent records are available, past and current water use, and projected water use sectors.	10631(e)(1)	System Water Demands	Consider "past" to be 2005, present to be 2010, and projected to be 2015, 2020, 2025, and 2030. Provide numbers for each category for each of these years.	Section 4.3 Section 4.4 Section 4.5
32	Report the distribution system water loss for the most recent 12-month period available.	10631(e)(3)(A)	System Water Demands		Section 4.3 (Table 4.4)
33	(Provide) a description of the nature and extent of each demand management measure implemented over the past five years. The description will address specific measures listed in code.	10631(f)(1)	DMMs	Discuss each DMM, even if it is not currently or planned for implementation. Provide any appropriate schedules.	Section 6
34	(Describe) the expected future water supply projects and programs that may be undertaken by the water supplier to address water supply reliability in average, single-dry, and multiple-dry years.	10631(g)	System Supplies		Not Applicable (See Section 6)
35	(Describe) desalinated water project opportunities for long-term supply.	10631(h)	System Supplies		Section 2.6.4 No plans for desalination.

No.	UWMP requirement ^a	Calif. Water Code reference	Subject ^b	Additional clarification	UWMP location
36	CUWCC members may submit their 2013-2014 CUWCC BMP annual reports in lieu of, or in addition to, describing the DMM implementation in their UWMPs. This option is only allowable if the supplier has been found to be in full compliance with the CUWCC MOU.	10631(i)	DMMs		Section 6 Appendix E (2009-2014)
37	Urban water suppliers will include documentation that they have provided their wholesale supplier(s) – if any - with water use projections from that source.	10631(j)	System Supplies	Average year, single dry year, multiple dry years for 2015, 2020, 2025, and 2030. imported water supply available from MWD. Groundwater supply is also shown up 2040.	Section 2 Section 5.5 Tables 5.4-5.10 deal with
38	Wholesale suppliers will include documentation that they have provided their urban water suppliers with identification and quantification of the existing and planned sources of water available from the wholesale to the urban supplier during various water year types.	10631(j)	System Supplies		Section 5.5 (Tables 5.4 – 5.10) Appendix I
39	The water use projections required by Section 10631 shall include projected water use for single-family and multifamily residential housing needed for lower income households, as defined in Section 50079.5 of the Health and Safety Code, as identified in the housing element of any city, county, or city and county in the service area of the supplier.	10631.1(a)	System Demands		Section 4.5
40	(Provide) an urban water shortage contingency analysis that specifies stages of action and an outline of specific water supply conditions at each stage.	10632(a) and 10632(a)(1)	Water Shortage Contingency Planning		Section 7.2 Stages of Action
41	(Provide) an estimate of the minimum water supply available during each of the next three water years based on the driest three-year historic sequence for the agency's water supply.	10632(a)(2)	Water Shortage Contingency Planning		Section 7.3
42	(Identify) actions to be undertaken by the urban water supplier to prepare for, and implement during, a catastrophic interruption of water supplies including, but not limited to, a regional power outage, an earthquake, or other disaster.	10632(a)(3)	Water Shortage Contingency Planning		Section 7.4 Appendix L
43	(Identify) mandatory prohibitions against specific water use practices during water shortages, including, but not limited to, prohibiting the use of potable water for street cleaning.	10632(a)(4)	Water Shortage Contingency Planning		Section 7.5 Appendix H

No.	UWMP requirement ^a	Calif. Water Code reference	Subject ^b	Additional clarification	UWMP location
44	(Specify) consumption reduction methods in the most restrictive stages. Each urban water supplier may use any type of consumption reduction methods in its water shortage contingency analysis that would reduce water use, are appropriate for its area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply.	10632(a)(5)	Water Shortage Contingency Planning		Section 7.5 Appendix H
45	(Indicated) penalties or charges for excessive use, where applicable.	10632(a)(6)	Water Shortage Contingency Planning		Section 7.5 Penalties or Charges
46	(Provide) an analysis of the impacts of each of the actions and conditions in the water shortage contingency analysis on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts.	10632(a)(7)	Water Shortage Contingency Planning		Section 7.6
47	(Provide) a draft water shortage contingency resolution or ordinance.	10632(a)(8)	Water Shortage Contingency Planning		Section 7.7 Appendix H
48	(Indicate) a mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis.	10632(a)(9)	Water Shortage Contingency Planning		Section 7.8
49	For wastewater and recycled water, coordinate with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area.	10633	System Supplies (Recycled Water)		Section 2.6.1 Section 8
50	(Describe) the wastewater collection and treatment systems in the supplier's service area, including a quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.	10633(a)	System Supplies (Recycled Water)		Section 2.6.1 Section 8
51	(Describe) the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.	10633(b)	System Supplies (Recycled Water)		Section 2.6.1 Section 8
52	(Describe) the recycled water currently being used in the supplier's service area.	10633(c)	System Supplies (Recycled Water)		Section 2.6.1 Section 8
53	(Describe and quantify) the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse, groundwater recharge, indirect potable reuse, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses.	10633(d)	System Supplies (Recycled Water)		Section 8

No.	UWMP requirement ^a	Calif. Water Code reference	Subject ^b	Additional clarification	UWMP location
54	(Describe) The projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected .	10633(e)	System Supplies (Recycled Water)		Section 8
55	(Describe the) actions, including financial incentives, which may be taken to encourage the use of recycled water, and the projected results of these actions in terms of acre-feet of recycled water used per year.	10633(f)	System Supplies (Recycled Water)		Section 8 Actions to Encourage Use
56	(Provide a) plan for optimizing the use of recycled water in the supplier's service area, including actions to facilitate the installation of dual distribution systems, to promote recirculating uses, to facilitate the increased use of treated wastewater that meets recycled water standards, and to overcome any obstacles to achieving that increased use.	10633(g)	System Supplies (Recycled Water)		Section 8 Recycled Water Planning
57	(Provide) information on the quality of existing sources of water available to the supplier and the manner in which water quality affects water management strategies and supply reliability.	10634	Water Supply Reliability Assessment	For years 2010, 2015, 2020, 2025, and 2030	Section 3
58	Every urban water supplier shall include, as part of its urban water management plan, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and multiple dry water years. The water service reliability assessment shall be based upon the information compiled pursuant to Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier.	10635(a)	Water Supply Reliability Assessment		Section 5
59	(Provide) supporting documentation that Water Shortage Contingency Plan has been, or will be, provided to any city or county within which it provides water, no later than 60 days after the submission of the plan to DWR.	10635(b)	Plan Adoption, Submittal, and Implementation		To be performed after plan is adopted in June
60	(Provide) supporting documentation that the water supplier shall encourage the active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan.	10642	Plan Preparation		Appendix J Public Notifications Public Hearing Advertisements to be included in Appendix J.

No.	UWMP requirement ^a	Calif. Water Code reference	Subject ^b	Additional clarification	UWMP location
61	Prior to adopting a plan, the urban water supplier shall make the plan available for public inspection and shall hold a public hearing thereon. Prior to the hearing, notice of the time and place of hearing shall be published within the jurisdiction of the publicly owned water supplier pursuant to Section 6066 of the Government Code. The urban water supplier shall provide notice of the time and place of hearing to any city or county within which the supplier provides water supplies. A privately owned water supplier shall provide an equivalent notice within its service area.	10642	Plan Adoption, Submittal, and Implementation		Appendix J <i>Public Notifications</i> Public Hearing Advertisements to be included in Appendix J.
62	(Provide) the time and place of the hearing to any city or county within which the supplier provides water.	10642	Plan Adoption, Submittal, and Implementation		
63	(Provide) supporting documentation that the plan has been adopted as prepared or modified.	10642	Plan Adoption, Submittal, and Implementation		Appendix D <i>Proof of Adoption/Resolution</i>
64	(Provide) supporting documentation that the urban water supplier has submitted this UWMP to the California State Library.	10644(a)	Plan Adoption, Submittal, and Implementation		Section 1.2 Appendix J This will be done within 30 days of the City's adoption.
65	(Provide) supporting documentation that the urban water supplier has submitted this UWMP to any city or county within which the supplier provides water no later than 30 days after adoption.	10644(a)(1)	Plan Adoption, Submittal, and Implementation		Appendix J This will be done within 30 days of the City's adoption.
66	The plan, or amendments to the plan, submitted to the department shall be submitted electronically.	10644(a)(2)	Plan Adoption, Submittal, and Implementation		Section 1.3 Electronic Submittal
67	Not later than 30 days after filing a copy of its plan with the department, the urban water supplier and the department shall make the plan available for public review during normal business hours.	10645	Plan Adoption, Submittal, and Implementation		This will be done within 30 days of the City's adoption.

^a The UWMP Requirement descriptions are general summaries of what is provided in the legislation. Urban water suppliers should review the exact legislative wording prior to submitting its UWMP.

^b The Subject classification is provided for clarification only. It is aligned with the organization presented in Part I of this guidebook. A water supplier is free to address the UWMP Requirement anywhere with its UWMP, but is urged to provide clarification to DWR to facilitate review.



APPENDIX D:

City Council Resolution Adopting 2015 UWMP

*(Place Holder for City Council Resolution after
Adoption of the 2015 UWMP in June 2016)*



APPENDIX E:

CUWCC Reports (2009-2014)



CUWCC BMP Retail Coverage Report 2009

Foundational Best Management Practices for Urban Water Efficiency

BMP 1.1 Operation Practices

ON TRACK

61 City of Glendale, Water and Power

1. Conservation Coordinator provided with necessary resources to implement BMPs?

Name:

Title:

Email:

2. Water Waste Prevention Documents

WW Document Name	WWP File Name	WW Prevention URL	WW Prevention Ordinance Terms Description
Option A Describe the ordinances or terms of service adopted by your agency to meet the water waste prevention requirements of this BMP.	Copy7_of_Glendale_Water_Conservation_Ordinance.TIF	http://www.ci.glendale.ca.us/gmc/13.36.aspx	The ordinance provides a mandatory water conservation plan to minimize the effect of a shortage of water to the customers of the city and, by means of this chapter, to adopt provisions that will significantly reduce the consumption of water.
Option B Describe any water waste prevention ordinances or requirements adopted by your local jurisdiction or regulatory agencies within your service area.	Copy8_of_Glendale_Water_Conservation_Ordinance.TIF	http://www.ci.glendale.ca.us/gmc/13.36.aspx	The ordinance provides a mandatory water conservation plan to minimize the effect of a shortage of water to the customers of the city and, by means of this chapter, to adopt provisions that will significantly reduce the consumption of water.
Option C Describe any documentation of support for legislation or regulations that prohibit water waste.			
Option D Describe your agency efforts to cooperate with other entities in the adoption or enforcement of local requirements consistent with this BMP.			
Option E Describe your agency support positions with respect to adoption of legislation or regulations that are consistent with this BMP.			
Option F Describe your agency efforts to support local ordinances that establish permits requirements for water efficient design in new development.			

At Least As effective As



CUWCC BMP Retail Coverage Report 2009
Foundational Best Management Practices for Urban Water Efficiency

BMP 1.1 Operation Practices

ON TRACK

Exemption

No

Comments:



CUWCC BMP Coverage Report 2009

Foundational Best Management Practices For Urban Water Efficiency

BMP 1.2 Water Loss Control

On Track

61 City of Glendale, Water and Power

Completed Standard Water Audit Using AWWA Software?	Yes
AWWA File provided to CUWCC?	Yes
Glendale AWWA Water Audit 2009.xls	
AWWA Water Audit Validity Score?	62
Complete Training in AWWA Audit Method	No
Complete Training in Component Analysis Process?	No
Component Analysis?	No
Repaired all leaks and breaks to the extent cost effective?	Yes
Locate and Repair unreported leaks to the extent cost effective?	Yes
Maintain a record keeping system for the repair of reported leaks, including time of report, leak location, type of leaking pipe segment or fitting, and leak running time from report to repair.	Yes

Provided 7 Types of Water Loss Control Info

Leaks Repairs	Value Real Losses	Value Apparent Losses	Miles Surveyed	Press Reduction	Cost Of Interventions	Water Saved (AF)

At Least As effective As

Budget constraints and staff turnover have made it difficult to meet these requirements in the past. We plan to have staff complete all necessary trainings and complete the component analysis in the current year.

Exemption

Comments:



CUWCC BMP Coverage Report 2009

Foundational Best Management Practices For Urban Water Efficiency

BMP 1.3 Metering With Commodity

ON TRACK

61 City of Glendale, Water and Power

Numbered Unmetered Accounts	No
Metered Accounts billed by volume of use	Yes
Number of CII Accounts with Mixed Use Meters	3743
Conducted a feasibility study to assess merits of a program to provide incentives to switch mixed-use accounts to dedicated landscape meters?	No
Feasibility Study provided to CUWCC?	No
Date: 1/1/0001	
Uploaded file name:	
Completed a written plan, policy or program to test, repair and replace meters	Yes

At Least As effective As

Budget constraints and staff turnover have made it difficult to meet these requirements in the past. We plan to have staff complete the feasibility study in the current year.

Exemption

Comments:



CUWCC BMP Coverage Report 2009

Foundational Best Management Practices For Urban Water Efficiency

BMP 1.4 Retail Conservation Pricing

On Track

61 City of Glendale, Water and Power

Implementation (Water Rate Structure)

Customer Class	Water Rate Type	Conserving Rate?	(V) Total Revenue Commodity Charges	(M) Total Revenue Fixed Charges
Single-Family	Increasing Block	Yes	12292363.39	2654978.42
Multi-Family	Increasing Block	Yes	11300642.8	1120996.99
Commercial	Increasing Block	Yes	3856102.55	562961.14
Industrial	Increasing Block	Yes	549762.56	51188.91
Institutional	Increasing Block	Yes	579581.81	69722.63
Dedicated Irrigation	Increasing Block	Yes	745006.72	48128.16
Other	Increasing Block	Yes	1237.2	1218.01
			29324697.03	4509194.26

Calculate: V / (V + M) 87 %

Implementation Option: Use Annual Revenue As Reported

Use 3 years average instead of most recent year

Canadian Water and Wastewater Association

Upload file:

Agency Provide Sewer Service: No

At Least As effective As

Exemption

Comments:



CUWCC BMP Coverage Report 2009

Foundational Best Management Practices For Urban Water Efficiency

BMP 2.1 Public Outreach

ON TRACK

61 City of Glendale, Water and Power

Retail

Does your agency perform Public Outreach programs? No

The list of wholesale agencies performing public outreach which can be counted to help the agency comply with the BMP

Metropolitan Water District of SC

The name of agency, contact name and email address if not CUWCC Group 1 members

Did at least one contact take place during each quarter of the reporting year? No

Public Outreach Program List	Number
Newsletter articles on conservation	9
Flyers and/or brochures (total copies), bill stuffers, messages printed on bill, information packets	16
Website	16
Landscape water conservation media campaigns	6
General water conservation information	6
Total	53

Did at least one contact take place during each quarter of the reporting year? Yes

Number Media Contacts	Number
Articles or stories resulting from outreach	22
News releases	18
Newspaper contacts	20
Television contacts	3
Total	63

Did at least one website update take place during each quarter of the reporting year? Yes

Public Information Program Annual Budget

Annual Budget Category	Annual Budget Amount
Total	202000
Total Amount:	202000

Description of all other Public Outreach programs

Comments:

At Least As effective As



CUWCC BMP Coverage Report 2009

Foundational Best Management Practices For Urban Water Efficiency

BMP 2.1 Public Outreach

ON TRACK

Exemption

No

0



CUWCC BMP Coverage Report 2009

Foundational Best Management Practices For Urban Water Efficiency

BMP 2.2 School Education Programs

ON TRACK

61 City of Glendale, Water and Power

Retail

Does your agency implement School Education programs? Yes

The list of wholesale agencies performing public outreach which can be counted to help the agency comply with the BMP

Metropolitan Water District of SC

Materials meet state education framework requirements? Yes

LivingWise energy and water conservation kits and coloring books promoting water conservation.

Materials distributed to K-6? Yes

LivingWise energy and water conservation kits.

Materials distributed to 7-12 students? No (Info Only)

Annual budget for school education program: 75000.00

Description of all other water supplier education programs

Comments:

At Least As effective As No

Exemption No 0



CUWCC BMP Coverage Report 2010

61 City of Glendale, Water and Power

GPCD in 2006: 142.03

GPCD in 2010 122.64

GPCD Target for 2018: 116.47

Biennial GPCD Compliance Table

ON TRACK

Year	Report	Target		Highest Acceptable Bound	
		% Base	GPCD	% Base	GPCD
2010	1	96.4%	136.92	100%	142.03
2012	2	92.8%	131.81	96.4%	136.92
2014	3	89.2%	126.69	92.8%	131.81
2016	4	85.6%	121.58	89.2%	126.69
2018	5	82.0%	116.47	82.0%	116.47



CUWCC BMP Retail Coverage Report 2010

Foundational Best Management Practices for Urban Water Efficiency

BMP 1.1 Operation Practices

ON TRACK

61 City of Glendale, Water and Power

1. Conservation Coordinator provided with necessary resources to implement BMPs?

Name:

Title:

Email:

2. Water Waste Prevention Documents

WW Document Name	WWP File Name	WW Prevention URL	WW Prevention Ordinance Terms Description
Option A Describe the ordinances or terms of service adopted by your agency to meet the water waste prevention requirements of this BMP.	Copy5_of_Glendale_Water_Conservation_Ordinance.TIF	http://www.ci.glendale.ca.us/gmc/13.36.aspx	The ordinance provides a mandatory water conservation plan to minimize the effect of a shortage of water to the customers of the city and, by means of this chapter, to adopt provisions that will significantly reduce the consumption of water.
Option B Describe any water waste prevention ordinances or requirements adopted by your local jurisdiction or regulatory agencies within your service area.	Copy6_of_Glendale_Water_Conservation_Ordinance.TIF	http://www.ci.glendale.ca.us/gmc/13.36.aspx	The ordinance provides a mandatory water conservation plan to minimize the effect of a shortage of water to the customers of the city and, by means of this chapter, to adopt provisions that will significantly reduce the consumption of water.
Option C Describe any documentation of support for legislation or regulations that prohibit water waste.			
Option D Describe your agency efforts to cooperate with other entities in the adoption or enforcement of local requirements consistent with this BMP.			
Option E Describe your agency support positions with respect to adoption of legislation or regulations that are consistent with this BMP.			
Option F Describe your agency efforts to support local ordinances that establish permits requirements for water efficient design in new development.			

At Least As effective As



CUWCC BMP Retail Coverage Report 2010
Foundational Best Management Practices for Urban Water Efficiency

BMP 1.1 Operation Practices

ON TRACK

Exemption

No

Comments:



CUWCC BMP Coverage Report 2010

Foundational Best Management Practices For Urban Water Efficiency

BMP 1.2 Water Loss Control

On Track

61 City of Glendale, Water and Power

Completed Standard Water Audit Using AWWA Software?	Yes
AWWA File provided to CUWCC?	Yes
GWP AWWA Water Audit 2010.xls	
AWWA Water Audit Validity Score?	62
Complete Training in AWWA Audit Method	No
Complete Training in Component Analysis Process?	No
Component Analysis?	No
Repaired all leaks and breaks to the extent cost effective?	Yes
Locate and Repair unreported leaks to the extent cost effective?	Yes

Maintain a record keeping system for the repair of reported leaks, including time of report, leak location, type of leaking pipe segment or fitting, and leak running time from report to repair. Yes

Provided 7 Types of Water Loss Control Info

Leaks Repairs	Value Real Losses	Value Apparent Losses	Miles Surveyed	Press Reduction	Cost Of Interventions	Water Saved (AF)

At Least As effective As

Budget constraints and staff turnover have made it difficult to meet these requirements in the past. We plan to have staff complete all necessary trainings and complete the component analysis in the current year.

Exemption

Comments:



CUWCC BMP Coverage Report 2010

Foundational Best Management Practices For Urban Water Efficiency

BMP 1.3 Metering With Commodity

ON TRACK

61 City of Glendale, Water and Power

Numbered Unmetered Accounts	No
Metered Accounts billed by volume of use	Yes
Number of CII Accounts with Mixed Use Meters	3746
Conducted a feasibility study to assess merits of a program to provide incentives to switch mixed-use accounts to dedicated landscape meters?	No
Feasibility Study provided to CUWCC?	No
Date: 1/1/0001	
Uploaded file name:	
Completed a written plan, policy or program to test, repair and replace meters	Yes

At Least As effective As

Budget constraints and staff turnover have made it difficult to meet these requirements in the past. We plan to have staff complete the feasibility study in the current year.

Exemption

Comments:



CUWCC BMP Coverage Report 2010

Foundational Best Management Practices For Urban Water Efficiency

BMP 1.4 Retail Conservation Pricing

On Track

61 City of Glendale, Water and Power

Implementation (Water Rate Structure)

Customer Class	Water Rate Type	Conserving Rate?	(V) Total Revenue Commodity Charges	(M) Total Revenue Fixed Charges
Single-Family	Increasing Block	Yes	10543546.73	3312679.58
Multi-Family	Increasing Block	Yes	11769346.12	1468054.3
Commercial	Increasing Block	Yes	3885236.2	701918.41
Industrial	Increasing Block	Yes	574087.72	64752.57
Institutional	Increasing Block	Yes	512215.86	85077.13
Dedicated Irrigation	Increasing Block	Yes	553044.96	62236.11
Other	Increasing Block	Yes	5298.32	4317.57
			27842775.91	5699035.67

Calculate: V / (V + M) 83 %

Implementation Option: Use Annual Revenue As Reported

Use 3 years average instead of most recent year

Canadian Water and Wastewater Association

Upload file:

Agency Provide Sewer Service: No

At Least As effective As

Exemption

Comments:



CUWCC BMP Coverage Report 2010

Foundational Best Management Practices For Urban Water Efficiency

BMP 2.1 Public Outreach

ON TRACK

61 City of Glendale, Water and Power

Retail

Does your agency perform Public Outreach programs? **No**

The list of wholesale agencies performing public outreach which can be counted to help the agency comply with the BMP

Metropolitan Water District of SC

The name of agency, contact name and email address if not CUWCC Group 1 members

Did at least one contact take place during each quarter of the reporting year? **No**

Public Outreach Program List	Number
Newsletter articles on conservation	8
Flyers and/or brochures (total copies), bill stuffers, messages printed on bill, information packets	17
Website	17
Landscape water conservation media campaigns	6
General water conservation information	6
Total	54

Did at least one contact take place during each quarter of the reporting year? **Yes**

Number Media Contacts	Number
Articles or stories resulting from outreach	30
News releases	27
Newspaper contacts	28
Television contacts	4
Total	89

Did at least one website update take place during each quarter of the reporting year? **No**

Public Information Program Annual Budget

Annual Budget Category	Annual Budget Amount
Total	202000
Total Amount:	202000

Description of all other Public Outreach programs

Comments:

At Least As effective As

No



CUWCC BMP Coverage Report 2010

Foundational Best Management Practices For Urban Water Efficiency

BMP 2.1 Public Outreach

ON TRACK

Exemption

No

0



CUWCC BMP Coverage Report 2010

Foundational Best Management Practices For Urban Water Efficiency

BMP 2.2 School Education Programs

ON TRACK

61 City of Glendale, Water and Power

Retail

Does your agency implement School Education programs? Yes

The list of wholesale agencies performing public outreach which can be counted to help the agency comply with the BMP

Metropolitan Water District of SC

Materials meet state education framework requirements? Yes

LivingWise energy and water conservation kits and coloring books promoting water conservation.

Materials distributed to K-6? Yes

LivingWise energy and water conservation kits.

Materials distributed to 7-12 students? No (Info Only)

Annual budget for school education program: 75000.00

Description of all other water supplier education programs

Comments:

At Least As effective As No

Exemption No 0



CUWCC BMP Retail Coverage Report 2011

Foundational Best Management Practices for Urban Water Efficiency

BMP 1.1 Operation Practices

On Track

61 City of Glendale, Water and Power

1. Conservation Coordinator provided with necessary resources to implement BMPs?

Name:	Aneta Badalian
Title:	Business Account Rep
Email:	abadalian@ci.glendale.ca.us

2. Water Waste Prevention Documents

WW Document Name	WWP File Name	WW Prevention URL	WW Prevention Ordinance Terms Description
Option A Describe the ordinances or terms of service adopted by your agency to meet the water waste prevention requirements of this BMP.	Glendale Water Conservation Ordinance.TIF	http://www.ci.glendale.ca.us/gmc/13.36.aspx	The ordinance provides a mandatory water conservation plan to minimize the effect of a shortage of water to the customers of the city and, by means of this chapter, to adopt provisions that will significantly reduce the consumption of water.
Option B Describe any water waste prevention ordinances or requirements adopted by your local jurisdiction or regulatory agencies within your service area.	Copy_of_Glendale_Water_Consevation_Ordinance.TIF	http://www.ci.glendale.ca.us/gmc/13.36.aspx	The ordinance provides a mandatory water conservation plan to minimize the effect of a shortage of water to the customers of the city and, by means of this chapter, to adopt provisions that will significantly reduce the consumption of water.
Option C Describe any documentation of support for legislation or regulations that prohibit water waste.			
Option D Describe your agency efforts to cooperate with other entities in the adoption or enforcement of local requirements consistent with this BMP.			
Option E Describe your agency support positions with respect to adoption of legislation or regulations that are consistent with this BMP.			
Option F Describe your agency efforts to support local ordinances that establish permits requirements for water efficient design in new development.			



CUWCC BMP Retail Coverage Report 2011

Foundational Best Management Practices for Urban Water Efficiency

BMP 1.1 Operation Practices

On Track

At Least As effective
As

Exemption

Comments:



CUWCC BMP Coverage Report 2011

Foundational Best Management Practices For Urban Water Efficiency

BMP 1.2 Water Loss Control

On Track

61 City of Glendale, Water and Power

Completed Standard Water Audit Using AWWA Software?	Yes
AWWA File provided to CUWCC?	Yes
GWP AWWA Water Audit 2011.xls	
AWWA Water Audit Validity Score?	62
Complete Training in AWWA Audit Method	No
Complete Training in Component Analysis Process?	No
Component Analysis?	No
Repaired all leaks and breaks to the extent cost effective?	Yes
Locate and Repair unreported leaks to the extent cost effective?	Yes

Maintain a record keeping system for the repair of reported leaks, including time of report, leak location, type of leaking pipe segment or fitting, and leak running time from report to repair. Yes

Provided 7 Types of Water Loss Control Info

Leaks Repairs	Value Real Losses	Value Apparent Losses	Miles Surveyed	Press Reduction	Cost Of Interventions	Water Saved (AF)
19	738.84		381.7	True	1050000	1

At Least As effective As

Budget constraints and staff turnover have made it difficult to meet these requirements in the past. We plan to have staff complete all necessary trainings and complete the component analysis in the current year.

Exemption

Comments:



CUWCC BMP Coverage Report 2011

Foundational Best Management Practices For Urban Water Efficiency

BMP 1.3 Metering With Commodity

ON TRACK

61 City of Glendale, Water and Power

Numbered Unmetered Accounts	No
Metered Accounts billed by volume of use	Yes
Number of CII Accounts with Mixed Use Meters	3516
Conducted a feasibility study to assess merits of a program to provide incentives to switch mixed-use accounts to dedicated landscape meters?	No
Feasibility Study provided to CUWCC?	No
Date: 1/1/0001	
Uploaded file name:	
Completed a written plan, policy or program to test, repair and replace meters	Yes

At Least As effective As

Budget constraints and staff turnover have made it difficult to meet these requirements in the past. We plan to have staff complete the feasibility study in the current year.

Exemption

Comments:



CUWCC BMP Coverage Report 2011

Foundational Best Management Practices For Urban Water Efficiency

BMP 1.4 Retail Conservation Pricing

On Track

61 City of Glendale, Water and Power

Implementation (Water Rate Structure)

Customer Class	Water Rate Type	Conserving Rate?	(V) Total Revenue Commodity Charges	(M) Total Revenue Fixed Charges
Single-Family	Increasing Block	Yes	10444355.61	3863826.98
Multi-Family	Increasing Block	Yes	11602028.85	1686178.53
Commercial	Increasing Block	Yes	3747440.91	799852.98
Industrial	Increasing Block	Yes	802112.5	85141.86
Institutional	Increasing Block	Yes	459809.96	97577.56
Dedicated Irrigation	Increasing Block	Yes	536707.89	71631.62
Other	Increasing Block	Yes	4161.49	4078.63
			27596617.21	6608288.16

Calculate: $V / (V + M)$ 81 %

Implementation Option: Use Annual Revenue As Reported

Use 3 years average instead of most recent year

Canadian Water and Wastewater Association

Upload file:

Agency Provide Sewer Service: No

At Least As Effective As No

Exemption No

Comments:



CUWCC BMP Coverage Report 2011

Foundational Best Management Practices For Urban Water Efficiency

BMP 2.1 Public Outreach

On Track

61 City of Glendale, Water and Power

Retail Only

Does your agency perform Public Outreach programs? **Yes**

The list of wholesale agencies performing public outreach which can be counted to help the agency comply with the BMP

Metropolitan Water District of SC

The name of agency, contact name and email address if not CUWCC Group 1 members

Did at least one contact take place during each quarter of the reporting year? **No**

Public Outreach Program List	Number
Newsletter articles on conservation	8
Flyers and/or brochures (total copies), bill stuffers, messages printed on bill, information packets	11
Website	11
Landscape water conservation media campaigns	6
General water conservation information	4
Total	40

Did at least one contact take place during each quarter of the reporting year? **Yes**

Number Media Contacts	Number
Articles or stories resulting from outreach	28
News releases	25
Newspaper contacts	29
Television contacts	3
Total	85

Did at least one website update take place during each quarter of the reporting year? **No**

Public Information Program Annual Budget

Annual Budget Category	Annual Budget Amount
Total	175000
Total Amount:	175000

Description of all other Public Outreach programs



CUWCC BMP Coverage Report 2011

Foundational Best Management Practices For Urban Water Efficiency

BMP 2.1 Public Outreach

On Track

Comments:

At Least As Effective As

No

Exemption



CUWCC BMP Coverage Report 2011

Foundational Best Management Practices For Urban Water Efficiency

BMP 2.2 School Education Programs

On Track

61 City of Glendale, Water and Power

Retail Only

Does your agency implement School Education programs? Yes

The list of wholesale agencies performing public outreach which can be counted to help the agency comply with the BMP

Metropolitan Water District of SC

Materials meet state education framework requirements? Yes

LivingWise energy and water conservation kits and coloring books promoting water conservation.
--

Materials distributed to K-6? Yes

LivingWise energy and water conservation kits.
--

Materials distributed to 7-12 students? No (Info Only)

--

Annual budget for school education program: 60000.00

Description of all other water supplier education programs

LivingWise energy and water conservation kits and coloring books promoting water conservation. LivingWise energy and water conservation kits. water conservation coloring books Community Events Sponsorships

Comments:

At Least As Effective As No

Exemption No



CUWCC BMP Coverage Report 2012

61 City of Glendale, Water and Power

GPCD in 2006: 142.03

GPCD in 2012: 124.95

GPCD Target for 2018: 116.47

Biennial GPCD Compliance Table

ON TRACK

Year	Report	Target		Highest Acceptable Bound	
		% Base	GPCD	% Base	GPCD
2010	1	96.4%	136.92	100%	142.03
2012	2	92.8%	131.81	96.4%	136.92
2014	3	89.2%	126.69	92.8%	131.81
2016	4	85.6%	121.58	89.2%	126.69
2018	5	82.0%	116.47	82.0%	116.47



CUWCC BMP Retail Coverage Report 2012

Foundational Best Management Practices for Urban Water Efficiency

BMP 1.1 Operation Practices

On Track

61 City of Glendale, Water and Power

1. Conservation Coordinator provided with necessary resources to implement BMPs?

Name:	Aneta Badalian
Title:	Conservation Coordinator
Email:	abadalian@ci.glendale.ca.us

2. Water Waste Prevention Documents

WW Document Name	WWP File Name	WW Prevention URL	WW Prevention Ordinance Terms Description
Option A Describe the ordinances or terms of service adopted by your agency to meet the water waste prevention requirements of this BMP.	Copy9_of_Glendale_Water_Conservation_Ordinance.TIF	http://www.ci.glendale.ca.us/gmc/13.36.aspx	The ordinance provides a mandatory water conservation plan to minimize the effect of a shortage of water to the customers of the city and, by means of this chapter, to adopt provisions that will significantly reduce the consumption of water.
Option B Describe any water waste prevention ordinances or requirements adopted by your local jurisdiction or regulatory agencies within your service area.	Copy10_of_Glendale_Water_Conservation_Ordinance.TIF	http://www.ci.glendale.ca.us/gmc/13.36.aspx	The ordinance provides a mandatory water conservation plan to minimize the effect of a shortage of water to the customers of the city and, by means of this chapter, to adopt provisions that will significantly reduce the consumption of water.
Option C Describe any documentation of support for legislation or regulations that prohibit water waste.			
Option D Describe your agency efforts to cooperate with other entities in the adoption or enforcement of local requirements consistent with this BMP.			
Option E Describe your agency support positions with respect to adoption of legislation or regulations that are consistent with this BMP.			
Option F Describe your agency efforts to support local ordinances that establish permits requirements for water efficient design in new development.			



CUWCC BMP Retail Coverage Report 2012

Foundational Best Management Practices for Urban Water Efficiency

BMP 1.1 Operation Practices

On Track

At Least As effective
As

No

Exemption

Comments:



CUWCC BMP Coverage Report 2012

Foundational Best Management Practices For Urban Water Efficiency

BMP 1.2 Water Loss Control

On Track

61 City of Glendale, Water and Power

Completed Standard Water Audit Using AWWA Software?	Yes
AWWA File provided to CUWCC?	Yes
GWP AWWA Water Audit 2012.xls	
AWWA Water Audit Validity Score?	62
Complete Training in AWWA Audit Method	No
Complete Training in Component Analysis Process?	No
Component Analysis?	No
Repaired all leaks and breaks to the extent cost effective?	Yes
Locate and Repair unreported leaks to the extent cost effective?	Yes

Maintain a record keeping system for the repair of reported leaks, including time of report, leak location, type of leaking pipe segment or fitting, and leak running time from report to repair. Yes

Provided 7 Types of Water Loss Control Info

Leaks Repairs	Value Real Losses	Value Apparent Losses	Miles Surveyed	Press Reduction	Cost Of Interventions	Water Saved (AF)
10	18683.35		381.7		0	0

At Least As effective As

Budget constraints and staff turnover have made it difficult to meet these requirements in the past. We plan to have staff complete all necessary trainings and complete the component analysis in the current year.

Exemption

Comments:



CUWCC BMP Coverage Report 2012

Foundational Best Management Practices For Urban Water Efficiency

BMP 1.3 Metering With Commodity

ON TRACK

61 City of Glendale, Water and Power

Numbered Unmetered Accounts	No
Metered Accounts billed by volume of use	Yes
Number of CII Accounts with Mixed Use Meters	3569
Conducted a feasibility study to assess merits of a program to provide incentives to switch mixed-use accounts to dedicated landscape meters?	No
Feasibility Study provided to CUWCC?	No
Date: 1/1/0001	
Uploaded file name:	
Completed a written plan, policy or program to test, repair and replace meters	Yes

At Least As effective As

Budget constraints and staff turnover have made it difficult to meet these requirements in the past. We plan to have staff complete the feasibility study in the current year.

Exemption

Comments:



CUWCC BMP Coverage Report 2012

Foundational Best Management Practices For Urban Water Efficiency

BMP 1.4 Retail Conservation Pricing

On Track

61 City of Glendale, Water and Power

Implementation (Water Rate Structure)

Customer Class	Water Rate Type	Conserving Rate?	(V) Total Revenue Commodity Charges	(M) Total Revenue Fixed Charges
Single-Family	Increasing Block	Yes	11507266.08	4068287.12
Multi-Family	Increasing Block	Yes	11606338.04	1803262.85
Commercial	Increasing Block	Yes	2820565.56	604831.93
Industrial	Increasing Block	Yes	597048.69	64303.09
Institutional	Increasing Block	Yes	382057.78	75997.59
Dedicated Irrigation	Increasing Block	Yes	613487.94	83004.15
Other	Increasing Block	Yes	2270	2761.44
			27529034.09	6702448.17

Calculate: V / (V + M) 80 %

Implementation Option: Use Annual Revenue As Reported

Use 3 years average instead of most recent year

Canadian Water and Wastewater Association

Upload file:

Agency Provide Sewer Service: No

At Least As Effective As No

Exemption No

Comments:



CUWCC BMP Coverage Report 2012

Foundational Best Management Practices For Urban Water Efficiency

BMP 2.1 Public Outreach

On Track

61 City of Glendale, Water and Power

Retail Only

Does your agency perform Public Outreach programs? **Yes**

The list of wholesale agencies performing public outreach which can be counted to help the agency comply with the BMP

Metropolitan Water District of SC

The name of agency, contact name and email address if not CUWCC Group 1 members

Did at least one contact take place during each quarter of the reporting year? **No**

Public Outreach Program List	Number
Newsletter articles on conservation	6
Flyers and/or brochures (total copies), bill stuffers, messages printed on bill, information packets	9
Website	9
Landscape water conservation media campaigns	6
General water conservation information	6
Email Messages	4
Total	40

Did at least one contact take place during each quarter of the reporting year? **Yes**

Number Media Contacts	Number
Articles or stories resulting from outreach	26
News releases	28
Newspaper contacts	27
Television contacts	3
Total	84

Did at least one website update take place during each quarter of the reporting year? **No**

Public Information Program Annual Budget

Annual Budget Category	Annual Budget Amount
Total	202000
Total Amount:	202000

Description of all other Public Outreach programs



CUWCC BMP Coverage Report 2012

Foundational Best Management Practices For Urban Water Efficiency

BMP 2.1 Public Outreach

On Track

Comments:

At Least As Effective As

No

Exemption



BMP 2.2 School Education Programs

On Track

61 City of Glendale, Water and Power

Retail Only

Does your agency implement School Education programs? Yes

The list of wholesale agencies performing public outreach which can be counted to help the agency comply with the BMP

Metropolitan Water District of SC

Materials meet state education framework requirements? Yes

LivingWise energy and water conservation kits and coloring books promoting water conservation.

Materials distributed to K-6? Yes

LivingWise energy and water conservation kits.

Materials distributed to 7-12 students? No (Info Only)

Annual budget for school education program: 60000.00

Description of all other water supplier education programs

LivingWise energy and water conservation kits and coloring books promoting water conservation. LivingWise energy and water conservation kits. water conservation coloring books Community Events Sponsorships

Comments:

At Least As Effective As No

Exemption No



CUWCC BMP Retail Coverage Report 2013

Foundational Best Management Practices for Urban Water Efficiency

BMP 1.1 Operation Practices

ON TRACK

61 City of Glendale, Water and Power

1. Conservation Coordinator provided with necessary resources to implement BMPs?

Name:

Title:

Email:

2. Water Waste Prevention Documents

WW Document Name	WWP File Name	WW Prevention URL	WW Prevention Ordinance Terms Description
Option A Describe the ordinances or terms of service adopted by your agency to meet the water waste prevention requirements of this BMP.		http://qcode.us/codes/glendale/view.php?topic=13-13_36-13_36_060&frames=on	The ordinance provides a mandatory water conservation plan to minimize the effect of a shortage of water to the customers of the city and, by means of this chapter, to adopt provisions that will significantly reduce the consumption of water.
Option B Describe any water waste prevention ordinances or requirements adopted by your local jurisdiction or regulatory agencies within your service area.		http://qcode.us/codes/glendale/view.php?topic=13-13_36-13_36_070&frames=on	The ordinance establishes a No Water Waste Policy that is in effect at all times. It also sets 5 phases of water use restrictions.
Option C Describe any documentation of support for legislation or regulations that prohibit water waste.			
Option D Describe your agency efforts to cooperate with other entities in the adoption or enforcement of local requirements consistent with this BMP.			
Option E Describe your agency support positions with respect to adoption of legislation or regulations that are consistent with this BMP.			
Option F Describe your agency efforts to support local ordinances that establish permits requirements for water efficient design in new development.			

At Least As effective As



CUWCC BMP Retail Coverage Report 2013
Foundational Best Management Practices for Urban Water Efficiency

BMP 1.1 Operation Practices

ON TRACK

Exemption

Comments:



CUWCC BMP Coverage Report 2013

Foundational Best Management Practices For Urban Water Efficiency

BMP 1.2 Water Loss Control

ON TRACK

61 City of Glendale, Water and Power

- Completed Standard Water Audit Using AWWA Software? Yes
- AWWA File provided to CUWCC? Yes
- GWP AWWA Water Audit 2013.xls
- AWWA Water Audit Validity Score? 74
- Complete Training in AWWA Audit Method Yes
- Complete Training in Component Analysis Process? Yes
- Component Analysis? Yes
- Repaired all leaks and breaks to the extent cost effective? Yes
- Locate and Repair unreported leaks to the extent cost effective? Yes
- Maintain a record keeping system for the repair of reported leaks, including time of report, leak location, type of leaking pipe segment or fitting, and leak running time from report to repair. Yes

Provided 7 Types of Water Loss Control Info

Leaks Repairs	Value Real Losses	Value Apparent Losses	Miles Surveyed	Press Reduction	Cost Of Interventions	Water Saved (AF)
10	29524.49		382.2	False	0	

At Least As effective As

Exemption

Comments:



CUWCC BMP Coverage Report 2013

Foundational Best Management Practices For Urban Water Efficiency

BMP 1.3 Metering With Commodity

ON TRACK

61 City of Glendale, Water and Power

Numbered Unmetered Accounts	No
Metered Accounts billed by volume of use	Yes
Number of CII Accounts with Mixed Use Meters	3569
Conducted a feasibility study to assess merits of a program to provide incentives to switch mixed-use accounts to dedicated landscape meters?	No
Feasibility Study provided to CUWCC?	No
Date: 1/1/0001	
Uploaded file name:	
Completed a written plan, policy or program to test, repair and replace meters	Yes
At Least As effective As	<input type="text" value="No"/>
Exemption	<input type="text" value="No"/>
Comments:	



CUWCC BMP Coverage Report 2013

Foundational Best Management Practices For Urban Water Efficiency

BMP 1.4 Retail Conservation Pricing

On Track

61 City of Glendale, Water and Power

Implementation (Water Rate Structure)

Customer Class	Water Rate Type	Conserving Rate?	(V) Total Revenue Comodity Charges	(M) Total Revenue Fixed Carges
Single-Family	Increasing Block	Yes	11498777.33	6498261.37
Multi-Family	Increasing Block	Yes	9657985.58	3041855.21
Commercial	Uniform	Yes	4032534.3	1380768.7
Industrial	Uniform	Yes	836721.8	146309.09
Institutional	Uniform	Yes	554585.37	174937.47
Dedicated Irrigation	Uniform	Yes	782409.6	141369.54
Other	Uniform	Yes	16072.2	5674.65
			27379086.18	11389176.03

Calculate: V / (V + M) 71 %

Implementation Option: Use Annual Revenue As Reported

Use 3 years average instead of most recent year

Canadian Water and Wastewater Association

Upload file:

Agency Provide Sewer Service: No

At Least As effective As

Used Option 3

Exemption

Comments:



CUWCC BMP Coverage Report 2013

Foundational Best Management Practices For Urban Water Efficiency

BMP 2.1 Public Outreach

ON TRACK

61 City of Glendale, Water and Power

Retail

Does your agency perform Public Outreach programs? **Yes**

The list of wholesale agencies performing public outreach which can be counted to help the agency comply with the BMP

Metropolitan Water District of SC

The name of agency, contact name and email address if not CUWCC Group 1 members

Did at least one contact take place during each quarter of the reporting year? **No**

Public Outreach Program List	Number
Newsletter articles on conservation	6
Flyers and/or brochures (total copies), bill stuffers, messages printed on bill, information packets	11
Website	12
Landscape water conservation media campaigns	7
General water conservation information	8
Email Messages	5
Total	49

Did at least one contact take place during each quarter of the reporting year? **Yes**

Number Media Contacts	Number
Articles or stories resulting from outreach	24
News releases	26
Newspaper contacts	25
Television contacts	3
Total	78

Did at least one website update take place during each quarter of the reporting year? **Yes**

Public Information Program Annual Budget

Annual Budget Category	Annual Budget Amount
Total	175000
Total Amount:	175000

Description of all other Public Outreach programs

Comments:



CUWCC BMP Coverage Report 2013

Foundational Best Management Practices For Urban Water Efficiency

BMP 2.1 Public Outreach

ON TRACK

At Least As effective As

No

--

Exemption

No

0



CUWCC BMP Coverage Report 2013

Foundational Best Management Practices For Urban Water Efficiency

BMP 2.2 School Education Programs

ON TRACK

61 City of Glendale, Water and Power

Retail

Does your agency implement School Education programs? Yes

The list of wholesale agencies performing public outreach which can be counted to help the agency comply with the BMP

Metropolitan Water District of SC

Materials meet state education framework requirements? Yes

LivingWise energy and water conservation kits and coloring books promoting water conservation.

Materials distributed to K-6? Yes

LivingWise energy and water conservation kits.

Materials distributed to 7-12 students? No (Info Only)

Annual budget for school education program: 60000.00

Description of all other water supplier education programs

Comments:

At Least As effective As No

Exemption No 0



CUWCC BMP Retail Coverage Report 2014

Foundational Best Management Practices for Urban Water Efficiency

BMP 1.1 Operation Practices

ON TRACK

61 City of Glendale, Water and Power

1. Conservation Coordinator provided with necessary resources to implement BMPs?

Name:

Title:

Email:

2. Water Waste Prevention Documents

WW Document Name	WWP File Name	WW Prevention URL	WW Prevention Ordinance Terms Description
Option A Describe the ordinances or terms of service adopted by your agency to meet the water waste prevention requirements of this BMP.		http://qcode.us/codes/glendale/view.php?topic=13-13_36-13_36_060&frames=on	The ordinance provides a mandatory water conservation plan to minimize the effect of a shortage of water to the customers of the city and, by means of this chapter, to adopt provisions that will significantly reduce the consumption of water.
Option B Describe any water waste prevention ordinances or requirements adopted by your local jurisdiction or regulatory agencies within your service area.		http://qcode.us/codes/glendale/view.php?topic=13-13_36-13_36_070&frames=on	The ordinance establishes a No Water Waste Policy that is in effect at all times. It also sets 5 phases of water use restrictions.
Option C Describe any documentation of support for legislation or regulations that prohibit water waste.			
Option D Describe your agency efforts to cooperate with other entities in the adoption or enforcement of local requirements consistent with this BMP.			
Option E Describe your agency support positions with respect to adoption of legislation or regulations that are consistent with this BMP.			
Option F Describe your agency efforts to support local ordinances that establish permits requirements for water efficient design in new development.			

At Least As effective As



CUWCC BMP Retail Coverage Report 2014
Foundational Best Management Practices for Urban Water Efficiency

BMP 1.1 Operation Practices

ON TRACK

Exemption

Comments:



CUWCC BMP Coverage Report 2014

Foundational Best Management Practices For Urban Water Efficiency

BMP 1.2 Water Loss Control

ON TRACK

61 City of Glendale, Water and Power

- Completed Standard Water Audit Using AWWA Software? Yes
- AWWA File provided to CUWCC? Yes
- GWP AWWA Water Audit 2014.xls
- AWWA Water Audit Validity Score? 74
- Complete Training in AWWA Audit Method Yes
- Complete Training in Component Analysis Process? Yes
- Component Analysis? Yes
- Repaired all leaks and breaks to the extent cost effective? Yes
- Locate and Repair unreported leaks to the extent cost effective? Yes
- Maintain a record keeping system for the repair of reported leaks, including time of report, leak location, type of leaking pipe segment or fitting, and leak running time from report to repair. Yes

Provided 7 Types of Water Loss Control Info

Leaks Repairs	Value Real Losses	Value Apparent Losses	Miles Surveyed	Press Reduction	Cost Of Interventions	Water Saved (AF)
29	3296.98		382.2	False	0	28.74

At Least As effective As

Exemption

Comments:



CUWCC BMP Coverage Report 2014

Foundational Best Management Practices For Urban Water Efficiency

ON TRACK

Exempt

BMP 1.3 Metering With Commodity

61 City of Glendale, Water and Power

Numbered Unmetered Accounts	No
Metered Accounts billed by volume of use	Yes
Number of CII Accounts with Mixed Use Meters	3540
Conducted a feasibility study to assess merits of a program to provide incentives to switch mixed-use accounts to dedicated landscape meters?	No
Feasibility Study provided to CUWCC?	No
Date: 1/1/0001	
Uploaded file name:	
Completed a written plan, policy or program to test, repair and replace meters	Yes

At Least As effective As

Exemption

Comments:



CUWCC BMP Coverage Report 2014

Foundational Best Management Practices For Urban Water Efficiency

BMP 1.4 Retail Conservation Pricing

On Track

61 City of Glendale, Water and Power

Implementation (Water Rate Structure)

Customer Class	Water Rate Type	Conserving Rate?	(V) Total Revenue Comodity Charges	(M) Total Revenue Fixed Carges
Single-Family	Increasing Block	Yes	13057514.61	6751973.81
Multi-Family	Increasing Block	Yes	10301680.91	3120200.99
Commercial	Uniform	Yes	4383040.05	1486592.92
Industrial	Uniform	Yes	942769.58	155504.18
Institutional	Uniform	Yes	642648.54	177890.77
Dedicated Irrigation	Uniform	Yes	809844.03	144889.74
Other	Uniform	Yes	47321.13	16072.2
			30184818.85	11853124.61

Calculate: V / (V + M) 72 %

Implementation Option: Use Annual Revenue As Reported

Use 3 years average instead of most recent year

Canadian Water and Wastewater Association

Upload file:

Agency Provide Sewer Service: No

At Least As effective As

Used Option 3

Exemption

Comments:



CUWCC BMP Coverage Report 2014

Foundational Best Management Practices For Urban Water Efficiency

BMP 2.1 Public Outreach

ON TRACK

61 City of Glendale, Water and Power

Retail

Does your agency perform Public Outreach programs? **Yes**

The list of wholesale agencies performing public outreach which can be counted to help the agency comply with the BMP

Metropolitan Water District of SC

The name of agency, contact name and email address if not CUWCC Group 1 members

Did at least one contact take place during each quarter of the reporting year? **No**

Public Outreach Program List	Number
Newsletter articles on conservation	13
Flyers and/or brochures (total copies), bill stuffers, messages printed on bill, information packets	14
Website	17
Landscape water conservation media campaigns	10
General water conservation information	11
Email Messages	7
Total	72

Did at least one contact take place during each quarter of the reporting year? **Yes**

Number Media Contacts	Number
Articles or stories resulting from outreach	28
News releases	30
Newspaper contacts	29
Television contacts	5
Total	92

Did at least one website update take place during each quarter of the reporting year? **Yes**

Public Information Program Annual Budget

Annual Budget Category	Annual Budget Amount
Total	175000
Total Amount:	175000

Description of all other Public Outreach programs

Comments:



CUWCC BMP Coverage Report 2014

Foundational Best Management Practices For Urban Water Efficiency

BMP 2.1 Public Outreach

ON TRACK

At Least As effective As

No

Exemption

No

0



CUWCC BMP Coverage Report 2014

Foundational Best Management Practices For Urban Water Efficiency

BMP 2.2 School Education Programs

ON TRACK

61 City of Glendale, Water and Power

Retail

Does your agency implement School Education programs? Yes

The list of wholesale agencies performing public outreach which can be counted to help the agency comply with the BMP

Metropolitan Water District of SC

Agencies Name	ID number
Metropolitan Water District of SC	161

Materials meet state education framework requirements? Yes

LivingWise energy and water conservation kits and coloring books promoting water conservation.

Materials distributed to K-6? Yes

LivingWise energy and water conservation kits.

Materials distributed to 7-12 students? No (Info Only)

Annual budget for school education program: 60000.00

Description of all other water supplier education programs

Comments:

At Least As effective As No

Exemption No 0



CUWCC BMP Coverage Report 2014

61 City of Glendale, Water and Power

Baseline GPCD: 142.03

GPCD in 2014 127.39

GPCD Target for 2018: 116.50

Biennial GPCD Compliance Table

ON TRACK

Year	Report	Target		Highest Acceptable Bound	
		% Base	GPCD	% Base	GPCD
2010	1	96.4%	136.90	100%	142.00
2012	2	92.8%	131.80	96.4%	136.90
2014	3	89.2%	126.70	92.8%	131.80
2016	4	85.6%	121.60	89.2%	126.70
2018	5	82.0%	116.50	82.0%	116.50



APPENDIX F

Court Judgement on Groundwater Rights in the San Fernando and Verdugo Basins

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

ORIGINAL FILED

JAN 26 1979

JOHN A. CORCORAN County Clerk

SUPERIOR COURT OF THE STATE OF CALIFORNIA
FOR THE COUNTY OF LOS ANGELES

THE CITY OF LOS ANGELES,)
)
 Plaintiff,)
)
 vs.)
)
 CITY OF SAN FERNANDO, et al.,)
)
 Defendants.)
)

No. 650079
JUDGMENT

There follows by consecutive paging a Table of Contents (pages i. to vi.), Recitals (page 1), Definitions and List of Attachments (pages 1 to 6), Designation of Parties (page 6), Declaration re Geology and Hydrology (pages 6 to 12), Declaration of Rights (pages 12 to 21), Injunctions (pages 21 to 23), Continuing Jurisdiction (page 23), Watermaster (pages 23 to 29), Physical Solution (pages 29 to 34), and Miscellaneous Provisions (pages 34 to 35), and Attachments (pages 36 to 46). Each and all of said several parts constitute a single integrated Judgment herein.

TABLE OF CONTENTS

	<u>Page</u>
1	
2	
3	1. RECITALS 1
4	2. DEFINITIONS AND ATTACHMENTS 1
5	2.1 Definitions of Terms 1
6	2.2 List of Attachments 5
7	3. PARTIES 6
8	3.1 Defaulting and Disclaiming Defendants 6
9	3.2 No Rights Other Than as Herein Declared 6
10	4. DECLARATION RE GEOLOGY AND HYDROLOGY 6
11	4.1 Geology 6
12	4.1.1 ULARA 6
13	4.1.2 San Fernando Basin 7
14	4.1.3 Sylmar Basin 8
15	4.1.4 Verdugo Basin 8
16	4.1.5 Eagle Rock Basin 9
17	4.2 Hydrology 9
18	4.2.1 Water Supply 9
19	4.2.2 Ground Water Movement 9
20	4.2.3 Separate Ground Water Basins 10
21	4.2.4 Safe Yield and Native Safe Yield 11
22	4.2.5 Separate Basins -- Separate Rights 11
23	4.2.6 Hydrologic Condition of Basins 11
24	4.2.6.1 San Fernando Basin 11
25	4.2.6.2 Sylmar Basin 12
26	4.2.6.3 Verdugo Basin 12
27	4.2.6.4 Eagle Rock Basin 13
28	5. DECLARATION OF RIGHTS 12

	<u>Page</u>
1	
2	5.1 Right to Native Waters 12
3	5.1.1 Los Angeles River and San Fernando Basin . 12
4	5.1.1.1 Los Angeles' Pueblo Right 13
5	5.1.1.2 Extent of Pueblo Right 13
6	5.1.1.3 Pueblo Right -- Nature and
7	Priority of Exercise 13
8	5.1.1.4 Rights of Other Parties 14
9	5.1.2 Sylmar Basin Rights 14
10	5.1.2.1 No Pueblo Rights 14
11	5.1.2.2 Overlying Rights 14
12	5.1.2.3 Appropriative Rights of San
13	Fernando and Los Angeles 14
14	5.1.2.4 No Prescription 15
15	5.1.2.5 Other Parties 15
16	5.1.3 Verdugo Basin Rights 15
17	5.1.3.1 No Pueblo Rights 15
18	5.1.3.2 Prescriptive Rights of Glendale
19	and Crescenta Valley 15
20	5.1.3.3 Other Parties 15
21	5.1.4 Eagle Rock Basin Rights 16
22	5.1.4.1 No Pueblo Rights 16
23	5.1.4.2 No Rights in Native Waters 16
24	5.2 Rights to Imported Waters 16
25	5.2.1 San Fernando Basin Rights 16
26	5.2.1.1 Rights to Recapture Import Return
27	Water 16
28	5.2.1.2 Rights to Store and Recapture
	Stored Water 16

	<u>Page</u>
1	
2	5.2.1.3 Calculation of Import Return
3	Water and Stored Water Credits 17
4	5.2.1.4 Cumulative Import Return
5	Water Credits 18
6	5.2.1.5 Overextractions 18
7	5.2.1.6 Private Defendant 18
8	5.2.2 Sylmar Basin Rights 19
9	5.2.2.1 Rights to Recapture Import
10	Return Waters 19
11	5.2.2.2 Rights to Store and Recapture
12	Stored Water 19
13	5.2.2.3 Carry Over 19
14	5.2.2.4 Private Defendants 20
15	5.2.3 Verdugo Basin Rights 20
16	5.2.3.1 Glendale and Crescenta Valley 20
17	5.2.3.2 Los Angeles 20
18	5.2.3.3 Private Defendants 20
19	5.2.4 Eagle Rock Basin Rights 20
20	5.2.4.1 Los Angeles 20
21	5.2.4.2 Private Defendants 21
22	6. INJUNCTIONS 21
23	6.1 Each and Every Defendant 21
24	6.2 Each and Every Private Defendant 21
25	6.3 Defaulting and Disclaiming Parties 21
26	6.4 Glendale 21
27	6.5 Burbank 22
28	6.6 San Fernando 22

	<u>Page</u>
1	
2	6.7 Crescenta Valley 22
3	6.8 Los Angeles 22
4	6.9 Non-Consumptive and Minimal Consumptive Use Parties 22
5	7. CONTINUING JURISDICTION 23
6	7.1 Jurisdiction Reserved 23
7	8. WATERMASTER 23
8	8.1 Designation and Appointment 23
9	8.1.1 Watermaster Appointment 23
10	8.2 Powers and Duties 24
11	8.2.1 Scope 24
12	8.2.2 Requirement for Reports, Information and
13	Records 24
14	8.2.3 Requirement of Measuring Devices 24
15	8.2.4 Inspection by Watermaster 24
16	8.2.5 Policies and Procedures 24
17	8.2.6 Data Collection 25
18	8.2.7 Cooperation With Other Agencies 25
19	8.2.8 Accounting for Non-consumptive Use 25
20	8.2.9 Accounting for Accumulated Import Return
21	Water and Stored Water 25
22	8.2.10 Recalculation of Safe Yield 26
23	8.2.11 Watermaster Report 26
24	8.2.12 Active Party List 26
25	8.3 Administrative Committee 26
26	8.3.1 Committee to be Formed 26
27	8.3.2 Organization and Voting 27
28	8.3.3 Function and Powers 27

	<u>Page</u>
1	
2	8.4 Watermaster Budget and Assessments 27
3	8.4.1 Watermaster's Proposed Budget 27
4	8.4.2 Objections and Review 28
5	8.4.3 Notice of Assessment 28
6	8.4.4 Payment 28
7	8.5 Review of Watermaster Activities 28
8	8.5.1 Review Procedures 28
9	8.5.1.1 Noticed Motion 28
10	8.5.1.2 De Novo Nature of Proceedings 28
11	8.5.1.3 Decision 29
12	9. PHYSICAL SOLUTION 29
13	9.1 Circumstances Indicating Need for Physical Solution 29
14	9.2 Prior Stipulated Judgment 29
15	9.2.1 Eagle Rock Basin Parties 30
16	9.2.2 Non-Consumptive or Minimal-Consumptive
17	Operations 30
18	9.2.3 Abandoned Operations 31
19	9.3 Private Defendants 31
20	9.3.1 Private Defendants and Appropriate Cities 3
21	9.3.2 Reports and Accounting 32
22	9.3.3 Payment 32
23	9.3.3.1 Los Angeles 32
24	9.3.3.2 Glendale or Burbank 32
25	9.4 Glendale and Burbank 33
26	9.5 San Fernando 34
27	9.6 Effective Date 34
28	10. MISCELLANEOUS PROVISIONS 34

	<u>Page</u>
1	
2	10.1 Designation of Address for Notice and Service . 34
3	10.2 Notice of Change in Hydrologic Condition--
4	Sylmar Basin 35
5	10.3 Judgment Binding on Successors 35
6	10.4 Costs 35

ATTACHMENTS

9	"A" -- Map entitled "Upper Los Angeles River Area",	
10	showing separate basins therein	36
11	"B" -- List of "Dismissed Parties"	37
12	"C" -- List of "Defaulted Parties"	39
13	"D" -- List of "Disclaiming Parties"	41
14	"E" -- List of "Prior Stipulated Judgment"	42
15	"F" -- List of "Stipulated Non-consumptive or Minimal-	
16	consumptive Use Practices"	43
17	"G" -- Map entitled "Place of Use and Service Area of	
18	Private Defendants"	45
19	"H" -- Map entitled "Public Agency Water Service Areas" .	46

20
21
22
23
24
25
26
27
28

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

1. RECITALS

This matter was originally tried before the Honorable Edmund M. Moor, without jury, commencing on March 1, 1966, and concluding with entry of Findings, Conclusions and Judgment on March 14, 1968, after more than 181 trial days. Los Angeles appealed from said judgment and the California Supreme Court, by unanimous opinion, (14 Cal. 3d 199) reversed and remanded the case; after trial of some remaining issues on remand, and consistent with the opinion of the Supreme Court, and pursuant to stipulations, the Court signed and filed Findings of Fact and Conclusions of Law. Good cause thereby appearing,

IT IS ORDERED, ADJUDGED AND DECREED:

2. DEFINITIONS AND ATTACHMENTS

2.1 Definitions of Terms. As used in this Judgment, the following terms shall have the meanings herein set forth:

[1] Basin or Ground Water Basin -- A subsurface geologic formation with defined boundary conditions, containing a ground water reservoir, which is capable of yielding a significant quantity of ground water.

[2] Burbank -- Defendant City of Burbank.

[3] Crescenta Valley -- Defendant Crescenta Valley County Water District.

[4] Colorado Aqueduct -- The aqueduct facilities and system owned and operated by MWD for the importation of water from the Colorado River to its service area.

[5] Deep Rock -- Defendant Evelyn M. Pendleton, dba Deep Rock Artesian Water Company.

1 [6] Delivered Water -- Water utilized in a water supply
2 distribution system, including reclaimed water.

3 [7] Eagle Rock Basin -- The separate ground water basin
4 underlying the area shown as such on Attachment "A".

5 [8] Extract or Extraction -- To produce ground water,
6 or its production, by pumping or any other means.

7 [9] Fiscal Year -- July 1 through June 30 of the
8 following calendar year.

9 [10] Foremost -- Defendant Foremost Foods Company,
10 successor to defendant Sparkletts Drinking Water Corp.

11 [11] Forest Lawn -- Collectively, defendants Forest
12 Lawn Cemetery Association, Forest Lawn Company, Forest Lawn
13 Memorial-Park Association, and American Security and Fidelity
14 Corporation.

15 [12] Gage F-57 -- The surface stream gaging station
16 operated by Los Angeles County Flood Control District and
17 situated in Los Angeles Narrows immediately upstream from the
18 intersection of the Los Angeles River and Arroyo Seco, at
19 which point the surface outflow from ULARA is measured.

20 [13] Glendale -- Defendant City of Glendale.

21 [14] Ground Water -- Water beneath the surface of the
22 ground and within the zone of saturation.

23 [15] Hersch & Plumb -- Defendants David and Eleanor A.
24 Hersch and Gerald B. and Lucille Plumb, successors to
25 Wellesley and Duckworth defendants.

26 [16] Import Return Water -- Ground water derived from
27 percolation attributable to delivered imported water.

28 [17] Imported Water -- Water used within ULARA, which

1 is derived from sources outside said watershed. Said term
2 does not include inter-basin transfers wholly within ULARA.

3 [18] In Lieu Storage -- The act of accumulating ground
4 water in a basin by intentional reduction of extractions of
5 ground water which a party has a right to extract.

6 [19] Lockheed -- Defendant Lockheed Aircraft Corporation.

7 [20] Los Angeles -- Plaintiff City of Los Angeles,
8 acting by and through its Department of Water and Power.

9 [21] Los Angeles Narrows -- The physiographic area
10 northerly of Gage F-57 bounded on the east by the San Rafael
11 and Repetto Hills and on the west by the Elysian Hills,
12 through which all natural outflow of the San Fernando Basin
13 and the Los Angeles River flow en route to the Pacific Ocean.

14 [22] MWD -- The Metropolitan Water District of Southern
15 California, a public agency of the State of California.

16 [23] Native Safe Yield -- That portion of the safe
17 yield of a basin derived from native waters.

18 [24] Native Waters -- Surface and ground waters derived
19 from precipitation within ULARA.

20 [25] Overdraft -- A condition which exists when the
21 total annual extractions of ground water from a basin exceed
22 its safe yield, and when any temporary surplus has been
23 removed.

24 [26] Owens-Mono Aqueduct -- The aqueduct facilities
25 owned and operated by Los Angeles for importation to ULARA
26 water from the Owens River and Mono Basin watersheds easterly
27 of the Sierra-Nevada in Central California.

28 [27] Private Defendants -- Collectively, all of those

1 defendants who are parties, other than Glendale, Burbank, San
2 Fernando and Crescenta Valley.

3 [28] Reclaimed Water -- Water which, as a result of
4 processing of waste water, is made suitable for and used for
5 a controlled beneficial use.

6 [29] Regulatory Storage Capacity -- The volume of
7 storage capacity of San Fernando Basin which is required to
8 regulate the safe yield of the basin, without significant
9 loss, during any long-term base period of water supply.

10 [30] Rising Water -- The effluent from a ground water
11 basin which appears as surface flow.

12 [31] Rising Water Outflow -- The quantity of rising
13 water which occurs within a ground water basin and does not
14 rejoin the ground water body or is not captured prior to
15 flowing past a point of discharge from the basin.

16 [32] Safe Yield -- The maximum quantity of water which
17 can be extracted annually from a ground water basin under a
18 given set of cultural conditions and extraction patterns,
19 based on the long-term supply, without causing a continuing
20 reduction of water in storage.

21 [33] San Fernando -- Defendant City of San Fernando.

22 [34] San Fernando Basin -- The separate ground water
23 basin underlying the area shown as such on Attachment "A".

24 [35] Sportsman's Lodge -- Defendant Sportsman's Lodge
25 Banquet Association.

26 [36] Stored Water -- Ground water in a basin consisting
27 of either (1) imported or reclaimed water which is inten-
28 tionally spread, or (2) safe yield water which is allowed to

1 accumulate by In Lieu Storage. Said ground waters are dis-
2 tinguished and separately accounted for in a ground water
3 basin, notwithstanding that the same may be physically com-
4 mingled with other waters in the basin.

5 [37] Sylmar Basin -- The separate ground water basin
6 underlying the area indicated as such on Attachment "A".

7 [38] Temporary Surplus -- The amount of ground water
8 which would be required to be removed from a basin in order
9 to avoid waste under safe yield operation.

10 [39] Toluca Lake -- Defendant Toluca Lake Property
11 Owners Association.

12 [40] ULARA or Upper Los Angeles River Area -- The Upper
13 Los Angeles River watershed, being the surface drainage area
14 of the Los Angeles River tributary to Gage F-57.

15 [41] Underlying Pueblo Waters -- Native ground waters
16 in the San Fernando Basin which underlie safe yield and
17 stored waters.

18 [42] Valhalla -- Collectively, Valhalla Properties,
19 Valhalla Memorial Park, Valhalla Mausoleum Park.

20 [43] Van de Kamp -- Defendant Van de Kamp's Holland
21 Dutch Bakers, Inc.

22 [44] Verdugo Basin -- The separate ground water basin
23 underlying the area shown as such on Attachment "A".

24 [45] Water Year -- October 1 through September 30 of
25 the following calendar year.

26 Geographic Names, not herein specifically defined, are used to
27 refer to the places and locations thereof as shown on Attachment "A".

28 2.2 List of Attachments. There are attached hereto the .

1 following documents, which are by this reference incorporated in
2 this Judgment and specifically referred to in the text hereof:

3 "A" -- Map entitled "Upper Los Angeles River Area",
4 showing Separate Basins therein.

5 "B" -- List of "Dismissed Parties."

6 "C" -- List of "Defaulted Parties."

7 "D" -- List of "Disclaiming Parties."

8 "E" -- List of "Prior Stipulated Judgments."

9 "F" -- List of "Stipulated Non-Consumptive or Minimal-
10 Consumptive Use Practices."

11 "G" -- Map entitled "Place of Use and Service Area of
12 Private Defendants."

13 "H" -- Map entitled "Public Agency Water Service Areas."
14

15 3. PARTIES

16 3.1 Defaulting and Disclaiming Defendants. Each of the
17 defendants listed on Attachment "C" and Attachment "D" is without
18 any right, title or interest in, or to any claim to extract ground
19 water from ULARA or any of the separate ground water basins therein.

20 3.2 No Rights Other Than as Herein Declared. No party to
21 this action has any rights in or to the waters of ULARA except to
22 the extent declared herein.
23

24 4. DECLARATION RE GEOLOGY AND HYDROLOGY

25 4.1 Geology.

26 4.1.1 ULARA. ULARA (or Upper Los Angeles River Area),
27 is the watershed or surface drainage area tributary to the
28 Los Angeles River at Gage F-57. Said watershed contains a

1 total of 329,000 acres, consisting of approximately 123,000
2 acres of valley fill area and 206,000 acres of hill and
3 mountain area, located primarily in the County of Los Angeles,
4 with a small portion in the County of Ventura. Its boundaries
5 are shown on Attachment "A". The San Gabriel Mountains form
6 the northerly portion of the watershed, and from them two
7 major washes--the Pacoima and the Tujunga--discharge southerly
8 Tujunga Wash traverses the valley fill in a southerly direc-
9 tion and joins the Los Angeles River, which follows an east-
10 erly course along the base of the Santa Monica Mountains
11 before it turns south through the Los Angeles Narrows. The
12 waters of Pacoima Wash as and when they flow out of Sylmar
13 Basin are tributary to San Fernando Basin. Lesser tributary
14 washes run from the Simi Hills and the Santa Susana Mountains
15 in the westerly portion of the watershed. Other minor washes,
16 including Verdugo Wash, drain the easterly portion of the
17 watershed which consists of the Verdugo Mountains, the Elysian,
18 San Rafael and Repetto Hills. Each of said washes is a non-
19 perennial stream whose flood flows and rising waters are
20 naturally tributary to the Los Angeles River. The Los Angeles
21 River within ULARA and most of said tributary natural washes
22 have been replaced, and in some instances relocated, by
23 concrete-lined flood control channels. There are 85.3 miles
24 of such channels within ULARA, 62% of which have lined con-
25 crete bottoms.

26 4.1.2 San Fernando Basin. San Fernando Basin is the
27 major ground water basin in ULARA. It underlies 112,047 acres
28 and is located in the area shown as such on Attachment "A".

1 Boundary conditions of the San Fernando Basin consist on the
2 east and northeast of alluvial contacts with non-waterbearing
3 series along the San Rafael Hills and Verdugo Mountains and
4 the Santa Susana Mountains and Simi Hills on the northwest and
5 west and the Santa Monica Mountains on the south. Water-
6 bearing material in said basin extends to at least 1000 feet
7 below the surface. Rising water outflow from the San Fernando
8 Basin passes its downstream and southerly boundary in the
9 vicinity of Gage F-57, which is located in Los Angeles Narrows
10 about 300 feet upstream from the Figueroa Street (Dayton
11 Street) Bridge. The San Fernando Basin is separated from the
12 Sylmar Basin on the north by the eroded south limb of the
13 Little Tujunga Syncline which causes a break in the ground
14 water surface of about 40 to 50 feet.

15 4.1.3 Sylmar Basin. Sylmar Basin underlies 5,565 acres
16 and is located in the area shown as such on Attachment "A".
17 Water-bearing material in said basin extends to depths in ex-
18 cess of 12,000 feet below the surface. Boundary conditions of
19 Sylmar Basin consist of the San Gabriel Mountains on the north;
20 a topographic divide in the valley fill between the Mission
21 Hills and San Gabriel Mountains on the west, the Mission Hills
22 on the southwest, Upper Lopez Canyon Saugus Formation on the
23 east, along the east bank of Pacoima Wash, and the eroded
24 south limb of the Little Tujunga Syncline on the south.

25 4.1.4 Verdugo Basin. Verdugo Basin underlies 4,400 acres
26 and is located in the area shown as such on Attachment "A".
27 Boundary conditions of Verdugo Basin consist of the San
28 Gabriel Mountains on the north, the Verdugo Mountains on the

1 south and southwest, the San Rafael Hills on the southeast and
2 the topographic divide on the east between the drainage area
3 that is tributary to the Tujunga Wash to the west and Verdugo
4 Wash to the east, the ground water divide on the west between
5 Monk Hill-Raymond Basin and the Verdugo Basin on the east and
6 a submerged dam constructed at the mouth of Verdugo Canyon on
7 the south.

8 4.1.5 Eagle Rock Basin. Eagle Rock Basin underlies 807
9 acres and is located in the area shown as such on Attachment
10 "A". Boundary conditions of Eagle Rock Basin consist of the
11 San Rafael Hills on the north and west and the Repetto Hills
12 on the east and south with a small alluvial area to the
13 southeast consisting of a topographic divide.

14 4.2 Hydrology.

15 4.2.1 Water Supply. The water supply of ULARA consists
16 of native waters, derived from precipitation on the valley
17 floor and runoff from the hill and mountain areas, and of im-
18 ported water from outside the watershed. The major source of
19 imported water has been from the Owens-Mono Aqueduct, but
20 additional supplies have been and are now being imported
21 through MWD from its Colorado Aqueduct and the State Aqueduct.

22 4.2.2 Ground Water Movement. The major water-bearing
23 formation in ULARA is the valley fill material bounded by
24 hills and mountains which surround it. Topographically, the
25 valley-fill area has a generally uniform grade in a southerly
26 and easterly direction with the slope gradually decreasing
27 from the base of the hills and mountains to the surface
28 drainage outlet at Gage F-57. The valley fill material is a

1 heterogeneous mixture of clays, silts, sand and gravel laid
2 down as alluvium. The valley fill is of greatest permeability
3 along and easterly of Pacoima and Tujunga Washes and generally
4 throughout the eastern portion of the valley fill area,
5 except in the vicinity of Glendale where it is of lesser
6 permeability. Ground water occurs mainly within the valley
7 fill, with only negligible amounts occurring in hill and
8 mountain areas. There is no significant ground water movement
9 from the hill and mountain formations into the valley fill.
10 Available geologic data do not indicate that there are any
11 sources of native ground water other than those derived from
12 precipitation. Ground water movement in the valley fill
13 generally follows the surface topography and drainage except
14 where geologic or man-made impediments occur or where the
15 natural flow has been modified by extensive pumping.

16 4.2.3 Separate Ground Water Basins. The physical and
17 geologic characteristics of each of the ground water basins,
18 Eagle Rock, Sylmar, Verdugo and San Fernando, cause impedi-
19 ments to inter-basin ground water flow whereby there is
20 created separate underground reservoirs. Each of said basins
21 contains a common source of water supply to parties extracting
22 ground water from each of said basins. The amount of under-
23 flow from Sylmar Basin, Verdugo Basin and Eagle Rock Basin to
24 San Fernando Basin is relatively small, and on the average has
25 been approximately 540 acre feet per year from the Sylmar
26 Basin; 80 acre feet per year from Verdugo Basin; and 50 acre
27 feet per year from Eagle Rock Basin. Each has physiographic,
28 geologic and hydrologic differences, one from the other, and

1 each meets the hydrologic definition of "basin." The ex-
2 tractions of water in the respective basins affect the other
3 water users within that basin but do not significantly or
4 materially affect the ground water levels in any of the other
5 basins. The underground reservoirs of Eagle Rock, Verdugo and
6 Sylmar Basins are independent of one another and of the San
7 Fernando Basin.

8 4.2.4 Safe Yield and Native Safe Yield. The safe yield
9 and native safe yield, stated in acre feet, of the three
10 largest basins for the year 1964-65 was as follows:

<u>Basin</u>	<u>Safe Yield</u>	<u>Native Safe Yield</u>
11 San Fernando	90,680	43,660
12 Sylmar	6,210	3,850
13 Verdugo	7,150	3,590

14
15 The safe yield of Eagle Rock Basin is derived from imported
16 water delivered by Los Angeles. There is no measurable
17 native safe yield.

18 4.2.5 Separate Basins -- Separate Rights. The rights
19 of the parties to extract ground water within ULARA are
20 separate and distinct as within each of the several ground
21 water basins within said watershed.

22 4.2.6 Hydrologic Condition of Basins. The several
23 basins within ULARA are in varying hydrologic conditions,
24 which result in different legal consequences.

25 4.2.6.1 San Fernando Basin. The first full year
26 of overdraft in San Fernando Basin was 1954-55. It
27 remained in overdraft continuously until 1968, when an
28 injunction herein became effective. Thereafter, the

1 basin was placed on safe yield operation. There is no
2 surplus ground water available for appropriation or
3 overlying use from San Fernando Basin.

4 4.2.6.2 Sylmar Basin. Sylmar Basin is not in
5 overdraft. There remains safe yield over and above the
6 present reasonable beneficial overlying uses, from which
7 safe yield the appropriative rights of Los Angeles and
8 San Fernando may be and have been exercised.

9 4.2.6.3 Verdugo Basin. Verdugo Basin was in
10 overdraft for more than five consecutive years prior to
11 1968. Said basin is not currently in overdraft, due to
12 decreased extractions by Glendale and Crescenta Valley on
13 account of poor water quality. However, the combined
14 appropriative and prescriptive rights of Glendale and
15 Crescenta Valley are equivalent to the safe yield of the
16 Basin. No private overlying or appropriative rights
17 exist in Verdugo Basin.

18 4.2.6.4 Eagle Rock Basin. The only measurable
19 water supply to Eagle Rock Basin is import return water
20 by reason of importations by Los Angeles. Extractions by
21 Foremost and Deep Rock under the prior stipulated
22 judgments have utilized the safe yield of Eagle Rock
23 Basin, and have maintained hydrologic equilibrium
24 therein.

25
26 5. DECLARATION OF RIGHTS

27 5.1 Right to Native Waters.

28 5.1.1 Los Angeles River and San Fernando Basin.

1 5.1.1.1 Los Angeles' Pueblo Right. Los Angeles,
2 as the successor to all rights, claims and powers of the
3 Spanish Pueblo de Los Angeles in regard to water rights,
4 is the owner of a prior and paramount pueblo right to the
5 surface waters of the Los Angeles River and the native
6 ground waters of San Fernando Basin to meet its reason-
7 able beneficial needs and for its inhabitants.

8 5.1.1.2 Extent of Pueblo Right. Pursuant to said
9 pueblo right, Los Angeles is entitled to satisfy its
10 needs and those of its inhabitants within its boundaries
11 as from time to time modified. Water which is in fact
12 used for pueblo right purposes is and shall be deemed
13 needed for such purposes.

14 5.1.1.3 Pueblo Right -- Nature and Priority of
15 Exercise. The pueblo right of Los Angeles is a prior and
16 paramount right to all of the surface waters of the Los
17 Angeles River, and native ground water in San Fernando
18 Basin, to the extent of the reasonable needs and uses of
19 Los Angeles and its inhabitants throughout the corporate
20 area of Los Angeles, as its boundaries may exist from
21 time to time. To the extent that the Basin contains
22 native waters and imported waters, it is presumed that
23 the first water extracted by Los Angeles in any water
24 year is pursuant to its pueblo right, up to the amount
25 of the native safe yield. The next extractions by Los
26 Angeles in any year are deemed to be from import return
27 water, followed by stored water, to the full extent of
28 Los Angeles' right to such import return water and stored

1 water. In the event of need to meet water requirements
2 of its inhabitants, Los Angeles has the additional right,
3 pursuant to its pueblo right, withdraw temporarily from
4 storage Underlying Pueblo Waters, subject to an obliga-
5 tion to replace such water as soon as practical.

6 5.1.1.4 Rights of Other Parties. No other party
7 to this action has any right in or to the surface waters
8 of the Los Angeles River or the native safe yield of the
9 San Fernando Basin.

10 5.1.2 Sylmar Basin Rights.

11 5.1.2.1 No Pueblo Rights. The pueblo right of
12 Los Angeles does not extend to or include ground waters
13 in Sylmar Basin.

14 5.1.2.2 Overlying Rights. Defendants Moordigian
15 and Hersch & Plumb own lands overlying Sylmar Basin and
16 have a prior correlative right to extract native waters
17 from said Basin for reasonable beneficial uses on their
18 said overlying lands. Said right is appurtenant to said
19 overlying lands and water extracted pursuant thereto may
20 not be exported from said lands nor can said right be
21 transferred or assigned separate and apart from said
22 overlying lands.

23 5.1.2.3 Appropriative Rights of San Fernando
24 and Los Angeles. San Fernando and Los Angeles own
25 appropriative rights, of equal priority, to extract and
26 put to reasonable beneficial use for the needs of said
27 cities and their inhabitants, native waters of the
28 Sylmar Basin in excess of the exercised reasonable

1 beneficial needs of overlying users. Said appropriative
2 rights are:

3 San Fernando 3,580 acre feet
4 Los Angeles 1,560 acre feet.

5 5.1.2.4 No Prescription. The Sylmar Basin is not
6 presently in a state of overdraft and no rights by
7 prescription exist in said Basin against any overlying
8 or appropriative water user.

9 5.1.2.5 Other Parties. No other party to this
10 action owns or possesses any right to extract native
11 ground waters from the Sylmar Basin.

12 5.1.3 Verdugo Basin Rights.

13 5.1.3.1 No Pueblo Rights. The pueblo right of
14 Los Angeles does not extend to or include ground water
15 in Verdugo Basin.

16 5.1.3.2 Prescriptive Rights of Glendale and
17 Crescenta Valley. Glendale and Crescenta Valley own
18 prescriptive rights as against each other and against
19 all private overlying or appropriative parties in the
20 Verdugo Basin to extract, with equal priority, the
21 following quantities of water from the combined safe
22 yield of native and imported waters in Verdugo Basin:

23 Glendale 3,856 acre feet
24 Crescenta Valley 3,294 acre feet.

25 5.1.3.3 Other Parties. No other party to this
26 action owns or possesses any right to extract native
27 ground waters from the Verdugo Basin.

1 5.1.4 Eagle Rock Basin Rights.

2 5.1.4.1 No Pueblo Rights. The pueblo right of
3 Los Angeles does not extend to or include ground water
4 in Eagle Rock Basin.

5 5.1.4.2 No Rights in Native Waters. The Eagle
6 Rock Basin has no significant or measurable native safe
7 yield and no parties have or assert any right or claim
8 to native waters in said Basin.

9 5.2 Rights to Imported Waters.

10 5.2.1 San Fernando Basin Rights.

11 5.2.1.1 Rights to Recapture Import Return Water.
12 Los Angeles, Glendale, Burbank and San Fernando have each
13 caused imported waters to be brought into ULARA and to be
14 delivered to lands overlying the San Fernando Basin, with
15 the result that percolation and return flow of such
16 delivered water has caused imported waters to become a
17 part of the safe yield of San Fernando Basin. Each of
18 said parties has a right to extract from San Fernando
19 Basin that portion of the safe yield of the Basin attri-
20 butable to such import return waters.

21 5.2.1.2 Rights to Store and Recapture Stored
22 Water. Los Angeles has heretofore spread imported water
23 directly in San Fernando Basin. Los Angeles, Glendale,
24 Burbank and San Fernando each have rights to store water
25 in San Fernando Basin by direct spreading or in lieu
26 practices. To the extent of any future spreading or in
27 lieu storage of import water or reclaimed water by Los
28 Angeles, Glendale, Burbank or San Fernando, the party

1 causing said water to be so stored shall have a right to
2 extract an equivalent amount of ground water from San
3 Fernando Basin. The right to extract waters attributable
4 to such storage practices is an undivided right to a
5 quantity of water in San Fernando Basin equal to the
6 amount of such Stored Water to the credit of any party,
7 as reflected in Watermaster records.

8 5.2.1.3 Calculation of Import Return Water and
9 Stored Water Credits. The extraction rights of Los
10 Angeles, Glendale, Burbank and San Fernando in San
11 Fernando Basin in any year, insofar as such rights are
12 based upon import return water, shall only extend to the
13 amount of any accumulated import return water credit of
14 such party by reason of imported water delivered after
15 September 30, 1977. The annual credit for such import
16 return water shall be calculated by Watermaster based
17 upon the amount of delivered water during the preceding
18 water year, as follows:

- | | | |
|----|---------------|---|
| 19 | Los Angeles: | 20.8% of all delivered water
(including reclaimed water) to
20 valley fill lands of San
21 Fernando Basin. |
| 22 | San Fernando: | 26.3% of all imported and
reclaimed water delivered to
23 valley-fill lands of San
Fernando Basin. |
| 24 | Burbank: | 20.0% of all delivered water
(including reclaimed water) to
25 San Fernando Basin and its
26 tributary hill and mountain
areas. |

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

Glendale: 20.0% of all delivered water (including reclaimed water) to San Fernando Basin and its tributary hill and mountain areas (i.e., total delivered water, [including reclaimed water], less 105% of total sales by Glendale in Verdugo Basin and its tributary hills).

In calculating Stored Water credit, by reason of direct spreading of imported or reclaimed water, Watermaster shall assume that 100% of such spread water reached the ground water in the year spread.

5.2.1.4 Cummulative Import Return Water Credits.

Any import return water which is not extracted in a given water year shall be carried over, separately accounted for, and maintained as a cummulative credit for purposes of future extractions.

5.2.1.5 Overextractions. In addition to extrac-

tions of stored water, Glendale, Burbank or San Fernando may, in any water year, extract from San Fernando Basin an amount not exceeding 10% of such party's last annual credit for import return water, subject, however, to an obligation to replace such overextraction by reduced extractions during the next succeeding water year. Any such overextraction which is not so replaced shall constitute physical solution water, which shall be deemed to have been extracted in said subsequent water year.

5.2.1.6 Private Defendant. No private defendant

is entitled to extract water from the San Fernando Basin on account of the importation of water thereto by overlying public entities.

1 5.2.2 Sylmar Basin Rights.

2 5.2.2.1 Rights to Recapture Import Return Waters.

3 Los Angeles and San Fernando have caused imported waters
4 to be brought into ULARA and delivered to lands overlying
5 the Sylmar Basin with the result that percolation and re-
6 turn flow of such delivered water has caused imported
7 waters to become a part of the safe yield of Sylmar Basin.
8 Los Angeles and San Fernando are entitled to recover from
9 Sylmar Basin such imported return waters. In calculating
10 the annual entitlement to recapture such import return
11 water, Los Angeles and San Fernando shall be entitled to
12 35.7% of the preceding water year's imported water de-
13 livered by such party to lands overlying Sylmar Basin.
14 Thus, by way of example, in 1976-77, Los Angeles was
15 entitled to extract 2370 acre feet of ground water from
16 Sylmar Basin, based on delivery to lands overlying said
17 Basin of 6640 acre feet during 1975-76. The quantity of
18 San Fernando's imported water to, and the return flow
19 therefrom, in the Sylmar Basin in the past has been of
20 such minimal quantities that it has not been calculated.

21 5.2.2.2 Rights to Store and Recapture Stored

22 Water. Los Angeles and San Fernando each have the right
23 to store water in Sylmar Basin equivalent to their rights
24 in San Fernando Basin under paragraph 5.2.1.2 hereof.

25 5.2.2.3 Carry Over. Said right to recapture

26 stored water, import return water and other safe yield
27 waters to which a party is entitled, if not exercised in
28 a given year, can be carried over for not to exceed five

1 years, if the underflow through Sylmar Notch does not
2 exceed 400 acre feet per year.

3 5.2.2.4 Private Defendants. No private defendant
4 is entitled to extract water from within the Sylmar Basin
5 on account of the importation of water thereto by over-
6 lying public entities.

7 5.2.3 Verdugo Basin Rights.

8 5.2.3.1 Glendale and Crescenta Valley. Glendale
9 and Crescenta Valley own appropriative and prescriptive
10 rights in and to the total safe yield of Verdugo Basin,
11 without regard as to the portions thereof derived from
12 native water and from delivered imported waters, notwith-
13 standing that both of said parties have caused waters to
14 be imported and delivered on lands overlying Verdugo
15 Basin. Said aggregate rights are as declared in Para-
16 graph 5.1.3.2 of these Conclusions.

17 5.2.3.2 Los Angeles. Los Angeles may have a
18 right to recapture its import return waters by reason of
19 delivered import water in the Basin, based upon reports
20 during and after water year 1977-78, upon application to
21 Watermaster not later than the year following such im-
22 port and on subsequent order after hearing by the Court.

23 5.2.3.3 Private Defendants. No private defendant,
24 as such, is entitled to extract water from within the
25 Verdugo Basin on account of the importation of water
26 thereto by overlying public entities.

27 5.2.4 Eagle Rock Basin Rights.

28 5.2.4.1 Los Angeles. Los Angeles has caused

1 imported water to be delivered for use on lands overlying
2 Eagle Rock Basin and return flow from said delivered
3 imported water constitutes the entire safe yield of Eagle
4 Rock Basin. Los Angeles has the right to extract or
5 cause to be extracted the entire safe yield of Eagle Rock
6 Basin.

7 5.2.4.2 Private Defendants. No private defend-
8 ants have a right to extract water from within Eagle Rock
9 Basin, except pursuant to the physical solution herein.

10 11 6. INJUNCTIONS

12 Each of the parties named or referred to in this Part 6, its
13 officers, agents, employees and officials is, and they are, hereby
14 ENJOINED and RESTRAINED from doing or causing to be done any of the
15 acts herein specified:

16 6.1 Each and Every Defendant -- from diverting the surface
17 waters of the Los Angeles River or extracting the native waters of
18 SAN FERNANDO BASIN, or in any manner interfering with the prior and
19 paramount pueblo right of Los Angeles in and to such waters,
20 except pursuant to the physical solution herein decreed.

21 6.2 Each and Every Private Defendant -- from extracting
22 ground water from the SAN FERNANDO, VERDUGO, or EAGLE ROCK BASINS,
23 except pursuant to physical solution provisions hereof.

24 6.3 Defaulting and Disclaiming Parties (listed in Attachments
25 "C" and "D") -- from diverting or extracting water within ULARA,
26 except pursuant to the physical solution herein decreed.

27 6.4 Glendale -- from extracting ground water from SAN
28 FERNANDO BASIN in any water year in quantities exceeding its

1 import return water credit and any stored water credit, except
2 pursuant to the physical solution; and from extracting water from
3 VERDUGO BASIN in excess of its appropriative and prescriptive right
4 declared herein.

5 6.5 Burbank -- from extracting ground water from SAN FERNANDO
6 BASIN in any water year in quantities exceeding its import return
7 water credit and any stored water credit, except pursuant to the
8 physical solution decreed herein.

9 6.6 San Fernando -- from extracting ground water from SAN
10 FERNANDO BASIN in any water year in quantities exceeding its
11 import return water credit and any stored water credit, except
12 pursuant to the physical solution herein decreed.

13 6.7 Crescenta Valley -- from extracting ground water from
14 VERDUGO BASIN in any year in excess of its appropriative and
15 prescriptive right declared herein.

16 6.8 Los Angeles -- from extracting ground water from SAN
17 FERNANDO BASIN in any year in excess of the native safe yield,
18 plus any import return water credit and stored water credit of said
19 city; provided, that where the needs of Los Angeles require the
20 extraction of Underlying Pueblo Waters, Los Angeles may extract
21 such water subject to an obligation to replace such excess as soon
22 as practical; and from extracting ground water from VERDUGO BASIN
23 in excess of any credit for import return water which Los Angeles
24 may acquire by reason of delivery of imported water for use over-
25 lying said basin, as hereinafter confirmed on application to
26 Watermaster and by subsequent order of the Court.

27 6.9 Non-consumptive and Minimal Consumptive Use Parties.
28 The parties listed in Attachment "F" are enjoined from extracting

1 water from San Fernando Basin, except in accordance with practices
2 specified in Attachment "F", or pursuant to the physical solution herein decreed.

3
4 7. CONTINUING JURISDICTION

5 7.1 Jurisdiction Reserved. Full jurisdiction, power and
6 authority are retained by and reserved to the Court for purposes of
7 enabling the Court upon application of any party or of the Water-
8 master by motion and upon at least 30 days' notice thereof, and
9 after hearing thereon, to make such further or supplemental orders
10 or directions as may be necessary or appropriate, for interpreta-
11 tion, enforcement or carrying out of this Judgment, and to modify,
12 amend or amplify any of the provisions of this Judgment or to add
13 to the provisions thereof consistent with the rights herein decreed;
14 provided, however, that no such modification, amendment or ampli-
15 fication shall result in a change in the provisions of Section
16 5.2.1.3 or 9.2.1 hereof.

17
18 8. WATERMASTER

19 8.1 Designation and Appointment.

20 8.1.1 Watermaster Qualification and Appointment. A
21 qualified hydrologist, acceptable to all active public agency
22 parties hereto, will be appointed by subsequent order of the
23 Court to assist the Court in its administration and enforce-
24 ment of the provisions of this Judgment and any subsequent
25 orders of the Court entered pursuant to the Court's continuing
26 jurisdiction. Such Watermaster shall serve at the pleasure of
27 the Court, but may be removed or replaced on motion of any
28 party after hearing and showing of good cause.

1 8.2 Powers and Duties.

2 8.2.1 Scope. Subject to the continuing supervision and
3 control of the Court, Watermaster shall exercise the express
4 powers, and shall perform the duties, as provided in this
5 Judgment or hereafter ordered or authorized by the Court in
6 the exercise of the Court's continuing jurisdiction.

7 8.2.2 Requirement for Reports, Information and Records.
8 Watermaster may require any party to furnish such reports,
9 information and records as may be reasonably necessary to
10 determine compliance or lack of compliance by any party with
11 the provisions of this Judgment.

12 8.2.3 Requirement of Measuring Devices. Watermaster
13 shall require all parties owning or operating any facilities
14 for extraction of ground water from ULARA to install and
15 maintain at all times in good working order, at such party's
16 own expense, appropriate meters or other measuring devices
17 satisfactory to the Watermaster.

18 8.2.4 Inspection by Watermaster. Watermaster shall make
19 inspections of (a) ground water extraction facilities and
20 measuring devices of any party, and (b) water use practices by
21 any party under physical solution conditions, at such times
22 and as often as may be reasonable under the circumstances to
23 verify reported data and practices of such party. Watermaster
24 shall also identify and report on any new or proposed new
25 ground water extractions by any party or non-party.

26 8.2.5 Policies and Procedures. Watermaster shall, with
27 the advice and consent of the Administrative Committee, adopt
28 and amend from time to time Policies and Procedures as may be

1 reasonably necessary to guide Watermaster in performance of
2 its duties, powers and responsibilities under the provisions
3 of this judgment.

4 8.2.6 Data Collection. Watermaster shall collect and
5 verify data relative to conditions of ULARA and its ground
6 water basins from the parties and one or more other govern-
7 mental agencies. Where necessary, and upon approval of the
8 Administrative Committee, Watermaster may develop supplemental
9 data.

10 8.2.7 Cooperation With Other Agencies. Watermaster may
11 act jointly or cooperate with agencies of the United States
12 and the State of California or any political subdivisions,
13 municipalities or districts (including any party) to secure or
14 exchange data to the end that the purpose of this Judgment,
15 including its physical solution, may be fully and economically
16 carried out.

17 8.2.8 Accounting for Non-consumptive Use. Watermaster
18 shall calculate and report annually the non-consumptive and
19 consumptive uses of extracted ground water by each party
20 listed in Attachment "F."

21 8.2.9 Accounting for Accumulated Import Return Water
22 and Stored Water. Watermaster shall record and verify addi-
23 tions, extractions and losses and maintain an annual and
24 cumulative account of all (a) stored water and (b) import
25 return water in San Fernando Basin. Calculation of losses
26 attributable to Stored Water shall be approved by the Adminis-
27 trative Committee or by subsequent order of the Court. For
28 purposes of such accounting, extractions in any water year by

1 Glendale, Burbank or San Fernando shall be assumed to be first
2 from accumulated import return water, second from stored
3 water, and finally pursuant to physical solution; provided,
4 that any such city may, by written notice of intent to Water-
5 master, alter said priority of extractions as between import
6 return water and stored water.

7 8.2.10 Recalculation of Safe Yield. Upon request of the
8 Administrative Committee, or on motion of any party and sub-
9 sequent Court order, Watermaster shall recalculate safe yield
10 of any basin within ULARA. If there has been a material long-
11 term change in storage over a base period (excluding any
12 effects of stored water) in San Fernando Basin the safe yield
13 shall be adjusted by making a corresponding change in native
14 safe yield of the Basin.

15 8.2.11 Watermaster Report. Watermaster shall prepare
16 annually and (after review and approval by Administrative
17 Committee) cause to be served on all active parties, on or
18 before May 1, a report of hydrologic conditions and Water-
19 master activities within ULARA during the preceding water
20 year. Watermaster's annual report shall contain such infor-
21 mation as may be requested by the Administrative Committee,
22 required by Watermaster Policies and Procedures or specified
23 by subsequent order of this Court.

24 8.2.12 Active Party List. Watermaster shall maintain at
25 all times a current list of active parties and their addresses.

26 8.3 Administrative Committee.

27 8.3.1 Committee to be Formed. An Administrative Commit-
28 tee shall be formed to advise with, request or consent to, and

1 review actions of Watermaster. Said Administrative Committee
2 shall be composed of one representative of each party having
3 a right to extract ground water from ULARA, apart from the
4 physical solution. Any such party not desiring to participate
5 in such committee shall so advise Watermaster in writing.

6 8.3.2 Organization and Voting. The Administrative
7 Committee shall organize and adopt appropriate rules and
8 regulations to be included in Watermaster Policies and Pro-
9 cedures. Action of the Administrative Committee shall be by
10 unanimous vote of its members, or of the members affected in
11 the case of an action which affects one or more basins but
12 less than all of ULARA. In the event of inability of the
13 Committee to reach a unanimous position, the matter may, at
14 the request of Watermaster or any party, be referred to the
15 Court for resolution by subsequent order after notice and
16 hearing.

17 8.3.3 Function and Powers. The Administrative Committee
18 shall be consulted by Watermaster and shall request or approve
19 all discretionary Watermaster determinations. In the event of
20 disagreement between Watermaster and the Administrative
21 Committee, the matter shall be submitted to the Court for
22 review and resolution.

23 8.4 Watermaster Budget and Assessments.

24 8.4.1 Watermaster's Proposed Budget. Watermaster
25 shall, on or before May 1, prepare and submit to the Admin-
26 istrative Committee a budget for the ensuing water year.
27 The budget shall be determined for each basin separately and
28 allocated between the separate ground water basins. The

1 total for each basin shall be allocated between the public
2 agencies in proportion to their use of ground water from such
3 basin during the preceding water year.

4 8.4.2 Objections and Review. Any party who objects to
5 the proposed budget, or to such party's allocable share there-
6 of, may apply to the Court within thirty (30) days of receipt
7 of the proposed budget from Watermaster for review and modifi-
8 cation. Any such objection shall be duly noticed to all in-
9 terested parties and heard within thirty (30) days of notice.

10 8.4.3 Notice of Assessment. After thirty (30) days from
11 delivery of Watermaster's proposed budget, or after the order
12 of Court settling any objections thereto, Watermaster shall
13 serve notice on all parties to be assessed of the amount of
14 assessment and the required payment schedule.

15 8.4.4 Payment. All assessments for Watermaster expenses
16 shall be payable on the dates designated in the notice of
17 assessment.

18 8.5 Review of Watermaster Activities.

19 8.5.1 Review Procedures. All actions of Watermaster
20 (other than budget and assessment matters, which are provided
21 for in Paragraph 8.4.2) shall be subject to review by the
22 Court on its own motion or on motion by any party, as follows:

23 8.5.1.1 Noticed Motion. Any party may, by a
24 regularly noticed motion, apply to the Court for review
25 of any Watermaster's action. Notice of such motion shall
26 be served personally or mailed to Watermaster and to all
27 active parties.

28 8.5.1.2 De Novo Nature of Proceedings. Upon the

1 filing of any such motion, the Court shall require the
2 moving party to notify the active parties of a date for
3 taking evidence and argument, and on the date so desig-
4 nated shall review de novo the question at issue. Water-
5 master's findings or decision, if any, may be received
6 in evidence at said hearing, but shall not constitute
7 presumptive or prima facie proof of any fact in issue.

8 8.5.1.3 Decision. The decision of the Court in
9 such proceeding shall be an appealable supplemental order
10 in this case. When the same is final, it shall be
11 binding upon the Watermaster and all parties.

12 9. PHYSICAL SOLUTION

13 9.1 Circumstances Indicating Need for Physical Solution.

14 During the period between 1913 and 1955, when there existed tempor-
15 ary surplus waters in the San Fernando Basin, overlying cities and
16 private overlying landowners undertook to install and operate water
17 extraction, storage and transmission facilities to utilize such
18 temporary surplus waters. If the injunction against interference
19 with the prior and paramount rights of Los Angeles to the waters of
20 the San Fernando and Eagle Rock Basins were strictly enforced, the
21 value and utility of those water systems and facilities would be
22 lost or impaired. It is appropriate to allow continued limited
23 extraction from the San Fernando and Eagle Rock Basins by parties
24 other than Los Angeles, subject to assurance that Los Angeles will
25 be compensated for any cost, expense or loss incurred as a result
26 thereof.
27

28 9.2 Prior Stipulated Judgments. Several defendants

1 heretofore entered into separate stipulated judgments herein,
2 during the period June, 1958 to November, 1965, each of which
3 judgments was subject to the Court's continuing jurisdiction.
4 Without modification of the substantive terms of said prior judg-
5 ments, the same are categorized and merged into this judgment and
6 superseded hereby in the exercise of the Court's continuing juris-
7 diction, as follows:

8 9.2.1 Eagle Rock Basin Parties. Stipulating defendants

9 Foremost and Deep Rock have extracted water from Eagle Rock
10 Basin, whose entire safe yield consist of import return
11 waters of Los Angeles. Said parties may continue to extract
12 water from Eagle Rock Basin to supply their bottled drinking
13 water requirements upon filing all required reports on said
14 extraction with Watermaster and Los Angeles and paying Los
15 Angeles annually an amount equal to \$21.78 per acre foot for
16 the first 200 acre feet, and \$39.20 per acre foot for any
17 additional water extracted in any water year.

18 9.2.2 Non-consumptive or Minimal-consumptive Operations.

19 Certain stipulating defendants extract water from San Fernando
20 Basin for uses which are either non-consumptive or have a
21 minimal consumptive impact. Each of said defendants who have
22 a minimal consumptive impact has a connection to the City of
23 Los Angeles water system and purchases annually an amount of
24 water at least equivalent to the consumptive loss of extracted
25 ground water. Said defendants are:

26 Non-Consumptive

27 Walt Disney Productions

28 Sears, Roebuck & Co.

1 9.3.1 Private Defendants and Appropriate Cities. Said
2 private defendants and the cities to which their said extrac-
3 tions shall be charged and to which physical solution payment
4 shall be made are:

		<u>Annual Quantities</u> <u>(acre feet)</u>
6	Los Angeles - Toluca Lake	100
7	Sportsman's Lodge	25
	Van de Kamp	120
8	Glendale - Forest Lawn	400
9	Southern Service Co.	75
10	Burbank - Valhalla	300
	Lockheed	25

11
12 Provided that said private defendants shall not develop,
13 install or operate new wells or other facilities which will
14 increase existing extraction capacities.

15 9.3.2 Reports and Accounting. All extractions pursuant
16 to this physical solution shall be subject to such reasonable
17 reports and inspections as may be required by Watermaster.

18 9.3.3 Payment. Water extracted pursuant hereto shall
19 be compensated for by annual payment to Los Angeles, and as
20 agreed upon pursuant to paragraph 9.3.3.2 to Glendale and
21 Burbank, thirty days from day of notice by Watermaster, on
22 the following basis:

23 9.3.3.1 Los Angeles. An amount equal to what
24 such party would have paid had water been delivered from
25 the distribution system of Los Angeles, less the average
26 energy cost of extraction of ground water by Los Angeles
27 from San Fernando.

28 9.3.3.2 Glendale or Burbank. An amount equal to

1 the sum of the amount payable to Los Angeles under para-
2 graph 9.4 hereof and any additional charges or conditions
3 agreed upon by either such city and any private defendant.

4 9.4 Glendale and Burbank. Glendale and Burbank have each
5 installed, during said years of temporary surplus, substantial
6 facilities to extract and utilize waters of the San Fernando Basin.
7 In addition to the use of such facilities to recover import return
8 water, the distribution facilities of such cities can be most
9 efficiently utilized by relying upon the San Fernando Basin for
10 peaking supplies in order to reduce the need for extensive new
11 surface storage. Glendale and Burbank may extract annual quanti-
12 ties of ground water from the San Fernando Basin, in addition to
13 their rights to import return water or stored water, as heretofore
14 declared, in quantities up to:

15	Glendale	5,500 acre feet
16	Burbank	4,200 acre feet;

17 provided, that said cities shall compensate Los Angeles annually
18 for any such excess extractions over and above their declared
19 rights at a rate per acre foot equal to the average MWD price for
20 municipal and industrial water delivered to Los Angeles during the
21 fiscal year, less the average energy cost of extraction of ground
22 water by Los Angeles from San Fernando Basin during the preceding
23 fiscal year. Provided, further, that ground water extracted by
24 Forest Lawn and Southern Service Co. shall be included in the
25 amount taken by Glendale, and the amount extracted by Valhalla and
26 Lockheed shall be included in the amount taken by Burbank. All
27 water taken by Glendale or Burbank pursuant hereto shall be charged
28 against Los Angeles' rights in the year of such extractions.

1 In the event of emergency, and upon stipulation or motion
2 and subsequent order of the Court, said quantities may be enlarged
3 in any year.

4 9.5 San Fernando. San Fernando delivers imported water on
5 lands overlying the San Fernando Basin, by reason of which said
6 city has a right to recover import return water. San Fernando does
7 not have water extraction facilities in the San Fernando Basin, nor
8 would it be economically or hydrologically useful for such facil-
9 ities to be installed. Both San Fernando and Los Angeles have
10 decreed appropriative rights and extraction facilities in the
11 Sylmar Basin. San Fernando may extract ground water from the
12 Sylmar Basin in a quantity sufficient to utilize its San Fernando
13 Basin import return water credit, and Los Angeles shall reduce its
14 Sylmar Basin extractions by an equivalent amount and receive an
15 offsetting entitlement for additional San Fernando Basin extractions.

16 9.6 Effective Date. This physical solution shall be effec-
17 tive on October 1, 1978, based upon extractions during water year
18 1978-79.

19
20 10. MISCELLANEOUS PROVISIONS

21 10.1 Designation of Address for Notice and Service. Each
22 party shall designate the name and address to be used for purposes
23 of all subsequent notices and service herein by a separate desig-
24 nation to be filed with Watermaster within thirty (30) days after
25 Notice of Entry of Judgment has been served. Said designation may
26 be changed from time to time by filing a written notice of such
27 change with the Watermaster. Any party desiring to be relieved
28 of receiving notices of Watermaster activity may file a waiver of

1 notice on a form to be provided by Watermaster. Thereafter such
2 party shall be removed from the Active Party list. For purposes of
3 service on any party or active party by the Watermaster, by any
4 other party, or by the Court, of any item required to be served
5 upon or delivered to such party or active party under or pursuant
6 to the Judgment, such service shall be made personally or by de-
7 posit in the United States mail, first class, postage prepaid,
8 addressed to the designee and at the address in the latest desig-
9 nation filed by such party or active party.

10 10.2 Notice of Change in Hydrologic Condition -- Sylmar Basin.

11 If Sylmar Basin shall hereafter be in a condition of overdraft due
12 to increased or concurrent appropriations by Los Angeles and San
13 Fernando, Watermaster shall so notify the Court and parties concern-
14 ed, and notice of such overdraft and the adverse effect thereof on
15 private overlying rights shall be given by said cities as prescribed
16 by subsequent order of the Court, after notice and hearing.

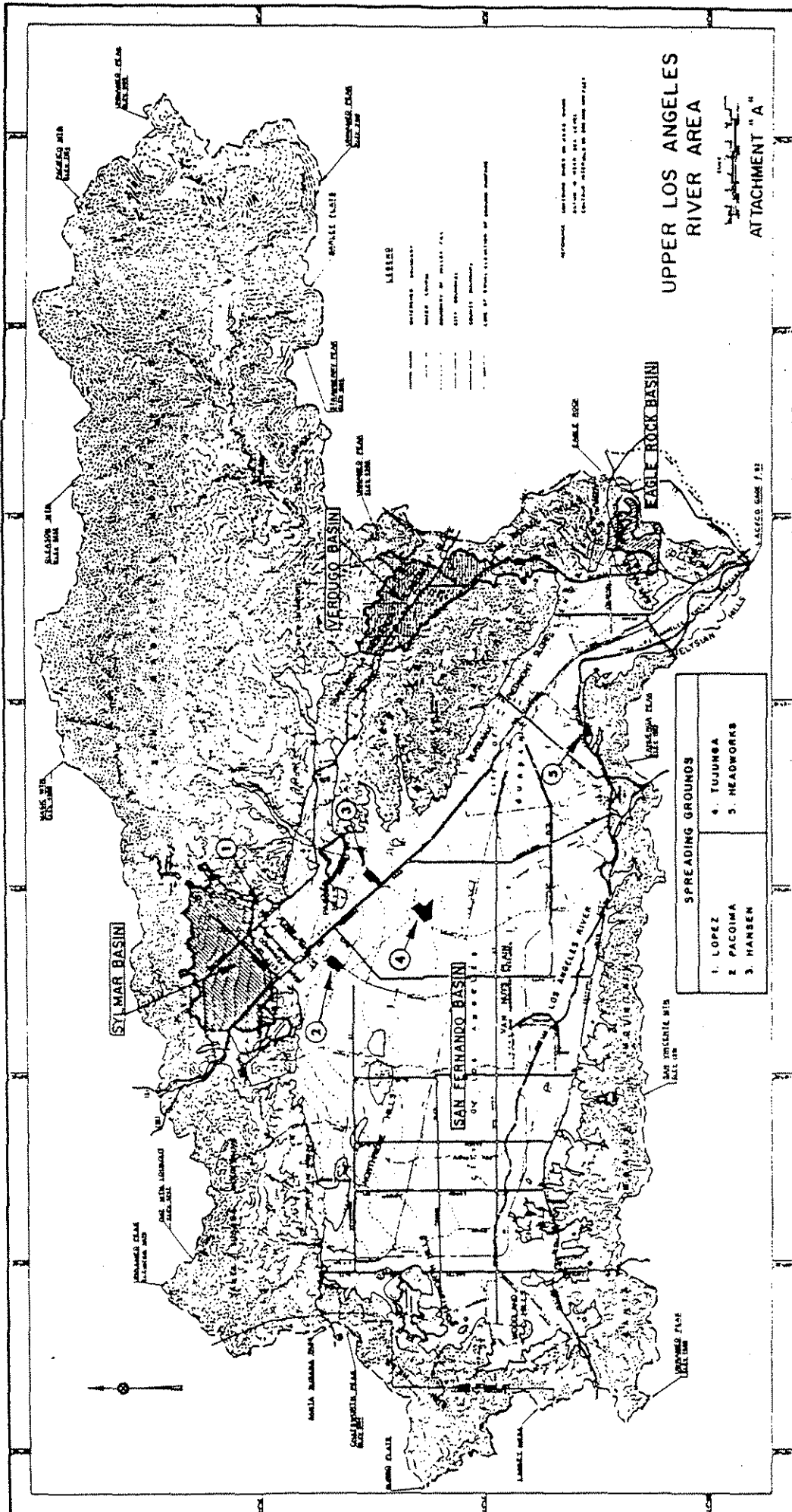
17 10.3 Judgment Binding on Successors. This Judgment and all
18 provisions thereof are applicable to and binding upon not only the
19 parties to this action, but also upon their respective heirs,
20 executors, administrators, successors, assigns, lessees and licen-
21 sees and upon the agents, employees and attorneys in fact of all
22 such persons.

23 10.4 Costs. Ordinary court costs shall be borne by each
24 party, and reference costs shall be borne as heretofore allocated
25 and paid.

26 DATED: Jan 26, 1979.

27
28 

Judge of the Superior Court



UPPER LOS ANGELES
RIVER AREA
ATTACHMENT "A"

SPREADING GROUNDS	
1. LOPEZ	4. TUJUNGA
2. PACOIMA	5. HEADWORKS
3. HANSEN	

ATTACHMENT "B"
LIST OF DISMISSED PARTIES

Adams, Catherine	Fitz-Patrick, Ada H.
Adair, Leo W.	Fitz-Patrick, C. C.
Anderson, Jesse E.	Frank X. Enderle, Inc., Ltd.
Anderson, Elizabeth A.	George, Florence H.
Anderson, Leland H.	George, Elton
Anderson, Bessie E.	Ghiglia, Frank P.
Bank of America, N.T. & S.A., (Trustee)	Givan, Amelia (Deceased)
Becker, Barbara	Glendale Junior College District of Los Angeles County
Beatrice Foods Company	Glendale Unified School District
Becker, Bert	Glenhaven Memorial Park, Inc.
Bishop, Elfreda M.	Griffith, Howard Barton
Bishop, William E.	Handorf, August V., Heirs of
Block, Leonard W.	Hanna, George
Block, Margery J.	Hicks, Forrest W., Executor of Estate of (California Bank)
Burbank C. U. School District	Houston-Fearless Corp., The
Busk, Rodney E.	Industrial Fuel Supply Co.
California, State of	Intervalley Savings & Loan Association
California Trust Company, (Trustee)	Julius, Adenia C.
California Trust Company, Trustee for First National Bank of Glendale	Julius, Louis A.
Citizens N.T.S. Bank of L.A., Trustee of M. M. Crenshaw	Kaesemeyer, Edna M.
Citizens National Trust & Savings Bank of Los Angeles	Karagozian, Charles
Citizens National Trust & Savings Bank of Los Angeles, Trustee, Deed of Trust 3724	Kates, Nathan as Co-Executor, Estate of Duckworth
Color Corporation of America	Kelley, June
Corporation of America	Kelley, Victor H.
Corporation of America, Trustee for Bank of America 32	Kiener, Harry, Deceased, Heirs of
Doe Corporation, 10-50	Knupp, Guy, Trustee
Doe 18-500	Landes, Clara Bartlett
Duckworth, John W., (Estate of)	Lentz, Richard
Equitable Life Assurance Society of the United States	Los Angeles County Flood Control District
Fidelity Federal Savings & Loan Association	Los Angeles Land and Water Company
	Los Angeles Trust and Savings Deposit Company (Safe)

Los Angeles Safe Deposit Company, Trustee for Security First National Bank of Los Angeles	Richardson, William L.
Los Angeles Trust and Safe Deposit Company, Trustee for H. Kiener	Security First National Bank of Los Angeles, Trustee
Lytle, Lydia L.	Security First National Bank of Los Angeles, Trustee for L. Schwaiger, etc.
Massachusetts Mutual Life Insurance Company	Smith, T. A.
Mahannah, E. E.	Smith, Sidney, Estate of, F. Small, Administrator
Mahannah, Hazel E.	Southern California Service Corp., Trustee for Verdugo Savings and Loan Association
M.C.A., Inc.	Sylmar Properties Inc.
Mangan, Blanche M.	Title Insurance and Trust Co., Trustee for Metropolitan Life Insurance Company, I. 1570
Mangan, Nicholas	Title Insurance and Trust Co., Trustee for Western Mortgage Company
McDougal, Murray	Title Guarantee & Trustee Company, Trustee
McDougal, Marian Y.	Title Insurance & Trust Company, Trustee for C. Fitz-Patrick
Mellenthin, Helen Louise	Title Insurance & Trust Company, Trustee for Intervalley Savings and Loan Association, 1114
Mellenthin, William	Title Insurance & Trust Company, for Fidelity Savings & Loan Association
Metropolitan Life Insurance Company	Title Insurance & Trust Company for Equitable Life Assurance Society, U.S.
Morgan, Kenneth H.	Union Bank & Trust Company of Los Angeles Trustee for B. Becker, et al.
Morgan, Anne	Valliant, Grace C.
Mulholland Orchard Company	Verdugo Savings & Loan Association
Mutual Life Insurance Company of New York	Warner Brothers Pictures, Inc.
Northwestern Mutual Life Insurance Company	Warner Ranch Company, Inc.
Oakmont Club	Walleck, Henry L., as Executor of the Estate of A. Givan
Oakwood Cemetery Association	Western Mortgage Company
Pasadena Savings & Loan Association	Wheeland, H. W.
Pagliai, Bruno	Wilcox, Ray C.
Pacific Lighting Corporation	Wise, Constance Julia
Pierce Brothers Mortuary	Wise, Robert Taylor
Premier Laundry Company, Inc.	Young, Donald M.
Pur-o-Spring Water Company	Young, Marcia S.
Renfrow, Mary Mildred	
Renfrow, Pleasant Thomas	
Reinert, H. C.	
Reinert, Laurotta	
Richardson, Helen I.	

ATTACHMENT "C"
LIST OF DEFAULTED PARTIES

Aetna Life Insurance Company	Corporation of America, Trustee for Bank of America, I. 54
American Savings & Loan Association	Desco Corp.
Babikian, Helen	Diller, Michael
Bank of America, N.T. & S.A., Trustee	Erratchuo, Richard
Bannan, B. A.	Glendale Towel and Linen Supply Company
Bannan, Clotilde R.	Guyer, Irene W.
Berkemeyer, Henry W.	Herrmann, Emily Louise by Louis T. Herrmann, Successor In Interest
Berkemeyer, Hildur M.	
Bell, William M.	Hicks, Forrest W., Executor of Estate of (California Bank)
Bell, Sallie C.	
Borgia, Andrea, Estate of	Hidden Hills Corporation
Borgia, Frances	Holmgrin, Neva Bartlett
Brown, Stella M.	Hope, Lester Townes
Burns, George A.	Hope, Dolores Defina
Burns, Louise J.	Huston Homes (Doe Corporation 8)
California Bank, Trustee re Hollywood State Bank	Johnson, William Arthur, Sr. (Doe 11)
California Bank, Trustee	Johnson, Grace Luvena (Doe 12)
Citizens National Bank & Savings Bank of Los Angeles, Trust for W. Stavert	Jessup, Marguerite R., Trustee (for 6)
Citizens National Trust & Savings Bank of Los Angeles, Mort. I. 164	Jessup, Marguerite Rice
Citizens National Trust & Savings Bank of Los Angeles Trustee	Jessup, Roger
Citizens National Trust & Savings Bank of Los Angeles, Co-Trustee for Estate of A. V. Handorf	La Maida, James V. (Doe 10)
Clauson, Emma S.	La Marda, Tony (La Maida)
Continental Auxillary Company (Doe Corporation 1)	Lancaster, Paul E.
Cowlin, Josephine McC.	Lancaster, William
Cowlin, Donald G.	Land Title Insurance Company, as Trustee
Cowlin, Dorothy N.	Land Title Insurance Company
	Los Angeles Pet Cemetary
	Metropolitan Savings & Loan Association of Los Angeles
	Monteria Lake Association

Mosher, Eloise V.	Title Insurance and Trust Co., Trustee for J. McC. Cowlin
Mosher, W. E.	
Murray, Marie	Title Insurance and Trust Co., Trustee for P. E. Lancaster
Pacific Lighting and Gas Supply Co.	Title Insurance and Trust Co., Trustee T. I., Deed of Trust I. 829
Plemmons, Florence S.	
Plemmons, John R.	Title Insurance and Trust Co., Trustee for C. R. Bannan, et al.
Polar Water Company	
Pryor, Charles	Wheeland, Henry R.
Rauch, Phil	Wheeland, Elizabeth A.
Roger Jessup Farms	Woodward, E. C., Co-Trustee of the Estate of A. V. Handorf
Rushworth, Helen	Wright, Alice M.
Rushworth, Lester	Wright, J. Marion
Schwaiger, Cecil A.	Wright, Irene Evelyn
Schwaiger, Lester R.	Wright, Ralph Carver
Sealand Investment Corporation, Trustee for Metropolitan Savings & Loan Association	
Sealand Investment Corporation	
Smith, Florence S. (Plemmons)	
Southern Service Company, Ltd.	
Stavert, Walter W.	
Sun Valley National Bank of Los Angeles	
Title Insurance and Trust Co., Trustee T. I. Deed of Trust, I. 31, 32	
Title Insurance and Trust Co., Trustee for Intervalley Savings & Loan Association I. 2509	
Title Insurance & Trust Co., Trustee for Massachusetts Mutual Life Insurance Co.	
Title Insurance and Trust Co.	
Title Insurance and Trust Co., Trustee A.	
Title Insurance and Trust Co., Trustee for Sun Valley National Bank of Los Angeles	

ATTACHMENT "D"

DISCLAIMING PARTIES

Andrew Jergens Company, The

Boyar, Mark

Chace, William M.
(dba V.P.L.C.)

DeMille, Cecil B., Estate of

Drewry Photocolor Corp.

Hayes, Hay B. (Hal)

Houston Color Film
Laboratories, Inc.

Krown, Samuel P.

La Canada Irrigation District

Lakeside Golf Club (of Hollywood)

Lakewood Water & Power Company

Mack, Lucille

Mollin Investment Co.

Mulholland, P. & R., Trustees
for R. Wood

Mulholland, Rose

Mulholland, Perry

Mulholland, Thomas

Mureau, Charles

Nathan, Julia N., Trustee

Oakmont Country Club

Platt, George E. Company

Richfield Oil Corporation

Riverwood Ranch Mutual Water
Company

Smith, Benjamin B.

Southern California Edison
Company

Spinks Realty Company

Sportsman's Lodge Banquet
Corporation

Stetson, G. Henry

Technicolor Corporation

Valley Lawn Memorial Park

ATTACHMENT "E"

LIST OF PRIOR STIPULATED JUDGMENTS

<u>PARTY</u>	<u>DATE JUDGMENT FILED</u>
Akmadzich, Mary L.	July 24, 1959
Akmadzich, Peter J.	July 24, 1959
California Materials Company	July 24, 1959
Carnation Company	Nov. 20, 1958
Consolidated Rock Products Co.	July 24, 1959
Hidden Hills Mutual Water Company	March 11, 1965
Knickerbocker Plastic Company, Inc.	Feb. 15, 1960
Livingston Rock & Gravel Co., Inc.	July 24, 1959
Pacific Fruit Express Company	March 11, 1965
Pendleton, Evelyn M., dba Deep Rock Artesian Water Company	Nov. 1, 1965
Sears, Roebuck and Company	June 9, 1958
Southern Pacific Company	March 11, 1965
Sparkletts Drinking Water Corporation	Nov. 1, 1965
Valley Park Corporation	July 24, 1959
Walt Disney Productions	May 15, 1961
White, Constance Ray	Feb. 15, 1960
White, Leo L.	Feb. 15, 1960

1 ATTACHMENT "F"

2 STIPULATED

3 NON-CONSUMPTIVE OR MINIMAL-CONSUMPTIVE USE

4 PRACTICES

5 Non-Consumptive Uses

6
7 Disney -- extracted ground water is used for air conditioning
8 cooling water in a closed system, which discharges to the
9 channel of the Los Angeles River and is subsequently spread
10 and recharges San Fernando Basin, without measurable diminu-
11 tion or loss.

12 Sears, Lockheed and Carnation -- extracted ground water, or a
13 portion thereof, is used for air conditioning cooling in a
14 closed system, which discharges to San Fernando Basin through
15 an injection well.

16 Toluca Lake -- that portion of extracted ground water which is not
17 consumptively used, by evaporation or otherwise, is circu-
18 lated and passed through the lake to the channel of the Los
19 Angeles River immediately upstream from Los Angeles' spread-
20 ing grounds, where such water is percolated into the ground
21 water of the Basin without measurable diminution or loss.

22 Sportsman's Lodge -- that portion of extracted ground water which
23 is not consumptively used, by evaporation or otherwise, is
24 circulated and passed through fish ponds and returned to
25 channels tributary to Los Angeles River upstream from Los
26 Angeles' spreading grounds, where such water is percolated
27 into the ground water of the Basin without measurable loss.

28 - - - - -

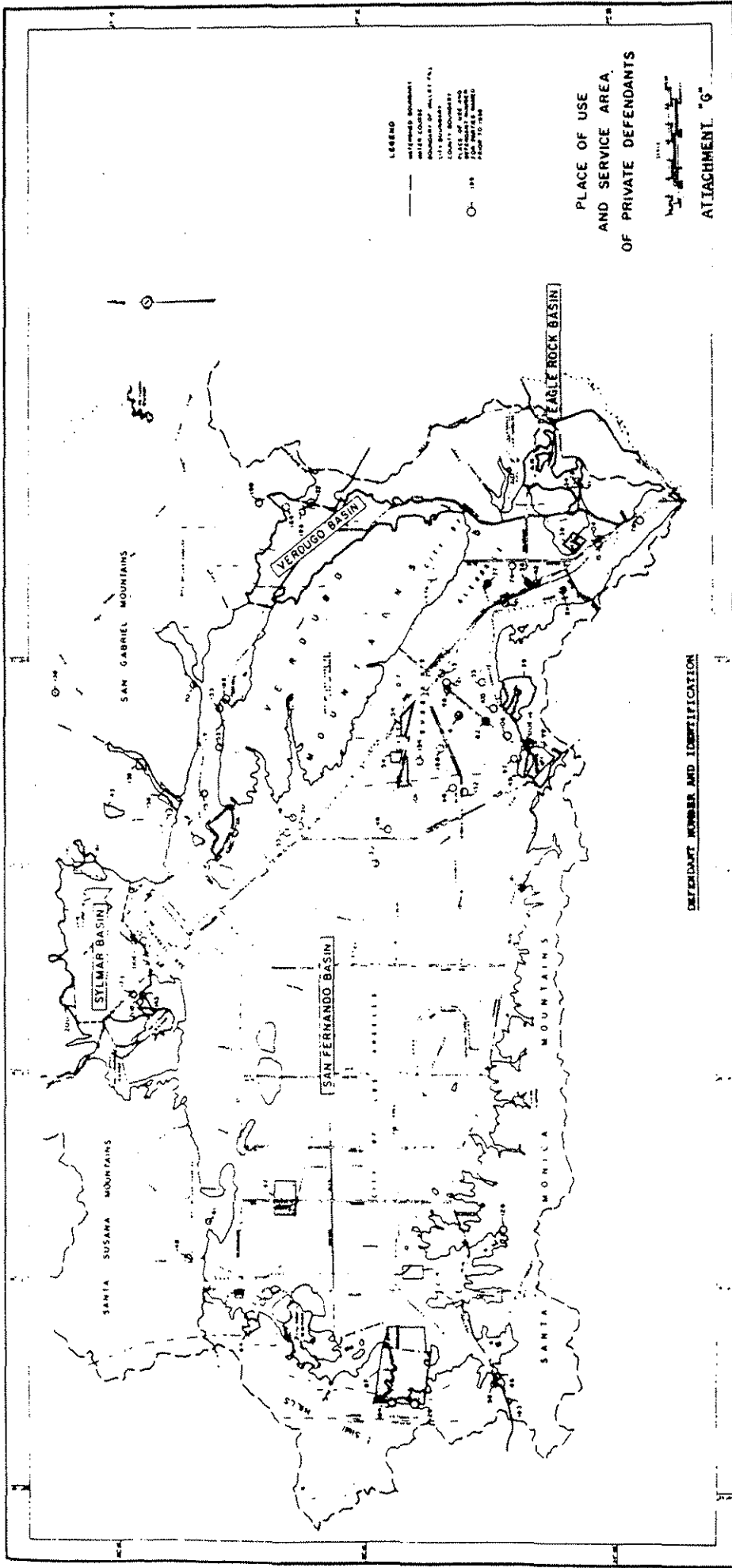
MINIMAL-CONSUMPTIVE USES

Conrock

&

Livingston

-- extracted ground water is used in rock, sand and gravel, and ready-mix concrete operations with net consumptive use of 10%, with the remaining 90% returning to the ground water. Each party purchases surface water from Los Angeles in amounts at least equivalent to such consumptive losses.



DEFENDANT NUMBER AND IDENTIFICATION

4	BURBANK UNIFIED SCHOOL DIST.	127	STELLA M. BROWN	168	FLORENCE S. PLEWORS
6	L.A.C.F.C.D.	126	MARK BOTAR	194	LESTER RUSHFORTH
13	THE ANDREW JENKINS CO.	128	GEORGE A. BURNS	195	LESTER R. SCHWALGER
15	BRATRICE FOODS CO.	132	WILLIAM M. CHACE	198	SIDNEY SMITH
18	CALIFORNIA MATERIALS CO.	134	EMMA L. CLAUSON	200	G. SIDNEY STETSON
21	CARNATION CO.	136	CECIL B. DENHILLS	204	A. M. RAHWER
30	CONSOLIDATED ROCK PROD. CO.	141	MAIRINE DUCHONORTH	205	ELIZABETH A. WHEELAND
34	DEEP ROCK ARTESIAN WATER CO.	143	RICHARD ERBARTHCO	211	ALICE M. WRIGHT
35	DECOO CO.	148	HOWARD BARTON GRIFFITH	DOE CORP 4	MOLLIN INVESTMENT CORP.
36	DISNEY PHOTOCOLOR CORP.	153	NEVA BARTLETT	DOE 1	BULLY LOUIS MERRIAM
39	FOREST LAWN CO.	164	E. E. MAHANAR	DOE 14	LESTER YOUNGS BOYS
41	FRESHFUNG WATER CO.	168	CELESTE LOUISE MCCABE		
42	GLENDALE TOWEL & LINEN SUPPLY CO.	173	KISAG MOONDIQIAN		
43	GLENHAVEN MEMORIAL PARK, INC.	181	JOHN E. MULLIN		
46	HUNSTON COLOR FILM LAB, INC.	183	CHARLES MURBAU		
48	KRICKROCKER PLASTIC CO., INC.	76	SOUTHERN PACIFIC RAILROAD CO.		
49	LAKESIDE GOLF CLUB OF HOLLYWOOD	77	SOUTHERN SERVICE CO., LTD.		
53	LIVINGSTON ROCK & GRAVEL CO.	78	SPARKLETT'S DRINKING WATER COMP.		
54	LOCKHEED AIRCRAFT CORP.	79	SPINGS REALTY CO.		
56	LOS ANGELES PET CHEMISTRY	80	SPORTSMAN'S LODGE, INC.		
61	MONTARIA LAKE ASSOC.	82	TP-MICOLOR COMP.		
62	MULHOLLAND ORCHARD CO.	97	TULUCA LAKE PROP. OWNERS ASSOC.		
64	OLWOOD CHEMIST ASSOC.	99	UNIVERSAL PICTURES CO.		
66	PACIFIC LIGHTING & GAS SUPPLY CO.	101	VALHALLA MEMORIAL PARK		
67	GEORGE S. PLATT CO.	104	VAN DE KAMPS DUTCH BAKERS INC.		
68	POLAR WATER CO.	105	WALT DISNEY PRODUCTIONS		
70	RIVERWOOD RANCH MUTUAL WATER CO.	106	WARFR BROS. PICTURES, INC.		
71	ROGER JESSUP FARMS	117	WILLIAM O. BARTOLOMANU		
74	SEAMS, ROEBUCK & CO.	120	HENRY W. BERKEMEYER		
75	SOUTHERN CAL. Edison CO.	122	ALFIEDA M. BISHOP		



APPENDIX G

Water Shortage Contingency Plan

Chapter 13.36 WATER CONSERVATION

Sections:

13.36.010 Established.

13.36.020 Policy.

13.36.030 Purpose.

13.36.040 Definitions.

13.36.050 Scope.

13.36.060 No water waste policy.

13.36.070 Phases.

13.36.080 Phase implementation and exemptions.

13.36.090 Enforcement.

13.36.100 Reports.

13.36.110 Rules and Regulations.

13.36.010 Established.

There is established a city mandatory water conservation plan. (Prior code § 9-150)

13.36.020 Policy.

It is declared that, because of the conditions prevailing in the city and in the areas of this state and elsewhere from which the city obtains its water supplies, because water needs are projected to increase in the future and while water is a renewable resource, it is a finite one, the general welfare requires that the water resources available to the city be put to the maximum beneficial use to the extent to which they are capable, and that the waste or unreasonable use or unreasonable method of use of water be prevented, and the conservation of such waters is to be exercised with a view to the reasonable and beneficial use thereof in the interests of the people of the city and for the public welfare. (Ord. 5112 § 61, 1996: prior code § 9-151)

13.36.030 Purpose.

The purpose of this chapter is to provide a mandatory water conservation plan to minimize the effect of a shortage of water to the customers of the city and, by means of this chapter, to adopt provisions that will significantly reduce the consumption of water over an extended period of time thereby extending the available water required for the customers of the city, to protect basic human health, safety and quality of life, to share the impacts caused by the water shortage in accord with the severity of the water shortage, and to minimize the hardship to the city and the general public to the greatest extent possible. (Ord. 5112 § 62, 1996: prior code § 9-153)

13.36.040 Definitions.

The following words and phrases, whenever used in this chapter, shall be construed as defined in this section unless from the context a different meaning is intended or unless a different meaning is specifically defined within individual sections of this chapter:

"California-friendly plantings" or "California-friendly landscaping" means those landscape plantings, including, but not limited to, trees, shrubs, perennials,

groundcovers, ornamental grasses and California-native plants, that require low water use for maintenance and that are included in the Metropolitan Water District's California Friendly Garden Guide catalogue, available at <http://www.bewaterwise.com>.

"Dining establishment" means a catering business or a restaurant, hotel, cafe, cafeteria or other public place where food or drink is sold, served or offered for sale.

"Low income individual" means any individual that is eligible for participation in the division's public benefit charge low-income program.

"Potable water" shall be defined as set forth in Section 13.38.020 of this code.

"Process water" means water used to manufacture, alter, convert, clean, heat or cool a product, or the equipment used for such purpose; water used for plant and equipment washing and for transporting the raw materials and products; and water used to grow and maintain trees and plants for sale or installation. Process water does not include water used in the preparation of food or drinks.

"Recycled water" shall be defined as set forth in Section 13.38.020 of this code.

(Ord. No. 5660, § 3, 6-30-2009; Ord. 5112 § 63, 1996; prior code § 9-154)

13.36.050 Scope.

The provisions of this chapter shall apply to all water customers and property served water by the department wherever situated, and shall also apply to all property and facilities owned, maintained, operated or under the jurisdiction of the various officers, boards, departments or agencies of the city.

(Ord. No. 5660, § 4, 6-30-2009; prior code § 9-156)

13.36.060 No water waste policy.

There is in effect at all times in the city a "no water waste" policy as set forth herein. Except as otherwise provided in this chapter, at no time shall any person make, cause, use, or permit the use of water from the department for residential, commercial, industrial, agricultural, governmental, or any other purpose in a manner contrary to any provision of this chapter or in an amount in excess of that use permitted by the conservation phase then in effect pursuant to action taken by the city council in accordance with the provisions of this chapter.

A. Water Use Restrictions.

1. Hose Washing. Potable water shall not be used for hose washing of sidewalks, walkways, driveways, or parking areas, tennis courts, patios, porches or other paved areas, except (i) where necessary to alleviate safety or sanitary hazards, and then only by use of a handheld bucket or similar container or a hand-held hose equipped with a water shut-off device; (ii) when using a low-volume high-pressure cleaning machine or (iii) that flammable or other dangerous substances may be disposed of

by direct hose flushing by public safety officers for the benefit of public health and safety.

2. Overspray or Runoff. There shall be no use of water for any purpose which results in overspray, runoff in flooding or runoff onto hardscape, driveways, streets, adjacent lands or into gutters.

3. Decorative Fountains. Except for water play features in city parks, no water shall be used to clean, fill or maintain levels in decorative fountains or similar structures unless such water is part of a recirculation system or unless such water is recycled water, which must be clearly posted.

4. Leaks. No water customer of the department shall permit water to leak from any facility on his premises; failure to effect the repair of any leak, within seventy-two (72) hours after the customer is notified of or discovers the leak, shall subject said customer to all penalties provided herein for waste of water.

5. Irrigation Times.

a. No landscaped or vegetated areas, whether or not such areas include California-friendly plantings and including, but not limited to, grass, lawn, groundcover, shrubbery, annual and perennial plants, crops, and trees, including in golf courses, cemeteries, parks and school areas, shall be watered, sprinkled, or irrigated between the hours of nine a.m. and six p.m., except for very short periods of time for the express purpose of adjusting or repairing an irrigation system. Irrigation using recycled water is exempt from this limitation provided such usage is permitted by law and is clearly posted.

b. No landscaped or vegetated areas, whether or not such areas include California-friendly plantings, shall be watered, sprinkled or irrigated on days when the wind is blowing causing overspray and on days when it is raining.

6. Vehicle Washing. The washing of commercial and noncommercial privately owned automobiles, trucks, trailers, motor homes, boats, busses, airplanes and other types of vehicles is restricted to use of a hand-held bucket and quick rinses using a hose with a positive shutoff nozzle. Exceptions: the use of wash water which is on the immediate premises of a commercial car wash or commercial service station; or where health, safety and welfare of the public is contingent upon frequent vehicle cleaning, such as garbage trucks and vehicles which transport food and perishables.

7. Commercial Car Wash and Laundry Systems. The installation of a nonrecirculating water system for any new commercial conveyor car wash system or new commercial laundry system is prohibited. Effective July 1, 2014, no commercial conveyor car wash may use a nonrecirculating water system in its operation.

8. Water for Construction Purposes. Water for construction purposes including, but not limited to, debrushing of vacant land, compaction of fills and pads, trench backfill and other construction uses, shall only be used in an efficient manner which will not result in runoff. Recycled water shall be used whenever it is an available and feasible alternative source of water.

9. Fire Hydrants. Unless a permit has been obtained in accordance with Section 13.04.080 of this code, the use of potable water from fire hydrants shall be limited to firefighting, related activities or other activities immediately necessary to maintain the health, safety and welfare of the residents of the city.

10. Dining Establishments.

a. No dining establishment shall serve drinking water to any customer unless expressly requested by the customer.

b. Effective January 1, 2010, dining establishments are prohibited from using nonwater-conserving pre-rinse dishwashing spray valves.

11. Conservation Notices. Dining establishments, hotels, motels and other commercial lodging establishments are required to post notices informing their guests about the city's "no water waste policy" and urging guests to conserve water.

12. Laundry Service. Hotels, motels and other commercial lodging establishments are required to post notices giving their guests the option of not laundering towels and linens daily.

13. Single Pass Cooling Systems. The installation of a single pass cooling system is prohibited in any building requesting new or expanded water service from the department.

14. Process Water. Process water shall be recycled to the greatest extent possible.

B. The water use restrictions set forth in paragraph (A) of this section shall be in effect at all times, except that in the event that the city council declares the need for conservation as set forth in Section 13.36.080, the water use restrictions shall be amended and the use of water shall be further restricted as required by the phase of conservation then in effect, as described in Section 13.36.070.

(Ord. No. 5675, § 1, 10-27-2009; Ord. No. 5660, § 5, 6-30-2009; Ord. 5112 § 64, 1996)

13.36.070 Phases.

A. Phase I.

1. Water Use Restrictions.

a. No use of water may be made contrary to the provisions of the no water waste policy set forth in Section 13.36.060(A)(1) through (14). During conservation phase I, the division of parks, recreation and community services will review its irrigation system for possible efficiencies.

B. Phase II.

1. Water Use Restrictions.

a. No use of water may be made contrary to the no water waste policy set forth in Section 13.36.060(A)(1) through(14).

b. During conservation phase II, the following additional water use restrictions shall also be in effect:

i. Landscape Irrigation Days and Durations. The use of potable water to irrigate any landscaped or vegetated areas shall only be permitted on Tuesdays, Thursdays and Saturdays, for no more than ten (10) minutes per watering station per permitted irrigation day. (a) Exceptions.

(1) The director of parks, recreation and community services may establish different irrigation days for any or all city park land, provided that such irrigation shall be limited to three (3) days per week and ten (10) minutes per watering station per permitted irrigation day, unless otherwise exempted by this chapter.

(2) Irrigation by a drip irrigation system or with low-flow sprinkler heads that require additional watering time are exempt from the ten-minute time limitation, but such irrigation shall be limited to the permitted irrigation days and times of day.

(3) Irrigation with a hand-held bucket or similar container, or a hand-held hose equipped with a water shut off nozzle or device are exempt from the ten-minute time limitation and from the restriction on landscape irrigation days set forth in subsection (B)(1)(b)(i) of this section, provided that such irrigation occurs before nine a.m. or after six p.m.

(4) The restriction on landscape irrigation days and durations shall not apply to: (a) an area designated by the fire chief or city engineer as an area that must be watered for fire prevention or for erosion control; (b) commercial nurseries and commercial growers that water to the extent necessary to sustain plants, trees, shrubs, crops or other vegetation intended for lawful commercial sale; (c) watering to the extent necessary to maintain vegetation, including fruit trees and shrubs, intended for consumption; (d) watering to the extent necessary to establish newly-planted landscaping, during the first two (2) weeks after such landscaping has been planted and (e) irrigation with recycled water in a manner that complies with all applicable laws.

ii. Landscaping Projects. Except for California-friendly landscaping, there shall be a deferral of all new or retrofit landscaping or turf planting requiring potable water service for irrigation. However, the deferral shall not be required for any new or retrofit landscaping plans that have been approved in accordance with Chapter 30.47 of the code prior to the date of adoption of a resolution implementing conservation phase II, III, IV or V, as applicable.

iii. New and Retrofit City and Agency Landscapes. Except for California-friendly landscaping, there shall be a deferral of all new and retrofit landscape and turf planting which requires potable water service for irrigation, on any property owned, controlled or maintained by the city or the redevelopment agency. However, the deferral shall not be required for any new or retrofit landscaping plans that have been approved in accordance with Chapter 30.47 of the code prior to the date of adoption of a resolution implementing conservation phase II, III, IV or V, as applicable.

C. Phase III.

1. Water Use Restrictions.

a. Except as further restricted or as amended by this subsection (C), no use of water may be made contrary to the provisions of the no water waste policy set forth in Section 13.36.060(A)(1) through (14) and conservation phase II as set forth in subsection (B) of this section.

b. During conservation phase III, the following additional water use restrictions shall also be in effect:

i. Water play features. The operation of city-owned water play features such as splash fountains in children's playgrounds, but not including swimming pools or wading pools, shall be limited to no more than five (5) hours per day.

ii. Landscape irrigation days and durations. The use of potable water to irrigate any landscaped or vegetated areas shall only be permitted on Tuesdays and Saturdays, for no more than ten (10) minutes per watering station per permitted irrigation day.

(a) Exceptions.

(1) The director of parks and recreational services may establish different irrigation days for any or all city park land, provided that such irrigation shall be limited to three (3) days per week and ten (10) minutes per watering station per permitted irrigation day, unless otherwise exempted by this chapter.

(2) Irrigation by a drip irrigation system or with low-flow sprinkler heads that require additional watering time are exempt from the time limitation, but such irrigation shall be limited to the permitted irrigation days and times of day.

(3) Irrigation with a hand-held bucket or similar container, or a hand-held hose equipped with a water shut off nozzle or device are exempt from the ten-minute time limitation, but shall be limited to the permitted irrigation days and times of day.

(4) The restriction on landscape irrigation days and durations shall not apply to: (a) an area designated by the fire chief or city engineer as an area that must be watered for fire prevention or for erosion control; (b) commercial nurseries and commercial growers that water to the extent necessary to sustain plants, trees, shrubs, crops or other vegetation intended for lawful commercial sale; (c) watering to the extent necessary to maintain vegetation, including fruit trees and shrubs, intended for consumption; (d) watering to the extent necessary to establish newly-planted landscaping, during the first two (2) weeks after such landscaping has been planted and (e) irrigation with recycled water in a manner that complies with all applicable laws.

D. Phase IV.

1. Water Use Restrictions.

a. Except as further restricted or as amended by this subsection (D), no use of water may be made contrary to the provisions of Sections 13.36.060(A)(1) through (14) and conservation phases II and III as set forth in subsections (B) and (C) of this section.

b. During conservation phase IV, the following additional water use restriction shall also be in effect:

i. Decorative Fountains. The use of potable water to clean, fill or maintain levels in decorative exterior fountains or similar exterior structures is prohibited.

ii. Lakes or Ponds. The use of potable water to fill decorative lakes or ponds is prohibited, except to the extent necessary to maintain aquatic life.

iii. Landscape Irrigation Days and Durations. The use of potable water to irrigate any landscaped or vegetated areas shall only be permitted on Saturdays, for no more than fifteen (15) minutes per watering station.

(a) Exceptions.

(1) The director of parks, recreation and community services may establish different irrigation days for any or all city park land, provided that such irrigation shall be limited to three (3) days per week and ten (10) minutes per watering station per permitted irrigation day, unless otherwise exempted by this chapter.

(2) Irrigation by a drip irrigation system or with low-flow sprinkler heads that require additional watering time are exempt from the time limitation, but such irrigation shall be limited to the permitted irrigation days and times of day.

(3) Irrigation with a hand-held bucket or similar container, or a hand-held hose equipped with an automatic shut off nozzle or device are exempt from the fifteen-minute time limitation, but shall be limited to the permitted irrigation days and times of day.

(4) The restriction on landscape irrigation days and durations shall not apply to: (a) an area designated by the fire chief or city engineer as an area that must be watered for fire prevention or for erosion control; (b) commercial nurseries and commercial growers that water to the extent necessary to sustain plants, trees, shrubs, crops or other vegetation intended for lawful commercial sale; (c) watering to the extent necessary to maintain vegetation, including fruit trees and shrubs, intended for consumption and (d) irrigation with recycled water in a manner that complies with all applicable laws.

E. Phase V.

1. Water Use Restrictions.

a. Except as further restricted or as amended by this subsection (E), no use of water may be made contrary to the provisions of the no water waste policy set forth in Section 13.36.060(A)(1) through (14) and conservation phases II, III, and IV as set forth in subsections (B), (C) and (D) of this section.

b. During conservation phase V, the following additional water use restriction shall also be in effect:

i. Decorative Fountains. The use of potable water to clean, fill or maintain levels in decorative fountains or similar structures, whether such fountains or structures are on the interior or exterior of a site, is prohibited.

ii. Water Play Features. The operation of city-owned water play features such as splash fountains in children's playgrounds, but not including swimming pools or wading pools, shall be limited to no more than four (4) hours per day.

iii. Landscape Irrigation Days and Durations. The use of potable water to irrigate any landscaped or vegetated areas shall only be permitted on the first and third Saturdays of each month. Irrigation is limited to the deep irrigation of trees and shrubs for no more than twenty (20) minutes per permitted watering station per irrigation day.

(a) Exceptions.

(1) The director of parks, recreation and community services may establish different irrigation days for any or all city park land, provided that such irrigation shall be limited to three (3) days per week and ten (10) minutes per watering station per permitted irrigation day, unless otherwise exempted by this chapter. Irrigation of city park land shall not be limited to the deep irrigation of trees and shrubs.

(2) Irrigation by a drip irrigation system that requires additional watering time is exempt from the time limitation, but such irrigation shall be limited to the permitted irrigation days and times of day.

(3) Irrigation of trees or shrubs with a hand-held bucket or similar container, or a hand-held hose equipped with an automatic shut off nozzle or device are exempt from the twenty-minute time limitation, but shall be limited to the permitted irrigation days and times of day.

(4) The restriction on landscape irrigation days and durations shall not apply to: (a) an area designated by the fire chief or city engineer as an area that must be watered for fire prevention or for erosion control; (b) commercial nurseries and commercial growers that water to the extent necessary to sustain plants, trees, shrubs, crops or other vegetation intended for lawful commercial sale; (c) watering to the extent necessary to maintain vegetation, including fruit trees and shrubs, intended for consumption and (d) irrigation with recycled water in a manner that complies with all applicable laws.

iv. Vehicle Washing. There shall be no washing of any commercial or noncommercial privately-owned automobile, truck, trailer, motor home, boat, bus, airplane or other types of vehicles, except by the use of wash water which is on the immediate premises of a commercial car wash or commercial service station; or where health, safety and welfare of the public is contingent upon frequent vehicle cleaning, such as garbage trucks and vehicles which transport food and perishables.

F. Exception. The prohibited use of water from the department provided for by Section 13.36.060(A)(1) through (14) and subsections (A)(1), (B)(1), (C)(1), (D)(1) and (E)(1) of this section are not applicable to that use of water necessary to preserve the public health and safety or for essential government services such as police, fire, and other similar emergency services.

(Ord. No. 5675, § 2, 10-27-2009; Ord. No. 5660, § 6, 6-30-2009; Ord. 5112 § 65, 1996; prior code § 9-157)

13.36.080 Phase implementation and exemptions.

A. The department shall monitor and evaluate the projected supply and demand for water by its customers monthly, and shall recommend to the city manager the extent of the conservation required by the customers of the department in order for the department to prudently plan for and supply water to its customers. The city manager shall, in turn, notify and recommend to the city council the appropriate phase of water conservation to be implemented. Such phase implementation shall be made by council resolution. Any such resolution shall include such findings or other determinations as may be required to comply with the California Environmental Quality Act. Such phase implementation and the water use restrictions for the declared conservation phase shall become operable immediately upon the effective date of the resolution of the council and shall be published once in a daily newspaper of general circulation. Each new customer of the department shall be provided with a copy of said prohibited use provisions at the time of application for service.

B. Any customer of the department may prospectively apply to the general manager for a modification of, or an exemption from, the water use restrictions set forth in this chapter based upon the unique needs and circumstances of the customer or his or her premises. The general manager may grant such modifications or exemptions, provided that such modifications or exemptions are consistent with the purpose and intent of this chapter.

(Ord. No. 5675, § 3, 10-27-2009; Ord. No. 5660, § 7, 6-30-2009; Ord. 5112 § 66, 1996; prior code § 9-158)

13.36.090 Enforcement.

A. Penalties. It is unlawful for any customer of the department to fail to comply with any of the provisions of this chapter. The penalties set forth in this section shall be additional to those penalties provided in any other section of this code. The penalties for failure to comply with any of the provisions of this chapter shall be as follows:

1. For the first observed or reported violation of any of the provisions of subsections A.1. through 14. of Section 13.36.060 and subsections A.1., B.1, C.1., D.1. or E.1. of Section 13.36.070, in accordance with the applicable water conservation phase in effect at the time of the violation, the department shall issue a written courtesy notice of the fact of such violation to the customer and a written copy of Chapter 13.36 of this title.

2. Any subsequent violation of any of the provisions of subsections A.1. through 14. of Section 13.36.060 and subsections A.1., B.1., C.1., D.1. or E.1. of Section

13.36.070, in accordance with the applicable water conservation phase in effect at the time of the violation, shall be punishable as an infraction in accordance with Chapter 1.20 of the code.

3. In addition to the penalties set forth in Chapter 1.20 of the code, the city may pursue any available civil remedies and criminal penalties, including, but not limited to, seek a court order permitting the installation of a flow-restricting device and/or disconnection of water service on the service of the customer at the premises at which the violation occurred or is occurring, together with any and all costs incurred by the city as a result of the waste of water, including, but not limited to, attorneys' fees, the costs of installation and removal of said flow restrictor and the cost of disconnection and restoration of service.

B. The general manager, or his or her designee, may enter into a written agreement to resolve any violation provided that such agreement is consistent with the purpose and intent of this chapter.

C. Reservation of Rights. The rights of the department hereunder shall be cumulative to any other rights of the department, including, but not limited to, its right to discontinue service.

(Ord. No. 5660, §§ 8, 9, 6-30-2009; Ord. 5112 § 67, 1996: prior code § 9-159)

13.36.100 Reports.

A. All commercial and industrial customers of the department using twenty-five thousand (25,000) billing units per year or more shall submit a water conservation plan to the city manager's office and the general manager. These users shall submit quarterly to the city manager's office and the general manager a report on the progress of their conservation plans.

B. All city departments shall submit to the city manager and the general manager an annual public report on their water conservation efforts. The reports are [to] present the level of performance compared to their water conservation plans.

(Ord. No. 5660, §§ 10, 11, 6-30-2009; Ord. 5112 § 68, 1996; prior code § 9-160)

13.36.110 Rules and Regulations.

The general manager shall have the power to establish rules and regulations consistent with the provisions of this Chapter 13.36 for the administration of the provisions of this chapter.

(Ord. No. 5660, § 12, 6-30-2009)



APPENDIX H

Ordinance 5660 – Additional Prohibited uses of Water

**Ordinance 5854 – Amendments to the Glendale Municipal
Code Relating to Water Conservation**

AN ORDINANCE OF THE COUNCIL OF THE CITY OF GLENDALE AMENDING SECTIONS 1.20.010 AND 2.72.140 AND CHAPTER 13.36 OF THE GLENDALE MUNICIPAL CODE, 1995, TO ESTABLISH ADDITIONAL PROHIBITED USES OF WATER AND TO ELIMINATE PERCENT-BASED WATER RATIONING REQUIREMENTS

BE IT ORDAINED BY THE COUNCIL OF THE CITY OF GLENDALE:

SECTION 1. Section 1.20.010 of the Glendale Municipal Code, 1995, regarding penalties and punishment for code violations, is hereby amended to read as follows:

1.20.010 Penalties and punishment for code violations.

A. Except as provided in subsections B, C or D of this section, whenever in this code any act is prohibited or declared unlawful, or the doing of any act is required, or the failure to do any act is declared to be unlawful, it shall be a misdemeanor. Unless a specific penalty is provided, any person convicted of such misdemeanor shall be punished by a fine not to exceed one thousand dollars (\$1,000.00), or imprisonment for a term not to exceed six (6) months, or by both such fine and imprisonment.

B. With the exception of Title 10 of this code, any other provision of this code where the specific penalty of infraction is provided, shall be deemed an infraction, punishable as follows:

1. A fine not exceeding one hundred dollars (\$100.00) for a first violation;
2. A fine not exceeding two hundred dollars (\$200.00) for a second violation within one (1) year; and
3. A fine not exceeding five hundred dollars (\$500.00) for each additional violation within one (1) year.

C. A violation of any provision of Title 10, with the exception of Chapter 10.56, unless otherwise specifically provided, shall be deemed an infraction. An infraction under Title 10, except Chapter 10.56, is punishable by a fine which shall be established by resolution of the city council, either for a specific section under Title 10 or pursuant to a bail or fine schedule applicable to numerous sections thereunder. Any such bail or fine shall not exceed the sum of five hundred dollars (\$500.00) for each violation.

D. A violation of the following Glendale Municipal Code sections shall be deemed an infraction punishable as provided in subsection B of this section, except that all violations after three (3) convictions or nolo contendere pleas, or any combination totaling three (3), within one (1) year, shall be misdemeanors punishable pursuant to Section 1.20.010(A): Sections 8.32.050, 8.52.040(A), 8.52.040(B), 8.52.040(D), 9.04.040(B), 9.04.040(C), 9.04.060(B), 10.28.090, 13.36.060, 13.36.070, 30.11.030, 30.11.070(A)(4), 30.11.070(B)(5), 30.11.070(C),

30.11.070(C)(4), 30.12.040(A)(1)(a), 30.12.040(A)(2)(a), 30.12.040(A)(2)(b), 30.12.050(A)(2), 30.12.050(B)(2), 30.13.040(A)(1), 30.13.040(B), 30.13.050(A)(2), 30.15.040(A), 30.15.050(A)(2), 30.15.050(B)(2), 30.31.010, 30.31.020, 30.31.030(A), 30.31.030(B)(1), 30.32.040(C), 30.32.040(D), 30.32.040(F), 30.32.040(H), 30.33.050, 30.33.210(B)(2), 30.34.020(F), 30.34.020(K), 30.34.030(B)(8), 30.34.030(D), 30.34.030(D)(1), 30.34.030(D)(2), 30.34.090(A), 30.34.090(D), 30.34.090(G) and 30.34.100(A).

SECTION 2. Section 2.72.140 of the Glendale Municipal Code, 1995, regarding the powers and duties of the Glendale Water & Power commission, is amended to read as follows:

2.72.140 Powers and duties generally.

The powers and duties of the Glendale water and power commission shall be as follows:

A. Investigations. To investigate the operations and facilities of the Glendale water and power department and the need for changes or additions in its plant or in its operation and to make recommendations to the city manager and the council accordingly;

B. Recommendations. To recommend to the city manager and the council ways and means of financing changes and additions to the plant or the methods of operation of the Glendale water and power department;

C. Change in Administrative Policy. To recommend to the city manager changes of administrative policy which the commission deems desirable in order that the Glendale water and power department may better serve the people of the city;

D. Powers and Duties of Advisory Nature. The power and duties of the commission are of an advisory nature only, and do not include the power of directing the conduct of the Glendale water and power department or its divisions.

SECTION 3. Section 13.36.040 of the Glendale Municipal Code, 1995, regarding definitions, is hereby amended to read as follows:

13.36.040 Definitions.

The following words and phrases, whenever used in this chapter, shall be construed as defined in this section unless from the context a different meaning is intended or unless a different meaning is specifically defined within individual sections of this chapter:

“California-friendly plantings” or “California-friendly landscaping” means those landscape plantings, including but not limited to trees, shrubs, perennials, groundcovers, ornamental grasses and California-native plants, that require low water use for maintenance and that are included in the Metropolitan Water District’s California Friendly Garden Guide catalogue, available at <http://www.bewaterwise.com>.

“Dining establishment” means a catering business or a restaurant, hotel, café, cafeteria or other public place where food or drink is sold, served or offered for sale.

“Low income individual” means any individual that is eligible for participation in the division’s public benefit charge low-income program.

“Potable water” shall be defined as set forth in section 13.38.020 of this code.

“Process water” means water used to manufacture, alter, convert, clean, heat or cool a product, or the equipment used for such purpose; water used for plant and equipment washing and for transporting the raw materials and products; and water used to grow and maintain trees and plants for sale or installation. Process water does not include water used in the preparation of food or drinks.

“Recycled water” shall be defined as set forth in section 13.38.020 of this code.

SECTION 4. Section 13.36.050 of the Glendale Municipal Code, 1995, regarding the scope of the water conservation provisions, is hereby amended to read as follows:

13.36.050 Scope.

The provisions of this chapter shall apply to all water customers and property served water by the department wherever situated, and shall also apply to all property and facilities owned, maintained, operated or under the jurisdiction of the various officers, boards, departments or agencies of the city.

SECTION 5. Section 13.36.060 of the Glendale Municipal Code, 1995, regarding the “no water waste” policy, is hereby amended to read as follows:

13.36.060 No water waste policy.

There is in effect at all times in the city a “no water waste” policy as set forth herein. Except as otherwise provided in this chapter, at no time shall any person make, cause, use, or permit the use of water from the department for residential, commercial, industrial, agricultural, governmental, or any other purpose in a manner contrary to any provision of this chapter or in an amount in excess of that use permitted by the conservation phase then in effect pursuant to action taken by the city council in accordance with the provisions of this chapter.

A. Water Use Restrictions.

1. **Hose washing.** There shall be no hose washing of sidewalks, walkways, driveways, or parking areas, tennis courts, patios, porches or other paved areas, except that flammable or other dangerous substances may be disposed of by direct hose flushing by public safety officers for the benefit of public health and safety.

2. Overspray or runoff. There shall be no use of water for any purpose which results in overspray, runoff in flooding or runoff onto hardscape, driveways, streets, adjacent lands or into gutters.

3. Decorative fountains. No water shall be used to clean, fill or maintain levels in decorative fountains or similar structures unless such water is part of a recirculation system or unless such water is recycled water, which must be clearly posted.

4. Leaks. No water customer of the department shall permit water to leak from any facility on his premises; failure to effect the repair of any leak, within seventy-two hours after the customer is notified of or discovers the leak, shall subject said customer to all penalties provided herein for waste of water.

5. Irrigation times.

a. No landscaped or vegetated areas, whether or not such areas include California-friendly plantings and including, but not limited to grass, lawn, groundcover, shrubbery, annual and perennial plants, crops, and trees, including in golf courses, cemeteries, parks and school areas, shall be watered, sprinkled, or irrigated between the hours of nine a.m. and six p.m., except for very short periods of time for the express purpose of adjusting or repairing an irrigation system. Irrigation using recycled water is exempt from this limitation provided such usage is permitted by law and is clearly posted.

b. No landscaped or vegetated areas, whether or not such areas include California-friendly plantings, shall be watered, sprinkled or irrigated on days when the wind is blowing causing overspray and on days when it is raining.

6. Vehicle washing. The washing of commercial and noncommercial privately owned automobiles, trucks, trailers, motor homes, boats, busses, airplanes and other types of vehicles is restricted to use of a hand-held bucket and quick rinses using a hose with a positive shutoff nozzle. Exceptions: the use of wash water which is on the immediate premises of a commercial car wash or commercial service station; or where health, safety and welfare of the public is contingent upon frequent vehicle cleaning, such as garbage trucks and vehicles which transport food and perishables.

7. Commercial car wash and laundry systems. The installation of a non-recirculating water system for any new commercial conveyor car wash system or new commercial laundry system is prohibited. Effective July 1, 2014, no commercial conveyor car wash may use a non-recirculating water system in its operation.

8. Water for construction purposes. Water for construction purposes including but not limited to debrushing of vacant land, compaction of fills and pads, trench backfill and other construction uses, shall only be used in an efficient manner which will not result in runoff. Recycled water shall be used whenever it is an available and feasible alternative source of water.

9. Fire hydrants. Unless a permit has been obtained in accordance with section 13.04.080 of this code, the use of potable water from fire hydrants shall be limited to firefighting, related activities or other activities immediately necessary to maintain the health, safety and welfare of the residents of the city.

10. Dining establishments.

a. No dining establishment shall serve drinking water to any customer unless expressly requested by the customer.

b. Effective January 1, 2010, dining establishments are prohibited from using non water-conserving pre-rinse dishwashing spray valves.

11. Conservation notices. Dining establishments, hotels, motels and other commercial lodging establishments are required to post notices informing their guests about the city's "no water waste policy" and urging guests to conserve water.

12. Laundry service. Hotels, motels and other commercial lodging establishments are required to post notices giving their guests the option of not laundering towels and linens daily.

13. Single pass cooling systems. The installation of a single pass cooling system is prohibited in any building requesting new or expanded water service from the department.

14. Process water. Process water shall be recycled to the greatest extent possible.

B. The water use restrictions set forth in paragraph A of this section shall be in effect at all times, except that in the event that the city council declares the need for conservation as set forth in section 13.36.080, the water use restrictions shall be amended and the use of water shall be further restricted as required by the phase of conservation then in effect, as described in section 13.36.070.

SECTION 6. Section 13.36.070 of the Glendale Municipal Code, 1995, regarding phases of conservation, is hereby amended to read as follows:

13.36.070 Phases.

A. Phase I.

1. Water Use Restrictions.

a. No use of water may be made contrary to the provisions of the no water waste policy set forth in Sections 13.36.060(A)(1) through (14).

///

B. Phase II.

1. Water Use Restrictions.

a. No use of water may be made contrary to the no water waste policy set forth in Sections 13.36.060(A)(1) through(14).

b. During conservation phase II, the following additional water use restrictions shall also be in effect:

i. Decorative fountains. The use of potable water to clean, fill or maintain levels in decorative exterior fountains or similar exterior structures is prohibited.

ii. Lakes or ponds. The use of potable water to fill decorative lakes or ponds is prohibited.

iii. Landscape irrigation days and durations. The use of potable water to irrigate any landscaped or vegetated areas shall only be permitted on Tuesdays, Thursdays and Saturdays, for no more than ten minutes per watering station per permitted irrigation day. Irrigation by a drip irrigation system or with low-flow sprinkler heads that require additional spray time are exempt from the time limitation, but such irrigation shall be limited to the permitted irrigation days and times of day. The restriction on landscape irrigation days and durations shall not apply to: (a) an area designated by the fire chief or city engineer as an area that must be watered for fire prevention or for erosion control; (b) commercial nurseries and commercial growers that water to the extent necessary to sustain plants, trees, shrubs, crops or other vegetation intended for lawful commercial sale and (c) irrigation with recycled water in a manner that complies with all applicable laws.

iv. Landscaping projects. Except for California-friendly landscaping, there shall be a deferral of all new or retrofit landscaping or turf planting requiring potable water service for irrigation. However, the deferral shall not be required for any new or retrofit landscaping plans that have been approved in accordance with chapter 30.47 of the code prior to the date of adoption of a resolution implementing conservation phase II, III, IV or V, as applicable.

v. New and retrofit city and agency landscapes. Except for California-friendly landscaping, there shall be a deferral of all new and retrofit landscape and turf planting which requires potable water service for irrigation, on any property owned, controlled or maintained by the city or the redevelopment agency. However, the deferral shall not be required for any new or retrofit landscaping plans that have been approved in accordance with chapter 30.47 of the code prior to the date of adoption of a resolution implementing conservation phase II, III, IV or V, as applicable.

///

///

C. Phase III.

1. Water Use Restrictions.

a. Except as further restricted or as amended by this subsection C, no use of water may be made contrary to the provisions of the no water waste policy set forth in Sections 13.36.060(A)(1) through (14) and conservation phase II as set forth in subsection B of this section.

b. During conservation phase III, the following additional water use restrictions shall also be in effect:

i. Decorative fountains. The use of potable water to clean, fill or maintain levels in decorative fountains or similar structures, whether such fountains or structures are on the interior or exterior of a site, is prohibited.

ii. Landscape irrigation days and durations. The use of potable water to irrigate any landscaped or vegetated areas shall only be permitted on Tuesdays and Saturdays, for no more than ten minutes per watering station per permitted irrigation day. Irrigation by a drip irrigation system or with low-flow sprinkler heads that require additional spray time are exempt from the time limitation, but such irrigation shall be limited to the permitted irrigation days and times of day. The restriction on landscape irrigation days and durations shall not apply to: (a) an area designated by the fire chief or city engineer as an area that must be watered for fire prevention or for erosion control; (b) commercial nurseries and commercial growers that water to the extent necessary to sustain plants, trees, shrubs, crops or other vegetation intended for lawful commercial sale and (c) irrigation with recycled water in a manner that complies with all applicable laws.

D. Phase IV.

1. Water Use Restrictions.

a. Except as further restricted or as amended by this subsection D, no use of water may be made contrary to the provisions of Sections 13.36.060(A)(1) through (14) and conservation phases II and III as set forth in Subsections (B) and (C) of this section.

b. During conservation phase IV, the following additional water use restriction shall also be in effect:

i. Landscape irrigation days and durations. The use of potable water to irrigate any landscaped or vegetated areas shall only be permitted on Saturdays, for no more than fifteen minutes per watering station. Irrigation by a drip irrigation system or with low-flow sprinkler heads that require additional spray time are exempt from the time limitation, but such irrigation shall be limited to the permitted irrigation days and times of day. The restriction on landscape irrigation days and durations shall not apply to: (a) an area designated by the fire chief or city engineer as an area that must be watered for fire prevention or for erosion control; (b)

commercial nurseries and commercial growers that water to the extent necessary to sustain plants, trees, shrubs, crops or other vegetation intended for lawful commercial sale and (c) irrigation with recycled water in a manner that complies with all applicable laws.

E. Phase V.

1. Water Use Restrictions.

a. Except as further restricted or as amended by this subsection E, use of water may be made contrary to the provisions of the no water waste policy set forth in Sections 13.36.060(A)(1) through (14) and conservation phases II, III, and IV as set forth in subsections (B), (C) and (D) of this section.

b. During conservation phase V, the following additional water use restriction shall also be in effect:

i. Landscape irrigation days and durations. The use of potable water to irrigate any landscaped or vegetated areas shall only be permitted on the first and third Saturdays of each month. Irrigation is limited to the deep irrigation of trees and shrubs for no more than twenty minutes per permitted watering station per irrigation day. Irrigation by a drip irrigation system or with low-flow sprinkler heads that require additional spray time are exempt from the time limitation, but such irrigation shall be limited to the permitted irrigation days and times of day. The restriction on landscape irrigation days and durations shall not apply to: (a) an area designated by the fire chief or city engineer as an area that must be watered for fire prevention or for erosion control; (b) commercial nurseries and commercial growers that water to the extent necessary to sustain plants, trees, shrubs, crops or other vegetation intended for lawful commercial sale and (c) irrigation with recycled water in a manner that complies with all applicable laws.

ii. Vehicle washing. There shall be no washing of any commercial or non commercial privately-owned automobile, truck, trailer, motor home, boat, bus, airplane or other types of vehicles, except by the use of wash water which is on the immediate premises of a commercial car wash or commercial service station; or where health, safety and welfare of the public is contingent upon frequent vehicle cleaning, such as garbage trucks and vehicles which transport food and perishables.

F. Exception. The prohibited use of water from the department provided for by Sections 13.36.060(A)(1) through (14) and subsections (A)(1), (B)(1), (C)(1), (D)(1) and (E)(1) of this section are not applicable to that use of water necessary to preserve the public health and safety or for essential government services such as police, fire, and other similar emergency services.

///

SECTION 7. Section 13.36.080 of the Glendale Municipal Code, 1995, regarding phase implementation, is hereby amended to read as follows:

13.36.080 Phase implementation.

The department shall monitor and evaluate the projected supply and demand for water by its customers monthly, and shall recommend to the city manager the extent of the conservation required by the customers of the department in order for the department to prudently plan for and supply water to its customers. The city manager shall, in turn, notify and recommend to the city council the appropriate phase of water conservation to be implemented. Such phase implementation shall be made by council resolution. Any such resolution shall such findings or other determinations as may be required to comply with the California Environmental Quality Act. Such phase implementation and the water use restrictions for the declared conservation phase shall become operable immediately upon the effective date of the resolution of the council and shall be published once in a daily newspaper of general circulation. Each new customer of the department shall be provided with a copy of said prohibited use provisions at the time of application for service.

SECTION 8. Section 13.36.090 of the Glendale Municipal Code, 1995, regarding application of surplus reduction, is hereby deleted in its entirety.

SECTION 9. Section 13.36.100 of the Glendale Municipal Code, 1995, regarding penalties for failure to comply, is hereby renumbered as Section 13.36.090 and amended to read as follows:

13.36.090 Enforcement.

A. Penalties. It is unlawful for any customer of the department to fail to comply with any of the provisions of this chapter. The penalties set forth in this section shall be additional to those penalties provided in any other section of this code. The penalties for failure to comply with any of the provisions of this chapter shall be as follows:

1. For the first observed or reported violation of any of the provisions of subsections (A)(1) through (14) of Section 13.36.060 and subsection (A)(1), (B)(1), (C)(1), (D)(1) or (E)(1) of Section 13.36.070, in accordance with the applicable water conservation phase in effect at the time of the violation, the department shall issue a written courtesy notice of the fact of such violation to the customer and a written copy of Chapter 13.36 of this title.

2. Any subsequent violation of any of the provisions of subsections (A)(1) through (14) of Section 13.36.060 and subsection (A)(1), (B)(1), (C)(1), (D)(1) or (E)(1) of Section 13.36.070, in accordance with the applicable water conservation phase in effect at the time of the violation, shall be punishable as an infraction in accordance with chapter 1.20 of the code.

3. In addition to the penalties set forth in chapter 1.20 of the code, the city may pursue any available civil remedies and criminal penalties, including but not limited to seek a court order permitting the installation of a flow-restricting device and/ or disconnection of water service on the service of the customer at the premises at which the violation occurred or is

occurring, together with any and all costs incurred by the city as a result of the waste of water, including but not limited to attorneys fees, the costs of installation and removal of said flow restrictor and the cost of disconnection and restoration of service.

B. The general manager, or his or her designee, may enter into a written agreement to resolve any violation provided that such agreement is consistent with the purpose and intent of this chapter.

C. Reservation of Rights, The rights of the department hereunder shall be cumulative to any other rights of the department, including but not limited to its right to discontinue service.

SECTION 10. Section 13.36.110 of the Glendale Municipal Code, 1995, regarding compliance relief, is hereby deleted in its entirety.

SECTION 11. Section 13.36.120 of the Glendale Municipal Code, 1995, regarding enforcement, is hereby renumbered 13.36.100 and amended to read as follows:

13.36.100 Reports.

A. All commercial and industrial customers of the department using twenty-five thousand billing units per year or more shall submit a water conservation plan to the city manager's office and the general manager. These users shall submit quarterly to the city manager's office and the general manager a report on the progress of their conservation plans.

B. All city departments shall submit to the city manager and the general manager an annual public report on their water conservation efforts. The reports are present the level of performance compared to their water conservation plans.

SECTION 12. A new Section 13.36.110 is hereby added to the Glendale Municipal Code, 1995, to read as follows:

13.36.110 Rules and regulations.

The general manager shall have the power to establish rules and regulations consistent with the provisions of this chapter 13.36 for the administration of the provisions of this chapter.

SECTION 13. Severability.

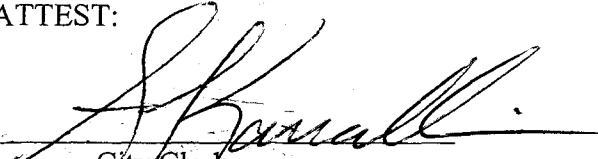
If any Section, subsection, clause, phrase, sentence or word of this Ordinance or the application thereof to any person or circumstance is for any reason held invalid, the validity of the remainder of the Ordinance or the application of such provision to other persons or circumstances shall not be affected thereby and shall not affect any other Section, subsection, clause, phrase, sentence or word of the Ordinance that can be given effect without the invalid Section, subsection, clause, phrase, sentence or word of this Ordinance. The City Council hereby declares that it would have passed this Ordinance and each Section, subsection, clause, phrase, sentence and word hereof,

irrespective of the fact that one or more Sections, subsections, clauses, phrases, sentences or words or the application hereof to any person or circumstance is held invalid.

Passed by the Council of the City of Glendale on the 30th day of June, 2009.



Mayor

ATTEST:


City Clerk

STATE OF CALIFORNIA)
COUNTY OF LOS ANGELES) SS.
CITY OF GLENDALE)

I, ARDASHES KASSAKHIAN, City Clerk of the City of Glendale, certify that the foregoing Ordinance No. 5660 was passed by the Council of the City of Glendale, California, at a regular meeting held on the 30th day of June, 2009, and that the same was passed by the following vote:


Ayes: **Drayman, Friedman, Najarian, Weaver, Quintero**

Noes: **None**

Absent: **None**



City Clerk

APPROVED AS TO FORM


CHIEF ASSISTANT CITY ATTORNEY
DATED 7/1/09



CITY OF GLENDALE CALIFORNIA
REPORT TO CITY COUNCIL

June 23, 2009

AGENDA ITEM

Proposed Amendment of Chapter 13.36 of the Glendale Municipal Code, 1995 - Water Conservation

1. Ordinance for Introduction (Percentage Reduction in Water Allotments) – Option # 1
2. Ordinance for Introduction (Landscape Watering Restrictions) – Option # 2
3. Resolution Adopting a Water Conservation Appeal Fee
4. Motion Providing Direction to Staff

COUNCIL ACTION

Public Hearing []	Ordinance []	Consent Calendar []	Action Item [<input checked="" type="checkbox"/>]	Report Only []
Approved for <u>June 23, 2009</u> calendar				

ADMINISTRATIVE ACTION

Submitted

Glenn O. Steiger, General Manager

[Signature]
Signature

Prepared

Peter Kavounas, Assistant General Manager

[Signature]

Approved

James E. Starbird, City Manager

[Signature]

Reviewed

Scott H. Howard, City Attorney

[Signature]

RECOMMENDATION

GWP recommends that the City Council amend the city's water conservation ordinance (Chapter 13.36 of the Glendale Municipal Code) in order to bring the city's code in line with current Best Management Practices established by the California Urban Water Conservation Council.

SUMMARY

As a result of the need to modify the existing Water Conservation Ordinance, staff presents two options to Council for consideration. The options, developed with input gathered from the community, differ in the method by which conservation is achieved.

Option #1 requires all residents and businesses to reduce consumption based on the consumption of a previous year, or base year. This is the existing ordinance methodology, and the option proposes relatively minor modifications to the existing code.

Option #2 requires all outdoor landscaping irrigation to be limited to certain days of the week.

Council is respectfully requested to select one of these options or give staff alternate direction.

FISCAL IMPACT

Water conservation, if effective, will result in a loss of GWP revenue. Option #1 results in predictable revenue impact. Staff intends to propose a water shortage charge to make up for the lost revenue should this option be selected. If the charge is approved there would be no anticipated fiscal impact.

Option #2 may also result in reduction of the water utility's revenue, however the reduction is difficult to quantify at this time because of the number of unknowns and variables associated with outdoor watering. As discussed below, GWP intends to present an amended rate structure in 2010 to take into account future revenue impacts associated with conservation.

Failure to amend the water conservation ordinance would impact the city's ability to obtain state grants and loans. Under Assembly Bill 1420, compliance with current Best Management Practices for water conservation is a prerequisite to obtaining state grants and loans.

BACKGROUND

On April 28, 2009, staff presented to Council the need to modify existing Glendale Municipal Code (GMC) sections relating to water conservation. The report to Council described the need for modifications, water utility financial considerations, and current water supply conditions (Exhibit 1). Council gave its permission to staff to proceed with proposing changes, and directed staff to conduct a public outreach effort to gather comments from the community.

The City's existing Water Conservation Ordinance (Chapter 13.36 of the GMC) describes the city's approach to conservation in four sections:

1. No water waste provisions that are in effect at all times; and
2. Mandatory conservation provisions to be triggered as necessary. Mandatory conservation can be invoked in phases by requiring a percentage cutback from a prior year's use (also called "baseline year"); and
3. Penalty provisions in case of violations of either sections above; and
4. Appeal process to allow for customers to dispute a penalty assessment.

Based on the need for changes and input received during the public outreach, staff is presenting Council with options for moving forward. Council is respectfully requested to select one of the options, or give staff different direction.

Option #1	Option #2
No Water Waste Provision Changes Percent-Based Conservation Phases	No Water Waste Provision Changes Days-Of-Week Watering Limitation Phases

After an ordinance is adopted, staff will bring to Council recommendations for an appropriate phase of mandatory conservation for the year and a recommendation for a water shortage charge if Option #1 is selected.

Public Outreach

Staff held a series of meetings to gather input from the community. Public meetings were held at the Sparr Heights Community Center, the Edison-Pacific Center, and the Perkins Building. Additional meetings were held with the Board of Realtors and Chamber of Commerce, and a group of large/ business account customers. The meetings were advertised on GTV6. GWP also issued a press release with the meeting dates to all local media outlets and also posted meeting notices on the GWP and the City website. The Glendale News-Press posted the meetings on the front page of the newspaper. In addition, five thousand letters were mailed to randomly selected residential customers. Letters were also sent to all homeowners association groups in Glendale, including all of their board members. Attendance ranged from as few as 10 people to as many as 40.

During the meetings, attendees were presented information about the existing GMC and the need for amendments, current water supply conditions, and the existing rate structure of the water utility. A question and answer session gave the opportunity for residents to express their point of view and offer comments and suggestions. Some of the comments related to broader issues outside the immediate scope of the water conservation ordinance, and as such, need to be addressed separately. GWP staff committed to the public to relay these comments to City Council and thus these are presented below:

- Council should not approve any more development in the City of Glendale as development strains existing water supplies.
- City should consider expanding the Recycled Water system with consideration for cost.
- City should provide a Grey Water permitting process.
- City should look into desalination of sea water and capture of rainwater as alternate sources of supply.

In addition to the above comments, a number of comments were a consistent theme during all the meetings. These were considered and incorporated to the extent possible in the options that are presented for Council's consideration, and are:

- Some residents have been diligently conserving water starting prior to 2006 (the current baseline for Voluntary Conservation), and it is unfair to use 2006 as the baseline for mandatory conservation.
- Some residents have already been conserving a lot of water, and it is unfair to ask them to conserve more.
- If the selected mandatory conservation approach is based on percent reduction from a baseline, how is the baseline selected? What happens if circumstances have changed since the baseline?
- Given that water meters in the City are read bi-monthly, how would residents know what their use is and their progress toward a conservation goal?
- Some plumbing devices that conserve water should be made mandatory (specifically hot-water circulating pumps).

- City should give rebates for water conservation improvements.
- Car washing by individual residents should not be prohibited, even at higher stages of conservation.
- How can a landlord of an apartment building with a single master meter enforce water conservation on individual tenants?
- If a resident exceeds their conservation goal for a bi-monthly period they should be given credit for the additional savings.
- City should consider a water budget customized for each connection.
- Landscaping irrigation should be provided through separate water meters.
- Customers should be provided with information that allows comparison of their usage to the typical usage in their neighborhood.
- There should be no penalty if the water is necessary to comply with the City's Landscaping Ordinance.
- City should have tiered rates that make the big water users pay much more.

A summary of GWP's responses to the above questions is attached to this report as Exhibit B. In general, the comments received by the public revealed anxiety about the need to conserve water and about the fairness of the existing mandatory conservation approach. There was good discussion regarding the No Water Waste provisions of the GMC and the proposed changes were generally understood and accepted.

Prior to the community outreach effort, staff developed recommended changes to the existing mandatory conservation provisions of the GMC aimed at clarifying the percent-based phases of conservation (Option #1). In light of the public perception of this approach, a separate approach has been developed and is presented as an option for Council's consideration. The alternate approach is to simply limit the days of the week during which watering of landscaping is permitted (Option #2). The pros and cons of both approaches are summarized later in this report.

No Water Waste Provisions

Both options presented to Council contain identical modifications to the No Water Waste provisions of the Water Conservation Chapter in the GMC. These are:

1. Extending the hours during which irrigation of landscaping is prohibited to the time between 9:00 a.m. and 6:00 p.m. (current restriction is from 10:00 a.m. to 5:00 p.m.)
2. Adding a provision prohibiting the installation of non-recirculating water systems for new commercial car wash and laundry facilities; mandating that existing car wash facilities replace non-recirculating water systems by 2014
3. Prohibiting dining establishments from using non-water conserving pre-rinse spray valves
4. Requiring lodging establishments to post notices giving guests an option of not laundering towels and linens daily
5. Prohibiting the installation of single pass cooling systems

These are required for Glendale to comply with Best Management Practices described in the California Water Conservation Council MOU to which Glendale is a signatory. Compliance with the Best Management Practices is a pre-requisite for eligibility for state grants and loans. The above modifications to the "No Water Waste" policy did not elicit a strong reaction from the public and are recommended by staff.

Plumbing Fixtures Retrofit

In addition to the No Water Waste provisions and the Mandatory Conservation phases, staff originally proposed to make the retrofit of plumbing fixtures a condition for the sale of a property. This was the main focus of the discussion with the Board of Realtors. As a result of that meeting, staff is evaluating a number of alternatives to a local "retrofit on resale" program. Staff is also closely tracking proposed state legislation (Senate Bill 407 - Padilla) which may make plumbing retrofit upon resale or upon issuance of a construction permit a state-wide requirement. If state legislation mandating the retrofit of water-wasting plumbing fixtures is not adopted, then GWP may, in the future, present a proposed retrofit ordinance to the City Council for its consideration.

Mandatory Conservation Approach

As mentioned earlier in this report, two approaches to mandatory conservation phases have been developed and are presented for City Council's consideration. These are: A modification of existing approach, which uses percent target based on a baseline year (Option 1); and, days-of-the-week-watering limitation (Option 2). A brief description of each approach follows.

Option #1: Percent Based: Under this approach, once the need for mandatory conservation is identified, a phase is recommended, along with a relevant base year. Residents and businesses are required to reduce their use compared to that of the same period in the base year. A floor is established below which a customer does not have to conserve, thus allowing a basic apportionment of water to each connection. If conservation is not achieved, progressive penalties are assessed. An appeals process provides relief for those who believe there are extenuating circumstances and a change of target is warranted. As the need for mandatory conservation increases, the percentage reduction would increase up to a maximum of 50%. This is the City's existing approach, and currently, the City is in Phase I-Voluntary Conservation using 2006 as a base year.

Option #2: Days-of-the-Week Watering Limitation: Under this approach, once the need for mandatory conservation is identified, a phase is recommended. Those that use water for irrigation are permitted to do so only on certain days of the week. The initial stage limits watering to three prescribed days per week, and as the need for mandatory conservation increases, the allowed days of the week are reduced. Penalties for violation are assessed like any other code violation, and there is no need for an appeal process as enforcement is viewed like any other code compliance issue.

These approaches vary in their philosophy and impact to customers and the utility. To assist Council in understanding these further, the table below offers a comparison of the advantages and disadvantages of each.

Method	Pro	Con
<p>Option #1: Percent-based w/ baseline</p>	<ul style="list-style-type: none"> • Can achieve desired level of conservation (can be measured and enforced) • Can adjust to levels up to 50% reduction of demand • Does not require those using at or below 10 hcf per month to conserve further • Every customer shares in the effort to conserve • Matches MWD conservation approach 	<ul style="list-style-type: none"> • Not as easy to explain to customers • Perceived unfair by those who have adopted a conservation ethic if use is above 10 hcf per month "floor" • Baseline is difficult for customers to accept • May affect some businesses • More complicated billing • Will create many appeals and lead to upset customers • Requires staffing-up to process appeals

Method	Pro	Con
Option #2: Days-of-the Week Watering Limitations	<ul style="list-style-type: none"> • Easy to understand • Easy on commercial & industrial customers • No impact on billing function of GWP • No appeals necessary-less staff work • Perceived as fair by those who are already making conservation efforts • Matches the Burbank and Pasadena approach (although these Cities also implemented a different rate structure at the same time) 	<ul style="list-style-type: none"> • Uncertain level of conservation • Maximum possible conservation is less than 20% and may be insufficient if drought worsens • Cannot be enforced broadly throughout the City (can be enforced case-by-case) • More likely to lead to penalties (shared by all) especially in higher stages of mandatory conservation • Conservation burden is placed mostly on single family residences and large irrigation (non-recycled water) accounts • Creates challenge for professional gardeners

Ultimately, the City's goal is to have a policy that will effectively lead to reduction in demand when necessary. At this time, the regional shortage is estimated at 10%. Either approach will get the City to come close to the desired 10% reduction.

If Council selects the percent-based approach, staff's recommendation will be to invoke Phase II (10% mandatory conservation) as soon as the ordinance goes into effect. If the Days-of-the Week Water Limitations approach is selected, staff's recommendation will be to invoke Phase II (limit watering to three days per week). Staff's recommendation will be presented to City Council as a separate agenda item after the Ordinance is adopted.

Future Option -- Water Budgeting: GWP is moving steadily toward installation of an advanced metering infrastructure (AMI) which, in addition to enhanced customer service, will also lead to increased ability to conserve water. The advent of AMI will enable GWP to develop individual water budgets tailored to customers -- an approach that is gaining popularity in the industry because it is perceived to be more equitable than current approaches. This approach is consistent with the contemplated changes to the water rate structure in 2010.

Financial Considerations

1. Penalties

Both water conservation ordinance options would include penalties to the customer for violation of the water conservation requirements. Option #1 includes penalties (unchanged from current code provisions) for customers that exceed the specified target. The penalties are progressive, and assess the amount by which a customer exceeds the target at 2x (twice the rate) for a first violation, and 4x (quadruple the rate) for a second violation. Option # 2 would treat water waste as a municipal code violation. Violators would be subject to code enforcement which could result in criminal penalties ranging from \$100 to \$1,000 (and/or 6 months' jail time), installation of a flow restrictor, or water shut off for repeat offenders.

2. Appeal Fee

The City's existing water conservation ordinance provides an appeal process to afford customers an opportunity to dispute penalties. The bases for appeals can include, among other provisions, water conservation practices that were established before the base period, addition of members to the

household, and changes in vacancy factors in multi-family units. Option #1 would retain the appeal process with adjustments including:

- Requiring a finding that the customer has achieved maximum practical reduction in their water use; and
- A \$50 appeal fee to recover a portion of staff expense to process appeals. The fee would be refundable if the appeal is successful and would not be required of low-income customers (e.g. those meeting the criteria for GWP public benefit charge low-income programs).

As mentioned earlier, Option #2 does not include a specific water conservation appeals process because enforcement would be handled through existing code enforcement process.

3. Revenue Reduction Due to Decreased Water Sales

Reduction in sales impacts the water utility's revenue, and it is prudent to establish a mechanism to recover the anticipated loss of revenue. This practice is received well by rating agencies that evaluate the financial stability of businesses.

The percent-based option (Option #1) allows staff to develop an estimate of lost revenue and propose a water shortage charge to recover and maintain a revenue-neutral position for the utility. If Council selects this approach staff would present a recommendation for an appropriate charge for each stage of conservation. This charge would be applied to Tier 2 sales, placing the burden on those that use greater volumes of water.

The water savings related to days-of-week watering limitations (Option #2) are harder to quantify and the impact to the utility's revenue is less certain. As such staff would recommend moving forward without a water shortage charge. As presented to Council in 2007, GWP plans to revisit water rates in 2010. At that time a new rate structure will be presented incorporating individual water-budgets and an automatic adjustment for conservation. Revenue lost from any shortage of water sales under Option #2 during 2009-2010 would not be recaptured.

4. MWD Penalties for Excess Water Consumption

The MWD Water Shortage Allocation Plan provides financial penalties in case member agencies exceed their allotment. These penalties range from approximately \$1,600/ac-ft to \$3,200/ac-ft, above the regular price of \$701/ac-ft. For Glendale these penalties, if incurred, would be paid through the existing Adjustment Charge as explained in the April 28, 2009 Council Report. The charge is assessed on all water sales in the City, and thus, is shared by all customers. As mentioned in the table above, Option #1 is more likely to achieve the desired conservation outcome thus avoiding penalties.

Coordination with Other City Departments

These options have been reviewed by the Neighborhood Services, Planning, Parks & Recreation Departments and the Building & Safety Department in order to reach a common understanding regarding enforcement and consistency with other city ordinances.

Environmental Review

The adoption of the proposed amendments to Chapter 13.36 of the Glendale Municipal Code is categorically exempt from review under the California Environmental Quality Act (CEQA) under the State CEQA Guidelines Section 15061(b)(3). The proposed conservation ordinance will conserve and protect existing water supplies and will not result in any environmental impacts.

The proposed ordinance is also exempt under Section 15304 regarding minor public or private alterations in the condition of land, water and/ or vegetation. Additionally, the proposed ordinance is exempt under CEQA Guidelines Section 15307 relating to actions by regulatory agencies for the protection of natural resources.

Recommendations

Option 1: Introduce the attached Ordinance amending existing Glendale Municipal Code Chapter 13.36 -Water Conservation. Amendments include changes to the No Water Waste provisions, and modifications of the percent-based targets to achieve various conservation stages. The ordinance also amends the Penalties and Appeals portions of the Section. In the event that Council selects this option, Council would need to consider the resolution establishing a fee for water conservation appeals.

Option 2: Introduce the attached Ordinance amending existing Glendale Municipal Code Chapter 13.36 - Water Conservation. Amendments include changes to the No Water Waste provisions, and replace the percent-based targets with limited days-of-the-week watering provisions to achieve various conservation stages. The ordinance also amends the Penalties and eliminates the Appeals portions of the existing ordinance.

Option 3: Provide alternate direction to staff.

EXHIBIT(S)

Exhibit A: April 28, 2009 Council Report

Exhibit B: Questions from the Public and GWP Responses

AN ORDINANCE OF THE COUNCIL OF THE CITY OF GLENDALE AMENDING SECTIONS 13.36.040, 13.36.060 AND 13.36.090 OF CHAPTER 13.36 OF THE GLENDALE MUNICIPAL CODE, 1995, RELATING TO WATER CONSERVATION

WHEREAS, on April 1, 2015, Governor Jerry Brown issued an Executive Order B-20-15 ("Order"), thereby ordering for the very first time in California's history, mandatory water use restrictions; and

WHEREAS, Governor Brown's Order directs the State Water Resources Control Board ("Water Board") to impose a 25% reduction on the state's local water supply agencies over the next year until February 2016; and

WHEREAS, in order to reach the 25% reduction goal, the Order sets forth various mandates inclusive of mandates relating to water saving through restrictions on water waste, and an increase in enforcement against water waste, which mandates the City of Glendale already has implemented through its Water Conservation Ordinance, Glendale Municipal Code, 1995 ("GMC") Chapter 13.36; and

WHEREAS, on April 18, 2015, the Water Board issued draft regulations which contain updates to the Water Board's regulations which were adopted in July 2014 and which are also implemented through the City's Water Conservation Ordinance; and

WHEREAS, the April 18, 2015 Water Board regulations update includes prohibitions on watering landscaping for 48 hours after measurable precipitation, on watering ornamental turf on public street medians, irrigation with potable water outside of newly constructed homes and buildings that is not delivered by drip or micro-spray systems, and limiting outdoor irrigation of ornamental landscapes or turf with potable water to no more than two days per week, as well as additional reporting requirements on conservation efforts and enforcement efforts; and

WHEREAS, in order to implement all of the mandates of the Water Board regulations, the City needs to amend its Water Conservation Ordinance, Section 13.36.060, to add a prohibition on watering landscaping for 48 hours after rain to the existing prohibition of watering landscaping during rain; and

WHEREAS, Section 13.36.090 should also be amended to allow the City the flexibility and ability to enforce the Water Conservation mandates through the City's Administrative Citation process.

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF GLENDALE:

SECTION 1. Section 13.36.060 of the Glendale Municipal Code, 1995 ("Glendale Municipal Code"), is hereby amended to read as follows:

13.36.040 Definitions.

The following words and phrases, whenever used in this chapter, shall be construed as defined in this section unless from the context a different meaning is intended or unless a different meaning is specifically defined within individual sections of this chapter:

“California-friendly plantings” or “California-friendly landscaping” means those landscape plantings, including, but not limited to, trees, shrubs, perennials, groundcovers, ornamental grasses and California-native plants, that require low water use for maintenance and that are included in the Metropolitan Water District’s California Friendly Garden Guide catalogue, available at <http://www.bewaterwise.com>.

“Dining establishment” means a catering business or a restaurant, hotel, cafe, cafeteria or other public place where food or drink is sold, served or offered for sale.

“Low income individual” means any individual that is eligible for participation in the division’s public benefit charge low-income program.

“Potable water” shall be defined as set forth in Section 13.28.020 of this code.

“Process water” means water used to manufacture, alter, convert, clean, heat or cool a product, or the equipment used for such purpose; water used for plant and equipment washing and for transporting the raw materials and products; and water used to grow and maintain trees and plants for sale or installation. Process water does not include water used in the preparation of food or drinks.

“Recycled water” shall be defined as set forth in Section 13.38.020 of this code. (Ord. No. 5660, § 3, 6-30-2009; Ord. 5112 § 63, 1996; prior code § 9-154)

SECTION 2. Section 13.36.060 of the Glendale Municipal Code, 1995 (“Glendale Municipal Code”), is hereby amended to read as follows:

13.36.060 No water waste policy.

There is in effect at all times in the city a “no water waste” policy as set forth herein. Except as otherwise provided in this chapter, at no time shall any person make, cause, use, or permit the use of water from the department for residential, commercial, industrial, agricultural, governmental, or any other purpose in a manner contrary to any provision of this chapter or in an amount in excess of that use permitted by the conservation phase then in effect pursuant to action taken by the city council in accordance with the provisions of this chapter.

A. Water Use Restrictions.

1. **Hose Washing.** Potable water shall not be used for hose washing of sidewalks, walkways, driveways, or parking areas, tennis courts, patios, porches or other paved areas, except (i) where necessary to alleviate safety or sanitary hazards, and then only by use of a handheld bucket or similar container or a hand-held hose equipped with a water shut-off device; (ii) when using a low-volume high-pressure cleaning machine or (iii) that flammable or other dangerous substances may be disposed of by direct hose flushing by public safety officers for the benefit of public health and safety.

2. Overspray or Runoff. There shall be no use of water for any purpose which results in overspray, runoff in flooding or runoff onto hardscape, driveways, streets, adjacent lands or into gutters.

3. Decorative Fountains. Except for water play features in city parks, no water shall be used to clean, fill or maintain levels in decorative fountains or similar structures unless such water is part of a recirculation system or unless such water is recycled water, which must be clearly posted.

4. Leaks. No water customer of the department shall permit water to leak from any facility on his premises; failure to effect the repair of any leak, within seventy-two (72) hours after the customer is notified of or discovers the leak, shall subject said customer to all penalties provided herein for waste of water.

5. Irrigation Times.

a. No landscaped or vegetated areas, whether or not such areas include California-friendly plantings and including, but not limited to, grass, lawn, groundcover, shrubbery, annual and perennial plants, crops, and trees, including in golf courses, cemeteries, parks and school areas, shall be watered, sprinkled, or irrigated between the hours of nine a.m. and six p.m., except for very short periods of time for the express purpose of adjusting or repairing an irrigation system. Irrigation using recycled water is exempt from this limitation provided such usage is permitted by law and is clearly posted.

b. No landscaped or vegetated areas, whether or not such areas include California-friendly plantings, shall be watered, sprinkled or irrigated on days when the wind is blowing causing overspray and on days when it is raining, or within forty eight (48) hours after it rains.

6. Vehicle Washing. The washing of commercial and noncommercial privately owned automobiles, trucks, trailers, motor homes, boats, busses, airplanes and other types of vehicles is restricted to use of a hand-held bucket and quick rinses using a hose with a positive shutoff nozzle. Exceptions: the use of wash water which is on the immediate premises of a commercial car wash or commercial service station; or where health, safety and welfare of the public is contingent upon frequent vehicle cleaning, such as garbage trucks and vehicles which transport food and perishables.

7. Commercial Car Wash and Laundry Systems. The installation of a nonrecirculating water system for any new commercial conveyor car wash system or new commercial laundry system is prohibited. Effective July 1, 2014, no commercial conveyor car wash may use a nonrecirculating water system in its operation.

8. Water for Construction Purposes. Water for construction purposes including, but not limited to, debrushing of vacant land, compaction of fills and pads, trench backfill and other construction uses, shall only be used in an efficient manner which will not result in runoff. Recycled water shall be used whenever it is an available and feasible alternative source of water.

9. Fire Hydrants. Unless a permit has been obtained in accordance with Section 13.04.080 of this code, the use of potable water from fire hydrants shall be limited to firefighting, related activities or other activities immediately necessary to maintain the health, safety and welfare of the residents of the city.

10. Dining Establishments.

a. No dining establishment shall serve drinking water to any customer unless expressly requested by the customer.

b. Effective January 1, 2010, dining establishments are prohibited from using nonwater-conserving pre-rinse dishwashing spray valves.

11. Conservation Notices. Dining establishments, hotels, motels and other commercial lodging establishments are required to post notices informing their guests about the city's "no water waste policy" and urging guests to conserve water.

12. Laundry Service. Hotels, motels and other commercial lodging establishments are required to post notices giving their guests the option of not laundering towels and linens daily.

13. Single Pass Cooling Systems. The installation of a single pass cooling system is prohibited in any building requesting new or expanded water service from the department.

14. Process Water. Process water shall be recycled to the greatest extent possible.

B. The water use restrictions set forth in paragraph (A) of this section shall be in effect at all times, except that in the event that the city council declares the need for conservation as set forth in Section 13.36.080, the water use restrictions shall be amended and the use of water shall be further restricted as required by the phase of conservation then in effect, as described in Section 13.36.070 (Ord. No. 5675, § 1, 10-27-2009; Ord. No. 5660, § 5, 6-30-2009; Ord. 5112 § 64, 1996)

SECTION 3. Section 13.36.090 of the Glendale Municipal Code, 1995 ("Glendale Municipal Code"), is hereby amended to read as follows:

13.36.090 Enforcement.

A. Penalties. It is unlawful for any customer of the department to fail to comply with any of the provisions of this chapter. The penalties set forth in this section shall be additional to those penalties provided in any other section of this code. The penalties for failure to comply with any of the provisions of this chapter shall be as follows:

1. For the first observed or reported violation of any of the provisions of subsection (A)(1) through (14) of Section 13.36.060 and subsections (A)(1), (B)(1), (C)(1), (D)(1) or (E)(1) of Section 13.36.070, in accordance with the applicable water

conservation phase in effect at the time of the violation, the department shall issue a written warning notice of the fact of such violation to the customer and a written copy of Chapter 13.36 of this title.

2. Any subsequent violation of any of the provisions of subsections (A)(1) through (14) of Section 13.36.060 and subsections (A)(1), (B)(1), (C)(1), (D)(1) or (E)(1) of Section 13.36.070, in accordance with the applicable water conservation phase in effect at the time of the violation, shall be punishable as an infraction in accordance with Chapter 1.20 and Chapter 1.24 of the code.

3. In addition to the penalties set forth in Chapter 1.20 and Chapter 1.24 of the code, the city may pursue any available civil remedies and criminal penalties, including, but not limited to, seek a court order permitting the installation of a flow-restricting device and/or disconnection of water service on the service of the customer at the premises at which the violation occurred or is occurring, together with any and all costs incurred by the city as a result of the waste of water, including, but not limited to, attorneys' fees, the costs of installation and removal of said flow restrictor and the cost of disconnection and restoration of service.

B. The general manager, or his or her designee, may enter into a written agreement to resolve any violation provided that such agreement is consistent with the purpose and intent of this chapter.

C. Reservation of Rights. The rights of the department hereunder shall be cumulative to any other rights of the department, including, but not limited to, its right to discontinue service. (Ord. No. 5660, §§ 8, 9, 6-30-2009; Ord. 5112 § 67, 1996: prior code § 9-159)

SECTION 4. Severability. This Ordinance is adopted under the authority of the Charter of the city of Glendale and State law. If any section, subsection, clause or phrase is declared invalid or otherwise void by a court of competent jurisdiction, it shall not affect any remaining provision hereof. In this regard the city council finds and declares that it would have adopted this measure notwithstanding any partial invalidity hereof.

SECTION 5. Effective Date. This Ordinance shall take effect and be in force thirty (30) days after the date of its passage.

Passed by the Council of the City of Glendale on the 5th day of
May, 2015.



Mayor

ATTEST: 

City Clerk

STATE OF CALIFORNIA)
COUNTY OF LOS ANGELES) SS.
CITY OF GLENDALE)

I, Ardashes Kassakhian, City Clerk of the city of Glendale, certify that the foregoing Ordinance No. 5854 was passed by a majority vote of the Council of the city of Glendale, California, at a regular meeting held on the 5th day of May, 2015, and that the same was passed by the followed vote.

Ayes: Devine, Friedman, Charpetian, Sinanyan, Najarian

Noes: None

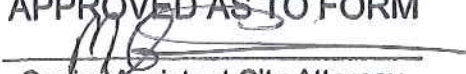
Absent: None

Abstain: None



City Clerk

APPROVED AS TO FORM



Senior Assistant City Attorney

Date 5/4/15



APPENDIX I

MWD 2015 UWMP Section II

Planning for the Future



The purpose of this section is to show how Metropolitan plans to meet Southern California's water supply needs in the future. In its role as supplemental supplier to the Southern California water community, Metropolitan faces ongoing challenges in meeting the region's needs for water supply reliability and quality. Increased environmental regulations and competition for water from outside the region have resulted in changes in delivery patterns and timing of imported water supply availability. At the same time, the Colorado River watershed has experienced a protracted drought since 2000.

As described in the previous chapter, the water used in Southern California comes from a number of sources. From 2006 through 2015, Metropolitan has provided 50 percent to 60 percent of the water needs in its service area from the Colorado River via the CRA, and from the Sacramento-San Joaquin River Watershed via the SWP. As Metropolitan continues to face various water supply challenges, development of adaptable strategies for managing resources to meet the range of estimated demands into the future and for adjusting to changing resource conditions is ongoing.

Metropolitan's continued progress in developing a diverse resource mix enables the region to meet its water supply needs. The investments that Metropolitan has made and its ongoing efforts in many different areas coalesce toward its goal of long-term regional water supply reliability. Metropolitan's actions have been focused on the following:

- Pursuing long-term solutions for the Delta
- Developing storage programs related to the SWP and the Colorado River
- Developing storage and groundwater management programs within the Southern California region
- Increasing conservation
- Increasing water recycling, groundwater recovery, and seawater desalination
- Developing water supply management programs outside of the region

Metropolitan has undertaken a number of planning initiatives over the years. This section summarizes these efforts, which include the Integrated Water Resources Plan (IRP), three IRP Updates, the Water Surplus and Drought Management Plan, the Water Supply Allocation Plan, and the Long-term Conservation Plan. Collectively, they provide a policy framework with guidelines and resource targets for Metropolitan to ensure regional water supply reliability.

While Metropolitan coordinates regional supply planning through its inclusive IRP process, Metropolitan's member agencies also conduct their own planning analyses – including their own urban water management plans – and may develop projects independently of Metropolitan. Appendix 5 shows a list of potential local projects provided to Metropolitan by its member agencies.

2.1 Integrated Water Resource Planning

In 1993, Metropolitan commenced an Integrated Water Resources Planning process as the beginning of a new era of regional reliability planning. As this planning process began, Metropolitan held a series of three regional assemblies from 1993 through 1995 addressing strategic planning issues. Attendance at these regional assemblies included Metropolitan's Board, Metropolitan's senior management, member agency managers, local retail water providers, groundwater basin managers, and invited public representatives. The purpose of these regional assemblies was to gain consensus on resource policy issues, provide direction for future work, and to endorse regional objectives, principles, and strategies.

A key outcome of the regional assemblies was the establishment and adoption of water supply principles which provided critical guidance for the development and adoption of future Metropolitan IRPs. In summary, these principles state:

- No water supplier in Southern California is an isolated, independent entity unto itself, and all, to varying degrees, are dependent upon a regional system of water importation, storage, and distribution.
- Metropolitan is Southern California's lead agency in regional water management, having the responsibility for importing water from outside the region and convening dialogues on regional water issues, encouraging local water development and conservation, advocating the region's interests to the state and federal governments, and leading the region's water community.
- Water suppliers at all levels have a responsibility to promote a strong water ethic both within the water community and among the public, developing plans through open processes, committing to achieving adopted regional goals and strategies, and committing to a policy of equity and fairness in development and implementation of water management programs.

These regional assemblies laid the foundation for Metropolitan's integrated regional planning path from 1996 to the present. This path has guided Metropolitan's water resources strategy from the initial adoption of the Metropolitan's IRP in 1996 to successive IRP updates in 2004 and 2010.

The 1996 IRP

Metropolitan's IRP established a long-term, comprehensive water resources strategy to provide the region with a reliable and affordable water supply. One of the fundamental outcomes of the 1996 IRP was the implementation of a diverse portfolio of resource investments in both imported and in-region supplies, and in water conservation measures. The 1996 IRP further emphasized the construction and creation of a network of water storage facilities, both below and above ground.

The 1996 IRP process identified cost-effective solutions that offered long-term reliability to the region. Having identified the need for a portfolio of different supplies to meet its demands, the 1996 IRP analyzed numerous resource portfolios seeking to find a "Preferred Resource Mix" that would provide the region with reliable and affordable water supplies through 2020. The analysis determined the best mix of resources based on cost-effectiveness, diversification, and reliability. Establishing the "Preferred Resource Mix" was an integral part of the 1996 IRP, and subsequent updates have continued to focus on how best to diversify Metropolitan's water portfolio and establish the broad resource targets for the region.

The 2004 IRP Update

The 2004 IRP Update reviewed the goals and achievements of the 1996 IRP, identified the changed conditions for water resource development, and updated resource development targets through 2025. These targets included increased conservation savings and planned increases in local supplies. The 2004 IRP Update also explicitly recognized the need to handle uncertainties inherent in any planning process. Some of these uncertainties include:

- Fluctuations in population and economic growth
- Changes in water quality regulations
- Discovery of new chemical contaminants
- Regulation of endangered species affecting sources of supplies
- Changes in climate and hydrology

As a result, a key component of the 2004 IRP Update was the addition of a 10 percent “planning buffer.” The planning buffer identified additional supplies, both imported and locally developed, that could be implemented to address uncertainty in future supplies and demands.

The 2010 IRP Update

In keeping with this reliability goal of meeting full-service demands at the retail level under all foreseeable hydrologic conditions, the 2010 IRP Update sought to stabilize Metropolitan’s traditional imported water supplies and establish additional water resources to withstand California’s inevitable dry cycles and growth in water demand. Metropolitan acknowledged the increasing impact that emerging challenges such as environmental regulations, threats to water quality, climate change, and economic unknowns and the uncertainty that these challenges would have on planning for a reliable, high quality, and affordable water supply. By 2010, the Colorado River had experienced below-average precipitation conditions for most of the previous decade, and the SWP was facing historic regulatory cutbacks that significantly reduced its supplies that pass through the Sacramento-San Joaquin Delta in Northern California. Recognizing that the conditions for developing and maintaining water supply reliability had changed, Metropolitan set out not only to update the IRP, but also to examine how best to adapt to the new water supply paradigm.

Adaptive Management Strategy

The 2010 IRP Update specifically planned for uncertainty with a range of adaptive management strategies that both meets demands under observed hydrology and responds to future uncertainty. The plan provided solutions by developing diverse and flexible resources that perform adequately under a wide range of future conditions. Specifically, the adaptive management strategy was a three-component plan that included the following:

- Core Resources Strategy – Designed to maintain reliable water supplies under known conditions. The Core Resources Strategy represented baseline efforts to manage water supply and demand conditions. This strategy was based on “what we know today,” including detailed planning assumptions about future demographic scenarios, water supply yields, and a range of observed historical weather patterns. Under this strategy, Metropolitan and its member agencies would advance water use efficiency through conservation and recycled water, along with further local supply development such as groundwater recovery and seawater desalination. Metropolitan would also stabilize traditional imported supplies from the Colorado River and Northern California.

- **Uncertainty Buffer** – A suite of actions which help to mitigate short-term changes. The 2010 IRP set goals for a range of potential buffer supplies to protect the region from possible shortages in a cost-effective manner, starting with a further expansion of water use efficiency on a region-wide basis. The buffer would enable the region to adapt to future circumstances and foreseeable challenges that were not assumed under the Core Resources Strategy, such as short-term loss of local supplies or regulatory restrictions.
- **Foundational Actions** – Strategies for additional water resources to augment the core or buffer supplies. Foundational Actions were designed to prepare the region by determining viable alternative supply options for long-range planning. These preparatory actions, including feasibility studies, technological research, and regulatory review, were designed to lay the foundation for potential alternative resource development.

The 2015 IRP Update

Since the 2010 IRP, drought in California and across the southwestern United States has put the IRP adaptive management strategy to the ultimate stress test. Dry conditions in California have persisted into 2015, resulting in a fourth consecutive year of drought. The year 2015 began with the driest January on record, resulting in the earliest and lowest snowpack peak in recorded history at only 17 percent of the traditional snowpack peak on April 1st. In the ten years since 2006, there were only two wet years, with the other eight years having been below normal, dry, or critically dry. The Colorado River watershed has also experienced an extended reduction in runoff. Within Southern California, continuing dry conditions have impacted the region's local supplies, including its groundwater basins.

Southern California has a remarkable, unparalleled tradition of meeting its water challenges as a single cohesive region. Metropolitan serves as both importer of water and regional water planner. For the past generation, the IRP has served as the reliability road map for the region.

Throughout 2015, Metropolitan engaged in a comprehensive process with its Board of Directors and member agencies to review how conditions have changed since the 2010 IRP Update and to establish targets for achieving regional reliability, taking into account known opportunities and risks. Areas reviewed in the 2015 IRP Update include demographics, hydrologic scenarios, water supplies from existing and new projects, water supply reliability analyses, and potential resource and conservation targets.

The 2015 IRP Update approach explicitly recognizes that there are remaining policy discussions that will be essential to guiding the development and maintenance of local supplies and conservation. Following adoption of the 2015 IRP Update and its targets for water supply reliability, Metropolitan will begin a process to address questions such as how to meet the targets for regional reliability, what are local and what are regional responsibilities, how to finance regional projects, etc. This discussion will involve extensive interaction with Metropolitan's Board of Directors and member agencies, with input from the public.

Findings and Conclusions

The findings and conclusions of the 2015 IRP Update are:

- **Action is needed** – Without the investments in conservation, local supplies, and the California WaterFix targeted in the 2015 IRP Update, Metropolitan's service area would experience unacceptable level of shortage allocation frequency in the future.
- **Maintain Colorado River supplies** – The plan to stabilize deliveries at 900,000 AF in a typical year will require more than 900,000 AF of planned actions.

- Stabilize SWP supplies – A collaborative approach with state and federal agencies to pursue better science for resolving questions about SWP operations and advancing coequal goals of Delta restoration and statewide water supply reliability in the near term. Also work collaboratively with state and federal agencies in the California WaterFix and EcoRestore efforts.
- Develop and protect local supplies and water conservation – The 2015 IRP Update embraces and advances the regional self-sufficiency ethics by increasing the targets for additional local supplies and conservation. These targets are discussed in detail in Section 3 of this UWMP.
- Maximize the effectiveness of storage and transfers – Rebuilding Metropolitan's supply of water reserves is imperative when the drought is over. A comprehensive water transfer approach that takes advantage of water when it is available will help to stabilize and build storage reserves, increasing the ability for Metropolitan to meet water demands in dry years.
- Continue with the adaptive management approach – The IRP is updated periodically to incorporate changed conditions, and an implementation report is prepared annually to monitor the progress in resources development. The 2015 IRP also includes Future Supply Actions that would advance a new generation of local supplies through public outreach; development of legislation and regulation; technical studies and support; and land and resource acquisitions.

2.2 Estimating Demands on Metropolitan

The Urban Water Management Planning Act requires that three basic planning analyses be conducted to evaluate supply reliability. The first is a water supply reliability assessment requiring development of a detailed evaluation of the supplies necessary to meet projected demands over at least a 20-year period. This analysis is to consider average, single-year, and multi-year drought conditions. The second is a water shortage contingency plan which documents the actions that would be implemented in addressing up to a 50 percent reduction in an agency's supplies. Finally, a plan must be developed specifying the steps that would be taken under a catastrophic interruption in water supplies.

To address these three requirements, Metropolitan developed estimates of future demands and supplies from local sources and from Metropolitan. Supply and demand analyses for the single- and multi-year drought cases were based on conditions affecting the SWP. For this supply source, the single driest year was 1977 and the three-year dry period was 1990-1992. The SWP is the appropriate point of reference for these analyses since this supply varies the most with hydrologic conditions. For the "average" year analysis, 91 years of historic hydrology (1922-2012) were used to estimate supply and demand.

Demand Forecast

Metropolitan developed its demand forecast by first estimating total retail demands for its service area and then factoring out water savings attributed to conservation.¹ Projections of local supplies then were derived using data from current and expected local supply programs and the IRP Local Resource Program Target. The resulting difference between total demands net of conservation and local supplies is the expected regional demands on Metropolitan supplies. These various estimates are shown in Tables 2-1 through 2-3. Major categories used in these tables are defined below.

Total Demands

Total demands are the sum of retail demand for M&I and agricultural, seawater barrier demand, and replenishment demand. Total demands represent the total amount of water needed by the member agencies. Total demands include:

- Retail Municipal and Industrial (M&I) Demand – Retail M&I demands represent the full spectrum of urban water use within the region. These include residential, commercial, industrial, institutional, and un-metered water uses. The demographic and economic data used in developing these forecasts were taken from the Southern California Association of Governments' (SCAG) 2012 Regional Transportation Plan/Sustainable Community Strategy (April 2012) and from the San Diego County Association of Governments' (SANDAG) Series 13: 2050 Regional Growth Forecast (October 2013). The SCAG and SANDAG regional growth forecasts are the core assumptions that drive the estimating equations in Metropolitan's Econometric Demand Model (MWD-EDM). SCAG's and SANDAG's projections undergo extensive local review and incorporate zoning information from city and county general plans and are backed by Environmental Impact Reports.

Impacts of potential annexation are not included in the demand projections for the 2015 UWMP. However, Metropolitan's Review of Annexation Procedures concluded that the impacts of annexation within the service area beyond 2020 would not exceed two percent of overall demands.

¹ Information generated as part of this analysis is contained in Appendix 1.

- Retail Agricultural Demand — Retail agricultural demands consist of water use for irrigating crops. Member agencies estimate agricultural water use based on many factors, including farm acreage, crop types, historical water use, and land use conversion. Each member agency estimates its agricultural demand differently, depending on the availability of information. Metropolitan relies on member agencies' estimates of agricultural demands for the 2015 UWMP.
- Seawater Barrier Demand — Seawater barrier demands represent the amount of water needed to hold back seawater intrusion into the coastal groundwater basins. Groundwater management agencies determine the barrier requirements based on groundwater levels, injection wells, and regulatory permits.
- Storage Replenishment Demand — Storage replenishment demands represent the amount of water member agencies plan to use to replenish their groundwater basins or surface reservoirs in order to maintain sustainable basin/reservoir health and production. For the 2015 UWMP, replenishment deliveries are not included as part of firm demands.

Conservation Adjustment

Savings from conservation reduces total retail demand. Conservation savings consists of the following:

- Code-Based Conservation — Water savings resulting from plumbing codes and other institutionalized water efficiency measures. Sometimes referred to as "passive conservation," this form of conservation would occur as a matter of course without any additional financial incentives from water agencies. Water savings from codes, standards, and ordinances are discussed in Appendix 6.
- Active Conservation — Water saved as a direct result of programs and practices directly funded by a water utility (e.g., measures outlined by the California Urban Water Conservation Council's "Best Management Practices"). Active conservation is unlikely to occur without agency action.
- Price Effect Conservation — Reductions in customer use attributable to changes in the real (inflation adjusted) cost of water. Because water has a positive price elasticity of demand, increases in water price will decrease the quantity demanded.
- Pre-1990 Savings — Conservation savings are commonly estimated from a base-year water-use profile. Beginning with the 1996 IRP, Metropolitan identified 1980 as the base year for estimating conservation because it marked the effective date of a new plumbing code in California requiring toilets in new construction to be rated at 3.5 gallons per flush or less. Between 1980 and 1990, Metropolitan's service area saved an estimated 250,000 acre-feet per year as the result of this 1980 plumbing code and unrelated water rate increases. Within Metropolitan's planning framework, these savings are referred to as "pre-1990 savings."

Local Supplies

Local supplies represent water produced by the member agencies to meet their total demands. Local supplies are a key component in determining how much Metropolitan supply is needed. Projections of local supplies relied on information gathered from a number of sources including past urban water management plans, Metropolitan's annual local production surveys, and communications between Metropolitan and member agency staff. Local supplies include:

- Groundwater and Surface Water – Groundwater production consists of extractions from local groundwater basins. Surface water comes from stream diversions and rainwater captured in reservoirs.
- The Los Angeles Aqueduct – A major source of imported water is conveyed from the Owens Valley via the Los Angeles Aqueduct (LAA) by Los Angeles Department of Water and Power (LADWP). Although LADWP imports water from outside of Metropolitan's service area, Metropolitan classifies water provided by the LAA as a local resource because it is developed and controlled by a local agency.
- Seawater desalination – Highly treated seawater suitable for municipal and industrial potable use.
- Groundwater Recovery and Recycled Water – Developed and operated by local water agencies, groundwater recovery projects treat degraded groundwater to meet potable use standards. Recycled water projects recycle wastewater for municipal and industrial use.
- Non-Metropolitan Imports – Water supplies imported or exchanged by member agencies from sources outside of the Metropolitan service area.

The local supply projections presented in demand tables include existing projects that are currently producing water and projects that are under construction. Projects in these categories of development provide a higher level of certainty, and are more likely to produce as forecasted. Appendix 5 contains a complete list of existing, under construction, fully designed with appropriated funds, feasibility, and conceptual projects that are within Metropolitan's service area.

Determining Demands on Metropolitan

Metropolitan serves imported water to its 26 member agencies. For most member agencies, they have other sources of water produced locally from groundwater basins, surface reservoirs, the LAA, recycled water projects, groundwater recovery projects, and seawater desalination projects. When local supplies are not enough to meet retail demands, member agencies purchase imported water from Metropolitan to meet their needs.

In determining demands for imported water, Metropolitan developed its Sales Model to calculate the difference between total forecasted retail demands and local supply projections. The balance is the demand on Metropolitan's imported water supply. The Sales Model calculates the difference between forecasted demands and projected local supplies after factoring in climate impacts. The Sales Model employs a modeling method using historical hydrologic conditions from 1922 to 2012 to simulate the expected demands on Metropolitan supplies based on hydrologic conditions. Each hydrologic condition results in one possible outcome for the forecast year in the planning horizon. For example, each forecast year, such as 2020, has 91 possible outcomes, one for each historical hydrology year during the period 1922 to 2012. This method of modeling produces a distribution of outcomes ranging from the driest to the wettest years within this historical period.

The Sales Model forecasts three types of demands on Metropolitan:

1. Consumptive Use – Metropolitan's supplies that are used to meet retail M&I demand.
2. Seawater Barrier – Imported water needed to hold back seawater intrusion into the coastal groundwater basins.
3. Replenishment – Water for groundwater or reservoir replenishment, when available, to meet replenishment demands.

For additional information on Metropolitan's demand forecast, see Appendix 1.

Table 2-1
Metropolitan Regional Water Demands
Single Dry-Year
(Acre-Feet)

	2020	2025	2030	2035	2040
A. Total Demands¹	5,234,000	5,409,000	5,549,000	5,679,000	5,808,000
Retail Municipal and Industrial	4,739,000	4,874,000	5,016,000	5,148,000	5,279,000
Retail Agricultural	131,000	168,000	164,000	162,000	160,000
Seawater Barrier	72,000	72,000	72,000	72,000	72,000
Storage Replenishment	292,000	295,000	297,000	297,000	297,000
B. Total Conservation	1,056,000	1,127,000	1,200,000	1,263,000	1,339,000
Existing Active (through 2015) ²	210,000	196,000	184,000	166,000	159,000
Code-based	381,000	423,000	462,000	497,000	532,000
Price-Effect ³	215,000	258,000	304,000	350,000	398,000
Pre-1990 Conservation	250,000	250,000	250,000	250,000	250,000
C. Total Local Supplies	2,447,000	2,497,000	2,523,000	2,538,000	2,550,000
Groundwater	1,304,000	1,302,000	1,302,000	1,302,000	1,302,000
Surface Water	107,000	107,000	107,000	107,000	107,000
Los Angeles Aqueduct	127,000	127,000	127,000	127,000	127,000
Seawater Desalination	56,000	56,000	56,000	56,000	56,000
Groundwater Recovery	143,000	157,000	163,000	165,000	167,000
Recycling ⁴	436,000	466,000	486,000	499,000	509,000
Other Imported Supplies ⁵	274,000	282,000	282,000	282,000	282,000
D. Total Metropolitan Demands	1,731,000	1,784,000	1,826,000	1,878,000	1,919,000
Consumptive Use	1,560,000	1,616,000	1,658,000	1,710,000	1,751,000
Seawater Barrier	5,000	2,000	2,000	2,000	2,000
Replenishment	166,000	166,000	166,000	166,000	166,000

Notes:

All units are acre-feet unless specified, rounded to the nearest thousand.

Totals may not sum due to rounding.

¹ Growth projections are based on SCAG 2012 Regional Transportation Plan and SANDAG Series 13 2050 Regional Growth Forecast.

² Does not include future active conservation savings. 1990 is base year.

³ Includes un-metered water use savings.

⁴ Excludes Santa Ana River base flow, which is used for recharge of Orange County groundwater basin and reflected in the Groundwater production numbers.

⁵ IID/SDCWA transfer and canal linings.

Table 2-2
Metropolitan Regional Water Demands
Multiple Dry-Year
(Acre-Feet)

	2020	2025	2030	2035	2040
A. Total Demands¹	5,199,000	5,450,000	5,601,000	5,732,000	5,865,000
Retail Municipal and Industrial	4,701,000	4,920,000	5,063,000	5,197,000	5,332,000
Retail Agricultural	128,000	164,000	169,000	166,000	164,000
Seawater Barrier	72,000	72,000	72,000	72,000	72,000
Storage Replenishment	298,000	294,000	297,000	297,000	297,000
B. Total Conservation	1,056,000	1,127,000	1,200,000	1,263,000	1,339,000
Existing Active (through 2015) ²	210,000	196,000	184,000	166,000	159,000
Code-based	381,000	423,000	462,000	497,000	532,000
Price-Effect ³	215,000	258,000	304,000	350,000	398,000
Pre-1990 Conservation	250,000	250,000	250,000	250,000	250,000
C. Total Local Supplies	2,416,000	2,487,000	2,511,000	2,535,000	2,550,000
Groundwater	1,305,000	1,302,000	1,302,000	1,302,000	1,303,000
Surface Water	102,000	102,000	102,000	102,000	102,000
Los Angeles Aqueduct	113,000	129,000	125,000	131,000	133,000
Seawater Desalination	56,000	56,000	56,000	56,000	56,000
Groundwater Recovery	139,000	155,000	162,000	165,000	167,000
Recycling ⁴	427,000	461,000	482,000	497,000	507,000
Other Imported Supplies ⁵	274,000	282,000	282,000	282,000	282,000
D. Total Metropolitan Demands	1,727,000	1,836,000	1,889,000	1,934,000	1,976,000
Consumptive Use	1,547,000	1,668,000	1,721,000	1,766,000	1,808,000
Seawater Barrier	6,000	2,000	2,000	2,000	2,000
Replenishment	174,000	166,000	166,000	166,000	166,000

Notes:

All units are acre-feet unless specified, rounded to the nearest thousand.

Totals may not sum due to rounding.

¹Growth projections are based on SCAG 2012 Regional Transportation Plan and SANDAG Series 13 2050 Regional Growth Forecast.

² Does not include future active conservation savings. 1990 is base year.

³ Includes un-metered water use savings.

⁴ Excludes Santa Ana River base flow, which is used for recharge of Orange County groundwater basin and reflected in the Groundwater production numbers.

⁵ IID/SDCWA transfer and canal linings.

Table 2-3
Metropolitan Regional Water Demands
Average Year
(Acre-Feet)

	2020	2025	2030	2035	2040
A. Total Demands¹	5,219,000	5,393,000	5,533,000	5,663,000	5,793,000
Retail Municipal and Industrial	4,725,000	4,859,000	5,001,000	5,133,000	5,264,000
Retail Agricultural	130,000	167,000	163,000	161,000	160,000
Seawater Barrier	72,000	72,000	72,000	72,000	72,000
Storage Replenishment	292,000	295,000	297,000	297,000	297,000
B. Total Conservation	1,056,000	1,127,000	1,200,000	1,263,000	1,339,000
Existing Active (through 2015) ²	210,000	196,000	184,000	166,000	159,000
Code-based	381,000	423,000	462,000	497,000	532,000
Price-Effect ³	215,000	258,000	304,000	350,000	398,000
Pre-1990 Conservation	250,000	250,000	250,000	250,000	250,000
C. Total Local Supplies	2,578,000	2,631,000	2,657,000	2,674,000	2,689,000
Groundwater	1,303,000	1,301,000	1,301,000	1,301,000	1,302,000
Surface Water	110,000	110,000	110,000	110,000	110,000
Los Angeles Aqueduct	261,000	264,000	264,000	266,000	268,000
Seawater Desalination	51,000	51,000	51,000	51,000	51,000
Groundwater Recovery	143,000	157,000	163,000	165,000	167,000
Recycling ⁴	436,000	466,000	486,000	499,000	509,000
Other Imported Supplies ⁵	274,000	282,000	282,000	282,000	282,000
D. Total Metropolitan Demands	1,586,000	1,636,000	1,677,000	1,726,000	1,765,000
Consumptive Use	1,415,000	1,468,000	1,509,000	1,558,000	1,597,000
Seawater Barrier	5,000	2,000	2,000	2,000	2,000
Replenishment	166,000	166,000	166,000	166,000	166,000

Notes:

All units are acre-feet unless specified, rounded to the nearest thousand.

Totals may not sum due to rounding.

¹ Growth projections are based on SCAG 2012 Regional Transportation Plan and SANDAG Series 13 2050 Regional Growth Forecast.

² Does not include future active conservation savings. 1990 is base year.

³ Includes un-metered water use savings.

⁴ Excludes Santa Ana River base flow, which is used for recharge of Orange County groundwater basin and reflected in the Groundwater production numbers.

⁵ IID/SDCWA transfer and canal linings.

2.3 Water Supply Reliability

After estimating demands for single dry year, multiple dry years, and average years, the water reliability analysis requires urban water suppliers to identify projected supplies to meet these demands. Table 2-4 summarizes the sources of supply for the single dry year (1977 hydrology), while Table 2-5 shows the region's ability to respond in future years under a repeat of the 1990-92 hydrology. Table 2-5 provides results for the average of the three dry-year series rather than a year-by-year detail because most of Metropolitan's dry-year supplies are designed to provide equal amounts of water over each year of a three-year period. These tables show that the region can provide reliable water supplies under both the single driest year and the multiple dry-year hydrologies. Table 2-6 reports the expected situation on average over all of the historic hydrologies from 1922 to 2012. Appendix 3 contains detailed justifications for the sources of supply used for this analysis.

Metropolitan's supply capabilities are evaluated using the following assumptions:

Colorado River Aqueduct Supplies

CRA supplies include supplies that would result from existing and committed programs and from implementation of the QSA and related agreements. The QSA establishes the baseline water use for each of the agreement parties and facilitates the transfer of water from agricultural agencies to urban uses. A detailed discussion of the QSA is included in Section 3.1. Colorado River transactions are potentially available to supply additional water up to the CRA capacity of 1.2 MAF on an as-needed basis.

State Water Project Supplies

SWP supplies are estimated using the 2015 SWP Delivery Capability Report distributed by DWR in July 2015. The 2015 SWP Delivery Capability Report presents current DWR estimates of the amount of water deliveries for current (2015) conditions and conditions 20 years in the future. These estimates incorporate restrictions on SWP and Central Valley Project (CVP) operations in accordance with the biological opinions of the U.S. Fish and Wildlife Service and National Marine Fisheries Service issued on December 15, 2008, and June 4, 2009, respectively. Under the 2015 SWP Delivery Capability Report with existing conveyance and low outflow requirements scenario, the delivery estimates for the SWP for 2020 conditions as percentage of Table A amounts are 12 percent, equivalent to 230 TAF, under a single dry-year (1977) condition and 51 percent, equivalent to 975 TAF, under long-term average condition.

The goal for the 2015 IRP Update for SWP supplies is to manage flow and export regulations in the near term and ultimately to achieve a long-term Bay-Delta solution. This goal involves continued engagement in collaborative science-based approaches to manage regulations in the near-term and continued participation in the long-term California WaterFix and the California EcoRestore efforts. This approach targets an average of 980 TAF of SWP supplies in the near-term and 1.2 MAF of supplies on average starting in 2030 when the long-term Delta solution is assumed to be in place. More detailed description of SWP supplies is included in Section 3.2.

In dry and below-normal conditions, Metropolitan has increased the supplies received from the California Aqueduct by developing flexible Central Valley/SWP storage and transfer programs. Further descriptions of these programs can be found in Section 3.3.

Storage

A key component of Metropolitan's water supply capability is the amount of water in Metropolitan's storage facilities. Over the past two decades, Metropolitan has developed a large regional storage portfolio that includes both dry-year and emergency storage capacity. Storage is a key component of water management. Storage enables the capture of surplus amounts of water in normal and wet climate and hydrologic conditions when it is plentiful for supply and environmental uses. Stored water can then be used in dry years and in conditions where augmented water supplies are needed to meet demands. Metropolitan's resource analysis model considers all the capacities and constraints of its storage facilities and programs and simulates the fill and withdrawal of these facilities through the 91 hydrologic conditions from 1922-2012.

Table 2-4
Single Dry-Year
Supply Capability¹ and Projected Demands
Repeat of 1977 Hydrology
(Acre-feet per year)

Forecast Year	2020	2025	2030	2035	2040
Current Programs					
In-Region Supplies and Programs	693,000	774,000	852,000	956,000	992,000
California Aqueduct ²	644,000	665,000	692,000	718,000	718,000
Colorado River Aqueduct					
Total Supply Available ³	1,451,000	1,457,000	1,456,000	1,455,000	1,454,000
<i>Aqueduct Capacity Limit⁴</i>	<i>1,200,000</i>	<i>1,200,000</i>	<i>1,200,000</i>	<i>1,200,000</i>	<i>1,200,000</i>
Colorado River Aqueduct Capability	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000
Capability of Current Programs	2,537,000	2,639,000	2,744,000	2,874,000	2,910,000
Demands					
Total Demands on Metropolitan	1,731,000	1,784,000	1,826,000	1,878,000	1,919,000
IID-SDCWA Transfers and Canal Linings	274,000	282,000	282,000	282,000	282,000
Total Metropolitan Deliveries⁵	2,005,000	2,066,000	2,108,000	2,160,000	2,201,000
Surplus	532,000	573,000	636,000	714,000	709,000
Programs Under Development					
In-Region Supplies and Programs	43,000	80,000	118,000	160,000	200,000
California Aqueduct	20,000	20,000	198,000	198,000	198,000
Colorado River Aqueduct					
Total Supply Available ³	155,000	125,000	75,000	25,000	25,000
<i>Aqueduct Capacity Limit⁴</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
Colorado River Aqueduct Capability	0	0	0	0	0
Capability of Proposed Programs	63,000	100,000	316,000	358,000	398,000
Potential Surplus	595,000	673,000	952,000	1,072,000	1,107,000

¹ Represents Supply Capability for resource programs under listed year type.

² California Aqueduct includes Central Valley transfers and storage program supplies conveyed by the aqueduct.

³ Colorado River Aqueduct includes programs, IID-SDCWA transfer and exchange and canal linings conveyed by the aqueduct.

⁴ Maximum CRA deliveries limited to 1.20 MAF including IID-SDCWA transfer and exchange and canal linings.

⁵ Total deliveries are adjusted to include IID-SDCWA transfer and exchange and canal linings. These supplies are calculated as local supply, but need to be shown for the purposes of CRA capacity limit calculations without double counting.

Table 2-5
Multiple Dry-Year
Supply Capability¹ and Projected Demands
Repeat of 1990-1992 Hydrology
(Acre-feet per year)

Forecast Year	2020	2025	2030	2035	2040
Current Programs					
In-Region Supplies and Programs	239,000	272,000	303,000	346,000	364,000
California Aqueduct ²	712,000	730,000	743,000	752,000	752,000
Colorado River Aqueduct					
Total Supply Available ³	1,403,000	1,691,000	1,690,000	1,689,000	1,605,000
<i>Aqueduct Capacity Limit⁴</i>	<i>1,200,000</i>	<i>1,200,000</i>	<i>1,200,000</i>	<i>1,200,000</i>	<i>1,200,000</i>
Colorado River Aqueduct Capability	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000
Capability of Current Programs	2,151,000	2,202,000	2,246,000	2,298,000	2,316,000
Demands					
Total Demands on Metropolitan	1,727,000	1,836,000	1,889,000	1,934,000	1,976,000
IID-SDCWA Transfers and Canal Linings	274,000	282,000	282,000	282,000	282,000
Total Metropolitan Deliveries⁵	2,001,000	2,118,000	2,171,000	2,216,000	2,258,000
Surplus	150,000	84,000	75,000	82,000	58,000
Programs Under Development					
In-Region Supplies and Programs	36,000	73,000	110,000	151,000	192,000
California Aqueduct	7,000	7,000	94,000	94,000	94,000
Colorado River Aqueduct					
Total Supply Available ³	80,000	75,000	50,000	25,000	25,000
<i>Aqueduct Capacity Limit⁴</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
Colorado River Aqueduct Capability	0	0	0	0	0
Capability of Proposed Programs	43,000	80,000	204,000	245,000	286,000
Potential Surplus	193,000	164,000	279,000	327,000	344,000

¹ Represents Supply Capability for resource programs under listed year type.

² California Aqueduct includes Central Valley transfers and storage program supplies conveyed by the aqueduct.

³ Colorado River Aqueduct includes programs, IID-SDCWA transfer and exchange and canal linings conveyed by the aqueduct.

⁴ Maximum CRA deliveries limited to 1.20 MAF including IID-SDCWA transfer and exchange and canal linings.

⁵ Total deliveries are adjusted to include IID-SDCWA transfer and exchange and canal linings. These supplies are calculated as local supply, but need to be shown for the purposes of CRA capacity limit calculations without double counting.

Table 2-6
Average Year
Supply Capability¹ and Projected Demands
Average of 1922-2012 Hydrologies
(Acre-feet per year)

Forecast Year	2020	2025	2030	2035	2040
Current Programs					
In-Region Supplies and Programs	693,000	774,000	852,000	956,000	992,000
California Aqueduct ²	1,760,000	1,781,000	1,873,000	1,899,000	1,899,000
Colorado River Aqueduct					
Total Supply Available ³	1,468,000	1,488,000	1,484,000	1,471,000	1,460,000
<i>Aqueduct Capacity Limit⁴</i>	<i>1,200,000</i>	<i>1,200,000</i>	<i>1,200,000</i>	<i>1,200,000</i>	<i>1,200,000</i>
Colorado River Aqueduct Capability	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000
Capability of Current Programs	3,653,000	3,755,000	3,925,000	4,055,000	4,091,000
Demands					
Total Demands on Metropolitan	1,586,000	1,636,000	1,677,000	1,726,000	1,765,000
IID-SDCWA Transfers and Canal Linings	274,000	282,000	282,000	282,000	282,000
Total Metropolitan Deliveries⁵	1,860,000	1,918,000	1,959,000	2,008,000	2,047,000
Surplus	1,793,000	1,837,000	1,966,000	2,047,000	2,044,000
Programs Under Development					
In-Region Supplies and Programs	43,000	80,000	118,000	160,000	200,000
California Aqueduct	20,000	20,000	225,000	225,000	225,000
Colorado River Aqueduct					
Total Supply Available ³	5,000	25,000	25,000	25,000	25,000
<i>Aqueduct Capacity Limit⁴</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
Colorado River Aqueduct Capability	0	0	0	0	0
Capability of Proposed Programs	63,000	100,000	343,000	385,000	425,000
Potential Surplus	1,856,000	1,937,000	2,309,000	2,432,000	2,469,000

¹ Represents Supply Capability for resource programs under listed year type.

² California Aqueduct includes Central Valley transfers and storage program supplies conveyed by the aqueduct.

³ Colorado River Aqueduct includes programs, IID-SDCWA transfer and exchange and canal linings conveyed by the aqueduct.

⁴ Maximum CRA deliveries limited to 1.20 MAF including IID-SDCWA transfer and exchange and canal linings.

⁵ Total deliveries are adjusted to include IID-SDCWA transfer and exchange and canal linings. These supplies are calculated as local supply, but need to be shown for the purposes of CRA capacity limit calculations without double counting.

2.4 Water Shortage Contingency Analysis

In addition to the Water Supply Reliability analysis addressing average year and drought conditions, the Act requires agencies to document the stages of actions that they would undertake in response to water supply shortages, including up to a 50 percent reduction in their water supplies. Metropolitan has captured this planning in its Water Surplus and Drought Management (WSDM)² Plan which guides Metropolitan's planning and operations during both shortage and surplus conditions. Furthermore, Metropolitan developed the Water Supply Allocation Plan (WSAP)³, which provides a standardized methodology for allocating supplies during times of shortage.

Water Surplus and Drought Management Plan

Metropolitan's Board adopted the WSDM Plan in April 1999, which provides policy guidance for managing regional water supplies to achieve the reliability goals of the IRP and identifies the expected sequence of resource management actions that Metropolitan will execute during surpluses and shortages to minimize the probability of severe shortages and reduce the possibility of extreme shortages and shortage allocations. Unlike Metropolitan's previous shortage management plans, the WSDM Plan recognizes the link between surpluses and shortages, and it integrates planned operational actions with respect to both conditions.

WSDM Plan Development

Metropolitan and its member agencies jointly developed the WSDM Plan during 1998 and 1999. This planning effort included more than a dozen half-day and full-day workshops and more than three dozen meetings between Metropolitan and member agency staff. The result of the planning effort is a consensus plan that addresses a broad range of regional water management actions and strategies.

WSDM Plan Principles and Goals

The guiding principle of the WSDM Plan is to manage Metropolitan's water resources and management programs to maximize management of wet year supplies and minimize adverse impacts of water shortages to retail customers. From this guiding principle came the following supporting principles:

- Encourage efficient water use and economical local resource programs
- Coordinate operations with member agencies to make available as much surplus water as possible for use in dry years
- Pursue innovative transfer and banking programs to secure more imported water for use in dry years
- Increase public awareness about water supply issues

The WSDM plan also declared that if mandatory import water allocations become necessary, they would be calculated on the basis of need, as opposed to any type of historical purchases. The WSDM plan contains the following considerations that would go into an allocation of imported water:

- Impact on retail consumers and regional economy

² Metropolitan Water District of Southern California. *Water Surplus and Drought Management Plan*, Report No. 1150, August, 1999.

³ Metropolitan Water District of Southern California, *Water Supply Allocation Plan*, December 2014.

- Investments in local resources, including recycling and conservation
- Population growth
- Changes and/or losses in local supplies
- Participation in Metropolitan's non-firm (interruptible) programs
- Investment in Metropolitan's facilities

WSDM Plan Implementation

Each year, Metropolitan evaluates the level of supplies available and existing levels of water in storage to determine the appropriate management stage. Each stage is associated with specific resource management actions designed to: (1) avoid an Extreme Shortage to the maximum extent possible; and (2) minimize adverse impacts to retail customers if an Extreme Shortage occurs. The current sequencing outlined in the WSDM Plan reflects anticipated responses based on detailed modeling of Metropolitan's existing and expected resource mix.

Surplus Stages

Metropolitan's supply situation is considered to be in surplus as long as net annual deliveries can be made to water storage programs. The WSDM Plan further defines four surplus management stages that guide the storage of surplus supplies in Metropolitan's storage portfolio. Deliveries for storage in DVL and in SWP terminal reservoirs continue through each surplus stage provided there is available storage capacity. Withdrawals from DVL for regulatory purposes or to meet seasonal demands may occur in any stage. Deliveries to other storage facilities may be interrupted, depending on the amount of the surplus.

Shortage Stages

The WSDM Plan distinguishes between Shortages, Severe Shortages, and Extreme Shortages. Within the WSDM Plan, these terms have specific meanings relating to Metropolitan's ability to deliver water to its customers.

Shortage: Metropolitan can meet full-service demands and partially meet or fully meet interruptible demands, using stored water or water transfers as necessary.

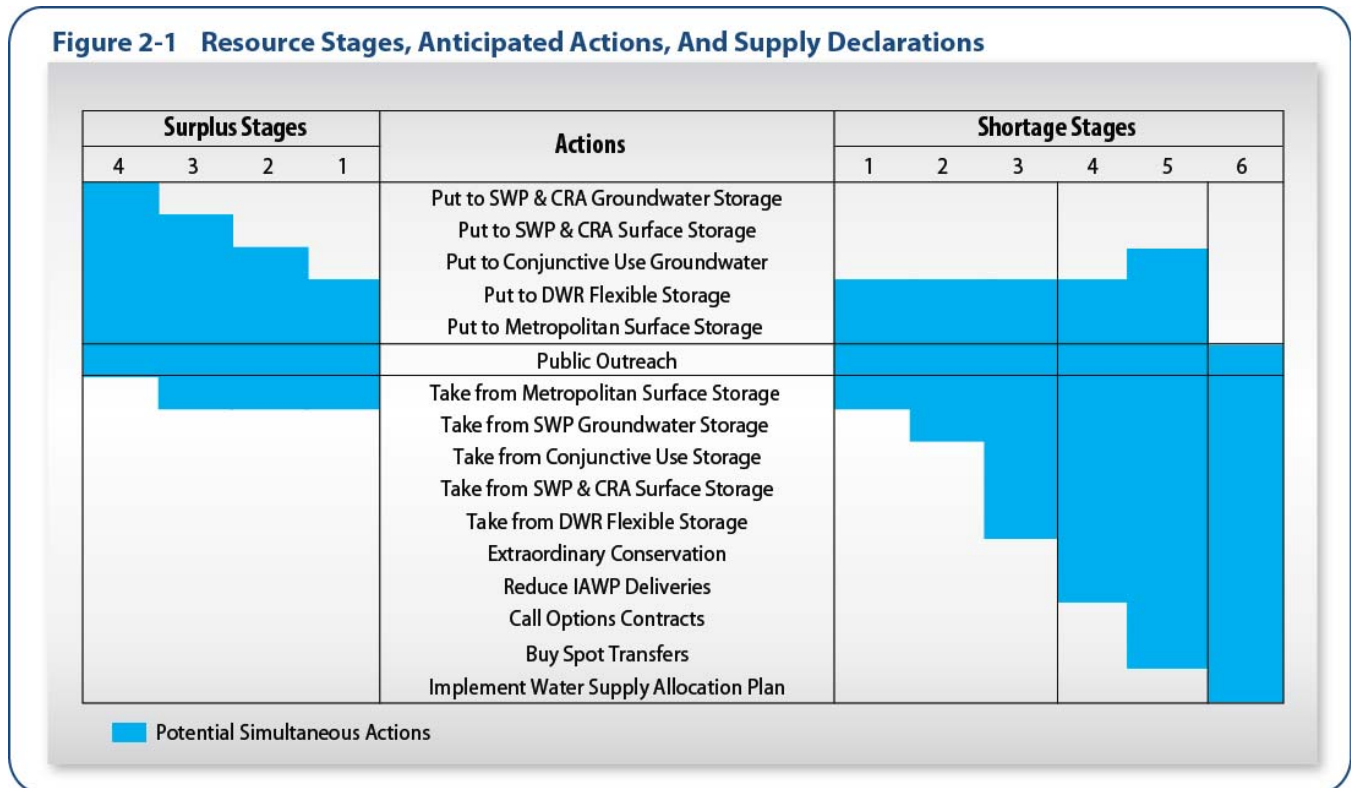
Severe Shortage: Metropolitan can meet full-service demands only by using stored water, transfers, and possibly calling for extraordinary conservation.

Extreme Shortage: Metropolitan allocates available supply to full-service customers.

The WSDM Plan also defines six shortage management stages to guide resource management activities. These stages are not defined merely by shortfalls in imported water supply, but also by the water balances in Metropolitan's storage programs. Thus, a 10 percent shortfall in imported supplies could be a stage one shortage if storage levels are high. If storage levels are already depleted, the same shortfall in imported supplies could potentially be defined as a more severe shortage.

When Metropolitan must make net withdrawals from storage to meet demands, it is considered to be in a shortage condition. Under most of these stages, Metropolitan is still able to meet all end-use demands for water. For shortage stages 1 through 3, Metropolitan will meet demands by withdrawing water from storage. At shortage stages 4 and 5, Metropolitan may undertake additional shortage management steps, including issuing public calls for extraordinary conservation and exercising water transfer options, or purchasing water on the open market.

Figure 2-1 shows the actions under surplus and shortage stages and when an allocation plan would be necessary to enforce mandatory cutbacks. The overriding goal of the WSDM Plan is to avoid reaching Shortage Stage 6, an Extreme Shortage.



Water Supply Condition Framework

Consistent with the WSDM Plan, Metropolitan's Board adopted a Water Supply Condition Framework in June 2008. The purpose of the framework is to communicate the urgency of the region's water supply situation and the need for further water conservation practices. The framework is intended to encourage proactive steps to reduce the region's water demand to mitigate the need for more severe actions, up to and including implementation of the WSAP to allocate water supply shortages to member agencies. The framework has four conditions, each calling for an increasingly heightened level of conservation response:

- Baseline Water Use Efficiency
- Condition 1: Water Supply Watch
- Condition 2: Water Supply Alert
- Condition 3: Water Supply Allocation

Table 2-7 below shows the framework and the associated conservation actions.

Table 2-7
Water Supply Condition Framework

Water Supply Condition Framework	
Baseline Water Use Efficiency	Ongoing conservation, outreach, and recycling programs to achieve permanent reductions in water use and build storage reserves.
Condition 1: Water Supply Watch	Local agency voluntary dry-year conservation measures and use of regional storage reserves.
Condition 2: Water Supply Alert	Regional call for cities, counties, member agencies and retail water agencies to implement extraordinary conservation through drought ordinances and other measures to mitigate use of storage reserves.
Condition 3: Water Supply Allocation	Implement Metropolitan's Water Supply Allocation Plan.

The drought periods of 2007-2011 and 2012-2015 provide an example of how the Water Supply Condition Framework is used. In June 2008, Metropolitan's Board declared a Condition 2: Water Supply Alert to highlight that storage reserves were dropping and that drought conditions were building, corresponding to WSDM shortage stages 1-5. In April 2009 and again in April 2010, Metropolitan's Board moved deeper into a Condition 3: Water Supply Allocation, corresponding to an extreme shortage stage 6 in the WSDM Plan. The April 2010 Water Supply Allocation condition was later terminated by Metropolitan's Board in April 2011 when hydrologic conditions improved during the 2010/2011 water year. The region returned to the Baseline Water Use Efficiency condition following the improvement in water supply. As dry conditions returned in 2012 and 2013, Metropolitan returned to using regional storage and sponsoring outreach efforts with member agencies to encourage voluntary conservation. In 2014, record dry and hot conditions significantly impacted the water resources of both the State of California and Metropolitan. In light of these conditions, which precipitated the January 2014 Emergency Drought Declaration by Governor Brown, Metropolitan's Board declared a Condition 2: Water Supply Alert in February 2014 to again provide public messaging and to urge local water agencies within Metropolitan's service area to adopt and enact water savings ordinances. Extremely dry conditions continued in 2015. In support of the Governor's Executive Order B-29-15 calling for 25 percent reductions in statewide consumer water use, Metropolitan's Board declared a Condition 3: Water Supply Allocation in April 2015.

Water Supply Allocation Plan

The WSAP provides a formula for allocating available water supplies to the member agencies in case of extreme water shortages within Metropolitan's service area. The WSAP was approved by Metropolitan's Board in February 2008 and has since been implemented three times, most recently in April 2015. The WSAP was developed in consideration of the principles and guidelines described in the WSDM Plan, with the objective of creating an equitable needs-based allocation. The WSAP

formula seeks to balance the impacts of a shortage at the retail level for shortages of Metropolitan supplies of up to 50 percent. The formula takes into account growth, local investments, changes in supply conditions, and the demand hardening aspects of non-potable recycled water use and the implementation of conservation savings programs.

Water Supply Allocation Plan Development

Between July 2007 and February 2008, Metropolitan staff worked jointly with Metropolitan's member agencies to develop the WSAP. Throughout the development process, Metropolitan's Board was provided with regular progress reports on the status of the WSAP. The WSAP was adopted at the February 12, 2008 Board meeting. Since the WSAP's adoption in 2008, Metropolitan has worked extensively with the member agencies to periodically review the WSAP formula. Following Board-directed formal review of the WSAP at 12 months after initial implementation and at 3 years after initial adoption, the Board approved adjustments to the WSAP formula on August 17, 2010, and September 13, 2011. In light of drought conditions, Metropolitan staff convened a member agency working group between July and November 2014 to revisit the WSAP before possible implementation in 2015. On December 9, 2014, the Board approved additional adjustments to the formula.

The WSAP Formula

The WSAP formula is calculated in three steps: base period calculations, allocation year calculations, and supply allocation calculations. The first two steps involve standard computations, while the third step contains specific methodology developed for the WSAP.

Step 1: Base Period Calculations

The first step in calculating a water supply allocation is to estimate water supply and demand using a historical base period with established water supply and delivery data. The base period for each of the different categories of demand and supply is calculated using data from fiscal years (July through June) ending 2013 and 2014.

Step 2: Allocation Year Calculations

The next step in calculating the water supply allocation is estimating water needs in the allocation year. This is done by adjusting the base period estimates of retail demand for population growth and changes in local supplies.

Step 3: Supply Allocation Calculations

The final step is calculating the water supply allocation for each member agency based on the allocation year water needs identified in Step 2. There are a number of adjustments that go into a member agency's water supply allocation. Each element and its application in the allocation formula are discussed in detail in Metropolitan's Water Supply Allocation Plan.

Annual Reporting Schedule on Supply/Demand Conditions

Managing Metropolitan's water supply resources to minimize the risk of shortages requires timely and accurate information on changing supply and demand conditions throughout the year. To facilitate effective resource management decisions, the WSDM Plan includes a monthly schedule for providing supply/demand information to Metropolitan's senior management and Board, and for making resource allocation decisions. Table 2-8 shows this schedule.

Table 2-8
Schedule of Reporting and Water Supply Allocation Decision-Making

Month	Information Report/Management Decision
January	Initial supply/demand forecasts for year
February - March	Update supply/demand forecasts for year
April - May	Finalize supply/demand forecasts Management decisions re: Contractual Groundwater and Option Transfer Programs Board decision re: Need for Extraordinary Conservation
October - December	Report on Supply and Carryover Storage

2.5 Catastrophic Supply Interruption Planning

The third type of planning needed to evaluate supply reliability is a catastrophic supply interruption plan that documents the actions necessary for a catastrophic interruption in water supplies. For Metropolitan, this planning is captured in the analysis that went into developing the Emergency Storage Requirements.

Emergency Storage Requirements

Metropolitan established its criteria for determining emergency storage requirements in the October 1991 Final Environmental Impact Report for the Eastside Reservoir, which is now named Diamond Valley Lake. These criteria were again discussed in the 1996 IRP. Metropolitan's Board approved both of these documents.

Emergency storage requirements are based on the potential of a major earthquake damaging the aqueducts that transport Southern California's imported water supplies (SWP, CRA, and Los Angeles Aqueduct). The adopted criteria assume that damage from such an event could render the aqueducts out of service for six months. Therefore, Metropolitan has based its planning on a 100 percent reduction in these imported supplies for a period of six months, which is a greater shortage than required by the Act.

To safeguard the region from catastrophic loss of water supply, Metropolitan has made substantial investments in emergency storage. The emergency plan outlines that under such a catastrophe, non-firm service deliveries would be suspended, and firm supplies to member agencies would be restricted by a mandatory cutback of 25 percent from normal-year demand levels. At the same time, water stored in surface reservoirs and groundwater basins under Metropolitan's program would be made available, and Metropolitan would draw on its emergency storage, as well as other available storage. In addition to DVL, Metropolitan has access to emergency storage at its other reservoirs, and at the SWP terminal reservoirs, and in its groundwater conjunctive use storage accounts. With few exceptions, Metropolitan can deliver this emergency supply throughout its service area via gravity, thereby eliminating dependence on power sources that could also be disrupted by a major earthquake. The WSDM Plan shortage stages will guide Metropolitan's management of available supplies and resources during the emergency to minimize the impacts of the catastrophe. Additional discussion of emergency storage is included in Appendix A.3.3.

Electrical Outages

Metropolitan has also developed contingency plans that enable it to deal with both planned and unplanned electrical outages. These plans include the following key points:

- In event of power outages, water supply can be maintained by gravity feed from regional reservoirs such as DVL, Lake Mathews, Castaic Lake, and Silverwood Lake.
- Maintaining water treatment operations is a key concern. As a result, all Metropolitan treatment plants have backup generation sufficient to continue operating in the event of supply failure on the main electrical grid.
- Valves at Lake Skinner can be operated by the backup generation at the Lake Skinner treatment plant.
- Metropolitan owns mobile generators that can be transported quickly to key locations if necessary.

2.6 Other Supply Reliability Risks

Metropolitan provides water to a broad and heterogeneous service area with water supplies from a variety of sources and geographic regions. Each of these demand areas and supplies has its own unique set of benefits and challenges. Among the challenges Metropolitan faces are the following:

Supplies

- The region and Colorado River Basin have been experiencing drought conditions for multiple years. In the past 16 years (2000-2015), there have been only three years when the Colorado River flow has been above average. The last above-average year was 2011, when the unregulated water year inflow to Lake Powell was 139 percent of average.
- Endangered species protection and conveyance needs in the Sacramento-San Joaquin River Delta System have resulted in operational constraints that are particularly important because pumping restrictions impact many water resource programs – SWP supplies and additional voluntary transfers, Central Valley storage and transfers, in-region groundwater storage, and in-region surface water storage.
- Changing climate patterns are predicted to shift precipitation patterns and possibly affect water supply.
- Difficulty and implications of environmental review, documentation, and permitting for multi-year transfer agreements, recycled water projects, and seawater desalination plants.
- Public perception of recycled water use.
- Opposition to local seawater desalination projects from environmental groups and community organizations.

Operations and Water Quality

- The cost and use of energy and greenhouse gas emissions.
- Water quality regulations and issues like the quagga mussels within the CRA. Controlling the spread and impacts of the quagga mussels will require more extensive maintenance and reduced operational flexibility.
- Salt and concentrate balance from a variety of sources.

Demand

- Fluctuations in population and economic growth.
- Uncertain location of growth.
- Uncertain housing stock and density.
- Changes in outdoor water use patterns.

The challenges posed by continued population growth, environmental constraints on the reliability of imported supplies, and new uncertainties imposed by climate change demand that Metropolitan assert the same level of leadership and commitment to taking on large-scale regional solutions to providing water supply reliability. New solutions are potentially available in the form of dramatically improved water-use efficiency, indirect and direct potable use of recycled water, and large-scale application of ocean desalination.

Distribution System Water Losses

Metropolitan followed the AWWA Water Audit methodology to track all sources of water and uses of water within its system. The AWWA Water Audit methodology quantifies real and apparent water system losses in an agency's distribution system. Section 10631(e)(3)(A) of the California Water Code requires that the 2015 Urban Water Management Plan update quantify distribution system water losses for the most recent 12-month period available.

For the distribution system water losses assessment, Metropolitan included its water balance audit for calendar years 2014 and 2013. In addition, Metropolitan also included a memorandum that provides water balance assessment for year 2012.

The results of Metropolitan's audit showed that the total amount of distribution system water losses in 2014 was approximately 6.4 TAF. A detailed discussion of Metropolitan's distribution system water losses for 2014 is included in Appendix 7 and summarized in Table A.7-1. In addition to the distribution system losses described in the AWWA tables, Metropolitan estimates that 37 TAF was lost from reservoir evaporation occurring in Lake Mathews, Lake Skinner, and DVL during CY 2014.

Climate Change

Climate change adds its own uncertainties to the challenges of planning. Metropolitan's water supply planning has been fortunate in having almost one-hundred years of hydrological data regarding weather and water supply. This history of rainfall data has provided a sound foundation for forecasting both the frequency and the severity of future drought conditions, as well as the frequency and abundance of above-normal rainfall. But, weather patterns can be expected to shift dramatically and unpredictably in a climate driven by increased concentrations of carbon dioxide in the atmosphere. These changes in weather significantly affect water supply planning, irrespective of the debate associated with the sources and cause of increasing concentrations of greenhouse gasses. As a major steward of the region's water supply resources, Metropolitan is committed to performing its due diligence with respect to climate change.

Potential Impacts

While uncertainties remain regarding the exact timing, magnitude, and regional impacts of these temperature and precipitation changes, researchers have identified several areas of concern for California water planners. These include:

- Reduction in Sierra Nevada snowpack;
- Increased intensity and frequency of extreme weather events; and
- Rising sea levels resulting in
 - Impacts to coastal groundwater basins due to seawater intrusion;
 - Increased risk of damage from storms, high-tide events, and the erosion of levees; and
 - Potential pumping cutbacks on the SWP and Central Valley Project (CVP).

Other important issues of concern due to global climate change include:

- Effects on local supplies such as groundwater;
- Changes in urban and agricultural demand levels and patterns;
- Impacts to human health from water-borne pathogens and water quality degradation;
- Declines in ecosystem health and function; and
- Alterations to power generation and pumping regimes.

Metropolitan's Activities Related to Climate Change Concerns

Resource Planning

Under the 2015 IRP Update, Metropolitan recognizes additional risks and uncertainties from a variety of sources:

- Water quality
- Climate change
- Regulatory and operational changes
- Project construction and implementation issues
- Infrastructure reliability and maintenance
- Demographic and growth uncertainty

Any of these risks and uncertainties, should they occur individually or collectively, may result in a negative impact to water supply reliability. While it is impossible to know how much risk and uncertainty to guard against, the region's reliability will be more secure with a long-term plan that recognizes risk and provides resource development to offset that risk. Some risk and uncertainty will be addressed by following the findings of the 2015 IRP Update. But there are other risks that may take longer to manifest, like climate change or shifts in demographic growth patterns that increase or move the demands for water.

Metropolitan has established an intensive, comprehensive technical process to identify key vulnerabilities. This Robust Decision Making (RDM) approach was used with the 2010 IRP Update. The RDM approach can show how vulnerable the region's reliability is to longer-term risks and can also establish "signposts" that can be monitored to see when critical changes may be happening. Signposts include monitoring the direction of ever-changing impacts from improved Global Climate Models, and housing and population growth patterns. The RDM approach will be revisited with the new resource reliability targets identified in the 2015 IRP Update. Initial 2015 IRP analysis indicated an additional 200,000 AF of water conservation and local supplies may be needed to address these risks. This additional supply goal will be considered when examining implementation policies and approaches as the IRP process continues.

Knowledge Sharing and Research Support

Metropolitan is an active and founding member of the Water Utility Climate Alliance (WUCA). WUCA consists of ten nationwide water providers collaborating on climate change adaptation and greenhouse gas mitigation issues. As a part of this effort, WUCA pursues a variety of activities on multiple fronts.

Member agencies of WUCA annually share individual agency actions to mitigate greenhouse gas emissions to facilitate further implementation of these programs. WUCA also monitors development of climate change-related research, technology, programs, and federal legislation.

In addition to supporting federal and regional efforts, WUCA released a white paper entitled "Options for Improving Climate Modeling to Assist Water Utility Planning for Climate Change" in January 2010. The purpose of this paper was to assess Global Circulation Models, identify key aspects for water utility planning, and make seven initial recommendations for how climate modeling and downscaling techniques can be improved so that these tools and techniques can be more useful for the water sector. Another recent WUCA publication related to water planning is: "Embracing Uncertainty: A Case Study Examination of How Climate Change is Shifting Water Utility Planning" (2015). A fundamental goal of this recent white paper is to provide water

professionals with practical and relevant examples, with insights from their peers, on how and why to modify planning and decision-making processes to better prepare for a changing climate.

In addition to these efforts, the member agencies of WUCA annually share individual agency actions to mitigate greenhouse gas emissions to facilitate further implementation of these programs. At a September 2009 summit at the Aspen Global Change Institute, WUCA members met with global climate modelers, along with federal agencies, academic scientists, and climate researchers, to establish collaborative directions to progress climate science and modeling efforts. WUCA continues to pursue these opportunities and partnerships with water providers, climate scientists, federal agencies, research centers, academia and key stakeholders.

Metropolitan also continues to pursue knowledge sharing and research support activities outside of WUCA. Metropolitan regularly provides input and direction on California legislation related to climate change issues. Metropolitan is active in collaborating with other state and federal agencies, as well as non-governmental organizations, on climate change related planning issues. The following list provides a sampling of entities that Metropolitan has recently worked with on a collaborative basis:

- USBR
- U.S. Army Corps of Engineers
- AWWA Research Foundation
- National Center for Atmospheric Research
- California Energy Commission
- California Department of Water Resources

Quantification of Current Research

Metropolitan continues to incorporate current climate change science into its planning efforts. A major component of the current IRP update effort is to explicitly reflect uncertainty in Metropolitan's future water management environment. This involves evaluating a wider range of water management strategies, and seeking robust and adaptive plans that respond to uncertain conditions as they evolve over time, and that ultimately will perform adequately under a wide range of future conditions. The potential impacts and risks associated with climate change, as well as other major uncertainties and vulnerabilities, will be incorporated into the update. Overall, Metropolitan's planning activities strive to support the Board adopted policy principles on climate change by:

- Supporting reasonable, economically viable, and technologically feasible management strategies for reducing impacts on water supply,
- Supporting flexible "no regret" solutions that provide water supply and quality benefits while increasing the ability to manage future climate change impacts, and
- Evaluating staff recommendations regarding climate change and water resources under the California Environmental Quality Act (CEQA) to avoid adverse effects on the environment.

Implementation of Programs and Policies

Metropolitan has made great efforts to implement greenhouse gas mitigation programs and policies for its facilities and operations. To date, these programs and policies have focused on:

- Exploring water supply/energy relationships and opportunities to increase efficiencies;
- Participating in The Climate Registry, a nonprofit greenhouse gas emissions registry for North America that provides organizations with the tools and resources to help them calculate, verify, report, and manage their greenhouse gas emissions in a publicly transparent and credible way;
- Acquiring "green" fleet vehicles, and supporting an employee Rideshare program;
- Developing solar power at both the Skinner water treatment plant (completed) and the Weymouth water treatment plant (in progress); and
- Identifying and pursuing development of "green" renewable water and energy programs that support the efficient and sustainable use of water.

Metropolitan also continues to be a leader in efforts to increase regional water use efficiency. Metropolitan has worked to increase the availability of incentives for local conservation and recycling projects, as well as supporting conservation Best Management Practices for industry and commercial businesses.

2.7 Pricing and Rate Structures

Revenue Management

A high proportion of Metropolitan's revenues come from volumetric water rates. Water sales revenues are approximately 80 percent of Metropolitan's total revenues. As a result, Metropolitan's revenues vary according to regional weather and the availability of statewide water supplies. In dry years, local demands increase, and Metropolitan may receive higher than anticipated revenues due to increased sales volumes. In contrast, in wet years, demands decrease, and revenues drop due to lower sales volumes. In addition, statewide supply shortages such as those in 2009 and 2015 also affect Metropolitan's revenues. Such revenue surpluses and shortages could cause instability in water rates. To mitigate this risk, Metropolitan maintains financial reserves, with a minimum and target balance, to stabilize water rates during times of reduced water sales. The reserves hold revenues collected during times of high water sales and are used to offset the need for revenues during times of low sales.

Another way to mitigate rate increases is by generating a larger portion of revenues from fixed sources. Metropolitan currently has two fixed charges, the Readiness-to-Serve Charge (RTS) and the Capacity Charge. Metropolitan also collects tax revenue from taxable property within its boundaries. The revenues from fixed charges generate approximately 18 percent of all Metropolitan revenues. RTS revenues have been increasing gradually, from \$136 million in fiscal year 2011-12, to \$155.5 million in fiscal year 2015-16.

Finally, Metropolitan generates revenue from interest income, hydroelectric power sales, and miscellaneous income such as rents and leases. For the last five fiscal years, these averaged approximately three percent of all Metropolitan revenues. These internally generated revenues are referred to as revenue offsets and reduce the amount of revenue that needs to be collected from rates and charges.

Elements of Rate Structure

This section provides an overview of Metropolitan's rate structure. The different elements of the rate structure are discussed below and summarized in Table 2-9.

System Access Rate (SAR)

The SAR is a volumetric system-wide rate levied on each acre-foot of water that moves through the Metropolitan system. All system users (member agency or third party) pay the SAR to use Metropolitan's conveyance and distribution system. The SAR recovers the cost of providing conveyance and distribution capacity to meet average annual demands.

Water Stewardship Rate (WSR)

The WSR recovers the costs of providing financial incentives for existing and future investments in local resources including conservation and recycled water. These investments or incentive payments are identified as the "demand management" service function in the cost of service process. The WSR is a volumetric rate levied on each acre-foot of water that moves through the Metropolitan system.

System Power Rate (SPR)

The SPR recovers the costs of energy required to pump water to Southern California through the SWP and CRA. The cost of power is recovered through a uniform volumetric rate. The SPR is applied to all deliveries to member agencies.

Treatment Surcharge

The treatment surcharge recovers the costs of providing treated water service through a uniform, volumetric rate. The treatment surcharge recovers all costs associated with providing treated water service, including commodity, demand, and standby related costs.

Capacity Charge

The capacity charge is levied on the maximum summer day demand placed on the system between May 1 and September 30 for a three-calendar year period. Demands measured for the purposes of billing the capacity charge include all firm demands, including wheeling service and exchanges.

The capacity charge is intended to pay for the cost of peaking capacity on Metropolitan's system, while providing an incentive for local agencies to decrease their use of the Metropolitan system to meet peak day demands and to shift demands into lower use time periods. Over time, a member agency will benefit from local supply investments and operational strategies that reduce its peak day demand on the system in the form of a lower total capacity charge.

Readiness-To-Serve Charge (RTS)

The costs of infrastructure projects needed to provide service, including emergency storage and those costs related to the conveyance and distribution system that are available but not used on average, are recovered by the RTS.

The RTS is allocated to the member agencies based on each agency's proportional share of a ten-year rolling average of all firm deliveries. A ten-year rolling average leads to a relatively stable RTS allocation that reasonably represents an agency's potential long-term need for standby service under different demand conditions. Member agencies may choose to have a portion of their total RTS obligation offset by standby charge collections levied by Metropolitan on behalf of the member agency. These standby charges are assessed on parcels of land within the boundaries of a given member agency.

Tier 1 Supply Rate

The costs of maintaining existing supplies and developing additional supplies are recovered through a two-tiered pricing approach. The Tier 1 Supply Rate recovers the cost of maintaining a reliable amount of supply. Each member agency has a predetermined amount of water that can be purchased at the lower Tier 1 Supply Rate. Purchases in excess of this limit will be made at the higher Tier 2 Supply Rate.

Tier 2 Supply Rate

The Tier 2 Supply Rate reflects Metropolitan's cost of purchasing water transfers north of the Delta. The Tier 2 Supply Rate encourages the member agencies and their customers to maintain existing local supplies and develop cost-effective local supply resources and conservation.

Table 2-9
Rate Structure Components

Rate Design Elements	Service Provided/ Costs Recovered	Type of Charge
System Access Rate	Conveyance/Distribution (Average Capacity)	Volumetric (\$/AF)
Water Stewardship Rate	Conservation/Local Resources	Volumetric (\$/AF)
System Power Rate	Power	Volumetric (\$/AF)
Treatment Surcharge	Treatment	Volumetric (\$/AF)
Capacity Charge	Peak Distribution System Capacity	Fixed (\$/cfs)
Readiness-To-Serve Charge	Conveyance/Distribution/Emergency Storage (infrastructure necessary to provide service)	Fixed (\$Million)
Tier 1 Supply Rate	Supply	Volumetric (\$/AF)
Tier 2 Supply Rate	Supply	Volumetric (\$/AF)

The following tables provide further information regarding Metropolitan's rates. Table 2-10 summarizes the rates and charges effective January 1, 2014, January 1, 2015, and January 1, 2016. Average costs by member agency will vary depending upon an agency's RTS allocation, Capacity Charge, and relative proportions of treated and untreated Tier 1, and Tier 2 water purchases. Table 2-11 provides the details of the Capacity Charge, calculated for calendar year 2016.

Table 2-12 provides the details of the Readiness-to-Serve Charge calculation for calendar year 2016 by member agency. Table 2-13 provides the current Purchase Order commitment quantities that member agencies will purchase from Metropolitan over the 10-year period starting January 2015 through December 2024. Tier 1 annual average limits for each member agency are also shown in this table.

Table 2-10
Metropolitan Water Rates and Charges

Effective	Jan 1, 2014	Jan 1, 2015	Jan 1, 2016
Tier 1 Supply Rate (\$/AF)	\$148	\$158	\$156
Tier 2 Supply Rate (\$/AF)	\$290	\$290	\$290
System Access Rate (\$/AF)	\$243	\$257	\$259
Water Stewardship Rate (\$/AF)	\$41	\$41	\$41
System Power Rate (\$/AF)	\$161	\$126	\$138
Full Service Untreated Volumetric Cost (\$/AF)			
Tier 1	\$593	\$582	\$594
Tier 2	\$735	\$714	\$728
Treatment Surcharge (\$/AF)	\$297	\$341	\$348
Full Service Treated Volumetric Cost (\$/AF)			
Tier 1	\$890	\$923	\$942
Tier 2	\$1,032	\$1,055	\$1,076
Readiness-to-Serve Charge (\$M)	\$166	\$158	\$153
Capacity Charge (\$/cfs)	\$8,600	\$11,100	\$10,900

Table 2-11
Capacity Charge Detail Calendar Year 2016

Agency	Peak Day Demand (cfs) (May 1 through September 30) Calendar Year				Calendar Year 2016 Capacity Charge (\$10,900/cfs)
	2012	2013	2014	3-Year Peak	
Anaheim	38.3	31.3	34.0	38.3	\$417,470
Beverly Hills	32.7	30.8	30.6	32.7	\$356,430
Burbank	20.9	19.7	22.6	22.6	\$246,340
Calleguas	224.0	228.7	240.8	240.8	\$2,624,720
Central Basin	74.5	73.6	61.0	74.5	\$812,050
Compton	2.3	2.9	0.0	2.9	\$31,610
Eastern	237.2	267.4	239.2	267.4	\$2,914,660
Foothill	17.6	18.9	19.9	19.9	\$216,910
Fullerton	24.4	20.0	22.2	24.4	\$265,960
Glendale	41.5	44.9	43.7	44.9	\$489,410
Inland Empire	126.7	153.9	144.0	153.9	\$1,677,510
Las Virgenes	41.9	43.2	46.1	46.1	\$502,490
Long Beach	60.4	66.9	67.8	67.8	\$739,020
Los Angeles	512.9	767.1	782.5	782.5	\$8,529,250
MWDOC	398.6	379.4	443.1	443.1	\$4,829,790
Pasadena	52.1	52.5	48.5	52.5	\$572,250
San Diego	961.5	967.4	1,138.2	1,138.2	\$12,406,380
San Fernando	2.8	4.9	0.0	4.9	\$53,410
San Marino	5.3	6.1	7.3	7.3	\$79,570
Santa Ana	19.2	19.6	17.5	19.6	\$213,640
Santa Monica	19.7	22.7	15.2	22.7	\$247,430
Three Valleys	133.0	178.6	151.4	178.6	\$1,946,740
Torrance	36.2	34.1	33.5	36.2	\$394,580
Upper San Gabriel	15.2	16.1	45.4	45.4	\$494,860
West Basin	222.6	230.2	217.5	230.2	\$2,509,180
Western	193.7	198.6	176.6	198.6	\$2,164,740
Total	3,515.3	3,879.5	4,058.5	4,196.0	\$45,736,400

Totals may not foot due to rounding

Table 2-12
Readiness-to-Serve Charge (by Member Agency)
Calendar Year 2016

Member Agency	Rolling Ten-Year Average Firm Deliveries (Acre-Feet) FY2004-05 to FY2013-14	RTS Share	12 months @ \$153 million per year (1/16-12/16)
Anaheim	21,646	1.26%	1,931,624
Beverly Hills	11,468	0.67%	1,023,387
Burbank	12,769	0.74%	1,139,430
Calleguas MWD	110,216	6.43%	9,835,288
Central Basin MWD	53,106	3.10%	4,739,002
Compton	2,222	0.13%	198,301
Eastern MWD	98,854	5.77%	8,821,351
Foothill MWD	9,999	0.58%	892,228
Fullerton	9,902	0.58%	883,599
Glendale	20,157	1.18%	1,798,733
Inland Empire Utilities Agency	60,390	3.52%	5,389,007
Las Virgenes MWD	22,702	1.32%	2,025,866
Long Beach	33,643	1.96%	3,002,172
Los Angeles	297,705	17.36%	26,566,040
Municipal Water District of Orange County	220,916	12.88%	19,713,676
Pasadena	21,506	1.25%	1,919,148
San Diego County Water Authority	377,077	21.99%	33,648,901
San Fernando	122	0.01%	10,914
San Marino	1,000	0.06%	89,227
Santa Ana	13,091	0.76%	1,168,155
Santa Monica	10,146	0.59%	905,408
Three Valleys MWD	66,509	3.88%	5,935,016
Torrance	18,514	1.08%	1,652,136
Upper San Gabriel Valley MWD	18,292	1.07%	1,632,281
West Basin MWD	128,160	7.47%	11,436,461
Western MWD	74,439	4.34%	6,642,650
Metropolitan Total	1,714,552	100.00%	\$153,000,000

Totals may not foot due to rounding

Table 2-13
Purchase Order Commitments and Tier 1 Limits
(by Member Agency)
January 2015 through December 2024

Member Agency	Annual Average Tier 1 Maximum	Purchase Order Commitment (acre-feet)
Anaheim	24,439	148,268
Beverly Hills	13,380	89,202
Burbank	16,776	108,910
Calleguas MWD	118,228	788,185
Central Basin MWD ¹	71,770	
Compton ¹	3,372	
Eastern MWD	117,585	783,898
Foothill MWD	11,773	73,312
Fullerton	11,299	75,322
Glendale	26,222	174,809
Inland Empire Utilities Agency	93,283	398,348
Las Virgenes MWD	24,358	162,387
Long Beach	51,804	263,143
Los Angeles	373,623	2,033,132
Municipal Water District of Orange County	321,635	2,144,233
Pasadena	22,965	153,102
San Diego County Water Authority ¹	393,542	
San Fernando ¹	629	
San Marino	1,442	9,610
Santa Ana	19,617	80,858
Santa Monica ¹	7,406	
Three Valleys MWD	80,687	537,916
Torrance	19,204	128,027
Upper San Gabriel Valley MWD	67,228	110,077
West Basin MWD	135,417	902,783
Western MWD	105,784	705,224
Total	2,133,468	9,870,746

¹ No Purchase Order; Tier 1 maximum is annual, not cumulative.
Totals may not foot due to rounding.



APPENDIX J

Public Notifications



Glendale Water & Power
Water Engineering

141 North Glendale Ave., Level 4
Glendale, CA 91206-4496
Tel: (818) 548-2062 Fax: (818) 240-4754

Certified Mail: 7003-1680-0007-3150-8304

March 21, 2016

Simon Hsu
Civil Engineering Associate III
Los Angeles Department of Water & Power
111 North Hope Street, Room 1460
Los Angeles, CA 90012

Subject: Notice of Preparation of Glendale 2015 Urban Water Management Plan

Pursuant to the requirements of the California Water Code Section, Division 6, Part 2.6. Urban Water Management Planning, Section 10621(b), every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days prior to the public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan.

This letter is intended to notify your agency that the City of Glendale is in process of preparing the 2015 Urban Water Management Plan (UWMP). Based on the City's current schedule, we expect to have a public review draft of the 2015 UWMP available for review in late April 2016.

If you have any questions, please contact me at (818) 548-3906 or via email RTakidin@GlendaleCA.GOV.

Respectfully yours,

A handwritten signature in blue ink that reads "Raja Takidin".

Raja Takidin
Senior Civil Engineer

RT/LC:sb



Glendale Water & Power
Water Engineering

141 North Glendale Ave., Level 4
Glendale, CA 91206-4496
Tel: (818) 548-2062 Fax: (818) 240-4754

Certified Mail: 7003-1680-0007-3150-8397

March 21, 2016

Sergio Fierro
State of California Department of Water Resources
Division of Statewide Integrated Water Management - Water Use Efficiency
770 Fairmont Avenue
Glendale, CA 91203

Subject: Notice of Preparation of Glendale 2015 Urban Water Management Plan

Pursuant to the requirements of the California Water Code Section, Division 6, Part 2.6. Urban Water Management Planning, Section 10621(b), every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days prior to the public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan.

This letter is intended to notify your agency that the City of Glendale is in process of preparing the 2015 Urban Water Management Plan (UWMP). Based on the City's current schedule, we expect to have a public review draft of the 2015 UWMP available for review in late April 2016.

If you have any questions, please contact me at (818) 548-3906 or via email RTakidin@GlendaleCA.GOV.

Respectfully yours,


Raja Takidin
Senior Civil Engineer

RT/LC:sb



Glendale Water & Power
Water Engineering

141 North Glendale Ave., Level 4
Glendale, CA 91206-4496
Tel: (818) 548-2062 Fax: (818) 240-4754

Certified Mail: 7003-1680-0007-3150-8373

March 21, 2016

Mark Lombos
County of Los Angeles, Department of Public Works
Watershed Management Division
900 S. Fremont Avenue, 5th Floor
Alhambra, CA 91803

Subject: Notice of Preparation of Glendale 2015 Urban Water Management Plan

Pursuant to the requirements of the California Water Code Section, Division 6, Part 2.6. Urban Water Management Planning, Section 10621(b), every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days prior to the public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan.

This letter is intended to notify your agency that the City of Glendale is in process of preparing the 2015 Urban Water Management Plan (UWMP). Based on the City's current schedule, we expect to have a public review draft of the 2015 UWMP available for review in late April 2016.

If you have any questions, please contact me at (818) 548-3906 or via email RTakidin@GlendaleCA.GOV.

Respectfully yours,

A handwritten signature in blue ink that reads "Raja Takidin". The signature is written in a cursive style and is positioned above a horizontal line.

Raja Takidin
Senior Civil Engineer

RT/LC:sb



Glendale Water & Power
Water Engineering

141 North Glendale Ave., Level 4
Glendale, CA 91206-4496
Tel: (818) 548-2062 Fax: (818) 240-4754

Certified Mail: 7003-1680-0007-3150-8236

March 21, 2016

Nina Jazmadarian
General Manager
Foothill Municipal Water District
4536 Hampton Road
La Canada Flintridge, CA 91011

Subject: Notice of Preparation of Glendale 2015 Urban Water Management Plan

Pursuant to the requirements of the California Water Code Section, Division 6, Part 2.6. Urban Water Management Planning, Section 10621(b), every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days prior to the public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan.

This letter is intended to notify your agency that the City of Glendale is in process of preparing the 2015 Urban Water Management Plan (UWMP). Based on the City's current schedule, we expect to have a public review draft of the 2015 UWMP available for review in late April 2016.

If you have any questions, please contact me at (818) 548-3906 or via email RTakidin@GlendaleCA.GOV.

Respectfully yours,

A handwritten signature in blue ink that reads "Raja Takidin". The signature is written in a cursive style and is positioned above a horizontal line.

Raja Takidin
Senior Civil Engineer

RT/LC:sb



Glendale Water & Power
Water Engineering

141 North Glendale Ave., Level 4
Glendale, CA 91206-4496
Tel: (818) 548-2062 Fax: (818) 240-4754

Certified Mail: 7003-1680-0007-3150-8380

March 21, 2016

David Gould
District Engineer
Crescenta Valley Water District
2700 Foothill Boulevard
La Crescenta, CA 91214

Subject: Notice of Preparation of Glendale 2015 Urban Water Management Plan

Pursuant to the requirements of the California Water Code Section, Division 6, Part 2.6. Urban Water Management Planning, Section 10621(b), every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days prior to the public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan.

This letter is intended to notify your agency that the City of Glendale is in process of preparing the 2015 Urban Water Management Plan (UWMP). Based on the City's current schedule, we expect to have a public review draft of the 2015 UWMP available for review in late April 2016.

If you have any questions, please contact me at (818) 548-3906 or via email RTakidin@GlendaleCA.GOV.

Respectfully yours,

A handwritten signature in blue ink that reads "Raja Takidin". The signature is written in a cursive style and is positioned above a horizontal line.

Raja Takidin
Senior Civil Engineer

RT/LC:sb



Glendale Water & Power
Water Engineering

141 North Glendale Ave., Level 4
Glendale, CA 91206-4496
Tel: (818) 548-2062 Fax: (818) 240-4754

Certified Mail: 7003-1680-0007-3150-8403

March 21, 2016

William Mace
Assistant General Manager
City of Burbank Water & Power
164 West Magnolia Boulevard
PO Box 631
Burbank, CA 91503-0631

Subject: Notice of Preparation of Glendale 2015 Urban Water Management Plan

Pursuant to the requirements of the California Water Code Section, Division 6, Part 2.6. Urban Water Management Planning, Section 10621(b), every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days prior to the public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan.

This letter is intended to notify your agency that the City of Glendale is in process of preparing the 2015 Urban Water Management Plan (UWMP). Based on the City's current schedule, we expect to have a public review draft of the 2015 UWMP available for review in late April 2016.

If you have any questions, please contact me at (818) 548-3906 or via email RTakidin@GlendaleCA.GOV.

Respectfully yours,

A handwritten signature in blue ink that reads "Raja Takidin".

Raja Takidin
Senior Civil Engineer

RT/LC:sb



Glendale Water & Power
Water Engineering

141 North Glendale Ave., Level 4
Glendale, CA 91206-4496
Tel: (818) 548-2062 Fax: (818) 240-4754

Certified Mail: 7010-2780-0000-6315-8266

March 21, 2016

Bradley R. Boman
Engineering Manager
City of Pasadena, Water and Power Department
150 S. Los Robles Ave., Suite 200
Pasadena, CA 91101

Subject: Notice of Preparation of Glendale 2015 Urban Water Management Plan

Pursuant to the requirements of the California Water Code Section, Division 6, Part 2.6. Urban Water Management Planning, Section 10621(b), every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days prior to the public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan.

This letter is intended to notify your agency that the City of Glendale is in process of preparing the 2015 Urban Water Management Plan (UWMP). Based on the City's current schedule, we expect to have a public review draft of the 2015 UWMP available for review in late April 2016.

If you have any questions, please contact me at (818) 548-3906 or via email RTakidin@GlendaleCA.GOV.

Respectfully yours,

A handwritten signature in blue ink that reads "Raja Takidin".

Raja Takidin
Senior Civil Engineer

RT/LC:sb



Glendale Water & Power
Water Engineering

141 North Glendale Ave., Level 4
Glendale, CA 91206-4496
Tel: (818) 548-2062 Fax: (818) 240-4754

Certified Mail: 7012-2210-0000-1187-2453

March 22, 2016

Bob Fan
General Manager
Valley Water Company
4524 Hampton Road, P. O. Box 706
La Canada Flintridge, CA 91011

Subject: Notice of Preparation of Glendale 2015 Urban Water Management Plan

Pursuant to the requirements of the California Water Code Section, Division 6, Part 2.6. Urban Water Management Planning, Section 10621(b), every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days prior to the public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan.

This letter is intended to notify your agency that the City of Glendale is in process of preparing the 2015 Urban Water Management Plan (UWMP). Based on the City's current schedule, we expect to have a public review draft of the 2015 UWMP available for review in late April 2016.

If you have any questions, please contact me at (818) 548-3906 or via email RTakidin@GlendaleCA.GOV.

Respectfully yours,

A handwritten signature in blue ink that reads "Raja Takidin". The signature is written in a cursive style and is positioned above a horizontal line.

Raja Takidin
Senior Civil Engineer

RT/LC:sb



APPENDIX K

Baseline & Compliance (2020) Per Capita Analysis

City of Glendale
SBX7-7 Baseline & Target Calculations



Year	Total Consumption (AF)	Serving Population	Per Capita (GPCD)
2015	22,154	196,682	101
2014	25,731	195,799	117
2013	26,580	191,152	124
2012	25,932	192,674	120
2011	24,439	196,372	111
2010	24,233	201,893	107
2009	29,699	198,903	133
2008	31,908	197,580	144
2007	32,846	197,037	149
2006	31,079	197,277	141
2005	30,745	197,251	139
2004	32,666	196,382	148
2003	31,039	193,983	143
2002	28,095	191,594	131
2001	31,119	188,952	147
2000	32,587	186,573	156
10-yr. Baseline (FY 2000-2009)			143.1
5-yr. Baseline (FY 2004-2008)			144.3
95% OF South Coast HR (149 GPCD)			141.6
2020 Target (95 % of 5-yr. Baseline)			137
2015 Target $\{(10\text{-yr Baseline} + 2020\text{ Target})/2\}$			140.1

2020 Compliance Target for City of Glendale is 137 in accordance with Glendale City Council's Decision

Recent Average (2010 – 2015) GPCD	115
2015 Water Use (GPCD)	101

In recent years the City of Glendale has been below its 2020 compliance target of 137 GPCD based on the Public Water System Statistics provided by the City (2011 -2015)

PUBLIC WATER SYSTEM STATISTICS

Calendar Year **2015**

Mailing Label

1. General Information

Please follow the provided instructions.

Contact :	Leo Chan
Title:	Civil Engineer II
Phone:	(818) 548-3905
Fax:	(818) 240-4754
E-mail:	lchan@glendaleca.gov
Website:	
County:	Los Angeles
Population served:	199,182
Names of communities served:	City of Glendale

2. Active Service Connections

Customer Class	Potable Water		Recycled Water	
	Metered	Unmetered	Metered	Unmetered
Single Family Residential	22,324	0		0
Multi-family Residential	7,381	0		0
Commercial/Institutional	3,704	0	1	0
Industrial	190	0		0
Landscape Irrigation	309	0	66	0
Other	26	0	10	0
Agricultural Irrigation	0	0		0
TOTAL	33934	0	77	0

3. Total Water Into the System - Units of production:

AF (Select: AF=acre-feet; MG=million gallons; CCF=hundred cubic feet)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Wells	802.00	706.10	601.90	498.38	482.74	539.28	773.74	781.50	764.05	784.08	671.52	691.55	8,096.85
Surface	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Purchased ^{1/}	1,080.00	1,022.00	1,403.20	1,495.40	1,400.00	1,379.96	1,154.70	1,302.60	1,170.00	1,096.10	1,150.10	1,072.30	14,726.36
Total Potable	1,882.00	1,728.10	2,005.10	1,993.78	1,882.74	1,919.24	1,928.44	2,084.10	1,934.05	1,880.18	1,821.62	1,763.85	22,823.21
Untreated Water													
Recycled ^{2/}													

1/ Potable wholesale supplier(s): Metropolitan Water District

2/ Recycled wholesale supplier(s): LA-Glendale Water Reclamation Plan

Level of treatment: Tertiary Treatment

4. Metered Water Deliveries - Units of delivery:

AF (Select: AF=acre-feet; MG=million gallons; CCF=hundred cubic feet)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
A. Single Family Residential	442.41	799.28	433.68	930.43	440.63	920.16	482.10	979.75	491.58	966.03	398.83	933.02	8217.90
B. Multi-family Residential	1093.96	464.86	1030.58	595.15	884.70	542.12	1020.08	504.95	989.22	553.31	832.71	625.06	9136.70
C. Commercial/Institutional	270.45	238.54	290.25	295.57	271.07	287.57	332.44	302.39	343.80	301.83	268.67	554.59	3757.17
D. Industrial	44.63	44.12	49.65	52.31	43.94	49.33	55.29	58.47	60.01	57.88	51.01	57.79	624.43
E. Landscape Irrigation	12.73	21.01	20.11	37.28	27.58	33.96	33.08	44.05	33.62	45.80	17.50	49.39	376.11
F. Other	0.29	2.46	0.29	4.08	1.45	3.81	2.12	10.88	2.17	11.40	0.08	2.96	41.99
Total Urban Retail (A thru F)	1864.47	1570.27	1824.56	1914.82	1669.37	1836.95	1925.11	1900.49	1920.40	1936.25	1568.80	2222.81	22154.30
Agricultural Irrigation													
Wholesale (to other agencies)													

PUBLIC WATER SYSTEM STATISTICS

Calendar Year **2014**

Mailing Label

1. General Information

Please follow the provided instructions.

Contact: Leo Chan
 Title: Civil Engineer II
 Phone: (818) 548-3905
 Fax: (818) 240-4754
 E-mail: lchan@glendaleca.gov
 Website:
 County: **Los Angeles**
 Population served: **195,799**
 Names of communities served: City of Glendale

2. Active Service Connections

Customer Class	Potable Water		Recycled Water	
	Metered	Unmetered	Metered	Unmetered
Single Family Residential	22,350	0		0
Multi-family Residential	7,354	0		0
Commercial/Institutional	3,652	0	1	0
Industrial	198	0		0
Landscape Irrigation	301	0	64	0
Other	26	0	10	0
Agricultural Irrigation	0	0		0
TOTAL	33881	0	75	0

3. Total Water Into the System - Units of production: **AF**

(Select: AF=acre-feet; MG=million gallons; CCF=hundred cubic feet)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Wells	796.77	699.77	716.88	317.69	316.20	313.97	739.24	778.98	777.07	717.09	327.25	789.82	7,290.72
Surface	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Purchased ^{1/}	1,414.90	1,141.90	1,289.80	1,853.00	2,153.60	2,157.15	1,859.00	1,696.70	1,578.00	1,491.20	1,723.50	916.40	19,275.15
Total Potable	2,211.67	1,841.67	2,006.68	2,170.69	2,469.80	2,471.12	2,598.24	2,475.68	2,355.07	2,208.29	2,050.75	1,706.22	26,565.87
Untreated Water													
Recycled ^{2/}													

1/ Potable wholesale supplier(s): Metropolitan Water District

2/ Recycled wholesale supplier(s): LA-Glendale Water Reclamation Plan

Level of treatment: Tertiary Treatment

4. Metered Water Deliveries - Units of delivery: **AF**

(Select: AF=acre-feet; MG=million gallons; CCF=hundred cubic feet)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
A. Single Family Residential	561.65	1089.13	519.89	1033.06	586.35	1355.97	767.65	1424.73	672.11	1339.82	497.67	1068.15	10916.18
B. Multi-family Residential	1101.57	452.08	1121.54	518.57	1040.04	543.10	1237.75	519.22	1094.88	645.54	874.31	547.84	9696.44
C. Commercial/Institutional	319.17	245.17	298.72	298.25	302.83	335.09	396.73	318.26	377.55	342.49	269.58	306.57	3810.41
D. Industrial	59.65	49.68	55.51	55.88	58.07	67.31	67.80	63.76	68.36	61.16	48.40	57.26	712.84
E. Landscape Irrigation	32.60	27.67	25.76	42.27	41.81	69.31	56.98	72.15	54.38	61.44	33.28	41.59	559.24
F. Other	2.46	6.18	1.63	3.40	2.69	2.66	3.89	2.74	2.29	4.75	0.19	3.02	35.90
Total Urban Retail (A thru F)	2077.10	1869.91	2023.05	1951.43	2031.79	2373.44	2530.80	2400.86	2269.57	2455.20	1723.43	2024.43	25731.01
Agricultural Irrigation													
Wholesale (to other agencies)													

If recycled is included, X box ↓

Mailing Label

PUBLIC WATER SYSTEM STATISTICS

Calendar Year **2013**

1. General Information

Please follow the provided instructions.

Contact: Leo Chan
 Title: Civil Engineer II
 Phone: (818) 548-3905
 Fax: (818) 240-4754
 E-mail: lchan@glendaleca.gov
 Website:
 County: Los Angeles
 Population served: 191,152
 Names of communities served: City of Glendale

2. Active Service Connections

Customer Class	Potable Water		Recycled Water	
	Metered	Unmetered	Metered	Unmetered
Single Family Residential	22,368	0		0
Multi-family Residential	7,275	0		0
Commercial/Institutional	3,620	0	1	0
Industrial	190	0		0
Landscape Irrigation	299	0	64	0
Other	8	0	10	0
Agricultural Irrigation	0	0		0
TOTAL	33760	0	75	0

3. Total Water Into the System - Units of production:

AF (Select: AF=acre-feet; MG=million gallons; CCF=hundred cubic feet)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Wells	806.52	615.22	735.48	357.88	643.55	561.35	455.57	722.12	736.72	842.28	785.71	801.69	8,064.07
Surface	27.59	25.48	28.86	23.91	22.37	26.34	25.08	23.01	13.25	0.00	0.00	0.00	215.90
Purchased ^{1/}	1,043.90	1,157.30	1,339.30	1,816.70	1,783.60	1,947.90	2,176.00	2,001.78	1,813.20	1,649.40	1,394.10	1,296.30	19,419.48
Total Potable	1,878.01	1,798.00	2,103.64	2,198.49	2,449.51	2,535.60	2,656.65	2,746.91	2,563.17	2,491.68	2,179.81	2,097.99	27,699.45
Untreated Water													
Recycled ^{2/}													

1/ Potable wholesale supplier(s): Metropolitan Water District

2/ Recycled wholesale supplier(s): LA-Glendale Water Reclamation Plan
 Level of treatment: Tertiary Treatment

4. Metered Water Deliveries - Units of delivery:

AF (Select: AF=acre-feet; MG=million gallons; CCF=hundred cubic feet)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
A. Single Family Residential	487.57	798.55	479.80	1085.95	610.66	1326.54	725.60	1549.59	742.13	1571.99	645.33	1273.42	11297.13
B. Multi-family Residential	1202.14	401.91	1107.57	535.78	1130.43	638.37	1039.99	654.16	1108.97	711.53	953.67	711.33	10195.85
C. Commercial/Institutional	329.74	223.82	276.01	279.02	329.56	295.11	378.32	358.79	333.31	375.95	291.45	333.51	3804.59
D. Industrial	55.51	46.69	52.03	50.35	60.45	56.54	69.95	69.90	51.73	72.37	54.64	62.05	702.21
E. Landscape Irrigation	21.81	26.63	22.57	45.48	39.15	61.01	58.12	87.50	42.30	84.78	27.55	47.31	564.21
F. Other	0.06	0.03	0.09	0.16	0.19	0.14	0.01	0.88	1.87	0.98	4.00	7.71	16.12
Total Urban Retail (A thru F)	2096.83	1497.63	1938.07	1996.74	2170.44	2377.71	2271.99	2720.82	2280.31	2817.60	1976.64	2435.33	26580.11
Agricultural Irrigation													
Wholesale (to other agencies)													

If recycled is included, X box ↓

PUBLIC WATER SYSTEM STATISTICS

Calendar Year **2012**

Mailing Label

1. General Information

Please follow the provided instructions.

Contact: **Leo Chan**
 Title: **Civil Engineer II**
 Phone: **(818) 548-3905**
 Fax: **(818) 240-4754**
 E-mail: **lchan@glendaleca.gov**
 Website:
 County: **Los Angeles**
 Population served: **192,674**
 Names of communities served: **City of Glendale**

2. Active Service Connections

Customer Class	Potable Water		Recycled Water	
	Metered	Unmetered	Metered	Unmetered
Single Family Residential	22,327	0		0
Multi-family Residential	7,209	0		0
Commercial/Institutional	3,555	0	1	0
Industrial	191	0		0
Landscape Irrigation	269	0	61	0
Other	9	0	7	0
Agricultural Irrigation	0	0		0
TOTAL	33560	0	69	0

3. Total Water Into the System - Units of production:

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Wells	820.04	639.02	818.99	789.67	725.08	785.11	799.27	789.83	812.14	817.62	722.55	585.90	9,105.23
Surface	0.00	14.39	40.71	37.71	36.56	33.46	33.15	30.27	22.67	30.92	27.14	29.94	336.91
Purchased ^{1/}	1,235.20	1,278.70	1,154.00	1,186.70	1,562.70	1,610.20	1,831.20	1,995.30	1,729.90	1,577.80	1,369.50	1,171.30	17,702.50
Total Potable	2,055.24	1,932.11	2,013.70	2,014.08	2,324.33	2,428.77	2,663.62	2,815.40	2,564.71	2,426.34	2,119.19	1,787.14	27,144.64
Untreated Water													
Recycled ^{2/}													

(Select: AF=acre-feet; MG=million gallons; CCF=hundred cubic feet)

1/ Potable wholesale supplier(s): Metropolitan Water District

2/ Recycled wholesale supplier(s): LA-Glendale Water Reclamation Plan

Level of treatment: Tertiary Treatment

4. Metered Water Deliveries - Units of delivery:

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
A. Single Family Residential	684.06	856.88	473.42	833.43	714.78	1148.38	720.51	1635.37	695.07	1652.09	599.62	1098.56	11112.17
B. Multi-family Residential	1121.00	471.44	965.55	616.58	1076.09	621.06	1017.83	739.75	926.48	824.91	1060.84	516.09	9957.62
C. Commercial/Institutional	279.02	221.57	292.87	242.81	284.40	275.99	345.11	373.55	330.47	398.49	324.52	248.72	3617.52
D. Industrial	50.69	41.18	63.39	45.90	57.16	53.14	74.39	55.11	66.54	69.98	54.43	42.72	674.63
E. Landscape Irrigation	27.87	24.47	26.11	25.58	28.29	48.64	65.71	80.75	49.64	93.91	39.85	54.65	565.47
F. Other	0.55	0.11	0.07	0.10	0.18	0.70	0.17	1.55	0.14	0.47	0.14	0.30	4.48
Total Urban Retail (A thru F)	2163.19	1615.65	1821.41	1764.40	2160.90	2147.91	2223.72	2886.08	2068.34	3039.85	2079.40	1961.04	25931.89
Agricultural Irrigation													
Wholesale (to other agencies)													

(Select: AF=acre-feet; MG=million gallons; CCF=hundred cubic feet)

If recycled is included, X box ↓

Mailing Label

PUBLIC WATER SYSTEM STATISTICS

Calendar Year **2011**

1. General Information

Please follow the provided instructions.

Contact: Leo Chan
 Title: Civil Engineer II
 Phone: (818) 548-3905
 Fax: (818) 240-4754
 E-mail: lchan@glendaleca.gov
 Website: _____
 County: Los Angeles
 Population served: 196,372
 Names of communities served: City of Glendale

2. Active Service Connections

Customer Class	Potable Water		Recycled Water	
	Metered	Unmetered	Metered	Unmetered
Single Family Residential	22,359	0		0
Multi-family Residential	7,212	0		0
Commercial/Institutional	3,550	0	1	0
Industrial	193	0		0
Landscape Irrigation	262	0	61	0
Other	9	0	7	0
Agricultural Irrigation	0	0		0
TOTAL	33585	0	69	0

3. Total Water Into the System - Units of production: **AF**

(Select: AF=acre-feet; MG=million gallons; CCF=hundred cubic feet)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Wells	810.64	700.90	666.70	614.50	738.70	162.40	430.30	866.50	807.60	849.20	786.30	765.00	8,198.74
Surface	31.39	30.47	33.10	36.30	31.70	34.50	36.90	35.10	31.80	26.10	35.50	5.40	368.26
Purchased ^{1/}	1,040.90	934.07	1,143.90	1,374.70	1,649.10	2,194.40	2,210.50	1,718.50	1,663.50	1,413.40	1,060.40	1,225.80	17,629.17
Total Potable	1,882.92	1,665.44	1,843.70	2,025.50	2,419.50	2,391.30	2,677.70	2,620.10	2,502.90	2,288.70	1,882.20	1,996.20	26,196.17
Untreated Water													
Recycled ^{2/}													

1/ Potable wholesale supplier(s): Metropolitan Water District

2/ Recycled wholesale supplier(s): LA-Glendale Water Reclamation Plan
 Level of treatment: Tertiary Treatment

4. Metered Water Deliveries - Units of delivery: **AF**

(Select: AF=acre-feet; MG=million gallons; CCF=hundred cubic feet)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
A. Single Family Residential	393.10	765.70	471.35	794.78	471.83	1054.51	684.78	1659.13	803.13	1332.46	345.49	1298.67	10074.93
B. Multi-family Residential	948.12	378.34	1110.61	586.46	796.29	624.54	1069.43	962.50	1001.22	436.63	819.21	1061.51	9794.86
C. Commercial/Institutional	278.34	301.98	173.42	253.05	264.31	263.37	328.02	371.74	345.24	307.40	213.55	397.80	3498.22
D. Industrial	45.14	38.29	54.31	44.52	52.32	48.57	54.44	57.13	55.69	60.68	53.44	63.73	628.26
E. Landscape Irrigation	9.07	26.53	15.36	21.44	32.90	21.25	64.07	72.94	50.31	56.57	34.40	36.28	441.12
F. Other	0.18	0.07	0.07	0.12	0.07	0.19	0.14	0.20	0.32	0.28	0.00	0.20	1.84
Total Urban Retail (A thru F)	1673.95	1510.91	1825.12	1700.37	1617.72	2012.43	2200.88	3123.64	2255.91	2194.02	1466.09	2858.19	24439.23
Agricultural Irrigation													
Wholesale (to other agencies)													

If recycled is included, X box ↓



APPENDIX L

Emergency Response Tactic Plan

Emergency Water Supplies

The material in this section will identify possible sources of potable water that can be used in the event the water system is not operational because of system outages, water quality impairment, or natural disaster. It could be a period of time from hours to days before water could be available.

Adjacent Water Agencies

Depending on the type of emergency, Glendale staff could contact the City of Burbank and Crescenta Valley Water District (CVWD) to activate water system interconnections. If these agencies are experiencing similar problems with their system, such as might occur in an earthquake, the City will need to review the availability of outside sources from private companies.

<u>City of Burbank</u>	<u>Office</u>	<u>Cell</u>
Bill Mace Asst. General Manager – Water	818-238-3558	
Albert Lopez Operations Manager	818-238-3500	626-674-4984
Kevin Mitchell Water Superintendent Maintenance & Construction	818-238-3500	818- 427-8515
Guard (After hours)	818-238-3778	None

Crescenta Valley Water District

Thomas Love, General Manager	818-248-3925	818-389-8777
Currently vacant, Water Superintendent	818-249-2185(Office)	
David Spain- System Operations Supervisor-(office)	818-249-2185 (cell)	818-284-5816
David Gould-District Engineer-(office)	818-248-3925 (cell)	818-284-5813
Bryan Jones-Construction Supervisor-(office)	818-249-2185 (cell)	818-284-5819
Standby (After Hours Emergency Call #)-	818-284-5822	

Private Water Suppliers

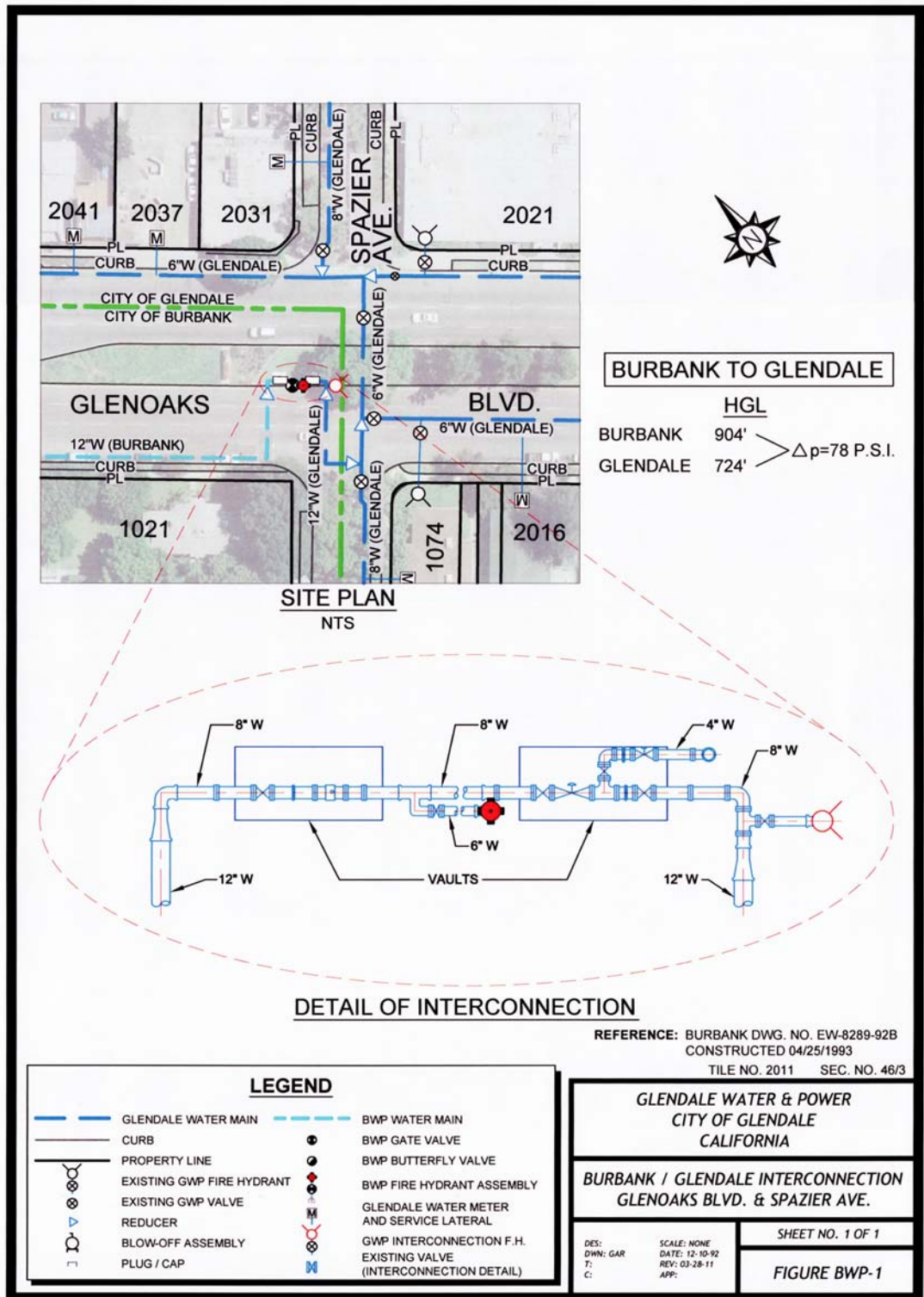
The Water Section can contact private companies (Sparkletts, Arrowhead, etc.) for water availability. The Water Superintendent and the staff, in coordination with the Fire Department and the Police Department could make this water available for citizens to pick-up their own containers at such locations as the Civic Auditorium, Utility Operation Center (UOC), or the Glendale Central Library. Information is provided below on the sources of bottled or bulk water.

Water Section employees will need to coordinate the contact of these agencies with *Water & Power* management and the City’s EOC.

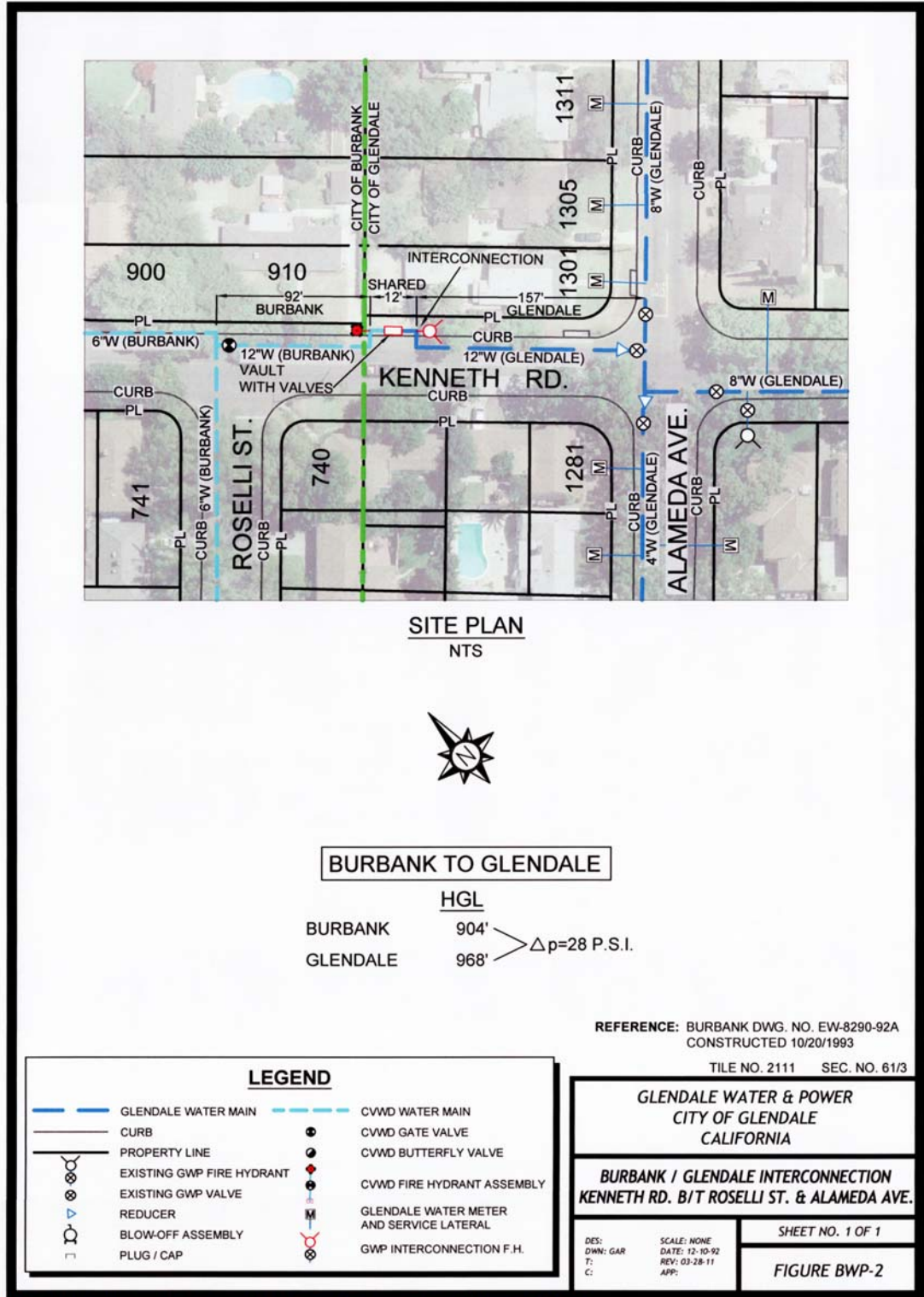
- | | | |
|----|-------------------------------------|----------------|
| 1. | Arrowhead Mountain Spring Water Co. | (800) 950-9393 |
| 2. | Sparkletts | (800) 669-3402 |
| 3. | DS Water | (800) 453-0293 |
| 5. | Mountain Valley Water | (800) 499-9982 |
| 6. | Rocky Mountain Water | (800) 339-3971 |

Use of City Reservoirs

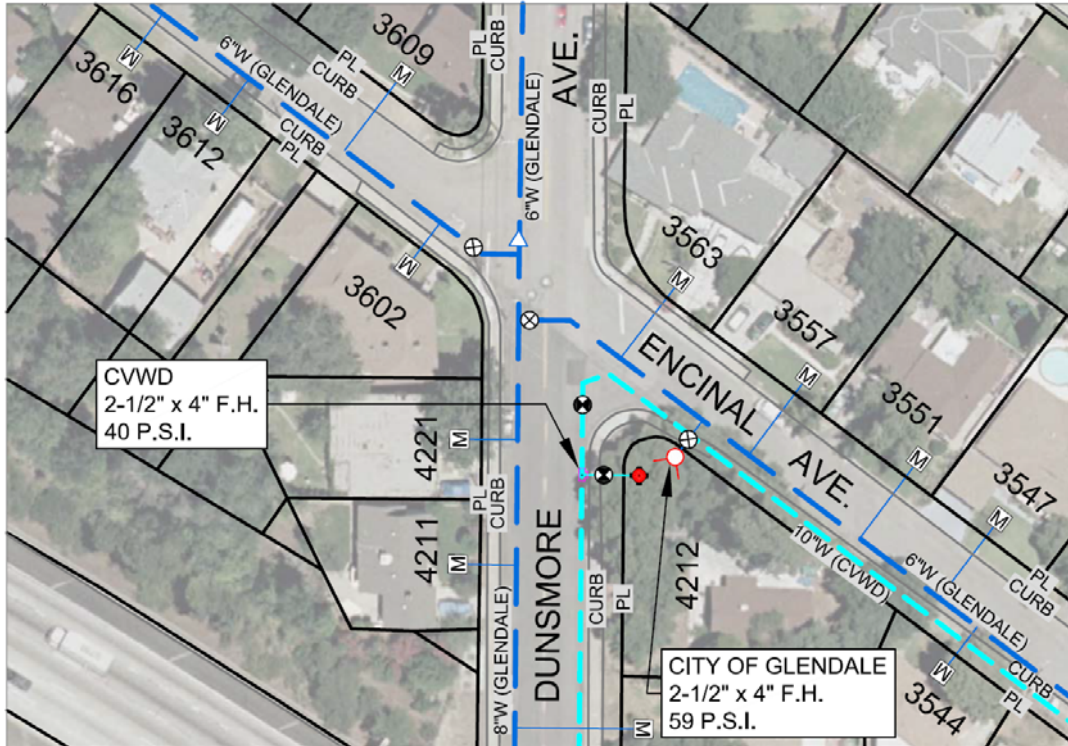
It is possible that water from a City storage tank could be distributed to the public in the event of a system outage. This could occur only after bacteriological testing shows absence of Coliform Bacteria and presence of a chlorine residual (0.2 – 2) mg/l. Glendale *Water & Power* will provide a U.S. Food and Drug Administration approved garden hose to distribute the water from City water tanks to individual containers or tanker trucks. The Water Superintendent and Water Quality Manager or their designees will supervise distribution at different storage tanks in coordination with other City Departments.



File Name: H:\PUBLIC\STAFF_RESOURCES\Emergency Response Tactical Plan Drawings\Inter-Connections Drawings & Information\Figure BWP-1.dwg
Plot Date: 03/30/11 - 10:52am



POTABLE WATER INTERCONNECTION BETWEEN CVWD 1,611' SYSTEM (ZONE II) AND CITY OF GLENDALE 1,666' SYSTEM



APPROX. DISTANCE BETWEEN TWO FIRE HYDRANTS - 70 FT.



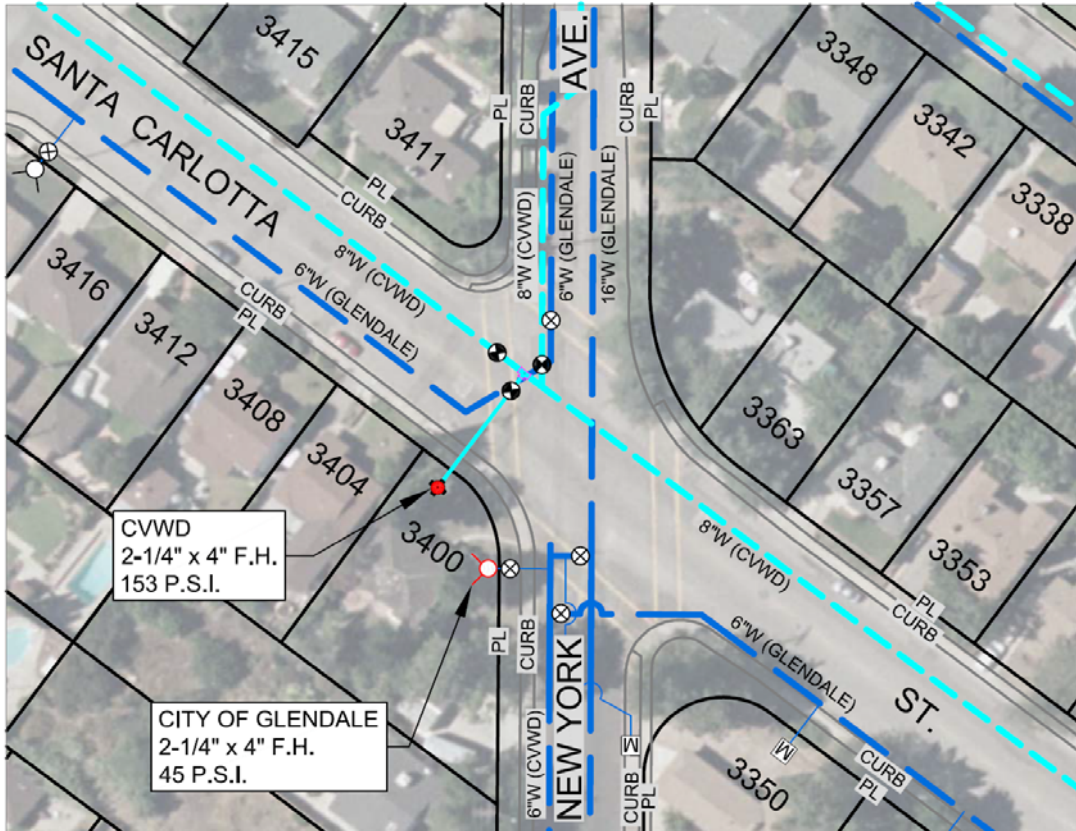
TILE NO. 3015 SEC. NO. 98/9

LEGEND			
	GLENDALE WATER MAIN		CVWD WATER MAIN
	CURB		CVWD GATE VALVE
	PROPERTY LINE		CVWD BUTTERFLY VALVE
	EXISTING GWP FIRE HYDRANT		CVWD FIRE HYDRANT ASSEMBLY
	EXISTING GWP VALVE		GLENDALE WATER METER AND SERVICE LATERAL
	REDUCER		GWP INTERCONNECTION F.H.
	BLOW-OFF ASSEMBLY		
	PLUG / CAP		

GLENDALE WATER & POWER CITY OF GLENDALE CALIFORNIA	
ENCINAL AVE. & DUNSMORE AVE. CVWD INTERCONNECTION NO. 2	
DES: DWN: GAR T: C: TN	SCALE: NONE DATE: 02-27-96 REV: 03-28-11 APP:
SHEET NO. 1 OF 1 FIGURE CVWD-2	

File Name: H:\PUBLIC\STAFF RESOURCES\Emergency Response Tactical Plan Drawings\Inter-Connections Drawings & Information\Figure CVWD-2.dwg
Plot Date: 03/26/11 - 3:17pm

POTABLE WATER INTERCONNECTION BETWEEN CVWD 2,243' SYSTEM (ZONE VII) AND CITY OF GLENDALE 2,000' SYSTEM



APPROX. DISTANCE BETWEEN TWO FIRE HYDRANTS - 48 FT.



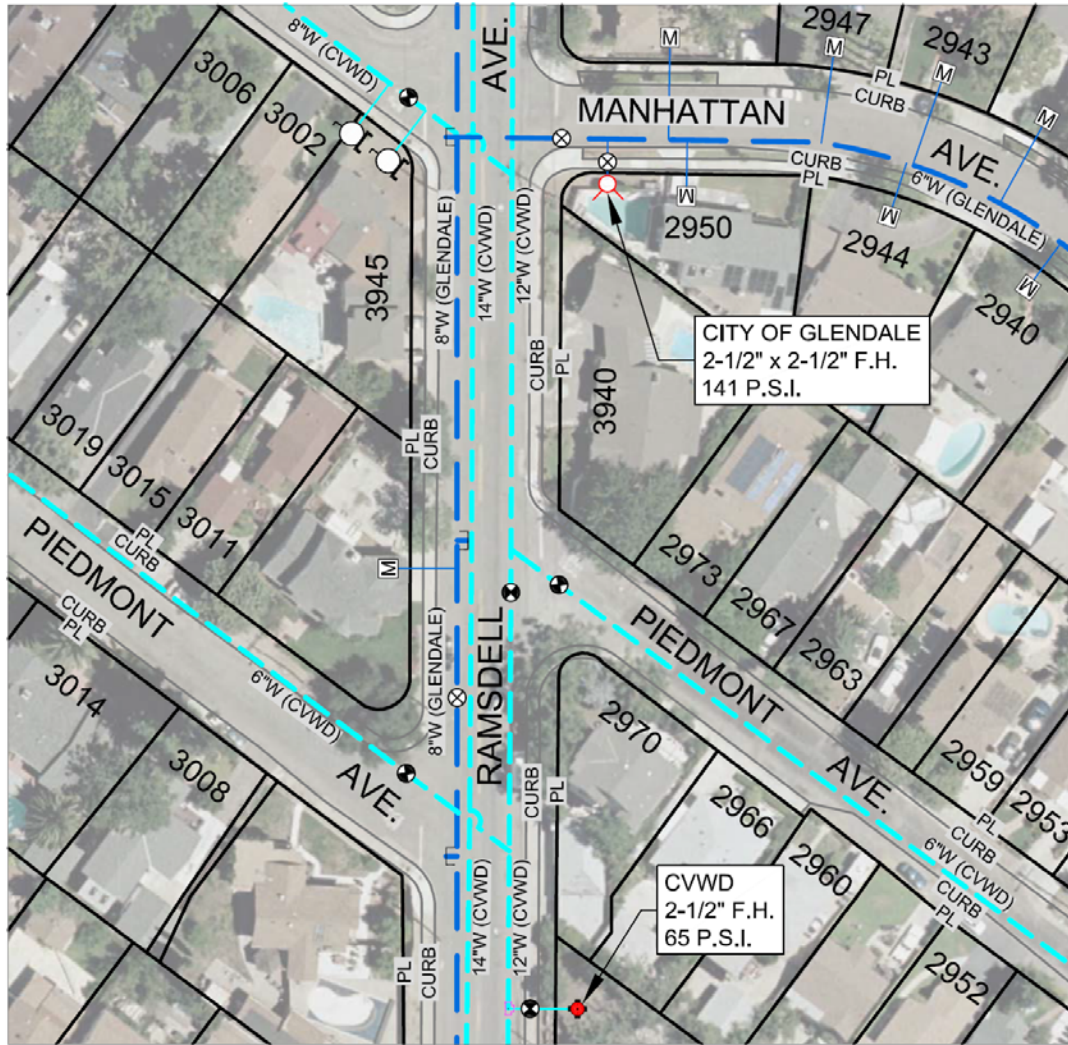
TILE NO. 3215 SEC. NO. 106/9

LEGEND			
	GLENDALE WATER MAIN		CVWD WATER MAIN
	CURB		CVWD GATE VALVE
	PROPERTY LINE		CVWD BUTTERFLY VALVE
	EXISTING GWP FIRE HYDRANT		CVWD FIRE HYDRANT ASSEMBLY
	EXISTING GWP VALVE		GLENDALE WATER METER AND SERVICE LATERAL
	REDUCER		GWP INTERCONNECTION F.H.
	BLOW-OFF ASSEMBLY		
	PLUG / CAP		

GLENDALE WATER & POWER CITY OF GLENDALE CALIFORNIA	
SANTA CARLOTTA ST. & NEW YORK AVE. CVWD INTERCONNECTION NO. 3	
DES: SCALE: NONE DWN: GAR DATE: 05-10-99 T: REV: 03-28-11 C: TN APP:	SHEET NO. 1 OF 1 FIGURE CVWD-3

File Name: H:\PUBLIC\STAFF RESOURCES\Emergency Response Tactical Plan Drawings\Inter-Connections Drawings & Information\Figure CVWD-3.dwg
Plot Date: 03/28/11 - 3:16pm

POTABLE WATER INTERCONNECTION BETWEEN CVWD 1,465' SYSTEM (ZONE I) AND CITY OF GLENDALE 1,666' SYSTEM



APPROX. DISTANCE BETWEEN TWO FIRE HYDRANTS - 400 FT.

LEGEND			
	GLENDALE WATER MAIN		CVWD WATER MAIN
	CURB		CVWD GATE VALVE
	PROPERTY LINE		CVWD BUTTERFLY VALVE
	EXISTING GWP FIRE HYDRANT		CVWD FIRE HYDRANT ASSEMBLY
	EXISTING GWP VALVE		GLENDALE WATER METER AND SERVICE LATERAL
	REDUCER		GWP INTERCONNECTION F.H.
	BLOW-OFF ASSEMBLY		
	PLUG / CAP		

TILE NO. 2716 & 2816 SEC. NO. 106/9

GLENDALE WATER & POWER
CITY OF GLENDALE
CALIFORNIA

RAMSDELL AVE. & MANHATTAN AVE.
CVWD INTERCONNECTION NO. 4

DES:
DWN: GAR
T:
C: TN

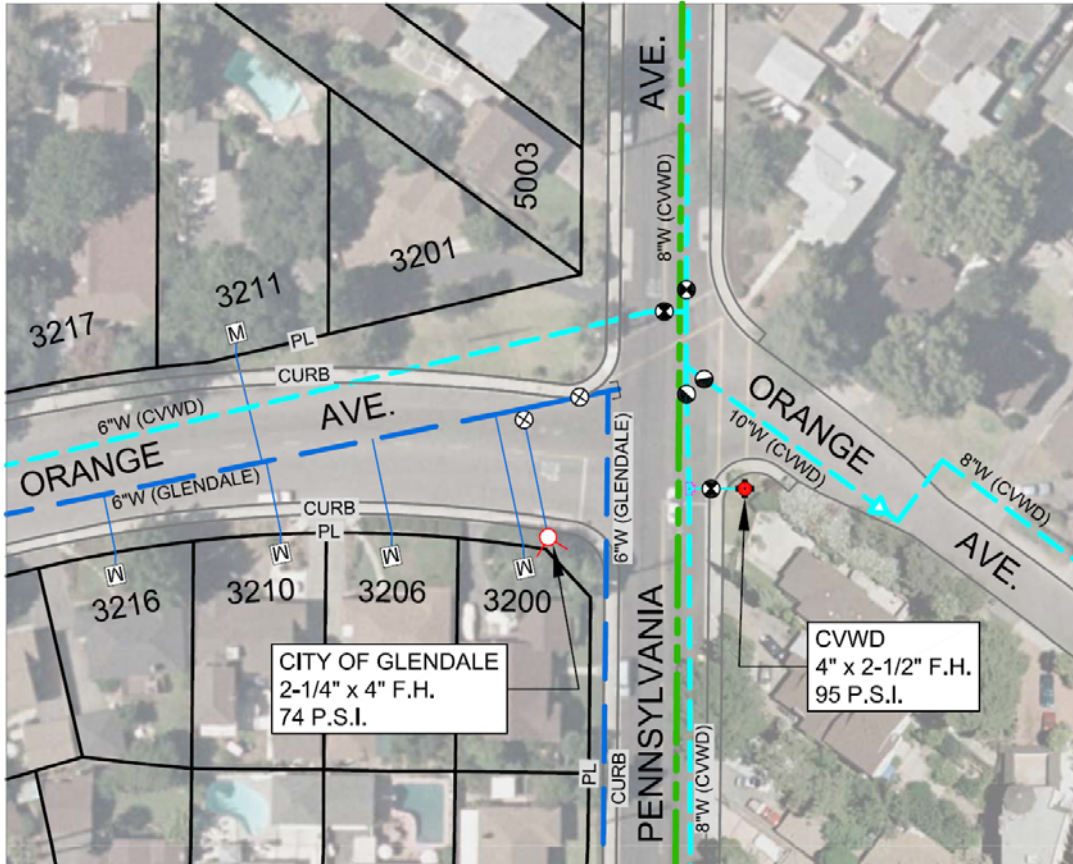
SCALE: NONE
DATE: 08-19-94
REV: 03-28-11
APP:

SHEET NO. 1 OF 1

FIGURE CVWD-4

File Name: H:\PUBLIC\STAFF RESOURCES\Emergency Response Tactical Plan Drawings\Inter-Connections Drawings & Information\Figure CVWD-4.dwg
Plot Date: 03/28/11 - 3:14pm

POTABLE WATER INTERCONNECTION BETWEEN CVWD 2,057' SYSTEM (ZONE V) AND CITY OF GLENDALE 2,000' SYSTEM



APPROX. DISTANCE BETWEEN TWO FIRE HYDRANTS - 90 FT.



LEGEND			
	GLENDALE WATER MAIN		CVWD WATER MAIN
	CURB		CVWD GATE VALVE
	PROPERTY LINE		CVWD BUTTERFLY VALVE
	EXISTING GWP FIRE HYDRANT		CVWD FIRE HYDRANT ASSEMBLY
	EXISTING GWP VALVE		GLENDALE WATER METER AND SERVICE LATERAL
	REDUCER		GWP INTERCONNECTION F.H.
	BLOW-OFF ASSEMBLY		
	PLUG / CAP		

TILE NO. 3116 & 3216 SEC. NO. 98/9

GLENDALE WATER & POWER
CITY OF GLENDALE
CALIFORNIA

ORANGE AVE. & PENNSYLVANIA AVE.
CVWD INTERCONNECTION NO. 5

DES:
DWN: GAR
T:
C: TN

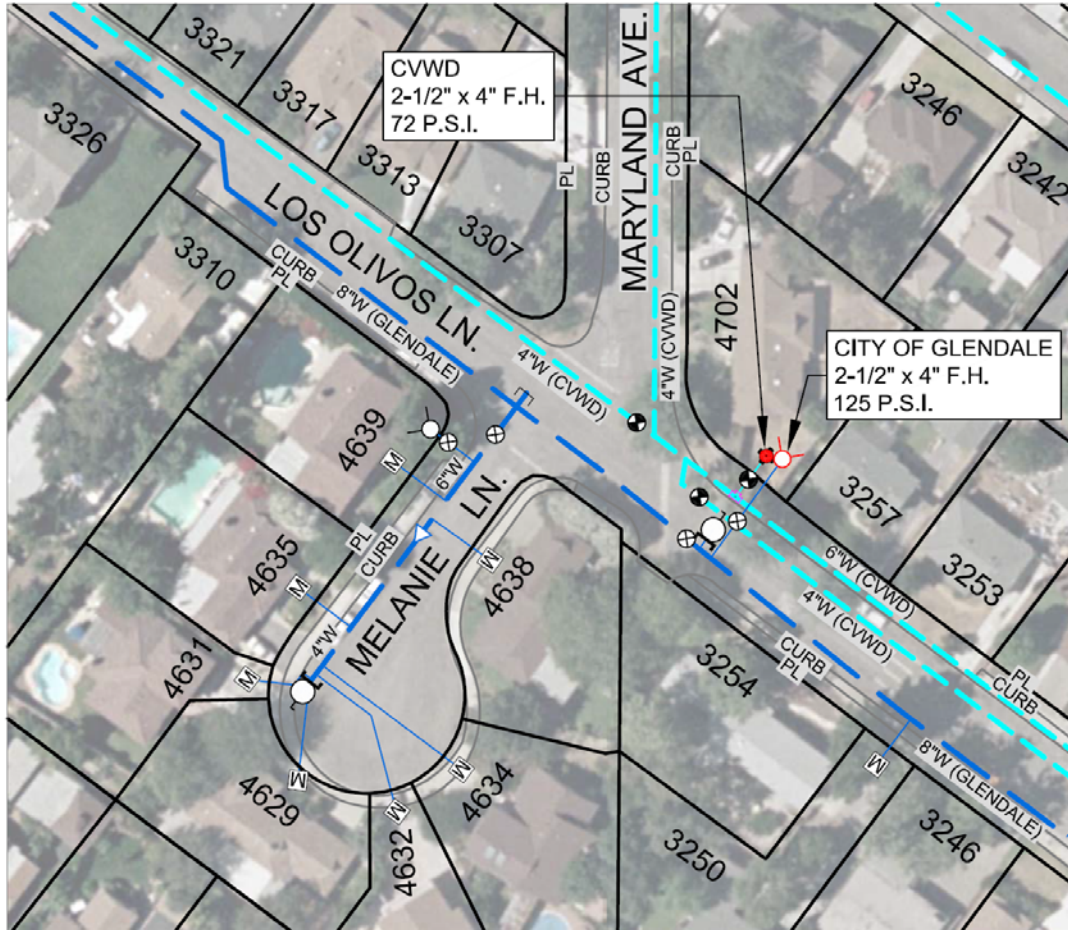
SCALE: NONE
DATE: 06-17-94
REV: 03-28-11
APP:

SHEET NO. 1 OF 1

FIGURE CVWD-5

File Name: H:\PUBLIC\STAFF_RESOURCES\Emergency Response Tactical Plan Drawings\Inter-Connections Drawings & Information\Figure CVWD-5.dwg
Plot Date: 03/28/11 - 3:13pm

POTABLE WATER INTERCONNECTION BETWEEN CVWD 1,877' SYSTEM (ZONE IV) AND CITY OF GLENDALE 2,000' SYSTEM



APPROX. DISTANCE BETWEEN TWO FIRE HYDRANTS - 30 FT.



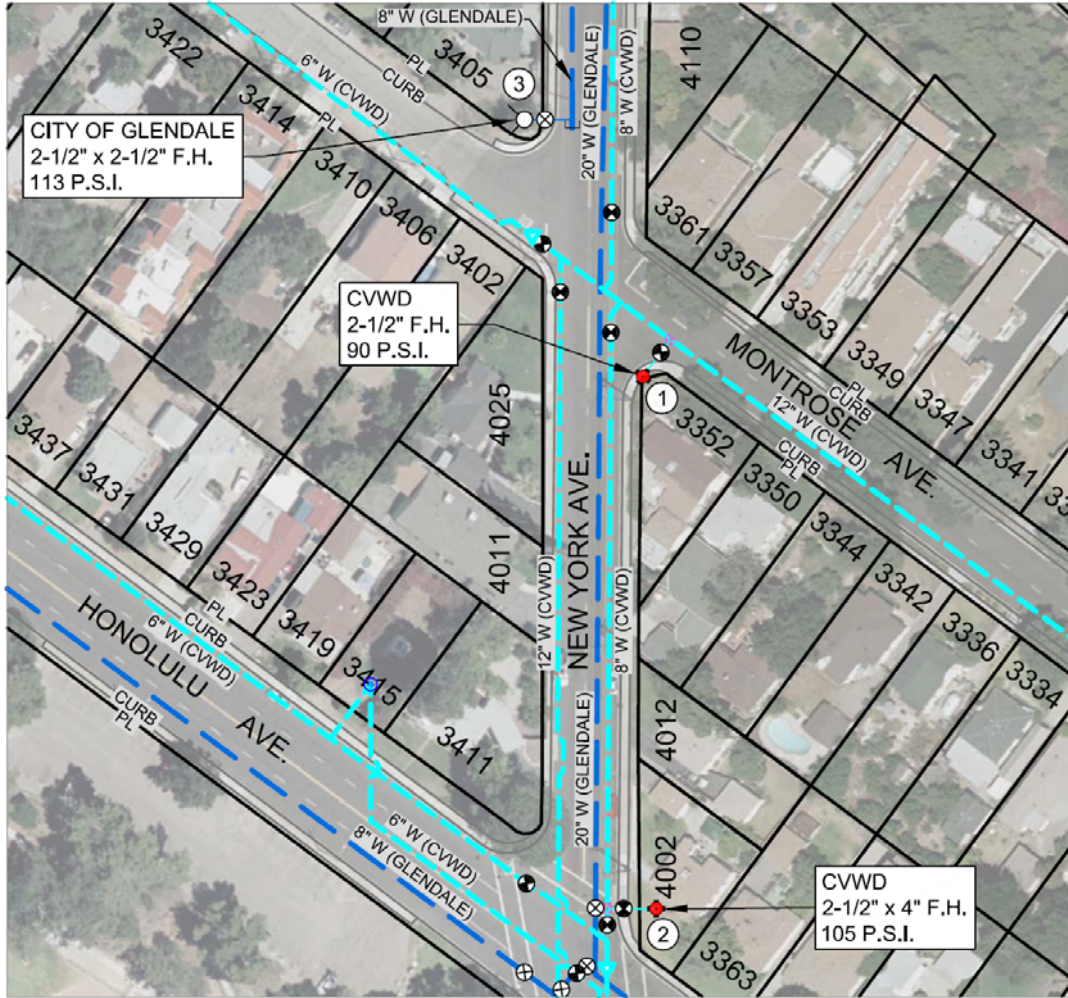
TILE NO. 3115 & 3116 SEC. NO. 106/9

LEGEND			
	GLENDALE WATER MAIN		CVWD WATER MAIN
	CURB		CVWD GATE VALVE
	PROPERTY LINE		CVWD BUTTERFLY VALVE
	EXISTING GWP FIRE HYDRANT		CVWD FIRE HYDRANT ASSEMBLY
	EXISTING GWP VALVE		GLENDALE WATER METER AND SERVICE LATERAL
	REDUCER		GWP INTERCONNECTION F.H.
	BLOW-OFF ASSEMBLY		
	PLUG / CAP		

GLENDALE WATER & POWER CITY OF GLENDALE CALIFORNIA	
LOS OLIVOS LN. & MARYLAND AVE. CVWD INTERCONNECTION NO. 6	
DES: GWP DWN: GAR T: C: TN	SCALE: NONE DATE: 09-04-06 REV: 03-28-11 APP:
SHEET NO. 1 OF 1 FIGURE CVWD-6	

File Name: H:\PUBLIC\STAFF_RESOURCES\Emergency Response Tactical Plan Drawings\Inter-Connections Drawings & Information\Figure CVWD-6.dwg
Plot Date: 03/28/11 - 3:12pm

POTABLE WATER INTERCONNECTION BETWEEN CVWD 1611' SYSTEM (ZONE II) AND CITY OF GLENDALE 1666' SYSTEM



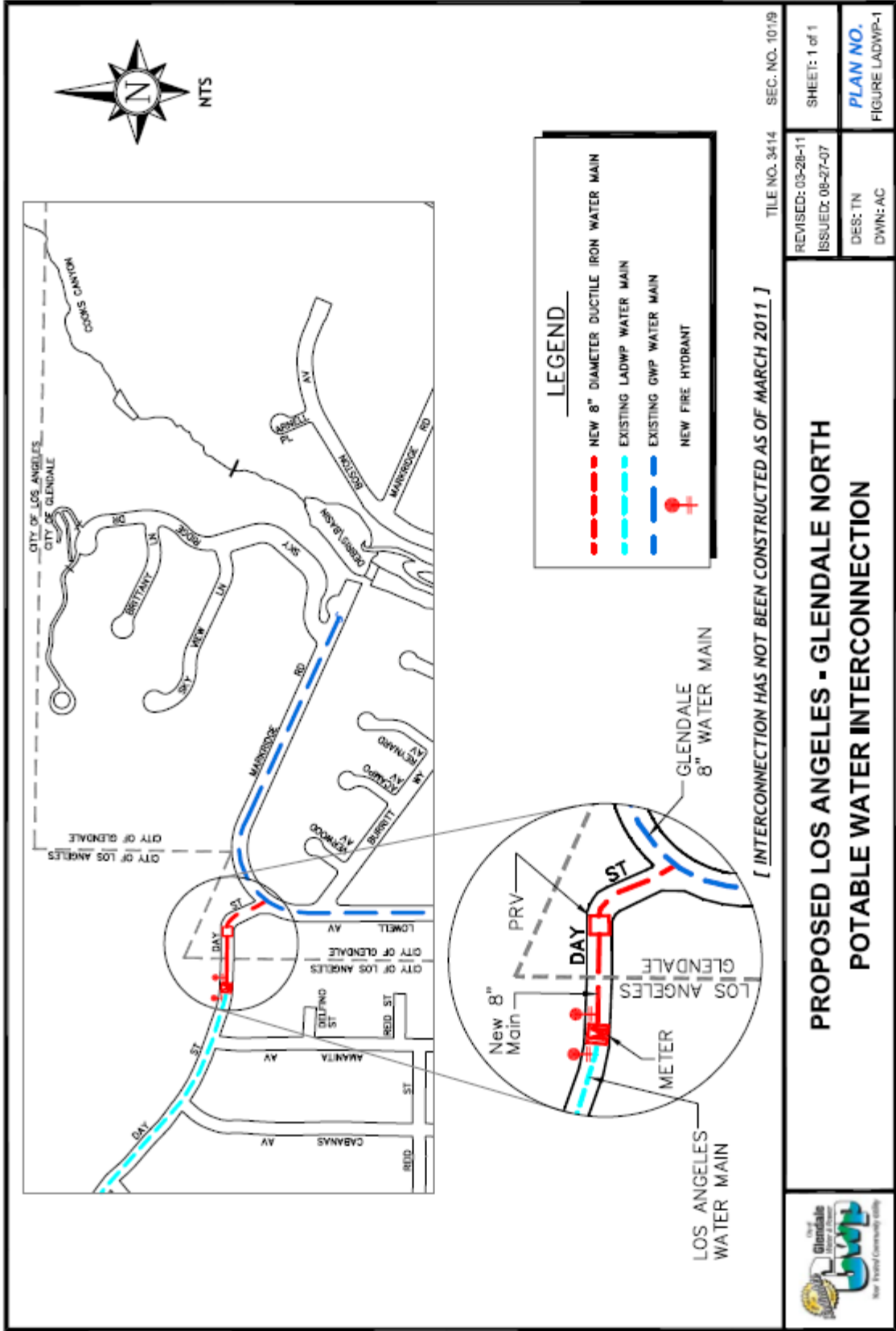
APPROX. DISTANCE BETWEEN FIRE HYDRANTS 1 & 3 - 205 FT.
APPROX. DISTANCE BETWEEN FIRE HYDRANTS 2 & 3 - 520 FT.

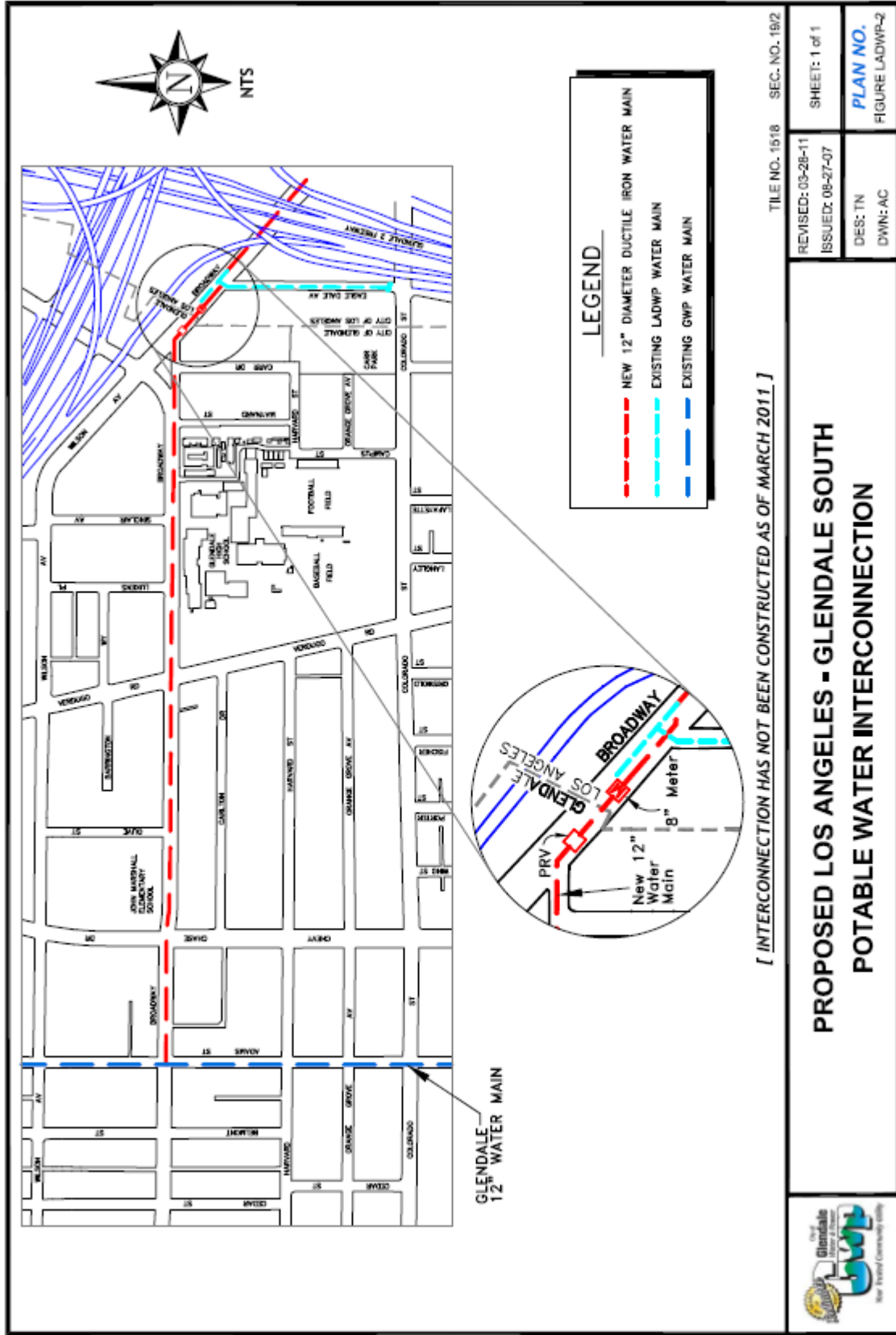
REFERENCE: CVWD DWG. NO. E-720 Sh. 2 of 27
ISSUED ON 09/03/2003
TILE NO. 2915 SEC. NO. 98/9

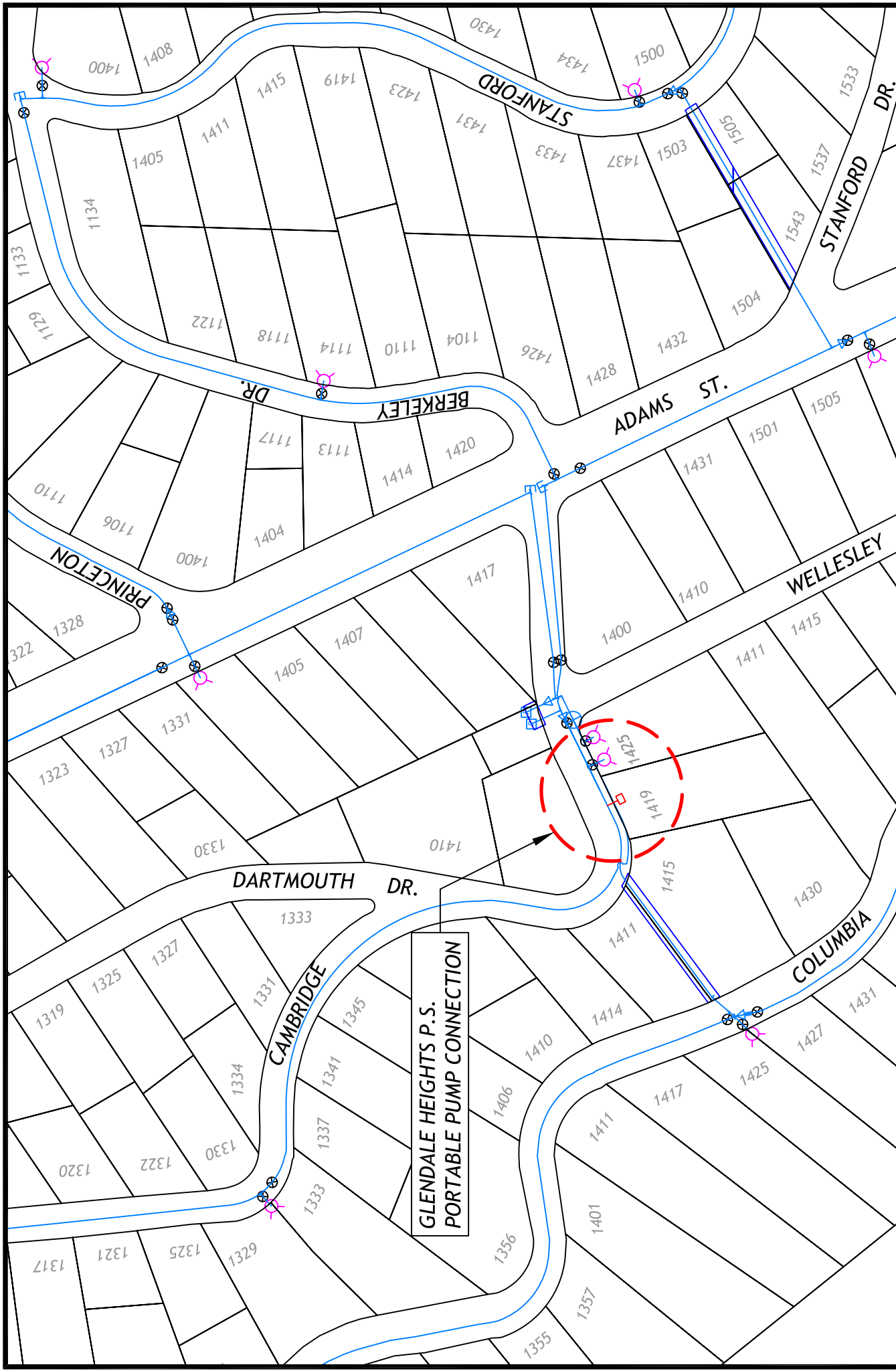
LEGEND			
	GLENDALE WATER MAIN		CVWD WATER MAIN
	CURB		CVWD GATE VALVE
	PROPERTY LINE		CVWD BUTTERFLY VALVE
	EXISTING GWP FIRE HYDRANT		CVWD FIRE HYDRANT ASSEMBLY
	EXISTING GWP VALVE		GLENDALE WATER METER AND SERVICE LATERAL
	REDUCER		GWP INTERCONNECTION F.H.
	BLOW-OFF ASSEMBLY		
	PLUG / CAP		

GLENDALE WATER & POWER CITY OF GLENDALE CALIFORNIA	
NEW YORK AVE. & HONOLULU AVE. CVWD INTERCONNECTION NO. 7	
DES: DWN: GAR T: C: TN	SCALE: NONE DATE: 02-27-96 REV: 03-30-11 APP:
SHEET NO. 1 OF 1	
FIGURE CVWD-7	

File Name: H:\PUBLIC\STAFF_RESOURCES\Emergency Response Tactical Plan Drawings\Inter-Connections Drawings & Information\Figure CVWD-7.dwg
Plot Date: 03/30/11 - 10:48am





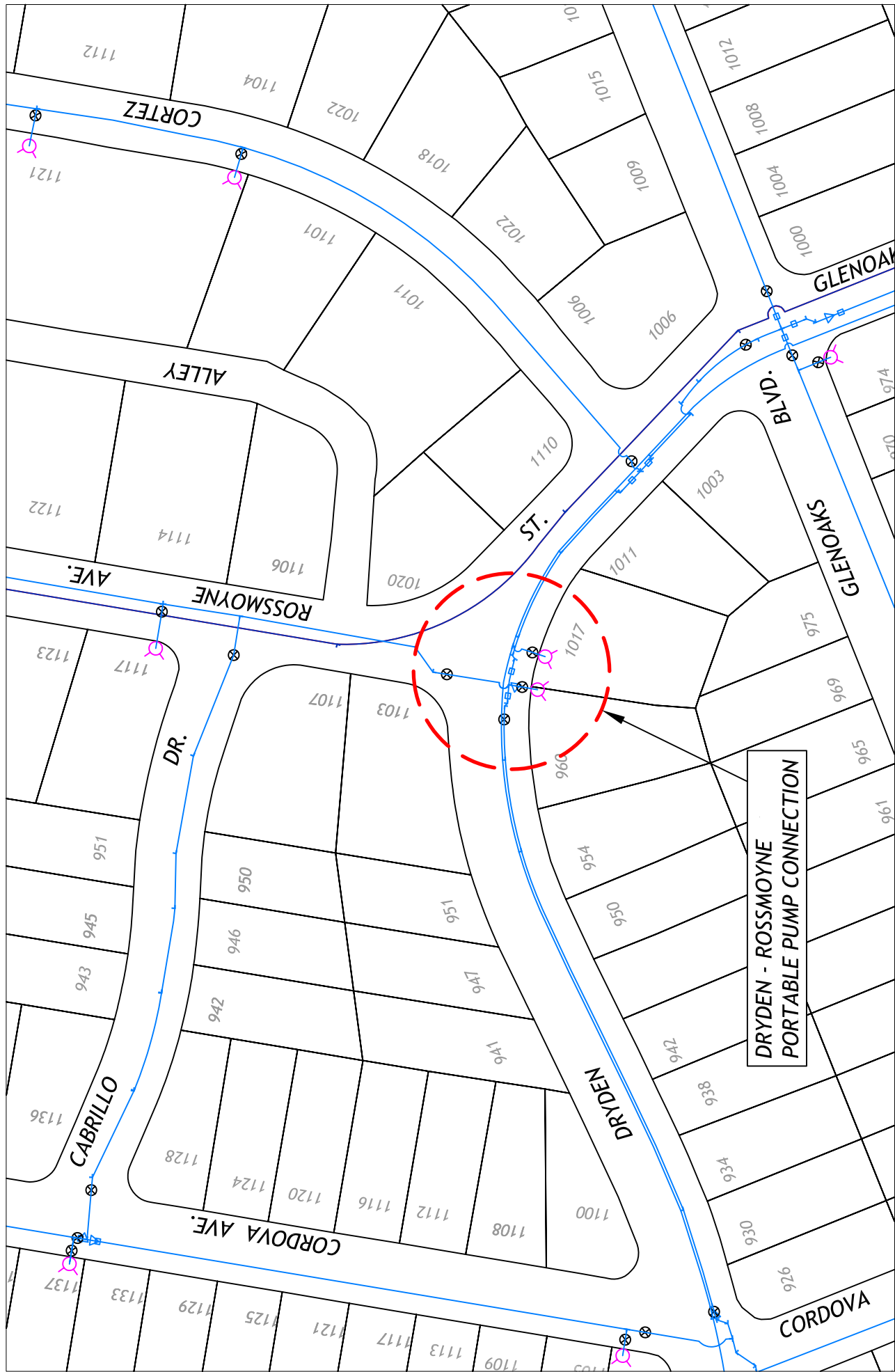


**Glendale Heights P.S.
Portable Pump Connection**

DES: TN	SCALE: NONE	PPC 1
DWN: GR/LC		
T: C: TN	APP:	SHEET: 4 OF 39
DATE: 04-29-10		PLAN NO. 6564-A

**Glendale Heights Pump Station
Portable Pump Connection - Location Map**



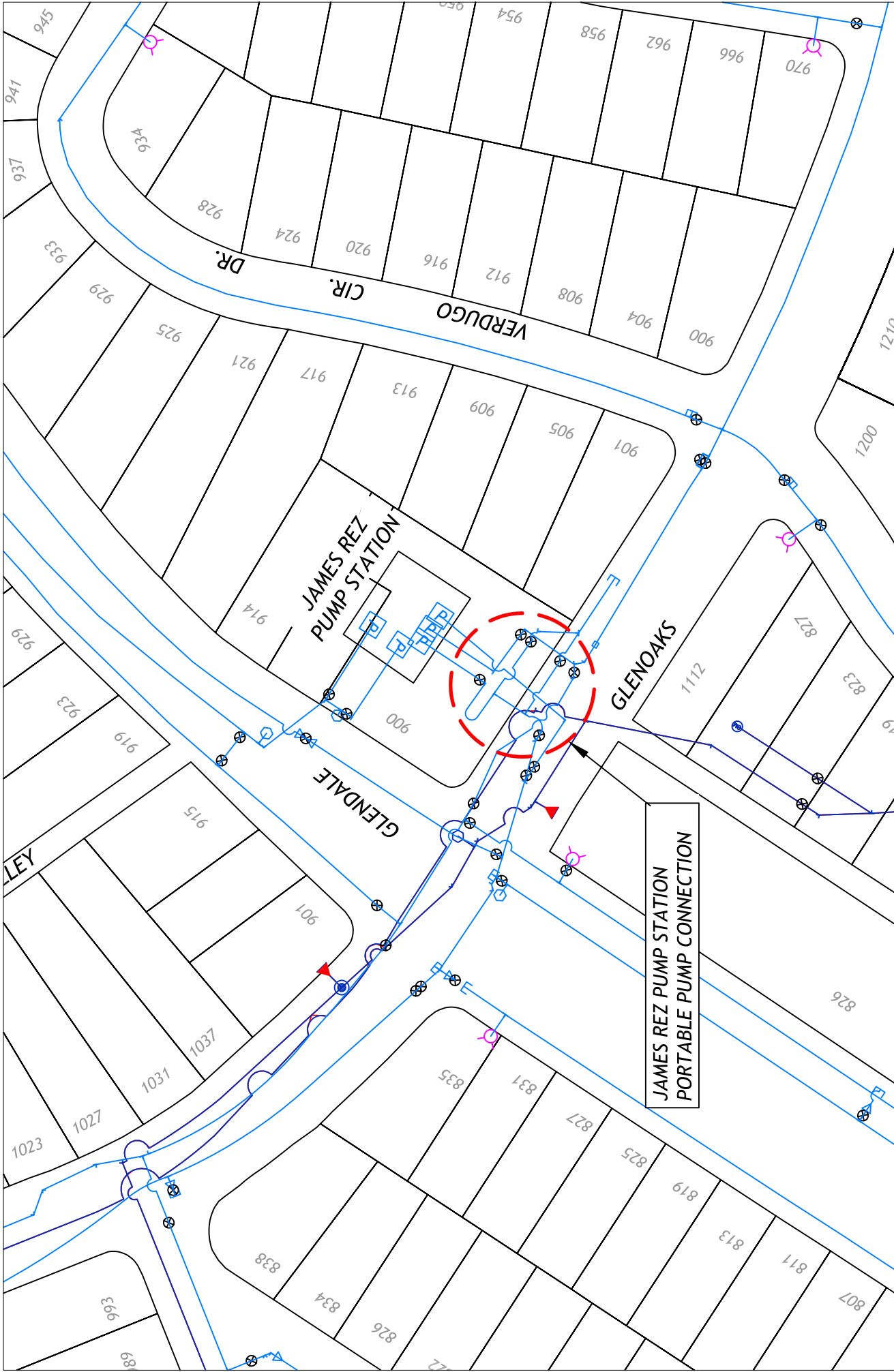


**DRYDEN - ROSSMOYNE
PORTABLE PUMP CONNECTION**

DES: TN	SCALE: NONE	PPC 2
DWN: GR		
T: C: TN	APP:	SHEET 7 OF 39
DATE: 04-29-10		PLAN NO. 6564-A

**DRYDEN - ROSSMOYNE
PORTABLE PUMP CONNECTION - LOCATION MAP**

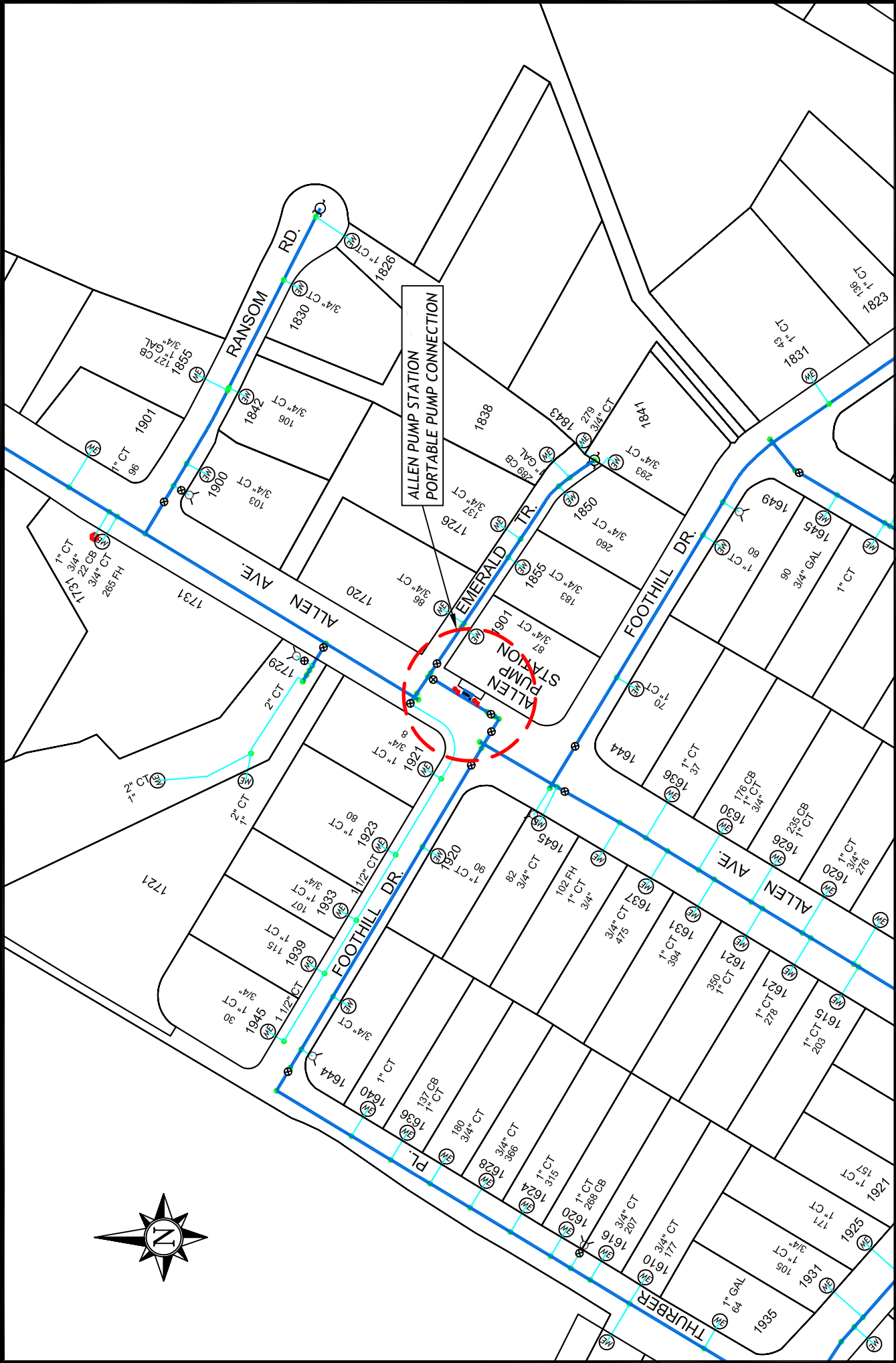




DES: TN	SCALE: NONE	PPC 3
DWN: GR		
T: C: TN	APP:	SHEET 10 OF 39
DATE: 04-29-10		PLAN NO. 6564-A

JAMES REZ PUMP STATION PORTABLE PUMP CONNECTION - LOCATION MAP



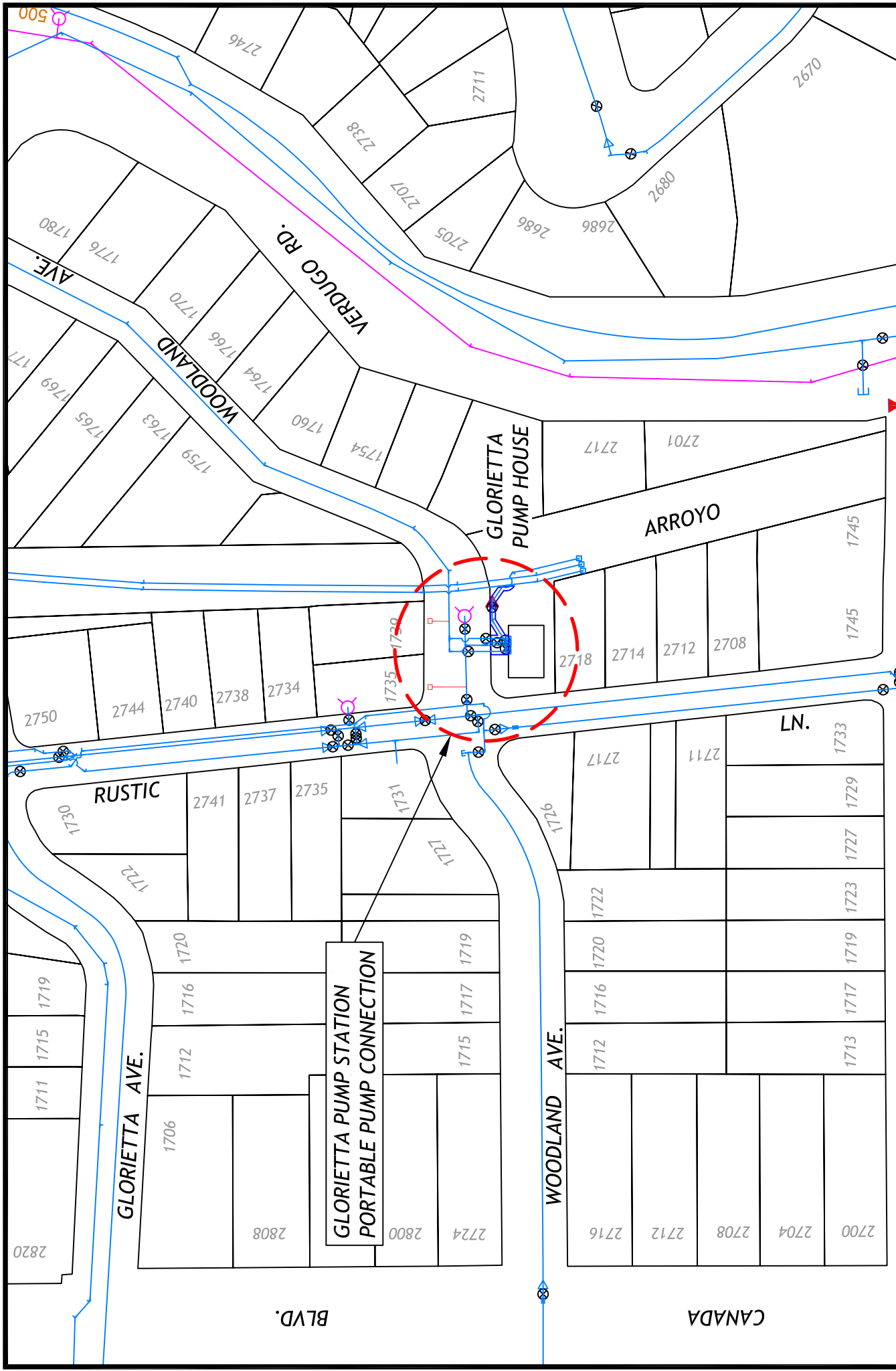


ALLEN PUMP STATION
PORTABLE PUMP CONNECTION

DES: TN	SCALE: NONE	PPC 4
DWN: GR		
T: C: TN	APP:	SHEET 13 OF 39
DATE: 4-29-10		PLAN NO. 6564-A

ALLEN PUMP STATION PORTABLE PUMP CONNECTION - LOCATION MAP

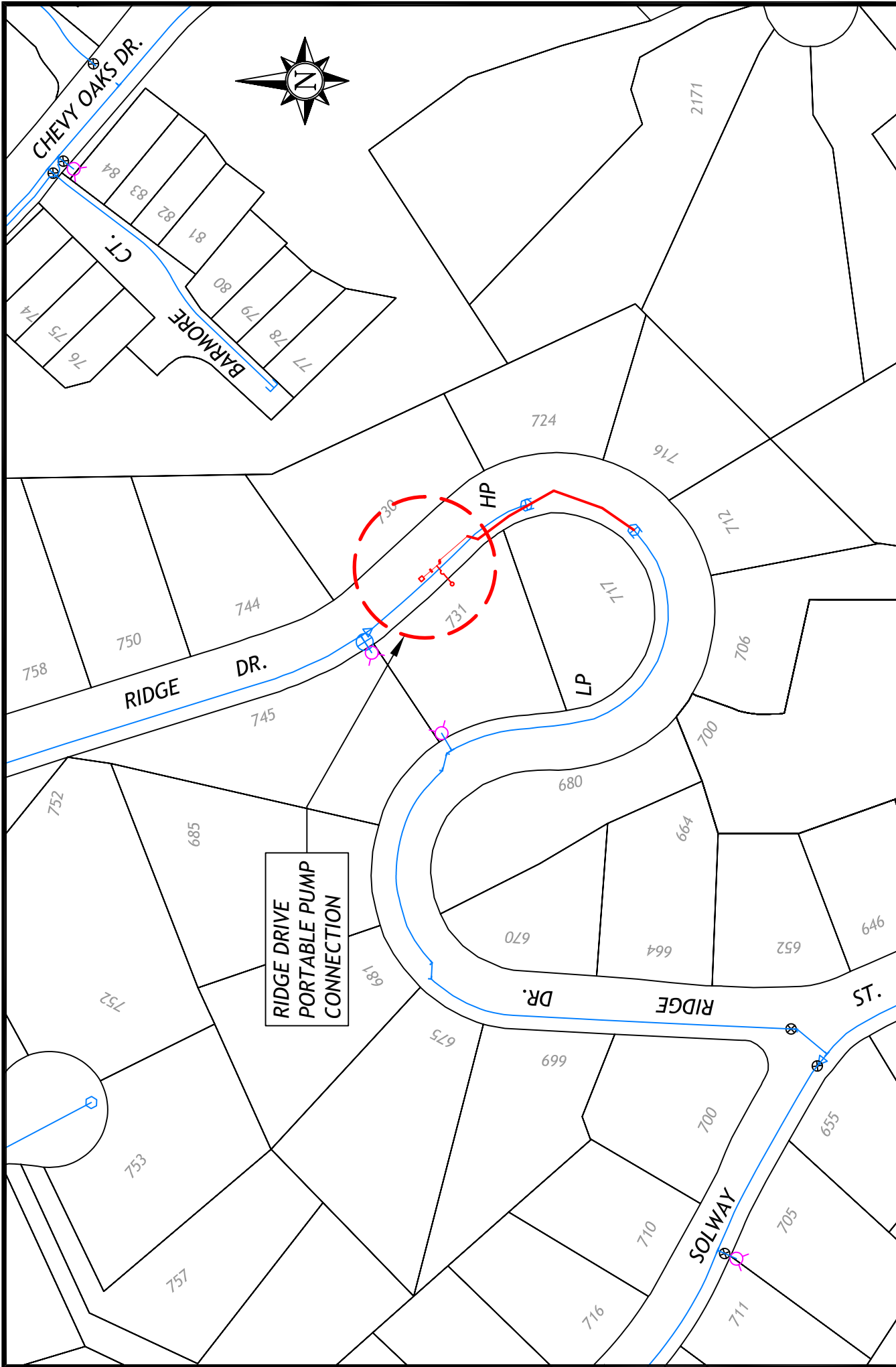




DES: TN	SCALE: NONE	PPC 5
DWN: GR/LC	T: APP:	SHEET 16 OF 39
C: TN		PLAN NO. 6564-A
DATE: 04-29-10		

GLORIETTA PUMP STATION PORTABLE PUMP CONNECTION - LOCATION MAP



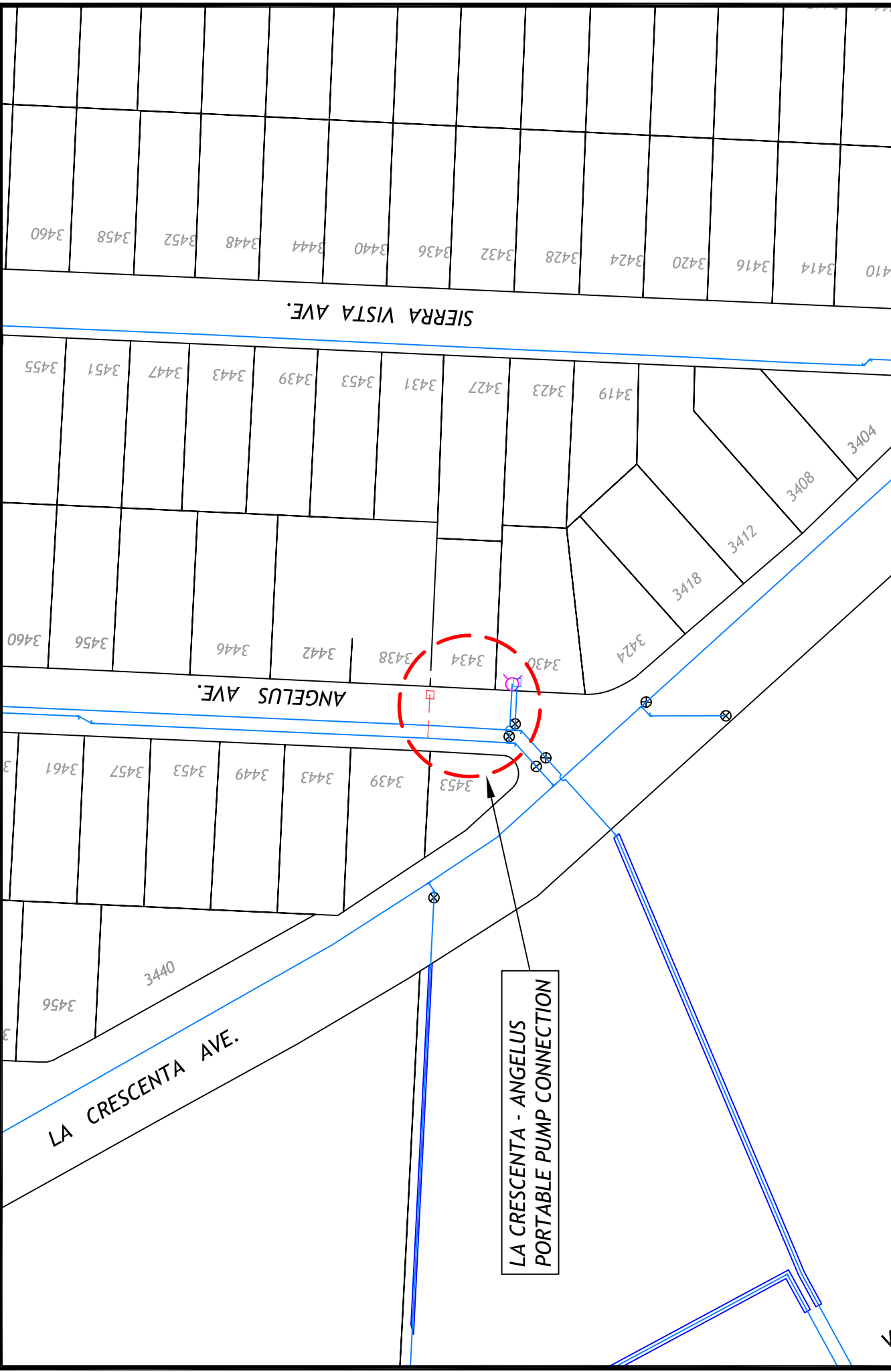


RIDGE DRIVE
PORTABLE PUMP
CONNECTION

DES: TN	SCALE: NONE	PPC 6
DWN: GR		
T: C: TN	APP:	SHEET: 19 OF 39
DATE: 04-29-10		PLAN NO. 6564-A

RIDGE DRIVE PORTABLE PUMP CONNECTION AND
6" WATER MAIN INSTALLATION - LOCATION MAP

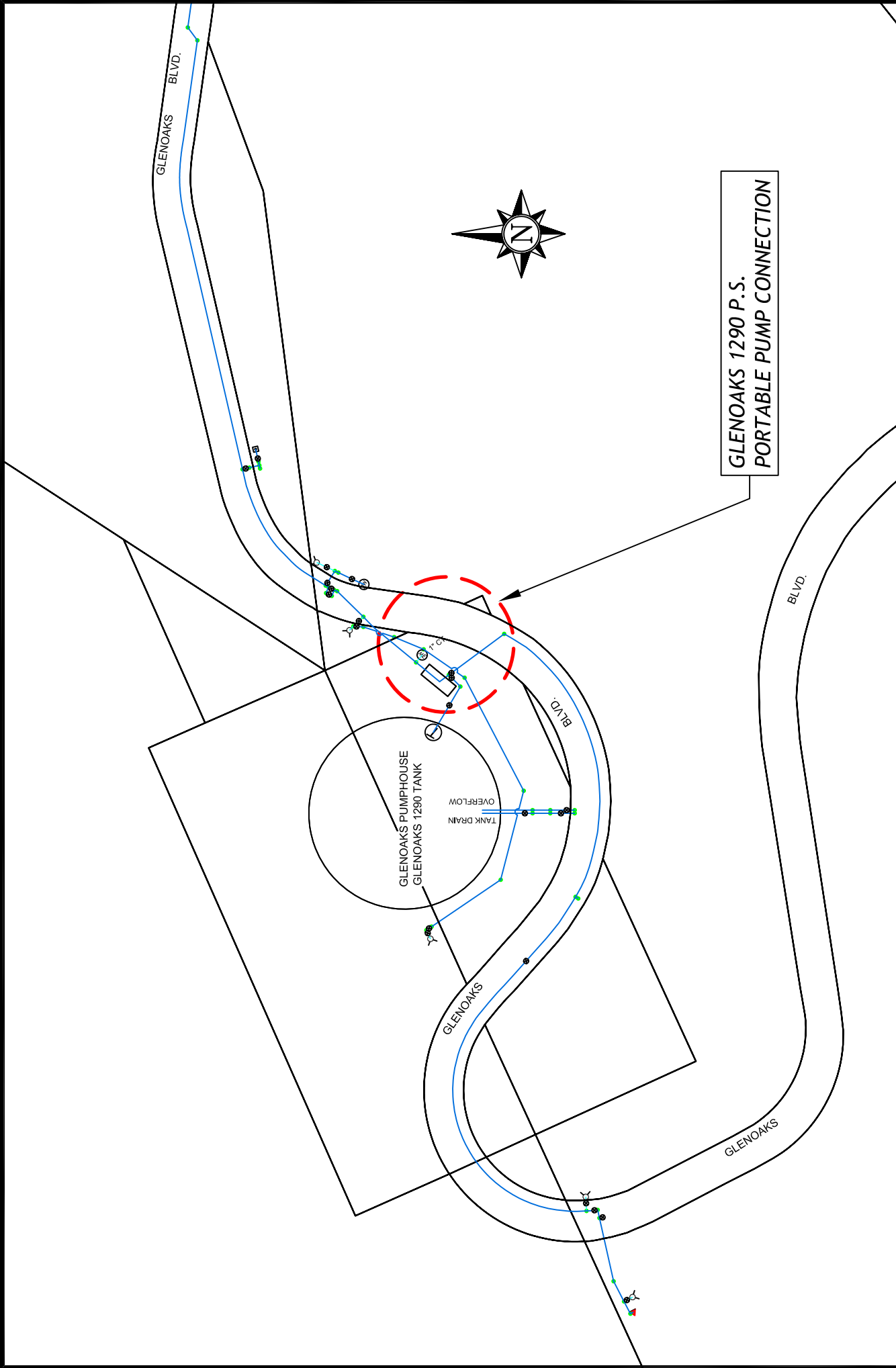




DES: TN SCALE: NONE
DWN: GR/LC
T: C: TN APP:
PPC 7
SHEET 22 OF 39
PLAN NO.
6564-A
DATE: 04-29-10

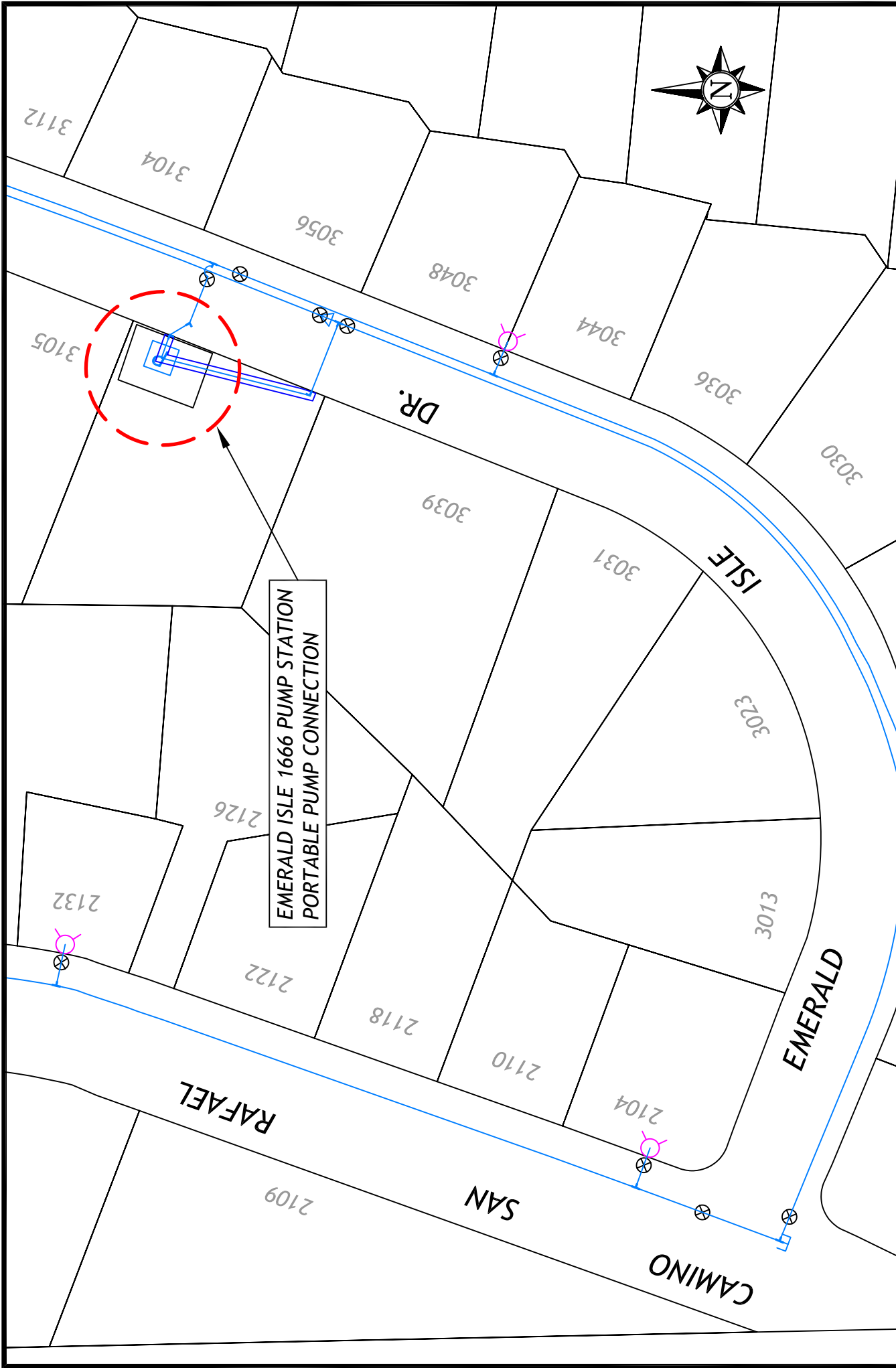
LA CRESCENTA - ANGELUS PORTABLE PUMP CONNECTION - LOCATION MAP





DES: TN	SCALE: NONE	PPC 8
DWN: GR	T: C: TN	SHEET 25 OF 39
APP:		PLAN NO. 6564-A
DATE: 04-29-10		

GLENOAKS 1290 PUMP STATION PORTABLE PUMP CONNECTION - LOCATION MAP

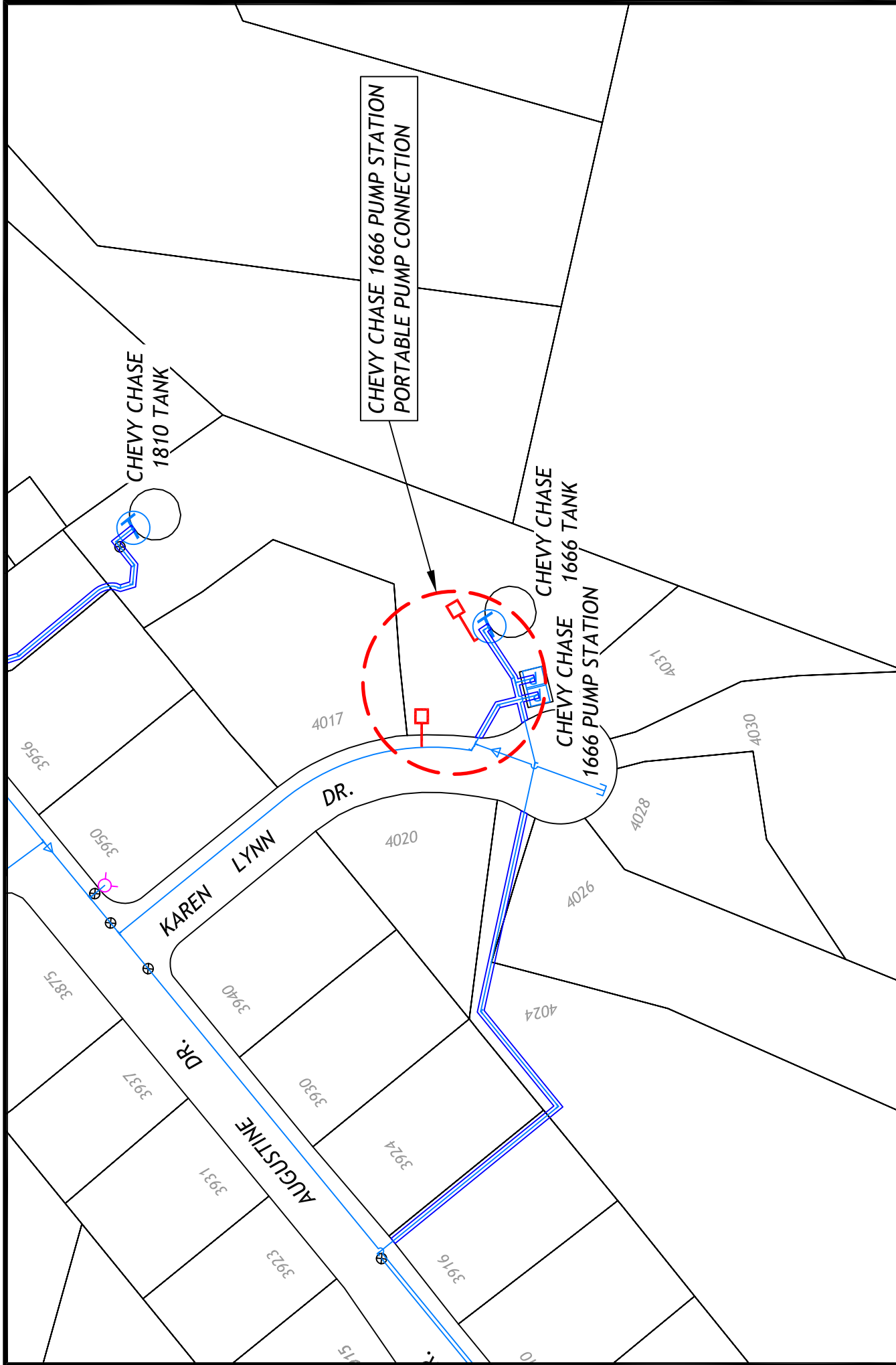


EMERALD ISLE 1666 PUMP STATION
PORTABLE PUMP CONNECTION

DES: TN	SCALE: NONE	PPC 9
DWN: GR/LC		SHEET 28 OF 39
T: C: TN	APP:	PLAN NO. 6564-A
DATE: 04-29-10		

**EMERALD ISLE 1666 PUMP STATION
PORTABLE PUMP CONNECTION - LOCATION MAP**

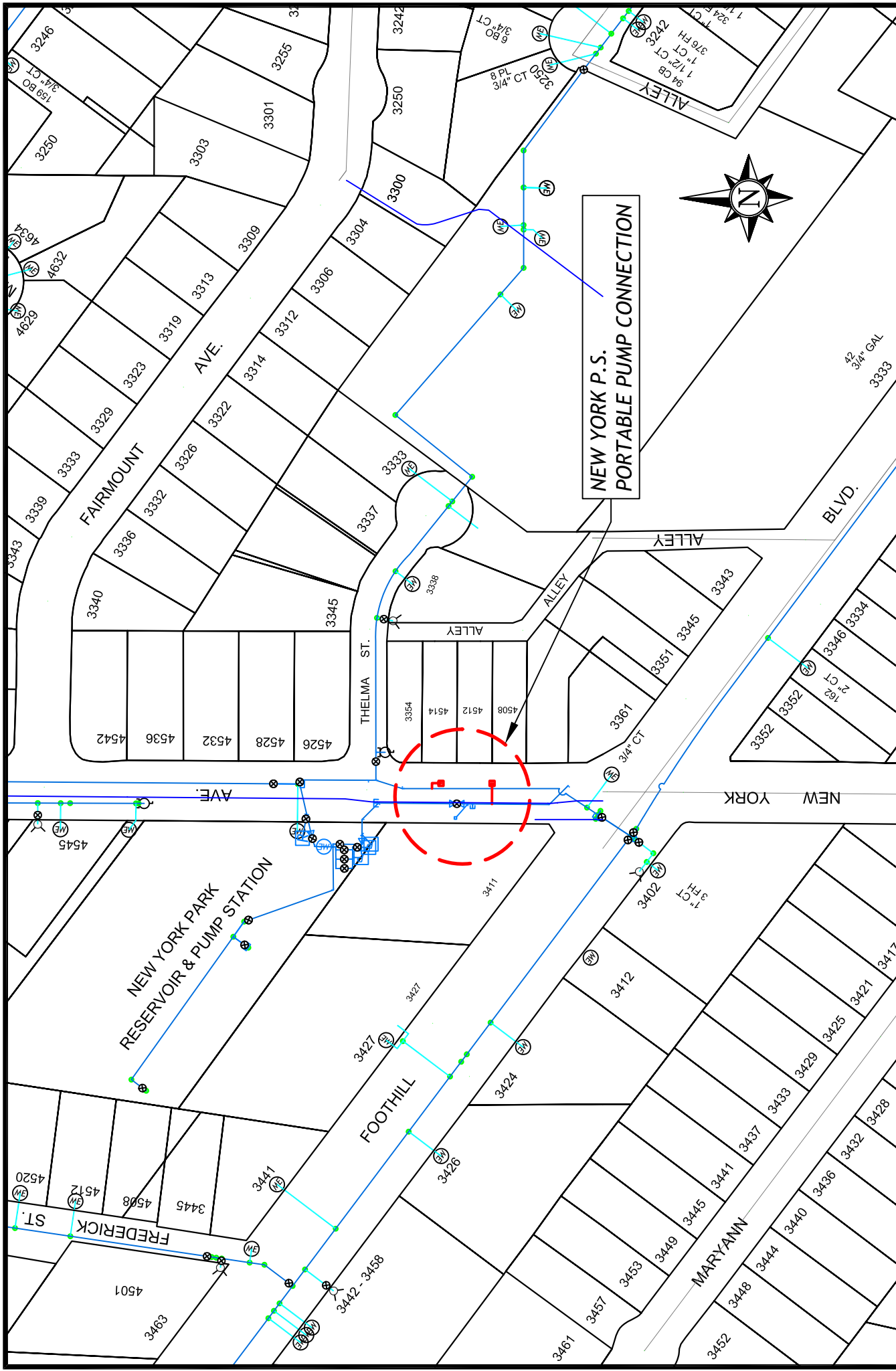




DES: TN	SCALE: NONE	PPC 10
DWN: GR	T: APP:	SHEET: 31 OF 39
C: TN	DATE: 04-29-10	PLAN NO. 6564-A

CHEVY CHASE 1666 PUMP STATION PORTABLE PUMP CONNECTION - LOCATION MAP

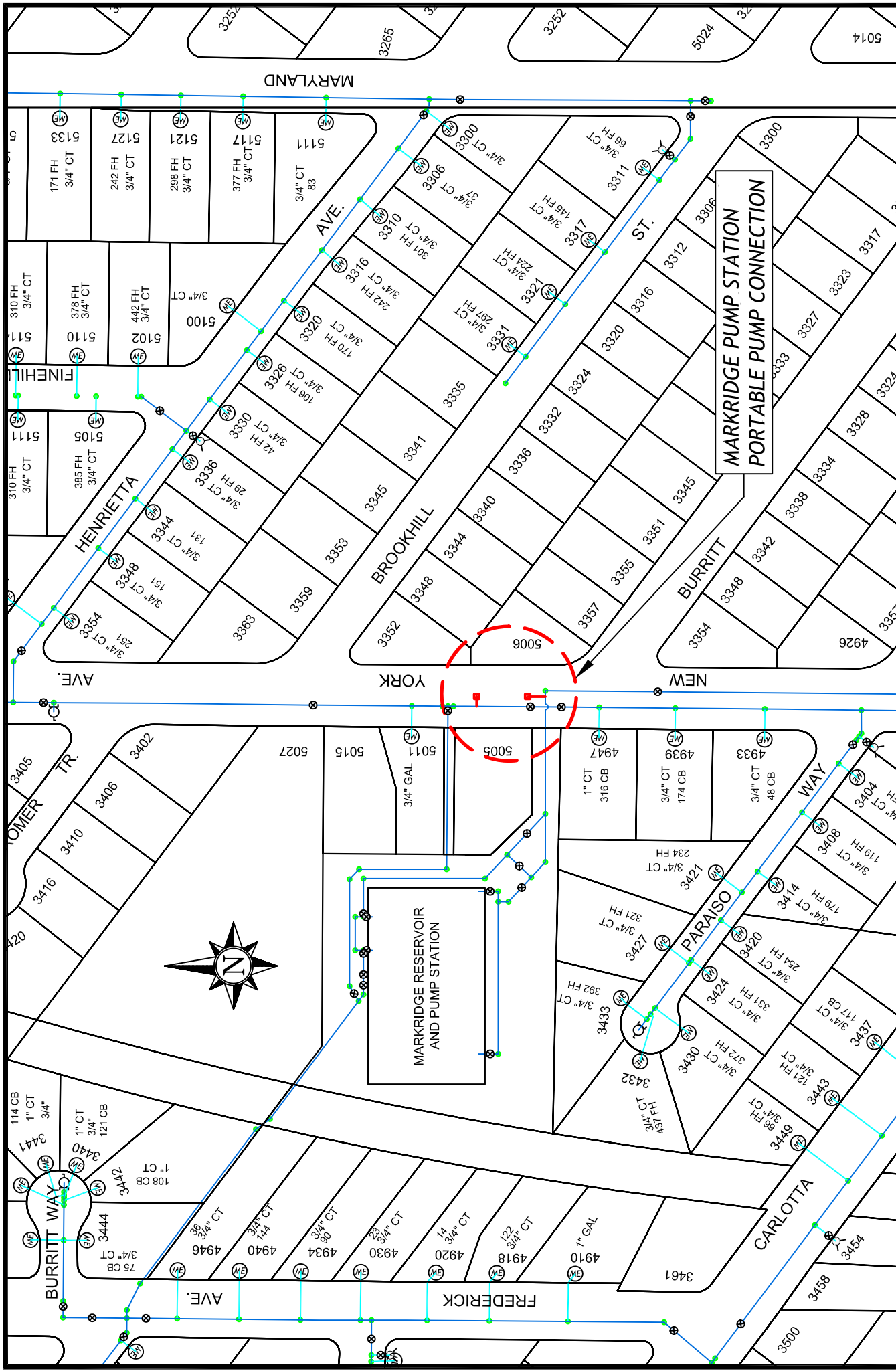




DES: TN	SCALE: NONE	PPC 11
DWN: GR	T: C: TN	SHEET: 34 OF 39
APP:		PLAN NO. 6564-A
DATE: 04-29-10		

NEW YORK PUMP STATION PORTABLE PUMP CONNECTION - LOCATION MAP





**MARKRIDGE PUMP STATION
PORTABLE PUMP CONNECTION**

DES: TN	SCALE: NONE	PPC 12
DWN: GR	T: C: TN	SHEET: 37 OF 39
APP:		PLAN NO. 6564-A
DATE: 04-29-10		

**MARKRIDGE PUMP STATION
PORTABLE PUMP CONNECTION - LOCATION MAP**



Earthquake Emergency

EVALUATION OF EMERGENCIES

- **LEVEL I - MINOR EMERGENCY:**

Level I earthquakes are those that:

- felt by nearly everyone
- feel like the vibrations due to a passing truck
- felt by people while walking
- awakens sleepers
- cause trees to sway and all suspended objects to swing

Level I earthquakes generally have Richter magnitudes less than 4.9. However, when evaluating the potential impact of an earthquake, the epicenter location must also be considered. For example, a Level I earthquake with an epicenter located near Glendale could conceivably have the same effect as a Level I earthquake with an epicenter located outside of the Glendale area. The 1988 Pasadena, 1989 Newport Beach earthquakes are examples of Level I earthquakes.

- **LEVEL II - MAJOR EMERGENCY:** A moderate to severe emergency wherein local resources are not adequate and mutual aid may be required on a regional or statewide basis.

Level II earthquakes are those that:

- are felt by moving people and drivers of motor cars
- are felt by all
- may cause some power outages and communication system overload
- may cause cracks in walls and destroy weak buildings
- may sever pipelines, causing leaks
- may cause some telephone outages
- may vibrate some structures off their supports
- may sever gas lines causing fires

Level II earthquakes generally have Richter magnitudes of 5.0 to 5.9. The 1987 Whittier and 1991 Sierra Madre earthquake have been classified in this category.

- **LEVEL III – CATASTROPHIC EMERGENCY:** A major disaster wherein resources in or near the impacted area are overwhelmed and extensive state and/or federal resources are required.

Level III earthquakes are those that:

- are felt by everyone within the earthquake's vicinity
- sever pipelines breakage (gas, water, sewer, oil, communication etc,)
- create various fires and chemical explosions
- damages dams
- ground cracks and landslides
- buildings collapse

A commonly used term for an earthquake in this category is "the Big One". The Richter magnitude for a Level III earthquake ranges from 6.0 to greater than 8.0. The 1985 Mexico City 8.0, 1988 Armenia 7.2, 1989 San Francisco/Loma Prieta 6.9, 1994 Northridge 6.7, most recently 2010 Haiti 7.0, 2010 Chili 8.8 and 2010 Mexicali 7.2, earthquakes have been classified in this category.

The infrequent occurrence of earthquakes of this magnitude makes it difficult to identify the amount of damage which could be caused locally and regionally; however, a Level III earthquake is expected to result in widespread and extensive damage to Glendale's facilities.

MOBILIZATION

Glendale's primary objective and initial response to an emergency will be to determine the level of mobilization necessary to save lives, maintain personnel and public safety, and provide for the delivery of water. Initial preliminary inspection of Glendale's facilities after an earthquake will dictate the level of mobilization that is required. **NOTE: DO NOT APPROACH FACILITIES OR AREAS WITHIN FACILITIES UNLESS SAFE.**

Mobilization levels have been defined as follows:

TABLE 1-1

	Richter Scale	Mercalli Scale	Level of Mobilization
LEVEL I:	4.0 to 4.9	V	Limited Mobilization required (No damage or minor damage)
LEVEL II:	5.0 to 5.9	VI-VII	Intermediate Mobilization required (moderate damage occurred)
LEVEL III:	6.0 to 8.0	VIII-XII	Full Mobilization required (Major damage occurred)

LEVEL 1

IF INCIDENT OCCURS DURING WORKING HOURS: Richter Scale 4.0 to 4.9

- Water System Operations Supervisor will arrange **staffing with the assistance of the Water Superintendents** to conduct "Emergency Response Inspection of Facilities," and complete the inspection form.
- Inspectors will notify the Water System Operations Supervisor and Water Superintendents that inspections have commenced
- When inspections have been completed, inspectors will contact Water System Operations Supervisor and Water Superintendents to report on damage to system
- Water Superintendents will make arrangements for system repairs
- Water Superintendents will be responsible for keeping Assistant General Manager-Water advised of system status

IF INCIDENT OCCURS AFTER WORKING HOURS: Richter Scale 4.0 to 4.9

- "Stand-by" personnel and Utility Safety Officer will initiate and conduct "Emergency Response Inspection of Facilities," and complete inspection forms
- "Stand-by" person will notify Glendale Dispatch and Water Superintendents that inspections have commenced
- When inspections have been completed, "Stand-by" person will contact Glendale Dispatch and Water Superintendents and report on damage to system
- Water Superintendents or designee person will make arrangements for system repairs
- Water Superintendent or designee person will be responsible for keeping Assistant General Manager-Water advised of system status

LEVEL II

IF INCIDENT OCCURS DURING WORKING HOURS: Richter Scale 5.0 to 5.9

- Assistant General Manager-Water or designee will report to EOC
- The Water Superintendents and Principal Civil Engineer will remain at work and ask all Water Section employees to remain at work

**Glendale Water & Power Department
Emergency Plan Water Section**

- Water System Operations Supervisor will arrange **staffing with the assistance of the Water Superintendents** to conduct "Emergency Response Inspection of Facilities" and complete inspection form
- Inspectors will notify the Water System Operations Supervisor and Water Superintendents that inspections have commenced
- When inspections have been completed, inspectors will contact Water System Operations Supervisor and Water Superintendents to report on damage to system
- Water Superintendents will make arrangements for system repairs
- A Water Section registered engineer will inspect all tanks, reservoirs, and pumping plants; complete inspection form and report to Assistant General Manager-Water
- Water Superintendents will be responsible for keeping Assistant General Manager-Water advised of system status
- Assistant General Manager-Water or designee will evaluate the need for a "Boil Water Advisory" depending on extent of damage
- Water Quality Manager will direct the collection of water samples for analysis in the vicinity of severe damages

IF INCIDENT OCCURS AFTER WORKING HOURS: Richter Scale 5.0 to 5.9

- All employees report to work
- Assistant General Manager-Water or designee will report to EOC
- "Stand-by" personnel will notify Glendale Dispatch and Water Superintendents that inspections have commenced and request back-up staff, if needed
- "Stand-by" personnel and Utility Safety Officer will initiate and conduct "Emergency Response Inspection of Facilities" and complete inspection form
- When inspections have been completed, "Stand-by" personnel will contact Glendale Dispatch and Water Superintendents to report on damage to system
- Water Superintendents or designee person will make arrangements for system repairs
- Water Superintendents will be responsible for keeping Assistant General Manager-Water advised of system status
- A Water Section registered engineer will inspect all tanks, reservoirs, and pumping plants; complete inspection form and report to Assistant General Manager-Water

**Glendale Water & Power Department
Emergency Plan Water Section**

- Assistant General Manager-Water or designee will evaluate the need for a "Boil Water Advisory" depending on extent of damage
- Water Quality Manager will direct the collection of water samples for analysis near severe damages

LEVEL III

IF INCIDENT OCCURS DURING WORKING HOURS: Richter Scale 6.0 to 8.0

This level requires full mobilization of all employees and resources with all employees reporting to work. All emergency response efforts will be coordinated through EOC.

- Assistant General Manager-Water or designee will report to EOC
- Assistant General Manager-Water or designee will immediately issue a "Boil Water Advisory"
- Water Quality Manager will direct the collection of water samples for analysis near severe damages
- The Water Superintendents and Principal Engineer will ask all Water Section employees to remain at work
- Water System Operations Supervisor will arrange **staffing with the assistance of the Water Superintendents** to conduct "Emergency Response Inspection of Facilities," and complete inspection form
- Inspectors will notify the Water System Operations Supervisor and Water Superintendents that inspections have commenced
- When inspections have been completed, inspectors will contact Water System Operations Supervisor and Water Superintendents to report on damage to system
- Water Superintendents will make arrangements for system repairs
- Water Superintendents will be responsible for keeping Assistant General Manager-Water advised of system status
- A Water Section registered engineer will inspect all tanks, reservoirs, and pumping plants; complete inspection form and report to Assistant General Manager-Water

IF INCIDENT OCCURS AFTER WORKING HOURS: Richter Scale 6.0 to 8.0

- Assistant General Manager-Water, Water Superintendents, Supervising Engineers, Supervising Field Personnel and field staff will report to work

**Glendale Water & Power Department
Emergency Plan Water Section**

- Assistant General Manager-Water or designee will report to EOC
- Assistant General Manager-Water or designee will immediately issue a "Boil Water Advisory"
- Water Quality Manager will direct the collection of water samples for analysis in the vicinity of severe damages.
- "Stand-by" personnel will notify Glendale Dispatch and Water Superintendents that inspections have commenced and request back-up staff, if needed
- "Stand-by" personnel and Utility Safety Officer will conduct "Emergency Response Inspection of Facilities" and complete appropriate forms
- When inspections have been completed, "Stand-by" personnel will contact Glendale Dispatch and Water Superintendents to report on damage to the system
- Water Superintendents or designee person will make arrangements for system repairs
- Water Superintendents or designee person will be responsible for keeping Assistant General Manager-Water advised of system status
- A Water Section registered engineer will inspect all tanks, reservoirs, and pumping plants; complete inspection form and report to Assistant General Manager-Water

MUTUAL AID

- **MEMBER AGENCY RESPONSE SYSTEM (MARS):**

As a Member Agency of the Metropolitan Water District (MWD), Glendale will be able to expedite mutual aid/assistance to and from other member agencies via dedicated radio. Following an earthquake of 5.5 or greater in its service area, MWD will activate its EOC and Member Agencies will be notified via radio. Radio should be turned on and monitored, if possible. MWD asks that all Member Agencies provide a status report within one hour of event.

Complete directions, including up-to-date contact information, is located in the UOC Superintendents' Office, in the common room, adjacent to the radio.

- **CALIFORNIA WATER/WASTEWATER RESPONSE NETWORK (CalWARN):**

The purpose of the Water/Wastewater Agency Response Network is to support and promote statewide emergency preparedness, disaster response, and mutual assistance matters for public and private water and wastewater utilities. Glendale is a member and part of Southern Region 1. Complete directions, including up-to-date contact information, is located in the UOC Superintendents' Office, in the common room, adjacent to the radio.

**WATER SECTION
EMERGENCY RESPONSE INSPECTION OF FACILITIES
PATROL ROUTE NO. 1**

Date: _____
Time of Occurrence: _____
Richter Reading: _____
Epicenter: _____

Inspector: _____

LIST OF FACILITY	CHECKED BY	TIME	DAMAGE REPORT
Cooks Canyon Tank & PS			
Dunsmore Tank			
Markridge Reservoir & PS			
New York Reservoir & PS			
Foothill Well			
Shirley Jean Booster			
Glorietta Wells 3, 4, 6			
Verdugo Wells A & B			
VPWTP			
San Luis Rey PS			

Comments: _____

* If damaged, notify appropriate personnel in the Department of Water Resources Division of Dams – See Tab 10 for Contact and phone numbers

PS - Pumping Stations
 RW - Recycled Water

Notes:

1. After inspection, notify Water Superintendent of inspection results. If damage to structures, major leaks, broken bolts, buckled tanks, slope failure or check valves, notify Water Superintendent immediately.
2. Inspect the interior and exterior of pumping plants, exterior of tanks, and the exterior of below-ground reservoirs.

**WATER SECTION
EMERGENCY RESPONSE INSPECTION OF FACILITIES
PATROL ROUTE NO. 2**

Date: _____
Time of Occurrence: _____
Richter Reading: _____
Epicenter: _____

Inspector: _____

LIST OF FACILITY	CHECKED BY	TIME	DAMAGE REPORT
Glorietta Park Res* E&W & PS			
Old Glorietta PS			
Fern Lane Tank & PS (RW)			
Park Manor Res & PS			
Freeway Tank (RW)			
Verdugo Reservoir			
Glendale Heights Tank			
Glendale Heights PS			

Comments:

* Glorietta-East: If damaged, notify appropriate personnel in Department of Water Resources - Division of Safety of Dams - See TAB 10 for contacts and phone numbers.

PS - Pumping Stations
 RW - Recycled Water

Notes:

1. After inspection, notify Water Superintendent of inspection results. If damage to structures, major leaks, broken bolts, buckled tanks, slope failure or check valves, notify Water Superintendent immediately.
2. Inspect the interior and exterior of pumping plants, exterior of tanks, and the exterior of below-ground reservoirs.

**WATER SECTION
EMERGENCY RESPONSE INSPECTION OF FACILITIES
PATROL ROUTE NO. 3**

Date: _____
Time of Occurrence: _____
Richter Reading: _____
Epicenter: _____

Inspector: _____

LIST OF FACILITY	CHECKED BY	TIME	DAMAGE REPORT
Jim Rez Pump Station			
MWD - 2			
Glenoaks 969* Res & PS			
Lower Scholl PS (RW)			
Glenoaks 1290 Tank & PS			
Glenoaks 1666 Tanks			
Glenoaks Tank (RW)			
Upper Scholl Tank & PS (RW)			
Scholl Canyon Tank & PS			
Glendale High PS (RW)			

Comments: _____

* If damaged, notify appropriate personnel in Department of Water Resources Division of Safety of Dams - See TAB 10 for contacts and phone numbers.

PS - Pumping Stations
 RW - Recycled Water

Notes:

1. After inspection, notify Water Superintendent of inspection results. If damage to structures, major leaks, broken bolts, buckled tanks, slope failure or check valves, notify Water Superintendent immediately.
2. Inspect the interior and exterior of pumping plants, exterior of tanks, and the exterior of below-ground reservoirs.

**WATER SECTION
EMERGENCY RESPONSE INSPECTION OF FACILITIES
PATROL ROUTE NO. 4**

Date: _____
Time of Occurrence: _____
Richter Reading: _____
Epicenter: _____

Inspector: _____

LIST OF FACILITY	CHECKED BY	TIME	DAMAGE REPORT
Diederich Res * & PS			
Melwood Res & PS			
Rossmoyne 1666 Tanks & PS			
Rossmoyne Res & PS			
San Luis Rey Tanks			
Western Res*, PS & MWD- 3 Brand Park*Reservoir			
Grandview Tank (RW)			
Allen Tank & PS			
Grandview Basins			

Comments: _____

* If damaged, notify appropriate personnel in Department of Water Resources Division of Safety of Dams - See TAB 10 for contacts and phone numbers.

PS - Pumping Stations
 RW - Recycled Water

Notes:

1. After inspection, notify Water Superintendent of inspection results. If damage to structures, major leaks, broken bolts, buckled tanks, slope failure or check valves, notify Water Superintendent immediately.
2. Inspect the interior and exterior of pumping plants, exterior of tanks, and the exterior of below-ground reservoirs.

**WATER SECTION
EMERGENCY RESPONSE INSPECTION OF FACILITIES
PATROL ROUTE NO. 5**

Date: _____
Time of Occurrence: _____
Richter Reading: _____
Epicenter: _____

Inspector: _____

LIST OF FACILITY	CHECKED BY	TIME	DAMAGE REPORT
Chevy Chase 968 Res * & PS			
Chevy Chase 1290 Res * & PS			
Emerald Isle 1290 PS			
Linda Vista PS			
Chevy Chase 1666 Tanks & PS			
Chevy Chase 1810 Tank			
Emerald Isle 1666 Tank			
Emerald Isle 1666 PS			
Emerald Isle 1850 Tank			

Comments: _____

* If damaged, notify appropriate personnel in Department of Water Resources Division of Safety of Dams - See TAB 10 for contacts and phone numbers.

PS - Pumping Stations
 RW - Recycled Water

Notes:

1. After inspection, notify Water Superintendent of inspection results. If damage to structures, major leaks, broken bolts, buckled tanks, slope failure or check valves, notify Water Superintendent immediately.
2. Inspect the interior and exterior of pumping plants, exterior of tanks, and the exterior of below-ground reservoirs.

**WATER SECTION
EMERGENCY RESPONSE INSPECTION OF FACILITIES
PATROL ROUTE NO. 6**

Date: _____
Time of Occurrence: _____
Richter Reading: _____
Epicenter: _____

Inspector: _____

LIST OF FACILITY	CHECKED BY	TIME	DAMAGE REPORT

Comments: _____

* If damaged, notify appropriate personnel in Department of Water Resources Division of Safety of Dams - See T AS 10 for contacts and phone numbers.

PS - Pumping Stations
 RW - Recycled Water

Notes:

1. After inspection, notify Water Superintendent of inspection results. If damage to structures, major leaks, broken bolts, buckled tanks, slope failure or check valves, notify Water Superintendent immediately.
2. Inspect the interior and exterior of pumping plants, exterior of tanks, and the exterior of below-ground reservoirs.

Fire Emergency

A fire emergency may occur, without warning, at any place and time within the City. This includes fires at a water facility, a high-rise building or major commercial facility, a series of fires throughout the City from an earthquake, a major brush, or multi-building fire creating a conflagration in a single area.

Water staff involvement in these situations will be required. A small, localized fire at a water facility may result in water delivery problems between the affected pump station and the associated storage facility. Large rural area fires have the potential to impede both staff access to critical pump stations and delivery of water to control the fire. Electricity to power pump stations may not be available. The level of Water staff involvement will be determined by the severity and location of the fire. **NOTE: The end of Chapter 5 has a list of sites equipped to use the Portable Pump and/or Portable Generator.**

The Water Superintendents primary role will be to identify the Water Section response. Their secondary role is to keep the Assistant General Manager-Water informed of what is happening. The material below describes the Water Section's response to fire emergencies.

FIRE AT A WATER FACILITY

The water facilities in the City contain significant mechanical and electrical equipment. Like other types of structures, they are vulnerable to fires from sources inside and outside. Water Department facilities utilize smoke alarms that are linked to the SCADA System. If a fire occurs at a Water Department Pump Station, the SCADA system will send an alarm to Glendale Dispatch.

IF THE FIRE OCCURS DURING WORKING HOURS:

- Glendale Dispatch will contact the Fire Department, Water Superintendents and the Utility Safety Officer
- The Water Superintendents will dispatch the appropriate staff members to review the situation
- The Water Superintendents will work with their staff to identify any changes in water system operation that may be required if the facility is no longer operational and he will begin identifying corrective actions

IF THE FIRE OCCURS AFTER WORKING HOURS:

- Glendale Dispatch will contact Fire Department Dispatch then Stand-By person, Water Superintendents and Utility Safety Officer

IF THE FIRE OCCURS AFTER WORKING HOURS:

- The Water Superintendents will dispatch the appropriate staff members to review the situation
- The Water Superintendents will work with their staff to identify any changes in water system operation that may be required if the facility is no longer operational and they will begin identifying corrective actions

MAJOR STRUCTURE OR BRUSH FIRE

In case of a major structure or brush fire in the City, the primary need for the Water Section is to make sure an adequate water supply is available. A major structure fire is classified as a Class 2 Alarm Fire or greater. Depending on the location and magnitude of the fire, the Water Section staff will respond. In the Elevation 724 service zone there are many large reservoirs that could provide an almost endless supply of water. Also, the City's major structures are located in this Service Zone. The chances of running out of water to fight a fire are remote. In the upper service zones of the City the amount of stored water is considerably less. In these areas, the Water Section staff will need to pay close attention to reservoir storage conditions. Utility Safety Officer will be on scene to ensure the safety of water personnel.

IF THE FIRE OCCURS DURING WORKING HOURS - In Elevation 724 Service Zone:

- A Trouble Shooter is to be dispatched to the site of the fire to make sure water is available from the hydrant for fire suppression
- In the Elevation 724 Service Zone, the staff member can leave after water availability is assured
- The Water Facility Operators will be asked by the Trouble Shooter to review the status of water storage in reservoirs serving the fire.

IF THE FIRE OCCURS DURING WORKING HOURS-Outside Elevation 724 Svc. Zone:

- Trouble Shooter is to remain on site until the fire is over
- Trouble Shooter is to request that Water Facility Operators review the status of water storage in reservoirs serving the fire.

- The Water Facility Operators will be asked by the Trouble Shooter to physically check the water levels in the reservoir for verification of storage conditions, and the operational status of the pumping plant delivering water into the reservoir of concern

IF THE FIRE OCCURS AFTER WORKING HOURS (ALL SERVICE ZONES):

- Glendale Dispatch will dispatch "Stand-by" person to the fire location
- "Stand-by" person will ensure that water is available
- The identical procedures as above are to be observed except that Water Facility Operators are to be called in if the "Stand-by" person deems it necessary

MAJOR CONFLAGRATION

If there is a major brush fire such as the College Hills fire or a fire involving many major structures in close proximity creating a high level of water needs, the Water Section staff will closely monitor water availability in reservoirs serving the fire and at the fire location. This is especially critical in areas outside of the Elevation 724 Service Zone. It is highly likely that the City's [Emergency Operations Center](#) will be activated for this type of disaster. Utility Safety Officer will be on scene to ensure the safety of water personnel.

IF THE FIRE OCCURS DURING WORKING HOURS:

- The Water Superintendents will make arrangements to immediately review the reservoir storage conditions in the affected areas.
- In areas outside of the Elevation 724 Service Zone, Water Facility Operators will be dispatched to the reservoirs serving the fire to verify water levels and the operational status of the pumping plant serving the reservoir
- Water Section staff will be dispatched to the fire location to make sure there are no problems with water availability from the fire hydrants
- Water Section staff will stay at the fire location until the fire is over
- Water Facility Operators will be asked to periodically visit the storage reservoirs to verify the actual reservoir storage levels and operational status of the pumping stations. This will be especially critical in areas outside of the Elevation 724 Service Zone.

IF THE FIRE OCCURS AFTER WORKING HOURS:

- The procedure will be the same as above except that Glendale Dispatch will notify the Stand-By person and the Water Superintendent that a major fire is occurring in the City.

Water Quality Emergency Procedures

A Water Quality Emergency in the distribution system arises when there is or could be contamination of the drinking water. A problem may be identified because of a known contamination of the water supply or could be suspected by a change in the color of the water, the taste of the water, the smell of the water, persistent citizen calls of similar nature, complaints of stomach problems such as diarrhea and dizziness or something else unusual about the water. The problem may also arise from an earthquake or other natural disaster, a failure in water treatment or a significant breakdown in the distribution system.

NOTE: If flushing is required see MS4 Permit and coordinate discharge with Environmental Section.

If the Incident Occurs:

During Normal Working Hours:

- ~ The first responder/Incident Commander will be the Water Troubleshooters, or Water Quality Staff person, who:
- ~ Confirms that there is a Water Quality problem, and its magnitude.
- ~ Reports the status to the Water Quality Manager and Water Superintendents, or designee, and the Assistant General Manager Water.

Water Quality Manager, Superintendents or Designee:

- ~ Dispatches qualified person to area to take additional samples, and arranges for testing ([see list of qualified samplers, who are listed according to priority](#))
- ~ Arranges for personnel to take appropriate action.
- ~ Notifies Assistant General Manager Water or designee.

During Non-Regular scheduled Working hours:

- ~ The first responder is the Water Stand-by person (Afterhours Troubleshooter) who:
- ~ Confirms that there is a Water Quality problem, and its magnitude.
- ~ Reports on the status to the Water Quality Manager, Water Superintendents, or designee.

Water Quality Manager, Superintendents or Designee:

- ~ Dispatches Principal Water Quality Specialist, or other qualified samplers to area to take additional samples, and arranges for testing ([see list of qualified samples](#)).
- ~ Arranges for personnel to take appropriate action.
- ~ Notifies Assistant General Manager Water or designee.

Emergency Boil Water Advisory

EMERGENCY BOIL WATER ADVISORY

BACKGROUND

In the event that damage has occurred to Glendale's or the Metropolitan Water District of Southern California's treatment plants and/or distribution systems, the possibility of contamination exists. The damage to facilities could be the result of an earthquake, other natural disaster, or a severe treatment plant or distribution system accident. The boil water advisories outline water purification procedures as a precaution, until Glendale notifies consumers that the water is safe to drink. This section contains boil water advisories. Boil water advisories will be issued by Glendale to water customers, as authorized by the Assistant General Manager-Electric & Water Services or his designee.

CRITERIA FOR ISSUING BOIL WATER ADVISORY

Criteria for issuance of a boil water advisory to consumers in an emergency situation:

- a. Known discharge of wastewater or any foreign substances into drinking water supply system;
- b. Significant loss of pressure in distribution system pipelines;
- c. Confirmed analytical evidence of microbiological contamination of the drinking water supply; or
- d. Extensive treatment process failure resulting in water that is unsafe to drink.

Although similar criteria would be an integral part of any decision to issue a boil water advisory, they do not mandate boil water advisory. However, these criteria would certainly result in notification to the State Water Resources Control Board – Division of Drinking Water (DDW). The boil water advisory would remain in effect until a firm determination is made that the water is safe for consumption. Any decision to rescind a boil water advisory would be coordinated with DDW.

GEOGRAPHIC EXTENT OF ADVISORY

When necessary, boil water advisory will be restricted to those areas affected by any of the criteria mentioned above. The Assistant General Manager-Electric & Water Services, the Water Superintendents and/or the Water Quality Manager will determine the geographic extent of the advisory.

WATER QUALITY RESTORATION

The Assistant General Manager-Electric & Water Services or designee will identify specific actions in order to correct the water quality problem

BOIL WATER ADVISORY FLYER TO RESIDENTS

The boil water advisory would be hand carried and posted at readily visible locations in the affected area, such as building entrances and utility poles. In addition, these fliers would be distributed to commercial establishments in the affected area, posted in storefront windows and used as shopping-bag stuffers. If the impacted area is small, fliers may be distributed door-to-door, possibly with the help of law enforcement officials. The geographic boundaries for the boil water advisory will be clearly defined.

The notice advises residents of the affected area to boil their tap water as a safety precaution due to the recent emergency situation. The residents are asked to boil their water until Glendale is able to complete water quality analysis and can assure that the water is safety to drink.

(SAMPLE)

NOTIFICATION TO RESIDENTS OF GLENDALE DATE: _____

**THE CITY OF GLENDALE WATER DEPARTMENT
EMERGENCY BOIL WATER ORDER**

Due to the recent (Insert specific emergency situation), the City of Glendale Water Department in conjunction with the State Water Resources Control Board - Division of Drinking Water is advising residents (or describe specific area) to use boiled tap water or bottled water for drinking and cooking purposes as a safety precaution. **All tap water used for drinking and cooking should be boiled for at least 1 minutes.** An alternative method of purification for residents that do not have gas or electricity available is to use unscented liquid household bleach (Clorox, Purex, etc.). To do so, add 8 drops of bleach per gallon of clear or 16 drops per gallon of cloudy water mix thoroughly, and allow standing for 30 minutes before using. A chlorine-like taste and odor will result from this purification procedure and is an indication that adequate disinfection has taken place. Water purification tablets may also be used by following the manufacturer's instructions.

Failure to follow this advisory could result in stomach or intestinal illness.

The Water Department will notify residents immediately as soon as it is determined that the water is safe to drink.

For more information, please visit the GWP website below for real-time updates or call (818) 548-2011:

<http://www.glendalewaterandpower.com>

Glendale Water Quality
Section:

Working Hours: 818- 548-3962

After Hours: 818- 548-2011

State Water Resources
Control Board-DDW:

General Information:818-551-2004

Fax: 818-551-2054

Los Angeles County
Department of Public Health:

Telephone: (626) 430-5420

Fax: (626) 813-3013

**BOIL WATER ADVISORY ANNOUNCEMENT TO
OTHER GLENDALE DIVISIONS**

Emergency situations may require cooperation from or coordination with other Glendale offices in assisting the residents with other individual concerns and questions. In order to thoroughly assist the public and to disseminate consistent information, the boil water advisory will be distributed to other Glendale offices listed below:

<u>Group</u>	<u>Attention</u>	<u>Phone #</u>	<u>Fax #</u>
1. Emergency Oper. Center	Incident Command	818/548-2121	818/545-4325
2. Water Engineering	Raja Takidin	818/548-2062	818/240-4754
3. UOC - Water	Dave Massie	818/548-2011	818/543-1428
4. Customer Services	Tami Vallier	818/548-3360	818/240-9418
5. Management Services	City Manager/ Director of Communications/ Tom Lorenz	818/548-4844	818/547-6740

BOIL WATER ADVISORY ANNOUNCEMENT TO MEDIA

This notice is designed to be disseminated through electronic media and will be utilized to give **immediate** notice to water consumers of a water quality emergency. The geographic boundaries for the boil water advisory will be clearly defined.

The notice outlines water purification procedures to be used by the consumer as a precaution, until Glendale notifies consumers that the water is safe to drink.

<u>GROUP</u>	<u>PHONE</u>	<u>FAX/EMAIL</u>
KFWB	(323)900-2098	NONE/comments@kfwb.com
KNX	(323)900-2070	NONE/knxnews@cbsradio.com
LA TIMES	(213)237-5000	NONE/Barbara.Thomas@latimes.com
NEWS PRESS	(818) 637-3200	(818) 241-1975
DAILY NEWS	(818)731-3000	NONE/dnmetro@dailynews.com
CHANNEL 2 (CBS)	(818)655-2299	(818) 655-2221
CHANNEL 4 (NBC)	(818)840-4321	(818) 840-3535
CHANNEL 5 (KTLA)	(323)460-5517	(213) 460-5333
CHANNEL 7 (ABC)	(818)863-7777	(818) 863-7080
CHANNEL 9 (KCAL)	(818)655-2299	(818) 655-2291
CHANNEL 11 (FOX)	(310)584-2025	(818) 584-2023
CNN	(404)821-1500	NONE/www.cnn.com/feedback/
ASSOCIATED PRESS	(212)621-1500	NONE/www.ap.org/company/contact-us
UNITED PRESS INT'L	NONE	NONE/newstips@upi.com
CITY OF BURBANK E.O.C.	(818) 238-1516	(818) 238-3491
ORANGE COUNTY REGISTER	(714)796-7075	NONE/www.ocregister.com/
MEDIA PAGE	(310)351-2504	NONE/http://www.mediapage.com/
CITY NEWS	(310) 481-0404	(310) 481-0416
KCOP	(310)584-2025	(818) 585-2023

**BOIL WATER ADVISORY ANNOUNCEMENT
TO SPECIAL AGENCIES**

The notice will be disseminated to various special agencies that require prompt notification of the boil water order to avoid serious health problems to the consumers. The notice outlines water purification procedures to be used by the consumer as a precaution, until Glendale notifies consumers that the water is safe to drink.

Hospitals:

- | | | |
|----|---|----------------------------------|
| 1. | Glendale Adventist Medical Center
1509 Wilson Terrace | 818/409-8000
FAX 818/546-5602 |
| 2. | Verdugo Hills Hospital
1812 Verdugo Boulevard | 818/790-7100
FAX:818/949-4039 |
| 3. | Glendale Memorial Hospital
125 W. Laurel Street | 818/502-1900 |
| 4. | Glenoaks Convalescent Hospital
409 W. Glenoaks Boulevard | 818/240-4300
FAX 818/247-0949 |

Residential Care:

- | | | |
|----|---|----------------------------------|
| 1. | Broadview Residential Care Center
535 W. Broadway | 818/246-4951
FAX 818/243-0437 |
| 2. | Casa Glendale Retirement Hotel
426 Piedmont Avenue | 818/246-7457
FAX 818/246-3344 |
| 3. | Glendale Verdugo Homes
917 E. Glenoaks | 818/507 -5048
FAX (NONE) |
| 4. | Windsor Manor
430 N. Glenoaks Avenue | 818/244-7219
FAX 818/240-3887 |

Residential Care:

- | | | |
|-----|--|----------------------------------|
| 5. | Casa de la Paloma
133 S. Kenwood | 818/243-0337
818/243-5881 Fax |
| 6. | Glen Park Residences
1220 Mariposa | 818/242-9000
818/242-3972 Fax |
| 7. | Glen Park Residences
1250 Boynton | 818/246-9000
818/246-1577 Fax |
| 8. | Leisure Vale Retirement Home
413 E. Cypress | 818/244-2323
818/244-3147 Fax |
| 9. | Los Feliz Gardens
205 E. Los Feliz | 818/241-2273
818/548-5881 Fax |
| 10. | Glendale Silvercrest
323 W. Garfield | 818/543-0211 |
| 11. | So. California Presbyterian Homes
516 Burchett Street | 818/247-0420
818/247-3871 Fax |
| 12. | Verdugo Valley Convalescent
Hospital 2635 Honolulu | 818/248-6856
818/248-6852 |
| 13. | Broadway Manor Convalescent Hospital
605 W. Broadway | 818/246-7174
818/246-7635 Fax |

Grade

Public Schools

1.	Crescenta Valley High	9-12	818/249-5871 FAX 818/541-9531
2.	Glendale High	1 0-12	818/242-3161 FAX 818/244-6309
3.	Herbert Hoover High	9-12	818/242-6801 FAX 818/247-8825
4.	Allan F. Daily High	9-12	818/247 -4805 FAX 818/547-3081
5.	Theodore Roosevelt Middle High	7-9	818/242-6845 FAX 818/552-5188
6.	Rosemont Middle	7-8	818/242-4224 FAX 818/248-3790
7.	Eleanor J. Toll Middle	7-8	818/244-8414 FAX 818/500-1487
8.	Woodrow Wilson Middle	7-9	818/244-8145 FAX 818/244-2050
9.	Balboa	K-6	818/241-1801 FAX 818/241-5557
10.	Cerritos	K-6	818/244-7207 FAX 818/247-2532
11.	Columbus	K-6	818/242-7722 FAX 818/247-2542
12.	Dunsmore	K-6	818/248-1758 FAX 818/249-7918
13.	Thomas Edison	K-6	818/241-1807 FAX 818/241-8028
14.	Benjamin Franklin	K-6	818/243-1809 FAX 818/552-5097

Schools:

<u>Public Schools</u>	Grade	
15. John C. Freemont	K-6	818/249-3241 FAX 818/249-7921
16. Glenoaks	K-6	818/242-3747 FAX 818/247-4423
17. Thomas Jefferson	K-6	818/243-4279 FAX 818/551-1069
18. Mark Keppel	K-6	818/244-2113 FAX 818/507-6542
19. La Crescenta	K-6	818/249:-3187 FAX 818/248-3168
20. Lincoln	K-6	818/249-1863 FAX 818/249-7876
21. Horace Mann	K-6	818/246-2421 FAX 818/507-6238
22. John Marshall	K-6	818/242-6834 FAX 818/242-1761
23. Monte Vista	K-6	818/248-2617 FAX 818/248-5263
24. Mountain Avenue	K-6	818/248-7766 FAX 818/248-6352
25. John Muir	K-6	818/241-4848 FAX 818/241-1058
26. Verdugo Woodlands	K-6	818/241-2433 FAX 818/548-4173
27. Richardson D. White	K-6	818/241-2164 FAX 818/409-8974

<u>Private Schools</u>	Grade	
1. A Plus Adventist Elementary	K-2	818/241-9353 FAX 818/240-9485
2. Armenian Sisters Academy	K-6	818/242-2512 FAX 818/242-4726
3. Bonnie Day Kindergarten	K	818/244-3241 FAX 818/244-1242
4. Calvary Christian Academy	K-6	818/244-9673 FAX 818/244-9851
5. Chamlian Armenian School	1-8	818/957 -3399 FAX (NONE)
6. Clearview School	K-12	818/846-6650 FAX (NONE)
7. First Lutheran School	K-6	818/244-7319 FAX (NONE)
8. Glendale Adventist Academy	K-12	818/244-8671 FAX 818/546-1180
9. Glendale Christian School	K-6	818/247 -7557 FAX (NONE)
10. Glendale Montessori	K-3	818/240-9415 FAX 818/240-8089
11. Glendale Montessori Elementary	1-6	818/243-5172 FAX (NONE)
12. Glendale Pre-School & Kindergarten	K	818/244-4567 FAX (NONE)
13. Holy Family Elementary	K-8	818/243-9239 FAX (NONE)
14. Holy Family High	9-12	818/241-3178 FAX 818/241-7753

(SAMPLE)

PRESS RELEASE

EMERGENCY
BOIL
WATER
ORDER

NOTICE TO MEDIA

City of Glendale Water & Power Department – 141 N. Glendale Avenue, CA 91206- (818) 548-2107 – FAX (818) 552-2852

For Immediate Release

Date: _____
Contact: Steve Zurn, General Manager, Glendale Water and Power
Michael De Ghetto Assistant General Manager, Water Services
James Saenz, Water Quality Manager
Phone: Working Hours – (818) 548-3900, (818)548-3297, and (818) 548-3962
After Hours – (818) 548-2011
FAX: (818) 552-2852

GLENDALE WATER-EMERGENCY BOIL WATER NOTICE

This is an official notice from the City of Glendale Water Department.

During the (Insert specific emergency situation), the water treatment and distribution system operated by the City of Glendale Water Department suffered extensive damage. The area affected by this notice include the entire City (or define specific area). Water quality tests are underway to assure that the water is safe to drink. As a precaution, until the water quality tests are completed, the Water Department is advising residents to only use boiled tap water or bottled water for drinking and cooking purposes. All tap water used for drinking or cooking should be boiled for at least 1 minute. An alternative method of purification for residents that do not have gas or electricity available is to use unscented liquid household bleach (Clorox, Purex, etc.). To do so, add 8 drops of bleach per gallon of clear or 16 drops per gallon of cloudy water, mix thoroughly, and allow to stand for 30 minutes before using. A chlorine-like taste and odor will result from this purification procedure and is an indication that adequate disinfection has taken place. Water purification tablets may also be used by following the manufacturer's instructions.

Failure to follow this advisory could result in stomach or intestinal illness.

The Water Department will notify residents as soon as it can be determined that the water is safe to drink.

For more information, please visit the GWP website below for real-time updates or call

H:\Public\Emergency Response Tactical Plan\2015 Updates\TAB 8-Water Quality Emergency Procedures

(818) 548-2011:

<http://www.glendalewaterandpower.com>

(SAMPLE)
EMERGENCY DO NOT DRINK NOTICE

Date:

UNSAFE WATER ALERT

[Insert one-liner language other than Spanish here, if needed, otherwise delete.]

**[System Name] water is possibly contaminated
with [an unknown substance]**

DO NOT DRINK YOUR WATER
Failure to follow this advisory could result in illness.

An unknown substance has been added to the drinking water supplied by the [Water System Name] due to a recent [intrusion; break-in] at [one of the wells; our treatment plant; storage tank; specific facility]. The State Water Resources Control Board, [County Name] County Health Department, and [Water System name] Water System are advising residents of [City, Town, System] to NOT USE THE TAP WATER FOR DRINKING AND COOKING UNTIL FURTHER NOTICE.

What should I do?

- **DO NOT DRINK YOUR TAP WATER---USE ONLY BOTTLED WATER.** Bottled water should be used for all drinking (including baby formula and juice), brushing teeth, washing dishes, making ice and food preparation **until further notice.**
- **DO NOT TRY AND TREAT THE WATER YOURSELF.** Boiling, freezing, filtering, adding chlorine or other disinfectants, or letting water stand will not make the water safe.
- **Optional:** Potable water is available at the following locations: [List locations]
Please bring a clean water container (5 gallons maximum capacity).

We will inform you when tests show that the water is safe again. We expect to resolve the problem within [estimated time frame].

For more information call:

Water Utility contact: [Name, title, phone & address of responsible utility representative].

State Water Resources Control Board at: [insert local district office, DE and phone number].

Local County Health Department: [insert phone number of local health department].

This notice is being sent to you by [insert water system name]. California Public Water System ID # [XXXXXXX]. Date Distributed: [date].

Please share this information with all other people who receive this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand.

(SAMPLE)

EMERGENCY DO NOT USE NOTICE

Date:

UNSAFE WATER ALERT

[Insert one-liner language other than Spanish here, otherwise delete.]

**[System Name] water is possibly contaminated
with [an unknown substance]**

DO NOT USE YOUR WATER

Failure to follow this advisory could result in illness.

An unknown substance has been added to the drinking water supplied by the [Water System Name] due to a recent [intrusion; break-in] at [one of the wells; our treatment plant; storage tank; specific facility]. The State Water Resources Control Board, [County Name] County Health Department, and [Water System name] Water System are advising residents of [City, Town, System] to NOT USE THE TAP WATER FOR DRINKING, COOKING, HAND WASHING, OR BATHING UNTIL FURTHER NOTICE.

What should I do?

- **DO NOT USE YOUR TAP WATER---USE ONLY BOTTLED WATER.** Bottled water should be used for all drinking (including baby formula and juice), brushing teeth, washing dishes, making ice, food preparation and bathing **until further notice**.
- **DO NOT TRY AND TREAT THE WATER YOURSELF.** Boiling, freezing, filtering, adding chlorine or other disinfectants, or letting water stand will not make the water safe.
- **Optional:** Potable water is available at the following locations: [List locations]
Please bring a clean water container (5 gallons maximum capacity).

We will inform you when tests show that the water is safe again. We expect to resolve the problem within [estimated time frame].

For more information call:

Water Utility contact: [Name, title, phone & address of responsible utility representative].

State Water Resources Control Board at: [insert local district office, DE and phone number].

Local County Health Department: [insert phone number of local health department].

This notice is being sent to you by [insert water system name]. California Public Water System ID # [XXXXXXX]. Date Distributed: [date].

Please share this information with all other people who receive this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand.

**RESCISSION OF BOIL WATER ADVISORY
TO RESIDENTS AND MEDIA**

This notice will be posted at readily visible locations throughout the affected areas, such as building entrances, commercial establishments and utility poles. In addition, this notice will be released to the media, and transmitted to water consumers through the newspaper, radio, television broadcasts and [Customer Service Reverse Notification System](#).

This notice will be issued to cancel a boil water advisory, once water quality monitoring has been completed and analysis indicates that the water is safe to drink.

(SAMPLE)

RESCISSION TO BOIL WATER ADVISORY

City of Glendale Water & Power Department – 141 N. Glendale Avenue, CA 91206- (818) 548-2107 – FAX (818) 552-2852

PRESS RELEASE

**For Immediate
Release**

Date:

Contact: Steve Zurn, General Manager, Glendale Water and Power
Michael De Ghetto Assistant General Manager, Water Services
James Saenz, Water Quality Manager
Phone: Working Hours – (818) 548-3900, (818)548-3297, and (818) 548-3962
After Hours – (818) 548-2011
FAX: (818) 552-2852

GLENDALE WATER- THE WATER IS SAFE TO DRINK

This is an official notice from the City of Glendale Water Department.

The City of Glendale Water Department has determined that your water is safe to drink.

It is no longer necessary to boil your tap water or consume bottled water.

Glendale will continue to keep residents informed of the status of their drinking water quality. For more information, please visit the GWP website below:

<http://www.glendalewaterandpower.com>

For further information or questions regarding your water, call the Water Department at (818) 548-3962.

DATE _____

BOIL WATER ORDER

Glendale Water & Power (GWP)

Failure to follow this advisory could result in stomach or intestinal illness.

Coliform bacteria were found in the water supply on _____. These bacteria are indicators of possible fecal contamination. However, NO fecal coliform [or E. coli] bacteria were found. If present, these bacteria can make you sick, and are a particular concern for people with weakened immune systems.

Fecal coliforms and E.coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, and people with severely compromised immune system.

Due to the recent event, the State Water Resources Control Board – Division of Drinking Water in conjunction with the Glendale Water & Power are advising residents around the area of _____ to use boiled tap water or bottled water for drinking and cooking purposes as a safety precaution.

All tap water used for drinking or cooking should be boiled rapidly for at least 1 minute. This is the preferred method to assure that the water is safe to drink.

An alternative method of purification for residents that do not have gas or electricity available is to use fresh liquid household bleach (Chlorox, Purex, etc.). To do so, add 8 drops (or 1/4 teaspoon) of bleach per gallon of clear water or 16 drops (or 1/2 teaspoon) per gallon of cloudy water, mix thoroughly, and allow to stand for 30 minutes before using.

A chlorine-like taste and odor will result from this purification procedure and is an indication that adequate disinfection has taken place.

Water purification tablets may also be used by following the manufacturers' instructions.

Emergency water treatment and quality testing are being conducted by GWP to resolve this water quality emergency problem. The GWP will notify residents as soon as the water is safe to drink.

For more information, please visit the GWP website below for real-time updates or call (818) 548-2011:

<http://www.glendalewaterandpower.com>

Water Utility contact: James Saenz or Ray Notario – 818-548-3962.

State Water Resources Control Board - DDW: Thomas Tsui – (818) 551-2036

Glendale *Water & Power*

DATE: _____

CANCELLATION OF BOIL WATER ORDER

On _____ you were notified of the need to boil/disinfect all tap water used for drinking and cooking purposes.

The City of Glendale *Water & Power* in conjunction with the State Water Resources Control Board – Division of Drinking Water has determined that, through abatement of the health hazard and comprehensive testing of the water, your water is safe to drink. **It is no longer necessary to boil you tap water or for you to consume bottled water.**

For more information, please visit the GWP website below or call (818) 548-2011:

<http://www.glendalewaterandpower.com>

Water Utility contact: James Saenz or Ray Notario – 818-548-3962.

State Water Resources Control Board – DDW: Thomas Tsui – (818) 551-2036

Fecha - _____

ORDEN DE HERVIR EL AGUA (BOIL WATER ORDER)

Glendale Water & Power

El no cumplir con esta advertencia puede resultar en enfermedades estomacales o intestinales.

Bacterias coliformes fecales (o E. coli) fueron encontradas en su servicio de agua el día [_____]. Estas bacterias pueden enfermarle, y son especialmente peligrosas para personas con las defensas bajas o sistemas inmunológicos débiles.

Coliformes fecales o E. coli son bacterias cuya presencia indica que el agua esta contaminada con desechos humanos o de animales. Microbios de esos desechos pueden causar diarrea, cólicos, nausea, dolores de cabeza u otros síntomas. Pueden representar un peligro para la salud de bebés niños y niñas de corta edad y personas con sistemas inmunológicos en alto riesgo.

Debido al evento reciente, el Departamento de Publico de Salud de California, y el Sistema de Agua de Glendale advierten a los residentes de _____ que deben utilizar agua de la llave hervida o agua de botella para beber y cocinar, como medida de precaución.

Toda el agua de la llave que se emplee para beber o cocinar deber ser hervida rápidamente durante al menos 1 minuto. Este es el mejor método para asegurarse de que el agua se pueda beber sin peligro.

Otro método de purificación del agua para los residentes que no tengan gas o electricidad disponibles es utilizar blanqueador líquido de uso doméstico (Chlorox, Purex, etc.). Para hacerlo, añada 8 gotas (o 1/4 cucharadita) de blanqueador por galón de agua clara, o 16 gotas (o media cucharadita) por galón de agua turbia, mézclelo bien y déjelo descansar 30 minutos antes de utilizarlo.

Este procedimiento de purificación causa que el agua huela y tenga sabor a cloro, lo que indica que ha sido desinfectada de manera adecuada.

También se puede utilizar tabletas de purificación del agua siguiendo las instrucciones del fabricante.

GWP está realizando un tratamiento y un análisis de emergencia del agua, para resolver este problema de emergencia de la calidad del agua. GWP notificará a los residentes cuando el agua se pueda volver a beber sin peligro.

Para más información llame a:

Contacto en el Servicio de Agua: James Saenz or Ray Notario at 818-548-3962;

Departamento de Publico de Salud de California: Thomas Tsui – (818) 551-2036

NOMBRE DEL SERVICIO DE AGUA

FECHA: _____

CANCELACIÓN DE LA ORDEN DE HERVIR EL AGUA

(Cancellation of Boil Water Order)

El _____ de _____ le notificaron que tenía que hervir o desinfectar toda el agua de la llave que utilizara para beber y cocinar.

El Sistema de Agua de Ciudad de Glendale junto con el Departamento de Publico de Salud de California, o la Jurisdicción Local de Salud Ambiental han determinado tras la supresión del riesgo de salud, seguido por un análisis completo del agua, que puede beber el agua de su llave sin peligro. **Ya no es necesario que hierva el agua de su llave ni que consuma agua de botella.**

Para más información llame a:

Contacto en el Servicio de Agua: James Saenz or Ray Notario at 818-548-3962;

Departamento de Publico de Salud de California: Thomas Tsui – (818) 551-2036

UUUUU0Hv_____

ՋՈՒՐԸ ԵՌԱՑՆԵԼՈՒ ՀՐԱՀԱՆԳ (Boil Water Order)

ԳԼԵՆԴԵԼԻ ՋՐԱՄԱՏԱԿԱՐԱՐՄԱՆ ԵՎ ԷԼԵԿՏՐԱՄԱՏԱԿԱՐԱՐՄԱՆ ԲԱԺԻՆ (ԳՋԷԲ)

Այս հրահանգին չհետևելը կարող է հանգեցնել ստամոքսի կամ աղիքային հիվանդությունների առաջացմանը:

20 _____ թվականի _____-ին ջրամատակարարման սխտեմում աղիքային (կղանքային) ցուպիկաձև բակտերիաներ [կամ էջերիխիա կոլի] են հայնտաբերվել: Այս բակտերիաները կարող են Ձեզ մոտ հիվանդություններ առաջացնել և մասնավորապես վտանգավոր են թուլացած իմունային համակարգ ունեցող անձանց համար:

Աղիքային (կղանքային) ցուպիկաձև բակտերիաները և էջերիխիա կոլին (աղիքային ցուպիկը) այնպիսի բակտերիաներ են, որոնց առակյությունը ջրում վկայում է այն մասին, որ ջուրն աղտոտված է մարդկային կամ կենդանական կղանքով: Այսպիսի արտաթորանքներում (կղանքային զանգվածներում) գտնվող միկրոբները կարող են առաջացնել լուծ, ուժեղ ցավեր որովայնի շրջանում, սրտխառնոց, գլխացավեր կամ այլ պիտանյաններ: Նրանք կարող են առանձնահատուկ առողջական վտանգ ներկայացնել նորածինների, երիտասարդ երեխաների և նշանակալից կերպով թուլացած իմունային համակարգ ունեցող անձանց համար:

Վերջերս կատարված ջրի ստուգումներից ստացված արդյունքներից էլնելով՝ Կալիֆորնիայի Առողջապահական ծառայությունների վարչությունը Գլենդելի Ջրամատակարարման և Էլեկտրամատակարարման բաժնի հետ համատեղ

ըրջանում բնակվող բնակիչներին խորհուրդ են տալիս ապահովության համար խմելու և կերակուր պատրաստելու նպատակների համար օգտագործել եռացրած ծորակի ջուր կամ շշավորված ջուր՝ որպես կանխարգելիչ միջոց:

Խմելու կամ կերակուր պատրաստելու նպատակով օգտագործվող ծորակի ջուրը անպայման պետք է առնվազն 1 րոպե տևողությամբ ուժեղ եռացվի: Մա առավել նախընտրելի մեթոդն է, որպեսզի համոզվեք, որ ջուրն ապահով է խմելու համար:

Գազ կամ էլեկտրականություն չունեցող բնակիչները կարող են ջրի մաքրման մի այլ տարբերակից օգտվել՝ գործածելով կենցաղային նպատակների համար նախատեսված թարմ հեղուկ ժավել (Clorox, Purex, և այլն): Դրա համար անհրաժեշտ է 1 գալոն պարզ ջրին ավելացնել 8 կաթիլ (կամ ¼ թեյի գդալ) ժավել, իսկ 1 գալոն պղտոր ջրին՝ 16 կաթիլ (կամ ½ թեյի գդալ) ժավել, որից հետո ջուրը պետք է լավ խառնել և նախքան օգտագործելը թողնել 30 րոպե:

Ջրի մաքրման այս մեթոդի հետևանքով քլորանման համ և հոտ է առաջանում, որը վկայում է այն մասին, որ կատարվել է պատեհ ախտահանում:

Կարելի է օգտագործել նաև ջրի մաքրման հաբեր՝ հետևելով արտադրողի կողմից առաջարկված ցուցումներին:

Գլենդելի Ջրամատակարարման և Էլեկտրամատակարարման բաժինը անհապաղ միջոցներ է ձեռնարկում ջրի մաքրման և ջրի որակի ստուգման համար՝ ջրի որակի հետ կապված այս անհետաձգելի խնդրի լուծման նպատակով: Ջրամատակարարման և Էլեկտրամատակարարման բաժինը բնակիչներին իսկույն կտեղեկացնի, երբ ջուրը խմելու համար նորից ապահով դառնա:

Լրացուցիչ տեղեկություններ ստանալու նպատակով զանգահարեք.

[Ջրամատակարարման ծառայությունների բաժին՝ Դանիել Ասկենայգերին – 818-551-6906, Փիթեր Քավունասին – 818-548-2137, Դեյվ Մասսիին կամ Մայք Ռոմանիտյին - 818-548-2011, կամ Ռեյ Նոթարիոն - 818-548-3962](tel:818-551-6906)

Կալիֆորնիայի Առողջապահական ծառայությունների վարչություն՝ [Թոմաս Մույին – 818-551-2036](tel:818-551-2036)

ԱՄՍԱԹԻՎ. _____, 20__

ՋՈՒՐԸ ԵՌԱՑՆԵԼՈՒ ՀՐԱՀԱՆԳԻ ԴԱԴԱՐԵՑՈՒՄ
(Cancellation of Boil Water Order)

20__ թվականի _____ -ին, Ձեզ տեղեկացրել էինք խմելու և կերակուր պատրաստելու նպատակով օգտագործվող ծորակից հոսող ջրերի եռացման/ախտահանման անհրաժեշտության մասին:

Գլենդեյլի Ջրամատակարարման և Էլեկտրամատակարարման բաժինը և Կալիֆորնիայի Առողջապահական ծառայությունների վարչությունը համատեղ, ելնելով ջրի բազմակողմանի ստուգումներից, պարզել են, որ առողջությանը սպառնացող վտանգը թուլացել է, և ծորակից հոսող ջուրը խմելու համար ապահով է: **Այլևս անհրաժեշտ չէ հոսող ջուրը եռացնել կամ օգտվել շշավորված ջրերից:**

Լրացուցիչ տեղեկություններ ստանալու նպատակով զանգահարեք.

Ջրամատակարարման ծառայությունների բաժին՝ [Դանիել Ասկենայզերին – 818-551-6906](tel:818-551-6906), [Փիթեր Քավունասին – 818-548-2137](tel:818-548-2137), [Դեյվ Մասսիին կամ Մայք Ռոմանինոյին – 818-548-2011](tel:818-548-2011), կամ [Ուեյ Լոթարիոյին – 818-548-3962](tel:818-548-3962)

Կալիֆորնիայի Առողջապահական ծառայությունների վարչություն՝ [Թոմաս Սոյին – 818-551-2036](tel:818-551-2036)

PLAN I (Medium Community)

During regular working hours our people will contact the news media at television station KXYZ to broadcast the necessary warning. The local radio stations will also be contacted. The television and radio personnel are available at all hours. As a follow-up measure, we will also contact the Daily Bee, a local newspaper that serves both Outtown and Hometown.

The warnings will be issued in both English and Spanish to cover all members of the community. Outlying areas of the water service area (such as Isolated Canyon and Lonesome Mountain subdivisions) will also be notified by sound truck and/or handbill distributed to their respective areas. Both of these areas are very small and this can be done quite quickly.

A special telephone answering service can also be quickly set up at the utility headquarters (using the regular company numbers) to answer questions that will come in from consumers. Questions are anticipated, especially from the Hometown area, because that area is served by three different water companies. A map will be available to the telephone answering personnel to determine the water company serving the caller.

It is anticipated that the time for notification to the television and radio audiences will be very short. The areas served by handbill and sound truck will also be notified within an hour. For notification to be issued in other than normal hours, the same media will be contacted and an announcement will be scheduled for as long as is necessary. A sound truck(s) will be used in the early morning hours to quickly alert the people not listening to their radio or television.

PLAN II (Small Community)

Our community is very small and the most efficient means of notification will be both sound truck and handbill. It is estimated that the entire service area can be covered in less than three hours.

PLAN III (Large Community)

The same plan as implemented in Plan I should be used here with the exceptions noted. All the news media will be contacted in the entire metropolitan area. This includes all television and radio stations and all local and general area newspapers. Maps have been prepared to be distributed to the media to locate the boundaries of the water company. This system is large enough that it may only be necessary to notify some of the water users. This information will be transmitted to the media and an answering service at the water company will respond to consumers' calls. Unless the problems are limited to isolated areas it is unreasonable to assume that contact can be made through sound truck or handbill.

Dam Failure Emergency

A dam failure emergency occurs when there is or could be a break in any of the water system reservoirs noted below: Indication of dam failure may be a release of both a large or small amount of water from the reservoir. A break would be identified based on a physical inspection of the reservoir, by a report of a large amount of unexplained water in the vicinity of the reservoir, or flooding conditions in the vicinity of the reservoir. It could also be identified by a large drop in water levels in the reservoir indicative of a break.

Six of Glendale's water system reservoirs fall under the jurisdiction of the Division of Safety of Dams.

The reservoirs under the jurisdiction of the State are:

Name of Dam	State Dam Number
Brand Reservoir	5-000
Western Reservoir	5-004
Diederich Reservoir	5-006
Glenoaks 968 Reservoir	5-007
Chevy Chase 1290 Reservoir	5-008
East Glorietta Reservoir	5-009

The State must be notified of any problems with these reservoirs. Included in this tab is a list of contact persons in the Division of Safety of Dams. It also contains an inundation map showing areas subject to flooding.

Section 6101 of Division 3 of the California Water Code requires owners of dams or reservoirs, or their agents, to advise the Department of Water Resources fully and promptly of any sudden or unprecedented flood or unusual or alarming circumstances or occurrence affecting the dams or reservoirs.

In the event of an emergency involving the dam(s) or reservoir(s) listed in the above table, in addition to notifying local authorities, the following personnel will be notified.

During Work Hours:

Michael Waggoneer, Chief
Field Engineering Branch
Division of Safety of Dams
2200 “X” Street, Suite 200
Sacramento, CA 95818
(916) 227-9800

The most likely indication of a reservoir failure will be the presence of water in gutters in the vicinity of the reservoirs and tanks. This could include a small amount of water flowing from the tank site to the street, or flooding as a result of a rupture. In the latter case, the problem is obvious. In the former case, more investigation is required.

Currently, there are three levels of emergency responses based on the volume of water released from the reservoir. **The Reservoir Emergency Response** diagram shows the course of action taken when there is a water release in the storage facilities. The diagram delineates the procedures to be followed as described below.

Level 1: A minor release when there is only a garden hose volume of water being discharged. In level 1, the leak is periodically inspected for increase in volume until repairs are completed. For response see Reservoir Emergency Response

Level 2: A moderate water release, equivalent to a fire hydrant volume discharge. For response see Reservoir Emergency Response.

Level 3: A widespread flooding event resulting from a reservoir rupture. For responses, see Reservoir Emergency Response.

Increased Readiness Emergency Plan Dam Failure

Attached are possible scenarios for the City of Glendale, *Water & Power* Department's larger reservoirs that might leak. These scenarios are more likely to occur as the result of an earthquake, rather than heavy rains. These reservoirs have sealed floor slabs. In the event of a leak in a joint, there are under floor pipe systems that detect leaks under the reservoirs. This usually gives adequate warning, allowing controlled drainage of the reservoirs, thereby alleviating the threat of sudden collapse.

Glenoaks 968 Reservoir: This reservoir is a large reinforced concrete box. Total failure of this facility is not likely; however, controlled drainage is possible, which would flood houses below the reservoir. (Water 4' to 6' deep near the reservoir would quickly reduce to approximately 2' in the street and flow down the middle of the streets. Auto damage is expected (see the attached inundation map). Houses shaded in shaded areas should be evacuated as a precautionary measure.

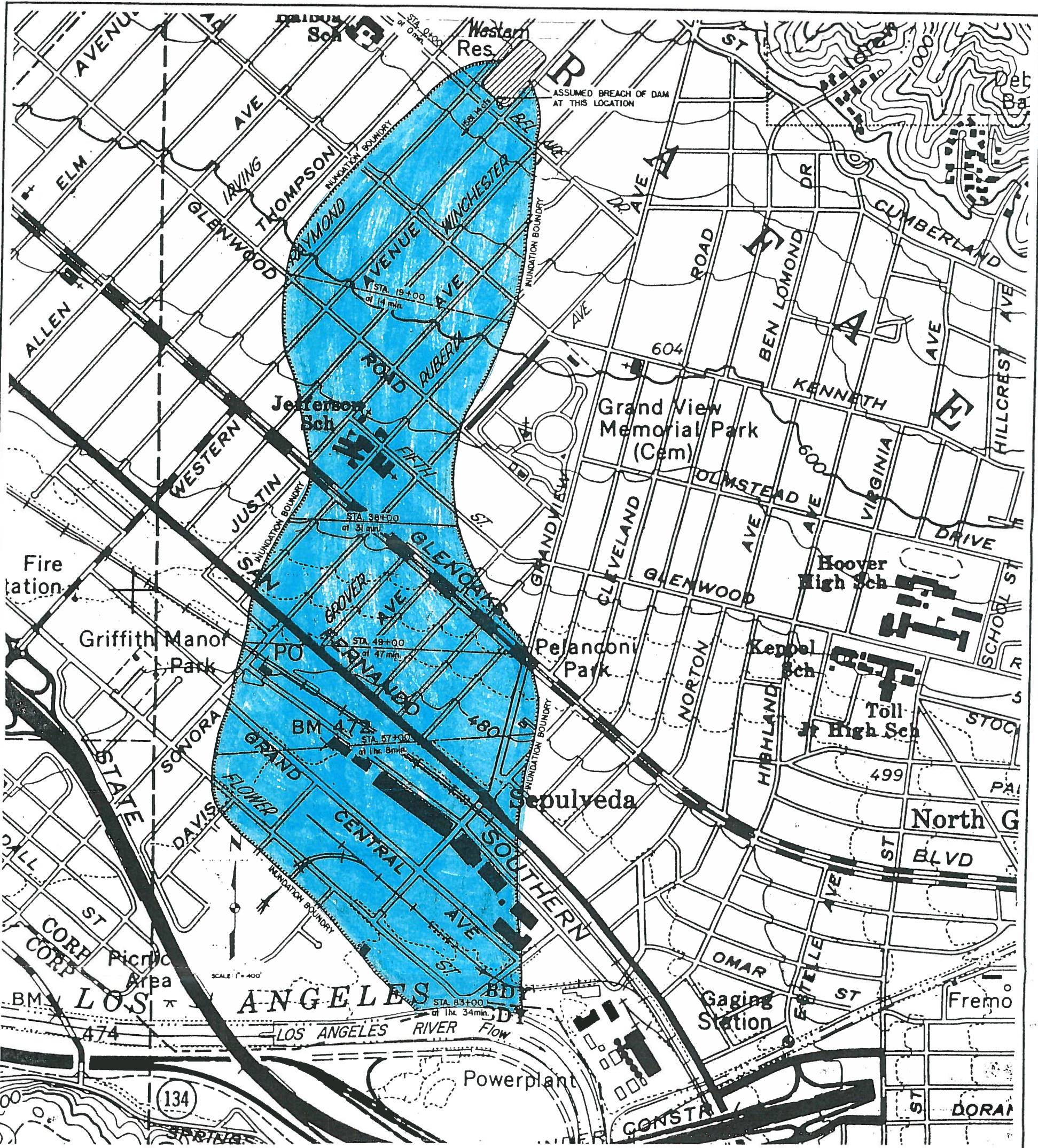
Chevy Chase 1290 Reservoir: This reservoir is a wooden roofed reservoir, with reinforced concrete floor slabs, with sealed joints. Reservoir would drain into Sheridan Road and carried quickly down streets and into LA County debris basin, near golf course. Houses immediately below the reservoir should be evacuated. Automobiles would be washed down the streets. Houses on each side of street should be evacuated as a precautionary measure (see inundation map).

Brand Reservoir: This facility has earth fill supporting a wooden roofed reservoir. The floor is made of reinforced concrete with sealed floor joints. Even with total collapse, water would drain directly into LA County debris basin below. No impact is expected on residents below dam (see inundation map).

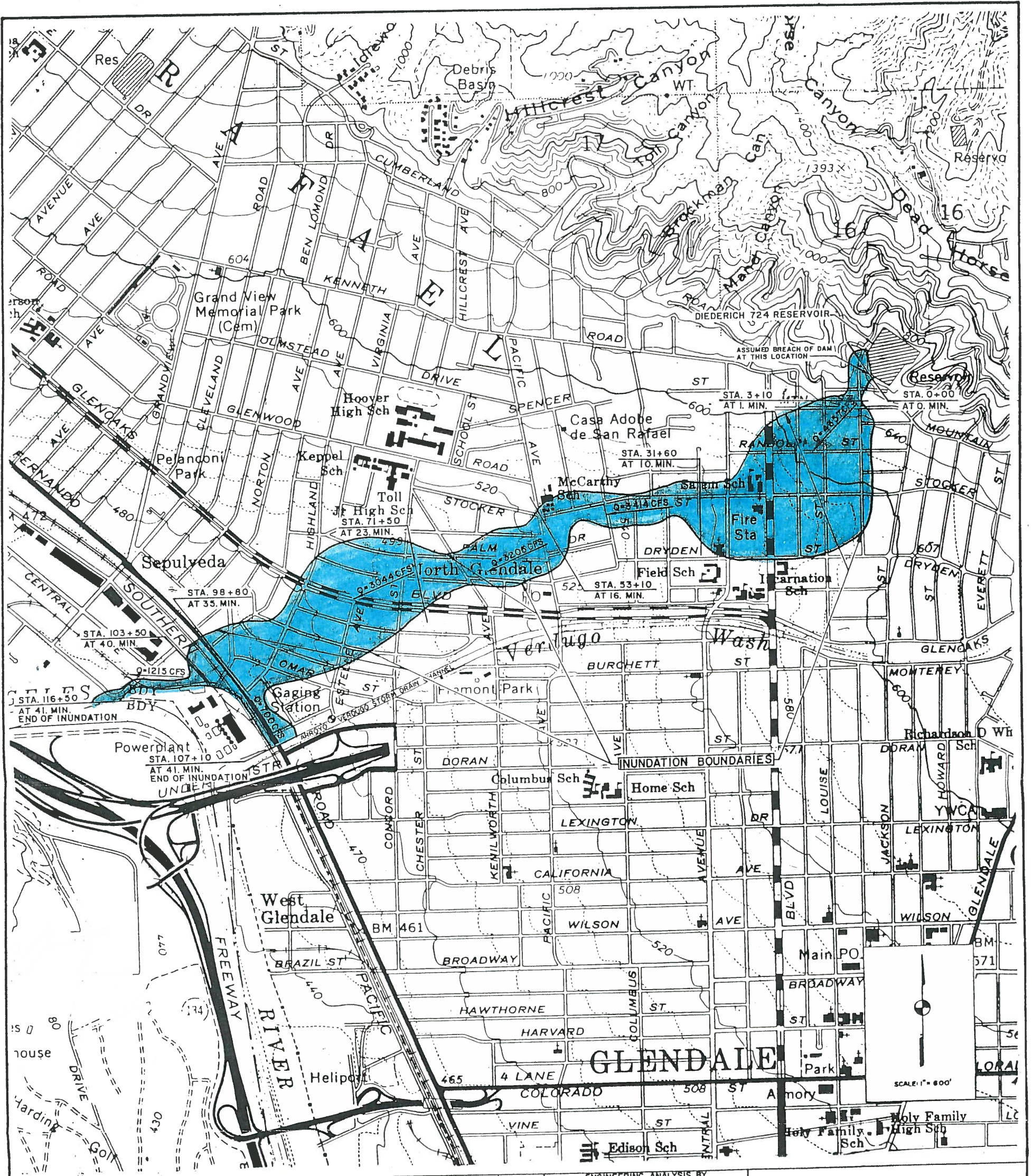
Glorietta Reservoir: This reservoir is a concrete roofed box, with top slab about 10' above street (under baseball diamond). Reservoir would drain into a cul-de-sac street that has flap gates. Probably would have about 4' to 6' of water in street that is about 400' long. Vehicles in street would be flooded. Houses could suffer damage and should be evacuated. (Total collapse of structure is very unlikely.) (See inundation map).

Western Reservoir: Wood roofed reservoir has reinforced concrete floor with sealed joints. Two walls are supported with soil 20' above street (maximum). Only a small portion of water is above street, however, streets are very flat. Water should be confined to streets, except in immediate area of the reservoir. Evacuate areas shaded in blue as precautionary measures (see inundation map).

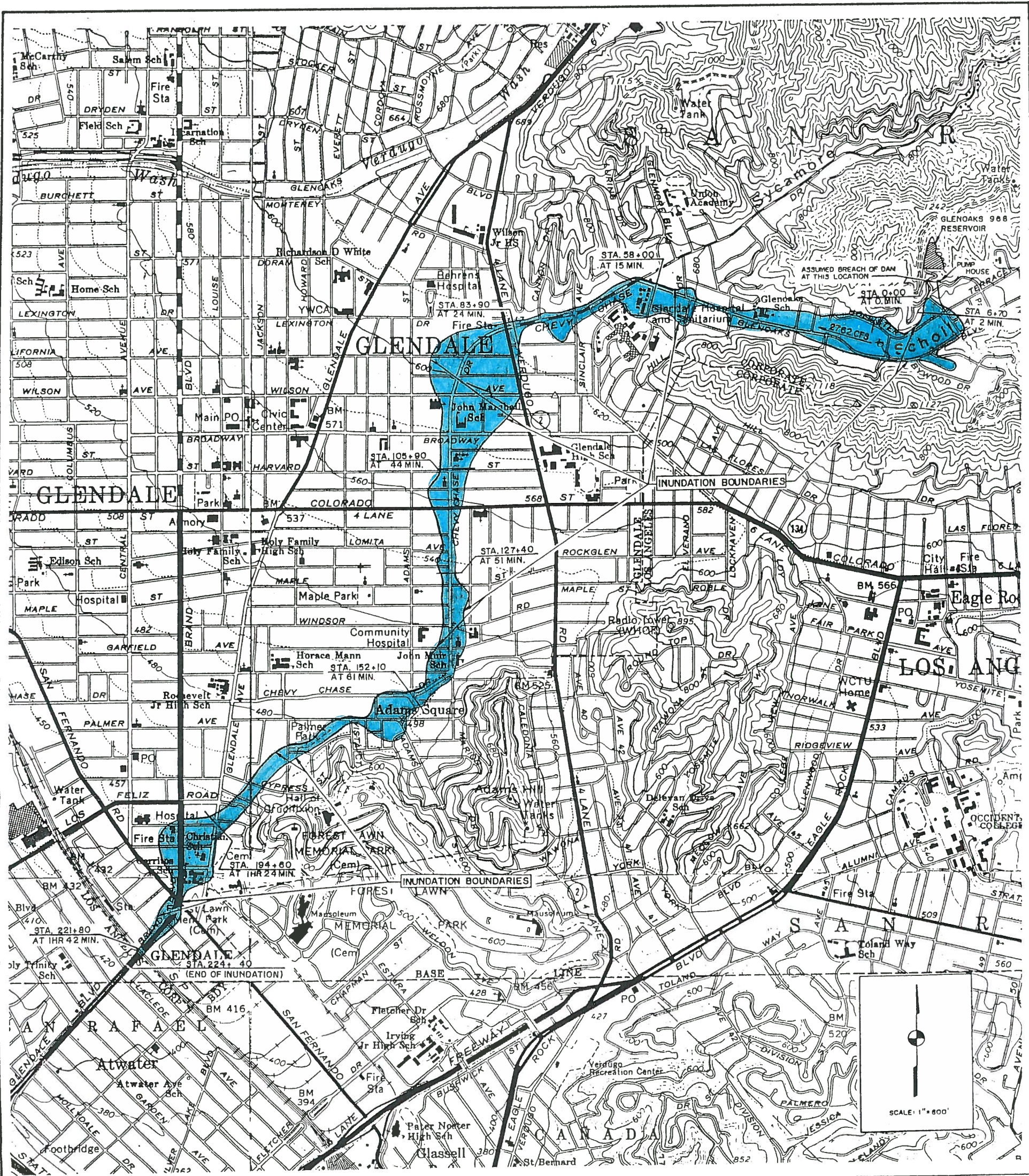
Diederich Reservoir: A large reservoir with fully reinforced concrete walls and roof with one wall supported by 25'; high slope. Total failure not likely, however, controlled drainage is possible, which could put water in streets may be 4' deep near reservoir to about 2' deep within four blocks and then street flow to Arroyo Verdugo. Houses and vehicles in area indicated should be evacuated; however, damage will probably be confined to area near reservoir (see inundation map).



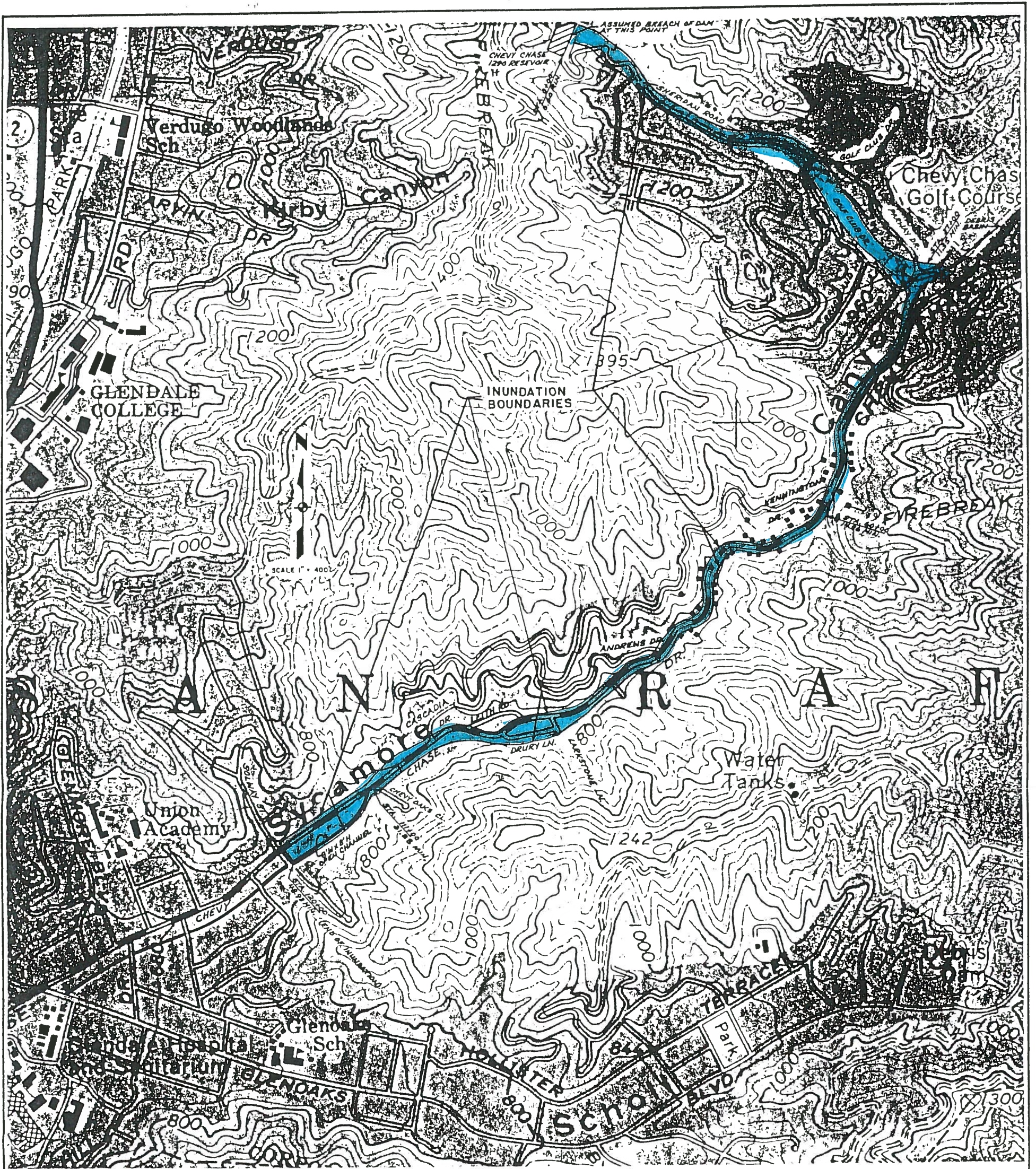
REVISIONS		ACCEPTANCE BY	DATE	OWNER	ENGINEERING ANALYSIS BY	INUNDATION MAP OF WESTERN RESERVOIR LOS ANGELES COUNTY DWG NO 3289-E SHEET NO 7
BY	DATE			CITY OF GLENDALE	NAME	
ISSUED	7-23-75	SUPERCEDES MAP ISSUED 8-31-73		PUBLIC SERVICE DEPT.	ST. METEOROLOGER CHIEF WATER WORKS ENGINEER	
				119 N. GLENDALE AVE.	ADDRESS	
				GLENDALE, CALIF. 91206	PUBLIC SERVICE DEPT. 119 N. GLENDALE AVE. GLENDALE, CALIF. 91206	
				DATE 7-23-75	SIGNATURE <i>Steven J. Meyerhofer</i>	
				NEXT REVIEW DATE	REG. CIV. ENG. NO. 15936	



REVISIONS			ACCEPTANCE BY	DATE	OWNER	ENGINEERING ANALYSIS BY		INUNDATION MAP OF DIEDERICH RESERVOIR LOS ANGELES COUNTY DWG NO. 3289-E SHEET NO. 4
BY	DATE				CITY OF GLENDALE	NAME	ST. BEYERHOFF	
ISSUED	SEPT. 24, 1980				PUBLIC SERVICE DEPT.	ADDRESS	PUBLIC SERVICE DEPT.	
					119 N. GLENDALE AVE.		119 N. GLENDALE AVE.	
					GLENDALE, CALIF. 91206	SIGNATURE	<i>[Signature]</i>	
					DATE SEPTEMBER 24, 1980	REG. CIV. ENG. NO.	15936	
					NEXT REVIEW DATE			



REVISIONS	ACCEPTANCE BY	DATE	OWNER	ENGINEERING ANALYSIS BY	INUNDATION MAP OF GLENOAKS 968 RESERVOIR
BY _____ ISSUED AUG. 1, 1980	_____	_____	CITY OF GLENDALE ADDRESS PUBLIC SERVICE DEPT. 119 N. GLENDALE GLENDALE, CALIF. 91206 DATE AUGUST 1, 1980 NEXT REVIEW DATE _____	S. J. MEYERHOFFER WATER SERVICES DIRECTOR ADDRESS PUBLIC SERVICE DEPT. 119 N. GLENDALE AVE. GLENDALE, CALIF. 91206 SIGNATURE <i>S. J. Meyerhoffer</i> REG. CIV. ENG. NO. 15936	
					LOS ANGELES COUNTY DWG NO. 3289-1 SHEET NO. 6

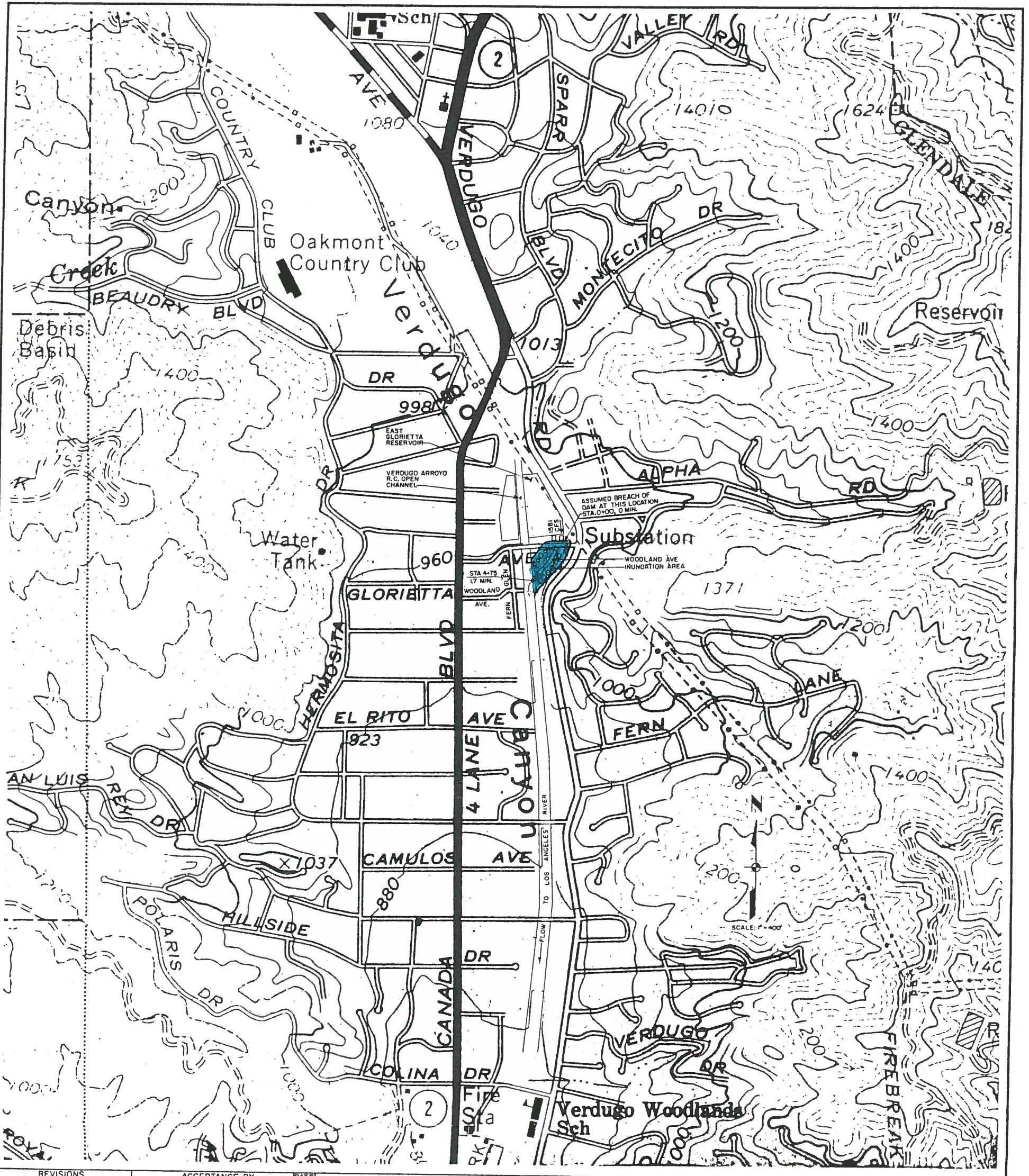


REVISIONS		ACCEPTANCE BY	DATE
BY	DATE		
ISSUED	7-28-76	SUPERCEDES MAP ISSUED 8-31-73	

OWNER CITY OF GLENDALE
 ADDRESS PUBLIC SERVICE DEPT
 119 N. GLENDALE AVE.
 GLENDALE, CALIF. 91206
 DATE 9-28-76
 NEX RE EW DATE

ENGINEERING ANALYSIS BY
 NAME S. J. MEYERHOFER
 CHIEF WATER WORKS ENGINEER
 ADDRESS PUBLIC SERVICE DEPT.
 119 N. GLENDALE AVE.
 GLENDALE, CALIF. 91506
 SIGNATURE *S. J. Meyerhofer*
 REG CIV ENG. NO. 15936

**INUNDATION MAP
 OF
 CHEVY CHASE 1290 RESV.**
 LOS ANGELES COUNTY DWG NO. 3289-E SHEET NO. 5



REVISIONS		ACCEPTANCE BY	DATE
BY ISSUED	DATE		
	JAN. 16, 1976	SUPERCEDES MAP ISSUED 8-31-73	

OWNER: CITY OF GLENDALE
 ADDRESS: PUBLIC SERVICE DEPT
 19 N. GLENDALE AVE.
 GLENDALE, CALIF. 91206
 DATE: JAN. 16, 1976
 NEXT REVIEW DATE:

ENGINEERING ANALYSIS BY
 NAME: S. J. MEYERHOFER
 CHIEF WATER WORKS ENGINEER
 ADDRESS: PUBLIC SERVICE DEPT
 119 N. GLENDALE AVE.
 GLENDALE, CALIF. 91206
 SIGNATURE: *S. J. Meyerhofer*
 REG. CIV. ENG. NO. 15936

INUNDATION MAP OF GLORIETTA RESERVOIR
 LOS ANGELES COUNTY DWG NO. 3289 E SHEET NO. 1

Unexplained Discharge from a Sub drain Drainage System Of a Reservoir

There is generally a sub drain drainage system for subsurface or below ground reservoirs that can cause an ongoing discharge of water. If there is a change in discharge patterns, it is imperative that an engineering review of the situation be performed. For above ground reservoirs, any discharge from the tank should be viewed as a concern.

Based on the inspection, possible options are to be discussed with Management. The engineer will make recommendations for follow-up, but continue observation (Level 1 and 2) response. This could range from no follow-up work, to partially draining the reservoir, to entirely draining the reservoir (Level 3), or to evacuating the entire area in combination with draining the reservoir.

If any actions are taken, the appropriate notification to the Police and Fire Department is necessary.

IF THE UNEXPLAINED DISCHARGE IS NOTICED OR OCCURS DURING WORKING HOURS:

- ~ Dispatch field personnel to investigate.
- ~ If they confirm the discharge, the Water Engineering Group is to be notified to inspect the facility.

IF THE UNEXPLAINED DISCHARGE IS NOTICED OR OCCURS AFTER WORKING HOURS:

- ~ Glendale Dispatch is to call out the "Stand-by" person to investigate
- ~ If the release is confirmed, the Water Superintendents are to be notified and arrangements made for an engineer to inspect the site
- ~ Based on the inspection, possible options are to be discussed with Management

Rupture of Dam – Level 3

In this case, there will be widespread flooding. Large amounts of water will be found in adjacent streets and possibly flooding of structures. The Water Section will most likely become aware of this by notification from the Fire or Police Departments, or citizens affected by the flooding.

IF THE DAM BREAK OCCURS DURING WORKING HOURS:

Water Superintendents are to:

1. Dispatch field crews to the site for inspection
2. Dispatch Water Facility Operators to turn off the pumps serving the reservoir to eliminate flow into the reservoir
3. Contact Water Engineering Section to initiate inspection of the effected site(s)
4. Keep Assistant General Manager GWP Water informed as to status

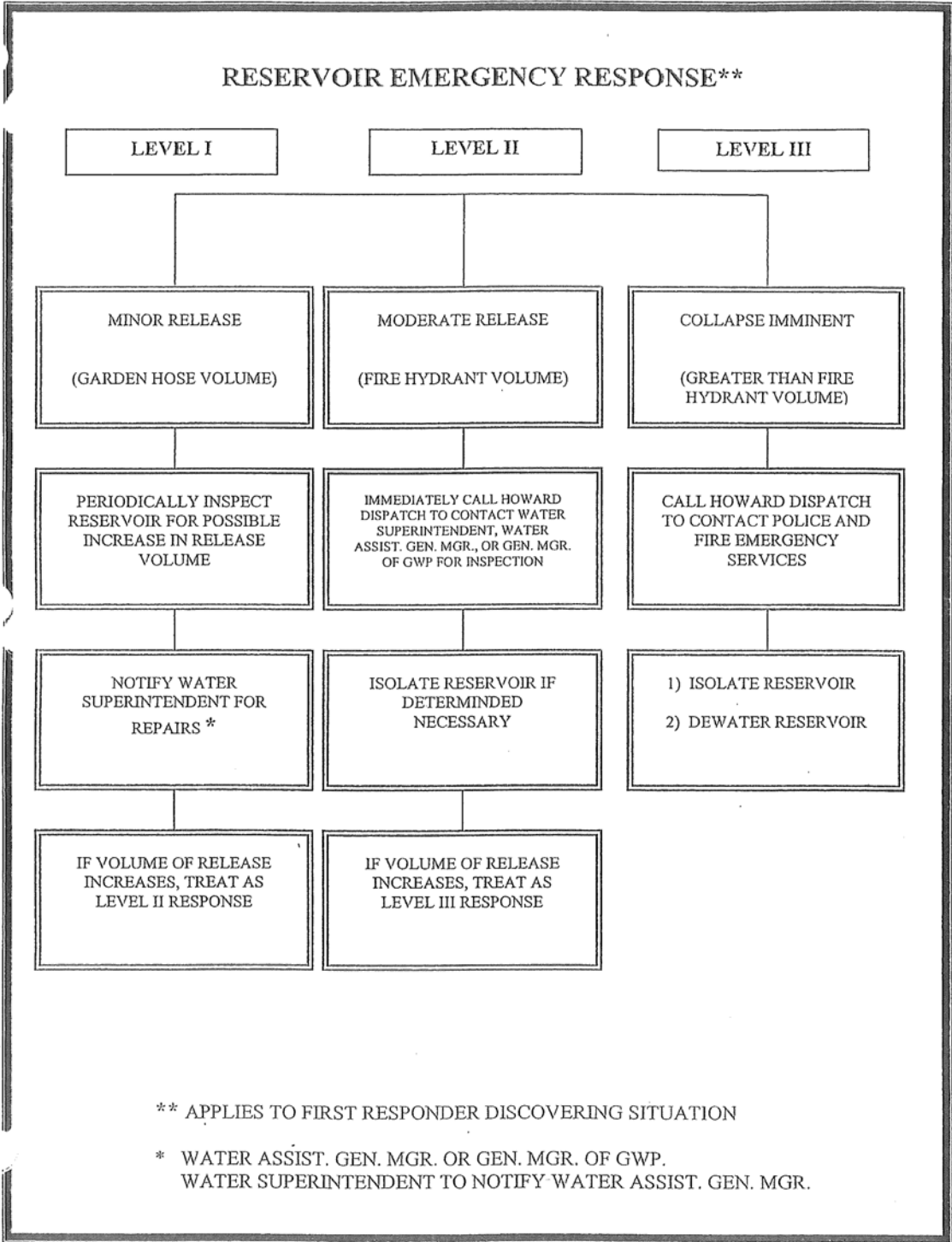
The staff has a number of options depending on what they observe. This could include:

1. Evacuate people as required
2. Turn off pumps serving the reservoir
3. Isolate the reservoir in the water distribution system
4. Attempt to dewater the reservoir using on-site valving
5. Turn on fire hydrants downstream of the reservoir to increase dewatering
6. Keep traffic out of the area
7. Contact Police and Fire Departments
8. As required, call out office engineers for inspection
9. Contact the Division of Safety of Dams

IF THE DAM BREAK OCCURS AFTER WORKING HOURS:

Glendale Dispatch will contact the Stand-by person and the Water Superintendents. Water Superintendents are to quickly begin an assessment of the situation and begin assembling crews to take the appropriate action, as specified above.

1. Notify and recall field crews and Water Facilities Operators
2. Notify Police and Fire
3. Notify and recall Principal Civil Engineer
4. Keep Assistant General Manager GWP Water informed of status.



Weather-Related Emergency Procedures

A Weather-related emergency may arise when extreme weather conditions like heavy rain and/or high winds occur. Extreme weather can make it difficult for staff to respond to emergencies and access water system facilities. One past example is the El Niño event of 2009-2010. During that time a series of severe storms compromised the reliability of access roads to Water Division facilities. Additionally, perimeter fencing at several facilities was damaged by encroaching mud and debris. In the 2009-2010 event, the City's Emergency Operations Center, (EOC), was activated and Water Division staff was on duty around-the-clock, responding to water outages, conducting facility visits, patrolling access roads and assisting other City departments. Windstorms are another weather-related emergency that have often caused numerous power outages at Water Division Facilities. To prepare for windstorm power outages, Water Division staff has established contingency plans to utilize emergency pumps and/or generators to maintain water service to customers when the electrical outages are lengthy.

The following procedures have been compiled using information from the Glendale Water & Power Emergency Plan. Additional procedures, specific to an El Niño event, were assembled using feedback from GWP personnel participating in emergency planning meetings. The information is divided into the following 3 sections: Planning, Inspection and Response.

PLANNING

The Water Field Sections will hold meetings with the sole purpose of planning for severe weather events. The goals should include safety of staff, maintaining access to and from facilities and the protection of facilities from the elements, i.e. rain, wind, flooding, etc. Management Division managers will participate in a coordinated city-wide EOC planning; including a table top exercise (if one is scheduled)

- Identify sites that may be susceptible to slides or flashfloods
- Identify and mitigate facilities that are in these zones

**Glendale Water & Power Department
Emergency Plan Water Section**

An inventory/condition assessment of the following items will be conducted:

- Sandbags(Stored at Grandview) and K-Rails, (Brand Landfill)
- Cones, Barricades, Signage
- PPE and Rain gear, (Have staff check their rain gear and replace as needed, ahead of rain events)
- Flashlights, (Batteries)
- Hand Tools, (Digging tools, etc.?)
- Vehicles, (Do vehicles all have fuel? Are any unavailable for use due to servicing, etc.?)
- Portable Lights
- Generators
- Trash pumps
- Contact Info, (Updated annually in the Emergency Response Tactical Plan- See Section 2 and FIELD SUPPORT CONTACTS Below).

FIELD SUPPORT CONTACTS

Safety: Maurice Oillataguerre-Office; (818) 550-4511, Cell; (818) 550-4779

Water Quality: James Saenz-Office; (818)937-8911, Cell; (818) 935-3623

Warehouse/UOC: Dave Cole-Office; (818) 937-8984, Cell; (818) 419-9021
(Supplies) Martin Powers-Office; (818) 937-8987, Cell; (818) 334-9798

UOC Security: Front Gate Office: (818) 937-8998
(Access)

Power Plant: Control Room #1 (For Afterhours UOC Access): (818) 548-3980

Dispatch (ECC): Howard Substation (818) 548-4881

Police: Emergency: (818) 548-3114, Non-Emergency: (818) 548-4911

Fire: Emergency: 911, Non-Emergency: (818) 548-4911

Electric Sect: Brian Brown-Office; (818) 548-3867, Cell; (818) 482-9489
(Equipment) Otilo Viramontes-Office; (818) 548-3889, Cell; (818) 238-7440

**Glendale Water & Power Department
Emergency Plan Water Section**

FIELD SUPPORT CONTACTS (Cont.)

Engineering: Raja Takidin; (818)548-3906, Cell; (818) 262-6487
Gerald Tom; (818) 551-6906
Water & Electric Counter: (818) 548-2062

Fleet Services: Mike Marino- Office; (818) 548-2095, Cell; (818) 482-9149
(Vehicles) Emilio Perez-Office; (818) 548-2095, Cell; (323) 810-7729
Karl Vogeley-Office; (818) 548-3952, Cell; (818) 484-0972

Facilities Mgmt.: Raymond Wong-Office; (818) 548-3731, Cell; (818) 262-9194
(Building repair- Al Ramirez-Office; (818) 550-4443, Cell; (818) 482-9153
Tree trimming) Kevin Todd-Office; (818) 550-4433, Cell; (818) 482-9439

Public Works: Gary Edsall-Office; (818) 937-8226, Cell; (818) 402-0225
(K-Rails, Streets) Dan Hardgrove-Office; (818) 548-3950, Cell;

Public Works: Brian Ortega-Office; (818) 550-3425, Cell; (818) 482-9991
(Sewer) John Hicks-Office; (818) 550-3415, Cell; (818) 262-6799

Public Works: Lew McGlothlin-Office; (818) 548-3739, Cell; (818) 822-4029
(Parks) Kimo Cambia-Office; (818) 548-3739, Cell; (818) 355-8915
(In charge of Glorietta Pk., New York and Deukmejian Parks)

United Pumping: (626) 961-9326

Mid Valley Towing: (818) 503-1300

Caltrans: (619) 688-6699 or 911 (ask for Highway Patrol)

Superintendents: David Massie-Cell;(818) 314-7788, Mike Romagnino-Cell;(818) 254-5702

Risk Management:Steve Martin-Cell;(818) 974-6553, Ann Maurer-Cell;(818) 913-0546

GWP Admin: Michael De Ghetto-Office; (818) 548-3023, Cell; (818) 238-7440
(Approvals) Steve Zurn-Office-Office; (818) 548-2107, Cell; (562) 298-8955

Prior to any major storm, plans should be made to do the following:

- Determine which payroll mechanism to use to put staff on “Stand-By”

**Glendale *Water & Power* Department
Emergency Plan Water Section**

- Set up Scheduled Overtime shifts to cover any weekends, weeknights and/or holidays that fall within the same period as the extreme weather event, (Shifts should be staggered so that staff have adequate rest/break periods).
- Ensure clear lines of communication with the EOC, if/when activated. Schedule staff, ahead of time, to relieve those on duty at the end of their shifts.

INSPECTION

At the direction of the Assistant General Manager-Water, the Water Superintendents will schedule inspections in September-October of each year, and direct staff to conduct facilities visits with the sole purpose of determining what, if any, work will need to be done in order to prepare for a severe weather event. Facility Inspections shall include the following:

- Access roads
- Perimeter fencing
- Hillsides adjacent to facilities
- Facility roofing
- Catch basins
- Low lying areas where standing water has potential to mix with City's potable water supply

Site-specific Inspections

All Water Division Facilities should be inspected ahead of major storms that are forecast to affect the local area. Facility checks should focus on areas especially vulnerable to effects of rain. Below is a list of all Water Division facilities, the potential problems at each site and the precautionary measures required to prevent or minimize damage.

Areas of Concern

Location	Potential Problem	Preparation and Possible Solution
PUMP STATIONS		
Allen PS	Water Intrusion	Pre-storm inspection and Repair, (If necessary). Monitor conditions during storm
Chevy Chase 1290 PS	Roof Leak	Pre-storm inspection and Repair, (If necessary). Monitor conditions during storm
Chevy Chase 1666 PS	Roof Leak	Monitor conditions during storm
Chevy Chase 968 PS	Roof Leak	Pre-storm inspection and Repair, (If necessary). Monitor conditions during storm
Cooks Canyon PS	Roof Leak	Pre-storm inspection and Repair, (If necessary). Monitor conditions during storm
Diederich PS	Roof Leak	Monitor conditions during storm
Emerald Isle 1290 PS	Roof Leak	Pre-storm inspection and Repair, (If necessary). Monitor conditions during storm

**Glendale Water & Power Department
Emergency Plan Water Section**

Location	Potential Problem	Preparation and Possible Solution
Emerald Isle 1666 PS	Roof Leak	Pre-storm inspection and Repair, (If necessary). Monitor conditions during storm
Glendale Heights PS	Roof Leak	Pre-storm inspection and Repair, (If necessary). Monitor conditions during storm
Glenoaks 1290 PS	Roof Leak	Pre-storm inspection and Repair, (If necessary). Monitor conditions during storm
Glenoaks 968 PS	Roof Leak	Pre-storm inspection and Repair, (If necessary). Monitor conditions during storm
G-2 PS (booster)	Roof Leak	Pre-storm inspection and Repair, (If necessary). Monitor conditions during storm. Check sump pump
Glorietta Park 968-1666	Roof Leak	Pre-storm inspection and Repair, (If necessary). Monitor conditions during storm
Old Glorietta PS	Roof Leak	Pre-storm inspection and Repair, (If necessary). Monitor conditions during storm
Grandview Blending Facility	Roof Leak	Pre-storm inspection and Repair, (If necessary). Monitor conditions during storm
Jim Rez PS	Roof Leak Water Pooling around Electrical Panels	Pre-storm inspection and Repair, (If necessary). Monitor conditions during storm
Linda Vista PS	Roof Leak	Pre-storm inspection and Repair, (If necessary). Monitor conditions during storm
Markridge PS	Roof Leak	Pre-storm inspection and Repair, (If necessary). Monitor conditions during storm. Check sump pump
Melwood PS	Roof Leak	Pre-storm inspection and Repair, (If necessary). Monitor conditions during storm
New York PS	Roof Leak	Pre-storm inspection and Repair, (If necessary). Monitor conditions during storm. Check sump pump
Park Manor PS	Roof Leak (Only in Pump 3 Room)	Pre-storm inspection and Repair, (If necessary). Monitor conditions during storm
Rossmoyne 1666 PS	Roof Leak	Pre-storm inspection and Repair, (If necessary). Monitor conditions during storm

**Glendale Water & Power Department
Emergency Plan Water Section**

San Luis Rey PS	Water Intrusion through front door	Sandbags just inside door, (Door opens outward).
Location	Potential Problem	Preparation and Possible Solution
Scholl Canyon PS	Water Intrusion through front door Roof Leak	Sandbags outside gates. Inspection and Repair (If necessary).
Oakmont Woods, (Shirley Jean) PS	None	N/A
Western PS	Roof Leak	Pre-storm inspection and repair, (If necessary). Monitor conditions during storm
Brand Park RW PS	Standing water	Monitor conditions during storm
Fern Lane RW PS	Roof Leak	Pre-storm inspection and repair, (If necessary). Monitor conditions during storm
Glendale High RW PS	Roof Leak	Pre-storm inspection and repair, (If necessary). Monitor conditions during storm
Lower Scholl Canyon RW PS	Roof Leak	Pre-storm inspection and repair, (If necessary). Monitor conditions during storm
Upper Scholl Canyon RW PS	Water Intrusion through back door Roof Leak	Sandbags inside door. Pre-storm inspection and repair (If necessary).
STORAGE FACILITIES		
Allen Tank	Mud and debris on access road Clogged drain adjacent to access road	Pre-storm inspection and repair. Monitor conditions during storm
Brand Park Reservoir - 968'	Clogged Catch basin, Roof Leak, Collapsed Roof. Mud, debris on Access Road	Pre-storm inspection and repair. Monitor conditions during storm
Chevy Chase Reservoir - 968'	Upstream Channel Clogged	Pre-storm inspection. Meet with Golf Course staff prior to storm to ensure maintenance is done. Monitor conditions during storm
Chevy Chase Reservoir - 1290'	Clogged Catch basin, Roof Leak, Collapsed Roof. Mud, debris on Access Road	Pre-storm inspection and repair. Monitor conditions during storm
Chevy Chase Tank - 1666'	Vault for below-grade check valve is flooded	Pre-storm inspection. Sandbag around perimeter of vault. Monitor conditions during storm

**Glendale Water & Power Department
Emergency Plan Water Section**

Location	Potential Problem	Preparation and Possible Solution
Chevy Chase Tank - 1810'	Mud and debris on access rd. Clogged drain adjacent to access road	Pre-storm inspection. Monitor conditions during storm
Cooks Canyon Tank	Mud and debris on access road	Pre-storm inspection. Monitor conditions during storm
Diederich Reservoir - 724'	Clogged catch basin. Top of reservoir turns to mud.	Pre-storm inspection. Monitor conditions during storm.
Dunsmore Tanks - 2400 (#1 & #2)	Mud and debris on access road and perimeter fence	Pre-storm inspection. Monitor conditions during storm. Note: K-rails installed.
Emerald Isle Tanks - 1666 (#1 & #2)	Mud and debris on perimeter fence (Hillside only)	Pre-storm inspection. Monitor conditions during storm.
Emerald Isle Tank - 1850'	Mud and debris on access road and perimeter fence	Pre-storm inspection. Monitor conditions during storm.
Glendale Heights Tanks - 845'	Mud and debris on access road	Pre-storm inspection. Monitor conditions during storm.
Glenoaks Reservoir - 968'	Clogged catch basin. Top of reservoir turns to mud.	Pre-storm inspection. Monitor conditions during storm.
Glenoaks Reservoir - 1290'	None	N/A
Glenoaks Tank - 1666'	Mud and debris on access road	Pre-storm inspection. Monitor conditions during storm
Glorietta Park Reservoir - 968'	Potential water intrusion from Verdugo Channel	Remove from service. Note: See dedicated section titled "Verdugo Channel Flooding"
Grandview Basins (#1 & #2)	Clogged catch basin in between pump station and storage facility, (Near sidewalk).	Pre-storm inspection. Monitor conditions during storm.
Markridge Reservoir - 2000'	Top of reservoir turns to mud.	Monitor for any standing water around hatches and sample ports
Melwood Reservoir - 968'	Top of reservoir turns to mud.	Monitor for any standing water around hatches and sample ports
New York Reservoir - 1666'	Standing water	Monitor for any standing water around hatches and sample ports

**Glendale Water & Power Department
Emergency Plan Water Section**

Location	Potential Problem	Preparation and Possible Solution
Park Manor Reservoir - 1290'	Clogged Catch basin, Roof Leak. Collapsed Roof. Mud, debris on Rd.	Pre-storm inspection. Monitor conditions during storm
Rossmoyne Reservoir - 1290'	Mud, debris on Access Road. Clogged drain on top of reservoir, standing water.	Pre-storm inspection. Monitor conditions during storm. Station portable 'trash' pump at site prior to storm.
Rossmoyne Tank - 1666'	Mud and debris on access road and perimeter fence	Pre-storm inspection. Monitor conditions during storm.
Verdugo Reservoir - 1666'	Mud and debris on access road	Pre-storm inspection. Monitor conditions during storm.
Western Reservoir - 724'	Clogged drains on perimeter road, Roof Leak. Collapsed Roof. Debris on Perimeter Road	Pre-storm inspection. Monitor conditions during storm
Glendale RW Tank	Mud and debris/rocks on Access Road and around tank	Pre-storm inspection. Monitor conditions during storm
Grandview RW Tank	Clogged Catch basin. Mud, debris/rock on Access Road and around perimeter of tank	Pre-storm inspection. Monitor conditions during storm
Freeway RW Reservoir	Mud and debris on access road	Pre-storm inspection. Monitor conditions during storm
Fern Lane RW Tank	None	N/A
Upper Scholl Canyon RW Tank	Mud and debris on access road	Pre-storm inspection. Monitor conditions during storm.
WELLS		
Glorietta Wells 3 & 4	Roof Leak in well house	Pre-storm inspection and Repair (If necessary)
Glorietta Well 6	None	N/A
Foothill Well	Roof Leak in Chemical Injection/storage room	Pre-storm inspection and Repair (If necessary)

**Glendale Water & Power Department
Emergency Plan Water Section**

Verdugo Wells A & B	Potential water intrusion from Verdugo Channel	Remove from service. Note: See dedicated section titled "Verdugo Channel Flooding"
---------------------	--	--

Location	Potential Problem	Preparation and Possible Solution
-----------------	--------------------------	--

TREATMENT PLANTS

Verdugo Park Water Treatment Plant	Potential water intrusion from Verdugo Channel	Remove from service. Note: See dedicated section titled "Verdugo Channel Flooding"
Glorietta Park Chemical Injection Facility	Roof Leak	Pre-storm inspection and Repair (If necessary)

GLENDALE OPERABLE UNIT

Glendale Water Treatment Plant	Rain Water Inundation	Pre-storm inspection of all sump pumps. Monitor conditions during storm.
Weak Base Anion(WBA) Treatment Plant	Roof Leak at Office	Pre-storm inspection. Monitor conditions during storm. Sandbag/Shutdown Facility.
	Flooding from LA River	Sandbag/Shutdown Facility.
Glendale North #1 Well	Rain Water Inundation	Pre-storm inspection of all sump pumps. Monitor conditions during storm.
	Flooding from LA River	Sandbag/Shutdown Facility
Glendale North #2 Well	Rain Water Intrusion	Pre-storm inspection of sump pump. Monitor conditions during storm
Glendale North #3 Well	Rain Water Intrusion	Pre-storm inspection of sump pump. Monitor conditions during storm
Glendale North #4 Well	Rain Water Intrusion	Pre-storm inspection of sump pump. Monitor conditions during storm
Glendale South #1 Well	Rain Water Intrusion	Pre-storm inspection of sump pump. Monitor conditions during Storm.
	Flooding from LA River	Sandbag/Turn Off Well
Glendale South #2 Well	Rain Water Intrusion	Pre-storm inspection of sump pump. Monitor conditions during Storm.
	Flooding from LA River	Sandbag/Turn Off Well
Glendale South #3 Well	Rain Water Intrusion	Pre-storm inspection of sump pump. Monitor conditions during storm

**Glendale Water & Power Department
Emergency Plan Water Section**

Glendale South #4 Well	Rain Water Intrusion	Pre-storm inspection of sump pump. Monitor conditions during storm
------------------------	----------------------	--

RESPONSE

Depending on the severity of the weather, severity of the incident and the criticality of the facilities affected, Water Division staff will respond accordingly. If event is severe, Staff will be scheduled to work around the clock, performing patrols of facilities, access roads and other known problematic areas. The following responses may be required:

Management:

- At the direction of the Assistant GM-Water, the Water Superintendents will schedule and coordinate staff response to events.
- Deliver regular status updates to the Assistant GM-Water, and/or the General Manager.
- Assign Staff to assist other City Departments on as-requested basis.
- Establish rotation for assignment at the EOC, if activated.
- If crews cannot perform normal construction activities during a rain event itself, assign them to additional facility patrols. Also, suspend normal activities so that crews and equipment are available to assist other City Departments as needed.
- Assign extra standby personnel as needed.
- If necessary, ask for assistance from other City Departments, (See contact info on pages 2-3 of this Section).

Staffing:

- Staff will be scheduled to work afterhours to patrol facilities, access roads and other problem areas.
- If EOC is activated, Water Engineering staff will be assigned to EOC as point of contact to relay information back and forth between Field staff and Incident Commander.
- Due to reduced demands during heavy rains, Operations staff should reduce imported water deliveries and if necessary, local production, (and make sure there is good turnover in the system).

Facilities:

**Glendale Water & Power Department
Emergency Plan Water Section**

- Increased monitoring/patrolling of Facility.
- Cleaning out storm water diversion structures around the reservoirs and facilities prior to the rain events.
- Installation of sandbags, unclogging of drains.
- Monitor wood roofs on reservoirs to ensure minimal ponding; Staff to address on both scheduled and unscheduled overtime as needed to clear standing water as needed.
- Perform temporary roofing repairs.
- Check the operation of all of permanent sump pumps in underground facilities are working, and repair as needed prior to rain events.
- Check the operation of all temporary sump and mud pumps and ensure they are working prior the rain events.

Access Roads:

- Increased monitoring/patrolling of Access Road.
- Removal of mud, rock and debris.
- Monitor condition of previously installed gravel/base. Add more, if necessary.
- Monitor condition of installed sandbags: Place sand bags on any slopes and access roads that known have issues related to runoff. Keep the roads clear of debris immediately after the heavy rain events.

Other Known Problematic Locations:

- Exposed transmission main from Verdugo Reservoir to New York Reservoir.
- Top of Rossmoyne 1290 Reservoir.
- Old San Luis Rey Tank Site
- Lower entrance to Chevy Chase 1290. (possible road failure near debris basin)
- Chevy Chase 1290 Slope
- Scholl Canyon potable pump station slope
- Dunsmore tanks slope

Verdugo Channel Flooding

The Verdugo Channel runs from the La Crescenta Valley in the north, southward, through the Verdugo basin, and then turns southwest until it joins the LA River at the Grayson Power Plant. The channel runs adjacent to several Water Division facilities, (Noted below): During a heavy rain event, it is possible that storm water could overflow the channel and impact the operation of these facilities. This Action Plan addresses how Glendale Water & Power will respond to flood conditions adjacent to the Verdugo Channel at the following facilities:

- Glorietta Park Reservoir
- Verdugo Wells A & B
- Verdugo Park Water Treatment Plant
- Utility Bridge at Grayson Power Plant, (See InfraMap for locations)

Stage I

The water level in the Verdugo Channel is within 2' of the top of the wall.

Water Crews Will:

Water Crews will be placed on standby to;

- Operate valves that would isolate Glorietta Park Reservoir from the channel.
- Operate valves at Grayson Power Plant Utility Bridge, (See InfraMap for locations).

Notify:

- The Water Superintendents and staff at the Glendale Energy Control Center, (Howard Dispatch). Howard Dispatch staff will notify the Fire Battalion Chief on duty.
- The EOC, if activated.

Verdugo Channel Flooding Continued:

Stage II

The water level has reached the top of the channel wall. The EOC may be activated.

Water Crews Will:

- Isolate both cells at Glorietta Park Reservoir.
- Shut off Verdugo Wells.
- Shut off Verdugo Park Water Treatment Plant, (Offline Oct. 2013).

Notify:

- Notify the EOC, if opened, of what has transpired. If the EOC has not been activated, notify the Fire Department Battalion Chief on duty.

Stage III

The water level is above the channel wall. The EOC has been activated.

Water Crews will:

- Sandbag the Verdugo Park Water Treatment Plant.
- Close the valves at the bridge adjacent to the Power Plant to isolate water mains under bridge, (See InfraMap for locations).

Notify:

- Notify the Section Incident Commander, and the EOC.

END.



APPENDIX M

Comments from the June ____, 2016 Public Hearing on
the 2015 UWMP

*(Place Holder for Comments from the Public
Hearing in June 2016)*