Service Review for Water Conservation in the Valley Region

LAFCO

for San Bernardino County

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Executive Summary

Introduction

In 2013 the Local Agency Formation Commission ("LAFCO") for San Bernardino County initiated its second cycle service reviews undertaking them on a regional service perspective rather than the prior community-by-community approach. This initiation included the development of a Fiscal Indicators database to be used in the service review analysis as well as placing the information on the LAFCO website to provide background information to the public. The development of this program required sometime to complete and the service reviews did not move forward during this period.

During the same time period, the San Bernardino Valley Water Conservation District initiated by Board resolution an application to amend its zero sphere designation and provide for a return to its prior sphere including the territory of the Santa Ana River easterly of the I-10/I-215 interchange. Due to overlap and complexity on the subject of water and the submission of an application from the San Bernardino Valley Water Conservation District (hereafter shown as SB Valley WCD), the LAFCO service review schedule for the Valley Region has two service reviews on the water subject – one service review for water conservation and another service review for wholesale, retail, and recycled water. The next service review scheduled will encompass wholesale, retail, and recycled water which will complement this water conservation service review.

All communities and water agencies are facing increasing challenges and opportunities in their role as stewards of water resources in the region. Increased environmental regulations, drought, and competition for water from outside the Valley Region have resulted in reduced supplies of imported water. Although the rate of regional population and economic growth has slowed due to the declined economy, water demand is still projected to rise, but at a slower rate, thus putting an even larger burden on local supplies.

Service Review Determinations

LAFCO staff responses to the requirement for written statements of the determinations outlined in Government Code 56430 for a service review are summarized below and incorporate the districts' responses and supporting materials.

<u>Determination I - Growth and population projections for the affected area</u>

Within San Bernardino County, the Valley Region is the most densely populated area, with 73% of the population within it, but accounting for only 2.5% of the county's land area. Based on these figures, the estimated population density of the Valley Region is approximately 2,977 persons per square mile, which is similar to neighboring Los Angeles and Orange Counties.

The 2014 estimated population is 1.5 million, and projections identify the Valley to grow at a rate of 0.3% annually through 2020. It is not until 2025 that the growth rate is projected to increase. LAFCO uses a 30-year horizon for its population projections, and

its analysis in conjunction with Southern California Associated Governments ("SCAG") projections provides a projected population of 2.1 million in 2045. The 2045 figure would be roughly twice that of 1990, with presumably twice the density overall.

The population projections do not include the heavy daily business, commercial, education and industrial activities. Further, the transient traffic on Interstates 10 and 15 (two of four interstates that exit Southern California to the east) has significantly increased in volume each decade and is anticipated to continue to do so. All of this signals that the Valley Region is one of the most densely populated and traveled parts of the state and that conjunctive use of water resources will only intensify for the already impacted groundwater basins.

Determination II - The location and characteristics of any disadvantaged unincorporated communities within or contiguous to the sphere of influence

The Valley Region as defined by LAFCO contains 75 square miles of unincorporated territory (15% of the Valley Region). Of that 75 square miles of unincorporated territory, 32 square miles (or 43%) is classified as a disadvantaged community; although some of that area includes government-owned, open space, or park land.

Determination III - Present and planned capacity of public facilities, adequacy of public services, and infrastructure needs or deficiencies including needs and deficiencies related to sewers, municipal and industrial water, and structural fire protection in any disadvantaged, unincorporated communities within or contiguous to the sphere of influence

Integration of flood and stormwater management strategies with recharge and conjunctive use opportunities contributes to water supply reliability in the region. The San Bernardino Valley region has been significantly urbanized over the past several decades and the area continues to grow with numerous in-fill development projects. As the amount of impervious surface increases with urbanization, the runoff, and, therefore, storm and flood flows are also increasing. Without adequate flood control systems to capture and contain these surface waters for recharge, the opportunities for water supply, water quality, and environmental improvement are greatly lessened or lost. Therefore, formulating strategies to further capture storm runoff and use it for recharge of the groundwater basins will provide both flood management and water supply benefits to the region.

As identified by the Department of Water Resources, the Chino Basin, Bunker Hill, and Riverside-Arlington basins have been designated as High Priority basins and the other basins as Medium Priority basins for future monitoring. Within the Chino Basin, storm water recharge has declined significantly since FY 2010-11 (due to the drought), being less than the storm water recharge average during the previous 10 years. Recycled water was first considered a recharge source to reduce reliance on imported water from the Metropolitan Water District of Southern California. However, due to the current drought and restrictions placed upon the State Water Project, recycled water has now become a necessity for the basin. In the San Bernardino Basin Area, groundwater storage is now at the lowest level in recorded history, easily surpassing the previous low

point in 1964, which took place at the end of a 20-year drought. In turn, multiple recharge and recovery projects are moving forward to be able to capture and use as much of the local supply as possible in order to lessen reliance on the State Water Project.

In response to efforts to reduce consumer consumption, the two water conservation districts in the Valley are neither 1) responsible for the demand reductions required by the Water Conservation Act of 2009 (10% demand reduction by 2015 and 20% by 2020), nor 2) responsible for helping the retail agencies within their respective boundary achieve their water use reductions as the water conservations districts are not "urban wholesale water providers". The Inland Empire Garden Friendly program was developed by the four major water suppliers of western Riverside and San Bernardino counties with cooperation from a university institute, conservation district and local botanic garden. The Inland Empire Garden Friendly program was created to assist consumers in locating and learning about climate-appropriate plants for the Inland Empire.

Specific to the West Valley portion of the region, the Chino Basin WCD has long provided water conservation sustainability services to its constituents through demonstration and education and it provides this service well. To further its demonstration and education service, it opened its Water Conservation Center campus in 2014. However, the service of Chino Basin WCD is limited to within its boundary which encompasses only a portion of the Chino Basin. Chino Basin WCD has received QWEL (Qualified Water Efficient Landscaper Board) and EPA certification as an adopter of the QWEL program and as an EPA WaterSense Labeled Professional Certification Program provider. QWEL certification is a valuable tool for consumers to be able to select landscape and maintenance professional who understand and have value for water and resource conservation. Seven district staff are QWEL certified and can teach the class to others.

For the East Valley portion of the region, the SB Valley WCD currently budgets very limited funding toward conservation education and outreach efforts. Instead, it focuses on water recharge efforts in cooperation with other agencies such as providing school and other outreach through Inland Empire Resource Conservation District. Additionally, SB Valley WCD actively supports and helps fund the iEfficient initiative, leads a Basin Technical Advisory Committee subcommittee for landscape education for implementing the qualified water efficient landscaper program (QWEL), and has a certified trainer on staff.

<u>Determination IV - Financial ability of agencies to provide services</u>

The Chino Basin WCD has a high unassigned fund balance that seems disproportionate to the services the district provides. MUNI had an unrestricted Net Position of $108 million at June 30, 2013, a substantially high figure. The Board of Directors has designated $18 million of this reserve to be retained for the purpose of self-insuring the district against any claims made against it.

SB Valley WCD has recently come out of a difficult financial time which began in 2008 and continued through 2011. This situation mirrored the overall economic slow-down; however, the effect on the district was more severe because all sources of its revenues were impacted at the same time. Since this time the district has revised its financial structure, reduced costs and implemented various policies that will reduce the likelihood and severity of these occurrences in the future. The district implemented cost reductions documented in the annual budgets including the reduction from seven to five divisions for the board of directors as allowed by special legislation (SB-235). In 2011 and 2012 the Groundwater Charge was increased by 25% and 15% respectively to allow the groundwater fund to raise adequate revenue to operate the facilities within its financial ability without subsidy from the district reserves or other enterprises. The district has high liquidity, no long-term debt, and meets its service obligations (after capital projects). Therefore, a high unassigned fund balance seems disproportionate to the services the district provides. In response to the review of the draft staff report, SB Valley WCD has provided additional information that identifies that it has a counter-cyclic revenue and expense cycle and that without accumulating this reserve rates would be highly variable. The District has also identified that it is presently designing capital improvements which will use much of the reserve attributed to groundwater. Should the district desire to actively provide habitat management and enhancement (related to the Wash Plan) beyond its own properties, it would need to receive special legislation to expand the scope of its authorized activities as well as submit an application to LAFCO to request authorization to provide said service under the provisions outlined in Government Code Section 56824.10 et seq.

Chino Basin WCD, IEUA, and MUNI are subject to an appropriations limit as outlined in the State Constitution. San Bernardino Valley WCD is not subject to the appropriations limit as it was determined to be exempt due to its limited tax rate in 1977-78. IEUA and MUNI annually adopt the limit as part of its budget process. A review of the audits for IEUA and MUNI does not identify a review of the annual calculation of the limit as required by the Constitution. LAFCO staff recommends that IEUA and MUNI include this requirement in future audits. Chino Basin WCD established its appropriations limit on January 12, 2015 and has indicated it will be reviewed in future audits.

Determination V - Status of, and opportunities for, shared facilities

Throughout the Valley Region there are numerous partnerships between Flood Control District, the municipal water districts, and the water conservation districts for storm water capture. This symbiotic relationship produces both economies of scale and duplication of service. As long as there are multiple agencies authorized to provide stormwater capture the opportunity to share facilities will remain.

Determination VI - Accountability for community service needs, including governmental structure and operational efficiencies

Within at least the past ten years, the two water conservation districts have not consistently yielded enough candidates for the board of directors to field competitive elections. This has resulted in the majority of the seats being filled by appointments in lieu of election. The elections for the Municipal Water Districts are more competitive:

IEUA has had an election for at least one board member in eight out of the last ten election cycles; and MUNI has had an election for at least one board member in seven out of the last ten election cycles.

Given the determinations of this service review, LAFCO staff's position is that one of two options should be supported by the Commission: (1) the consolidation of the two Water Conservation Districts into a single Water Conservation District serving the entirety of the Valley region and bringing the educational opportunities to a much broader constituency, or (2) two water conservation districts should consolidate with its respective overlaying municipal water district.

The first scenario of a single Water Conservation District encompassing the Valley has not been supported by any of the districts citing such concerns as separate basin activities and resources to the location of operations and governance. While this scenario would provide direct control of the consolidation process by the Water Conservation Districts and provides for a means to extend the conservation educational elements to all of the urban valley region, it appears that it has been discounted by all involved in the study. Without support from some quarter of the affected agencies, success would not be anticipated.

Turning to option two, consolidation with the respective Municipal Water Districts, for SB Valley WCD, a proposed consolidation of the SB Valley WCD and the San Bernardino Valley Municipal Water District was denied by LAFCO on the basis that the financial and structural issues identified by staff were being addressed by the District and consolidation would not offer an assurance of the continued services. During the processing of this service review, both the SB Valley WCD and MUNI have outlined their reluctance to consolidate given the contentious nature of the previous process and the deep and painful wounds that linger. However, as a part of this service review these agencies, along with East Valley Water District, have submitted an outline to form a Groundwater Sustainability Council ("Council") for stormwater capture, water import funding, and groundwater recharge which they are circulating to the east valley retailers. This effort proposes a means or mechanism to coordinate key functions and shared services and facilities, absent formal consolidation. The Council would be the responsible entity for ensuring adequate stormwater capture, imported water funding, and groundwater recharge efforts. The Council would be composed of the general managers of the water producers from the basin. While this scenario does not achieve consolidation it moves toward shared services and facilities, and it provides a means to move towards more efficient provision of this service in the East Valley area. While not the preferred method for service provision, LAFCO staff would support this option absent a desire for consolidation by the agencies. The one caveat with the structure is that the general managers form the council rather than elected officials which does not allow for a true functional consolidation as a joint powers authority would. Given the proviso identified above, LAFCO staff supports this effort and in doing so recommends that the Commission modify LAFCO 3173 to evaluate the alternative of modifying the SB Valley WCD's sphere of influence to be more in line with the Council's proposed efforts.

For the West Valley, efforts and sentiments to dissolve the Chino Basin WCD date back to at least 1969 based on the reasoning that the district's functions and services could be assumed by an overlying agency that has the same authorized functions and services (IEUA or Flood Control District). Given the information gathered and the determinations of this service review, LAFCO staff's position is that the best option for continuing the level of service currently offered for the entire West Valley would be for the Chino Basin WCD to consolidate with the IEUA. Should these districts not desire to put forth an application to LAFCO, the formation of an alliance, joint powers authority, or council similar to that as being proposed in the East Valley, as identified above, would move towards achieving greater economies of scale. Therefore, LAFCO staff recommends that the Commission initiate a sphere of influence proposal to evaluate an expansion of the Chino Basin WCD's existing coterminous sphere.

In order to address these recommendations, LAFCO staff is proposing that the Commission:

- Initiate a sphere of influence review for the Chino Basin Water Conservation District to include analysis of the following alternatives:
    - Expansion of the sphere of influence to be coterminous with the sphere of influence of IEUA;
    - Expansion to include the whole of the Chino Basin; or,
    - Designation of a zero sphere of influence.

- Modify LAFCO 3173 to include the analysis of the following alternatives for consideration:
    - Expansion of the sphere of influence to be coterminous with the sphere of influence of MUNI,
    - Include the whole of the Bunker Hill Basin, or
    - The request initiated by the District to expand the sphere of influence from its current zero sphere designation to include the district's boundary plus an additional 1,973 acres.

Continued Monitoring of the Districts by LAFCO

This service review identifies areas where the districts fail to comply with the State Constitution, State Law, and generally accepted good-governance practices. LAFCO staff recommends that the Commission determine that continued monitoring of the districts is warranted and that LAFCO staff be directed to return to the Commission every six months until all of the items below are satisfied.

Inland Empire Utilities Agency and San Bernardino Valley Municipal Water District

Section 1.5 of the State Constitution reads that the annual calculation of the appropriations limit (Gann Limit) for each entity of local government shall be reviewed as part of an annual financial audit. A review of the audits for IEUA and MUNI does not identify the annual calculation of the limit. LAFCO staff recommends that these agencies include this requirement in future audits.

Chino Basin Water Conservation District

Chino Basin WCD administers landscape and irrigation audits in partnership with IEUA and the eight member retail member agencies, and other agencies contract with the district to provide conservation programs on its behalf outside the Chino Basin WCD boundary.

Pursuant to Government Code Section 56133, LAFCO is charged with the responsibility for reviewing and taking action on any city or district contract to extend service outside of its jurisdiction. Even though the district's parent act, Water Conservation District Law of 1931, does not explain this circumstance, Section 56133 subjects all those agencies under LAFCO purview to this requirement. However, the law provides for exemptions and one such exemption is for contracts or agreements solely involving two or more public agencies where the public service to be provided is an alternative to, or substitute for, public services already being provided by an existing public service provider and where the level of service to be provided is consistent with the level of service contemplated by the existing service provider.

Should it be necessary to request an exemption on the basis of two government agencies contracting for service, LAFCO staff recommends that the district submit an application to LAFCO requesting an exemption under Government Code 56133(e) in order to provide service outside of its jurisdiction.

Introduction

LAFCO Authority

In 2000, state legislation designated Local Agency Formation Commissions as the agency to conduct a review of municipal services within each county.[1] Having jurisdiction for the largest county in the continental United States, the Local Agency Formation Commission for San Bernardino County ("LAFCO") has adopted a policy to conduct its service reviews on a regional basis. The initial round of service reviews for the Valley Region were conducted between 2002 and 2004 and were organized by community.

A service review is a comprehensive review to inform LAFCO, local agencies, and the community about the provision of municipal services. Service reviews attempt to describe and analyze information about service providers and to identify opportunities for increased effectiveness and efficiencies of service delivery. The service review can work in conjunction with a sphere of influence determination and may also guide (not require) LAFCO to take other actions under its authority. LAFCO, local agencies and the community may then use the service review to consider potential proposals to LAFCO (i.e. annexations, consolidations).

Second Round of Service Reviews

For the second round of service reviews, LAFCO is reviewing each region of the County (Valley, North Desert, South Desert, and Mountain) by service. This is the first service review of the second round for the Valley region, defined by the Valley Service Zone of the San Bernardino County Fire Protection District, generally described as extending from the Los Angeles and Orange County Lines eastward to Oak Glen, from the Riverside County line northward extending beyond the National Forest Boundary. Note that the Valley description is general and does not preclude the review from extending beyond the described boundary.

Two Service Reviews for Water

The topic and service of water is multi-faceted which includes overlap of subject matter and agencies that provide a variety of water-related services. For example, groundwater recharge operations include surface water, stormwater, imported water, and reclaimed water. Further, the Inland Empire Utilities Agency (a municipal water district) and San Bernardino Valley Municipal Water District both provide wholesale water, and the flood control efforts of the San Bernardino County Flood Control District have been used in part for groundwater recharge. Due to overlap and complexity of the subject, the LAFCO service review schedule has two service reviews on the topic – one service review for water conservation and another service review for wholesale, retail, and recycled water.

[1] The service review requirement is specified in the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (Government Code §56000 et. seq.). Upon adoption of the service review determinations, the Commission can update the spheres of influence for the reviewed agencies under its purview.

Application to Expand the Sphere of Influence

The San Bernardino Valley Water Conservation District submitted an application to LAFCO requesting expansion of its sphere of influence from a zero sphere designation to one that extends beyond its boundary to include territory along the Santa Ana River (LAFCO 3173). As required by law, a service review must be conducted in conjunction with a sphere of influence application. For this reason, the first service review for the Valley is for water conservation. The next service review will encompass wholesale, retail, and recycled water which will complement this water conservation service review.

Subsequent Service Reviews and Sphere of Influence Updates

Subsequent service reviews will include, but not be limited to, wastewater collection/treatment/reclamation, law enforcement, fire protection/emergency medical services/ambulance, park and recreation, streetlights, solid waste, etc.

In each service review, staff may recommend a sphere of influence update which would require a separate action and environmental analysis by the Commission.

Water Conservation Service Review

Water conservation can be defined as practices, techniques, and technologies that improve the efficiency of water use. Increased efficiency expands the use of the water resource, freeing up water supplies for other uses, such as population growth, new industry, and environmental conversation.[2]

Efforts to Reduce Consumer Consumption through Education and Outreach

When one hears the phrase “water conservation”, generally the first thing that comes to mind is reducing consumer consumption and misuse. Water conservation programs involved in social solutions are typically initiated at the local level, by either municipal water agencies or regional governments. Common strategies include public outreach campaigns, programs such as cash for grass, tiered water rates (charging progressively higher prices as water use increases), and restrictions on outdoor water use such as lawn watering and car washing. Cities in dry climates often require or encourage the installation of xeriscaping or natural landscaping in new homes to reduce outdoor water usage. The Environmental Protection Agency’s use of the term deals with actions that lead to projects that reduce water use and intensity.[3] Further, the Water Conservation Act of 2009 (California Senate Bill SBX7-7) requires a 10% demand reduction by 2015 and 20% by 2020. Fittingly, reducing consumer consumption and eliminating misuse is the first conjuring of the term “water conservation”.

[2] *Water Conservation Programs: A Planning Manual,* American Water Works Association, M52 First Ed., 2006.
[3] Environmental Protection Agency. http://www.epa.gov/greeningepa/water/index.htm. Accessed 18 September 2014. Last updated 5 November 2012.

Governor's Executive Order

For the first time in California's history, urban water suppliers will soon be required to comply with new mandatory restrictions aimed at achieving a statewide 25 percent reduction in potable urban water use. Under an executive order issued by Gov. Jerry Brown on April 1, 2015, the State Water Resources Control Board will develop, impose and enforce the mandatory water reduction measures, which will apply to local agencies that supply water to cities and towns across California. The Executive Order comes as water supplies continue to decline due to the severe drought gripping the state. The Order will have far-reaching implications for urban water suppliers, which will be required to develop rate structures and other pricing mechanisms, including new surcharges, fees and penalties, designed to maximize water conservation. The new restrictions will require water suppliers to cities and towns to reduce usage, as compared to the amount used in 2013. The Water Board will consider the relative per capita water usage of the service area of each water supplier, and require that areas with high per capita use achieve proportionately greater reductions than those with low use.

Natural Replenishment of the Basin

However, for governmental service there is another meaning, one which deals with water conservation districts. San Bernardino County has two water conservation districts: the Chino Basin WCD (located in the Chino Basin in the western portion of the Valley Region) and the San Bernardino Valley WCD (located in the Bunker Hill Basin in the eastern portion of the Valley Region). The Water Conservation District Law of 1931 does not define "water conservation" but authorizes water conservation districts a full range of water-related powers, to include:

- Make surveys and investigations of the water supply and resources of the district
- Appropriate, acquire, and conserve water and water rights for any useful purpose
- Conserve, store, spread, and sink water and for such purposes acquire or construct dams, dam sites, reservoirs and reservoir sites, canals, ditches and conduits, spreading basins, sinking wells, and sinking basins
- Provide for the construction, operation, and maintenance of such works, facilities, or operations within or without the district boundaries as the board deems necessary to protect the land or property in the district from damage by flood or overflow
- Pump water therefrom and thereby for sale, delivery, distribution, or other disposition
- Sell, deliver, distribute, or otherwise dispose of any water that may be stored or appropriated, owned, or controlled by the district
- Fix the rates at which water may be sold by the district

The two water conservation districts in the Valley are within the boundary of another public agency or private company that is the sole provider for: 1) wholesale, retail, and recycled water, 2) wastewater treatment, collection, and reclamation, and 3) water resource investigations (each is within an adjudicated basin with a court-appointed watermaster). Therefore, the remaining water-related powers of the water conservation districts per Water Conservation District Law of 1931 in San Bernardino County generally concerns the following: naturally replenishing the basin from surface water. The two water conservation

districts in San Bernardino County are the only water conservation districts in the state that do not provide wholesale or retail water

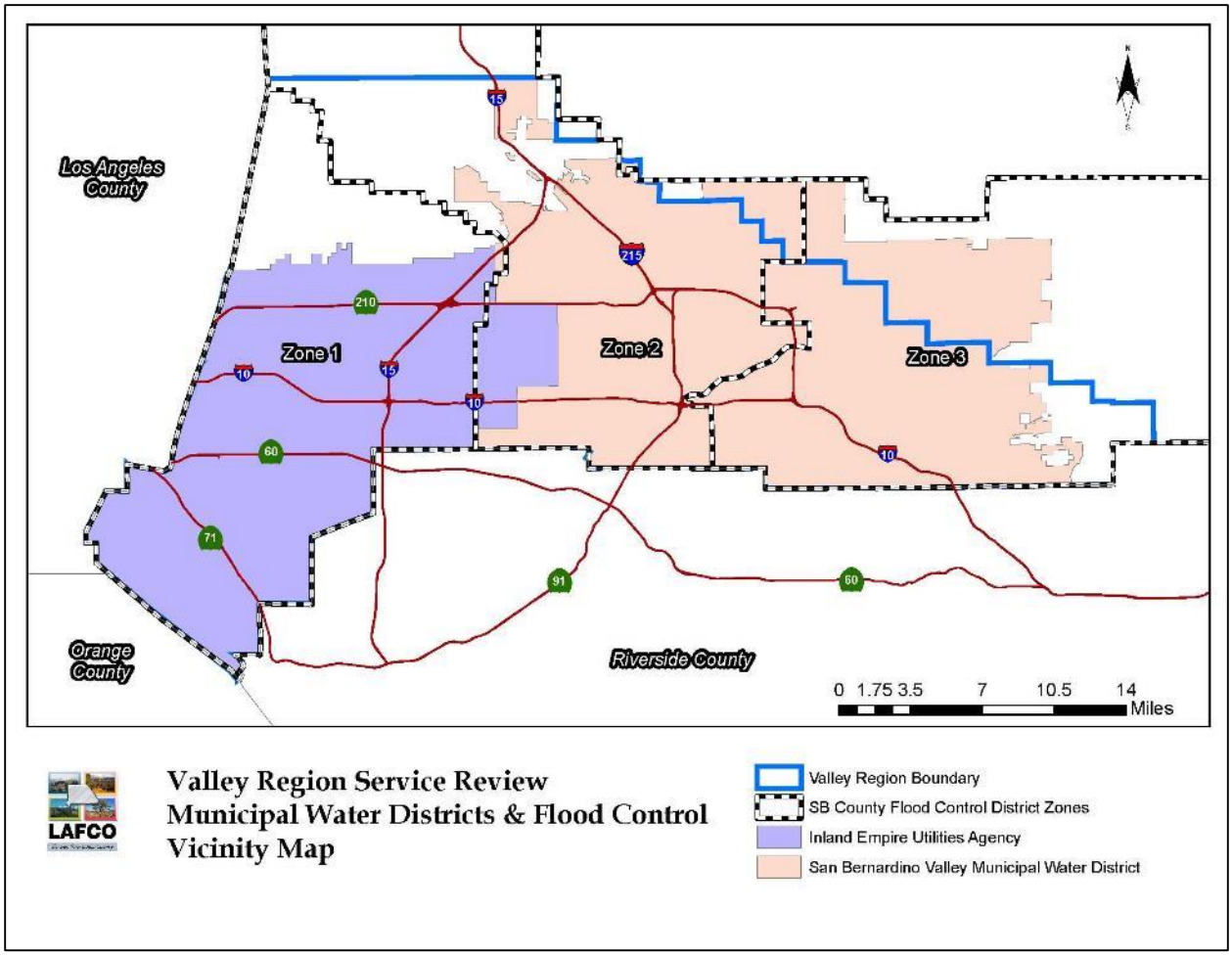
The Chino Basin WCD actively protects and replenishes the Chino Basin with rainfall and storm water discharge from the San Gabriel Mountains. Additionally, it performs water conservation education to individuals and organizations within the basin to further promote the efficient use of local water resources (hence the first meaning of the term "water conservation" as described above). The San Bernardino Valley WCD's primary role is groundwater recharge in the Bunker Hill Basin through replenishment of the basin by spreading surface water from the Santa Ana River and Mill Creek. San Bernardino Valley WCD uses its water allocation from the Santa Ana River to channel water through a network of canals and percolation basins that naturally recharge the Basin.

Agencies Reviewed

This report reviews water conservation activities throughout the Valley Region. The four agencies that provide the majority of the natural replenishment activities are the two water conservation districts (Chino Basin WCD and San Bernardino Valley WCD) and the two overlaying municipal water districts (Inland Empire Utilities Agency and San Bernardino Valley Municipal Water District). Correspondingly, the crux of the review is based on these agencies. Additionally, the San Bernardino County Flood Control District encompasses the entire county and its primary performed function is flood control. However, its principal act states it is authorized to "provide for the control and conservation of flood and storm waters" as well as water conservation to conserve and reclaim waters.

Location

The West and East Valley areas can generally be described by two municipal water districts and the zones to the San Bernardino County Flood Control District. The West Valley can be generally described by the Inland Empire Utilities Agency and Zone 1 of the San Bernardino County Flood Control District. The East Valley can be generally described by the San Bernardino Valley Municipal Water District and Zones 2 and 3 of the San Bernardino County Flood Control District. A map showing two municipal water districts and the flood control zones is shown below.



Agency Descriptions

<u>Valley-wide</u>

The San Bernardino County Flood Control District ("Flood Control District") encompasses the entire county. The Flood Control District was formed as a special district in April 1939 after the 1938 floods in San Bernardino County, created by the San Bernardino County Flood Control Act of 1939, found in Chapter 43 of the California Water Code Appendix. Its current functions include flood protection from major streams, flood control planning, storm drain management, debris removal programs, right-of-way acquisition, flood hazard investigations, and flood operations. However, Flood Control District is authorized under its Act to:

- "provide for the control and conservation of flood and storm waters…", and
- "prevent the waste of water…and to obtain, retain, and reclaim drainage, storm, flood and other waters and to save and conserve all or any such waters for beneficial use in said district.",

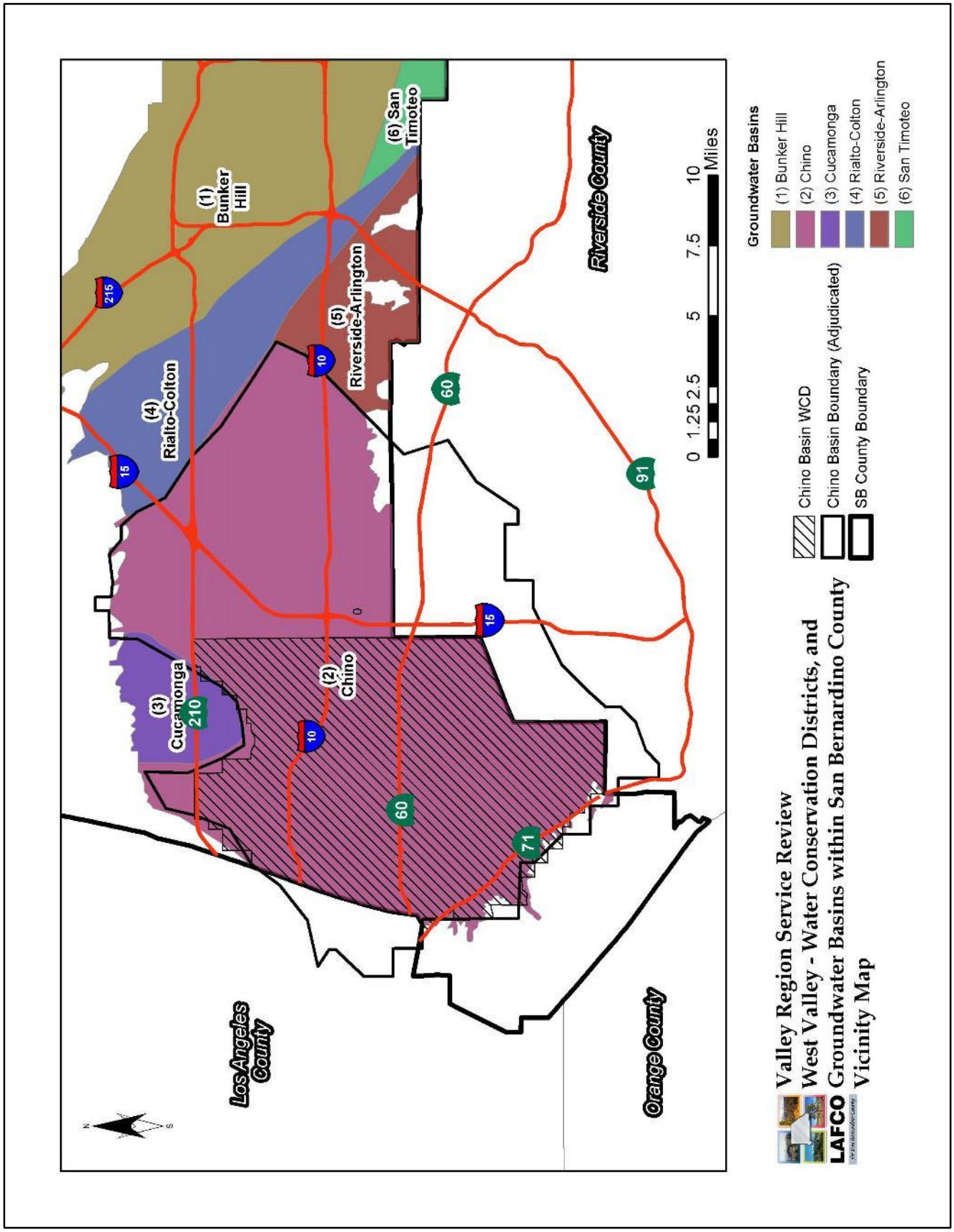
LAFCO staff consulted with the San Bernardino County Flood Control District during the SB Valley WCD service review in 2007 (LAFCO 2919) and the position of the district's administrator was that its purpose was to move water through its facilities as quickly and safely as possible and it did not directly pursue water conservation efforts. In response to the draft staff report, the Flood Control District has clarified its position and states the following,

> ”The District has a history of actively using its facilities for water conservation purposes that dates back to 1939 when the District was formed. A number of the existing storm water detention/water conservation basins originated as spreading grounds for water conservation. The District owns and operates 120 basins that are either debris, detention, conservation basins or a mixture thereof. The District also has ownership of most of the natural creeks and rivers in the valley area where recharge also occurs.
>
> Due to its limited resources providing flood protection for life and property has been considered the Districts higher purpose, but its secondary mission of water conservation has been considered important as evidenced by the number of basins constructed by the District. A number of these facilities are operated in conjunction with water agencies in order for them to be utilized for the recharge of state project water and recycled water in order to maximize the groundwater recharge since storm water is so variable.”

West Valley

The western portion of the Valley includes all or portions of the Chino and Cucamonga Groundwater Basins, including the Cities of Chino, Chino Hills, Fontana, Montclair, Ontario, Rancho Cucamonga, and Upland.

The following agencies play a major role in actively recharging the groundwater basins or account for recharge within the west valley: Chino Basin Water Conservation District, Chino Basin Watermaster (account and implement basin management), and Inland Empire Utilities Agency. The map below shows these West Valley agencies and the groundwater basins followed by a description of each agency.


Valley Region Service Review
West Valley - Water Conservation Districts, and
Groundwater Basins within San Bernardino County
Vicinity Map
LAFCO
Groundwater Basins
(1) Bunker Hill
(2) Chino
(3) Cucamonga
(4) Rialto-Colton
(5) Riverside-Arlington
(6) San Timoteo
Chino Basin WCD
Chino Basin Boundary (Adjudicated)
SB County Boundary
0 1.25 2.5 5 7.5 10
Miles
Los Angeles County
Orange County
Riverside County
(1) Bunker Hill
(2) Chino
(3) Cucamonga
(4) Rialto-Colton
(5) Riverside-Arlington
(6) San Timoteo
215
15
10
210
60
71
91

The Chino Basin Water Conservation District ("Chino Basin WCD") was formed in 1949 and has a goal to protect the Chino Groundwater Basin in order to guarantee that current and future water needs will be met. In conjunction with the Inland Empire Utilities Agency and San Bernardino County Flood Control District, the district actively protects and replenishes the Basin with rainfall and storm water discharge from the San Gabriel Mountains. The district overlaps the western portion, or about 113 square miles, of the Chino Groundwater Basin. The district's service area includes all or portions of the cities of Chino, Chino Hills, Montclair, Ontario, Rancho Cucamonga, and Upland, and unincorporated areas of San Bernardino County. Additionally, the district's primary function has evolved into providing water conservation education to individuals and organizations within the Basin to further promote the efficient use of local water resources. The recent expansion and improvement of the district headquarters and its demonstration gardens as well as landscape techniques contribute to this public education.

The Chino Basin Watermaster ("Watermaster") is the court-appointed Watermaster for the Chino Groundwater Basin which facilitates development and utilization of the Basin. The Watermaster consists of various entities pumping water from the Basin including cities, water districts, water companies, agricultural, commercial and other private concerns. The Watermaster's mission is, "To manage the Chino Groundwater Basin in the most beneficial manner and to equitably administer and enforce the provisions of the Chino Basin Watermaster Judgment", Case No. RCV 51010 (formerly Case No. SCV 164327). The Watermaster is progressively and actively implementing the Basin's Optimum Basin Management Program which includes extensive monitoring, further developing recharge capabilities, storage and recovery projects, managing salt loads, developing new yield such as reclaimed and storm water recharge and continuing to work with other agencies and entities to enhance this resource. The Watermaster is not under LAFCO purview; however its public members are.

The Inland Empire Utilities Agency, originally called the Chino Basin Municipal Water District ("CBMWD"), was formed in 1950 by popular vote of its residents to become a member agency of the Metropolitan Water District of Southern California for the purpose of importing water under the Municipal Water District Law (Water Code Section 71000 et seq). The Inland Empire Utilities Agency ("IEUA") is a wholesale water agency and does not provide any retail sales to other agencies. Since its formation in 1950, the IEUA has significantly expanded its water and wastewater utility services. These now include production of recycled water, distribution of imported and recycled water supplies, sewage treatment, co-composting of manure and municipal biosolids, desalinization of groundwater supplies and disposal of non-reclaimable industrial wastewater and brine. In 1998, the CBMWD officially became the Inland Empire Utilities Agency. The name change was meant to reflect the changes in the district's mission. IEUA's 242 square mile service mile area provides regional wastewater service and imported water deliveries to eight contracting agencies: Cities of Chino, Chino Hills, Ontario and Upland; as well as the Monte

Vista Water District, the Cucamonga Valley Water District, the Fontana Water Company[4] and the San Antonio Water Company[5].

Additionally, the City of Upland and Monte Vista Water District actively recharge in the West Valley and are discussed in Determination III of this report.

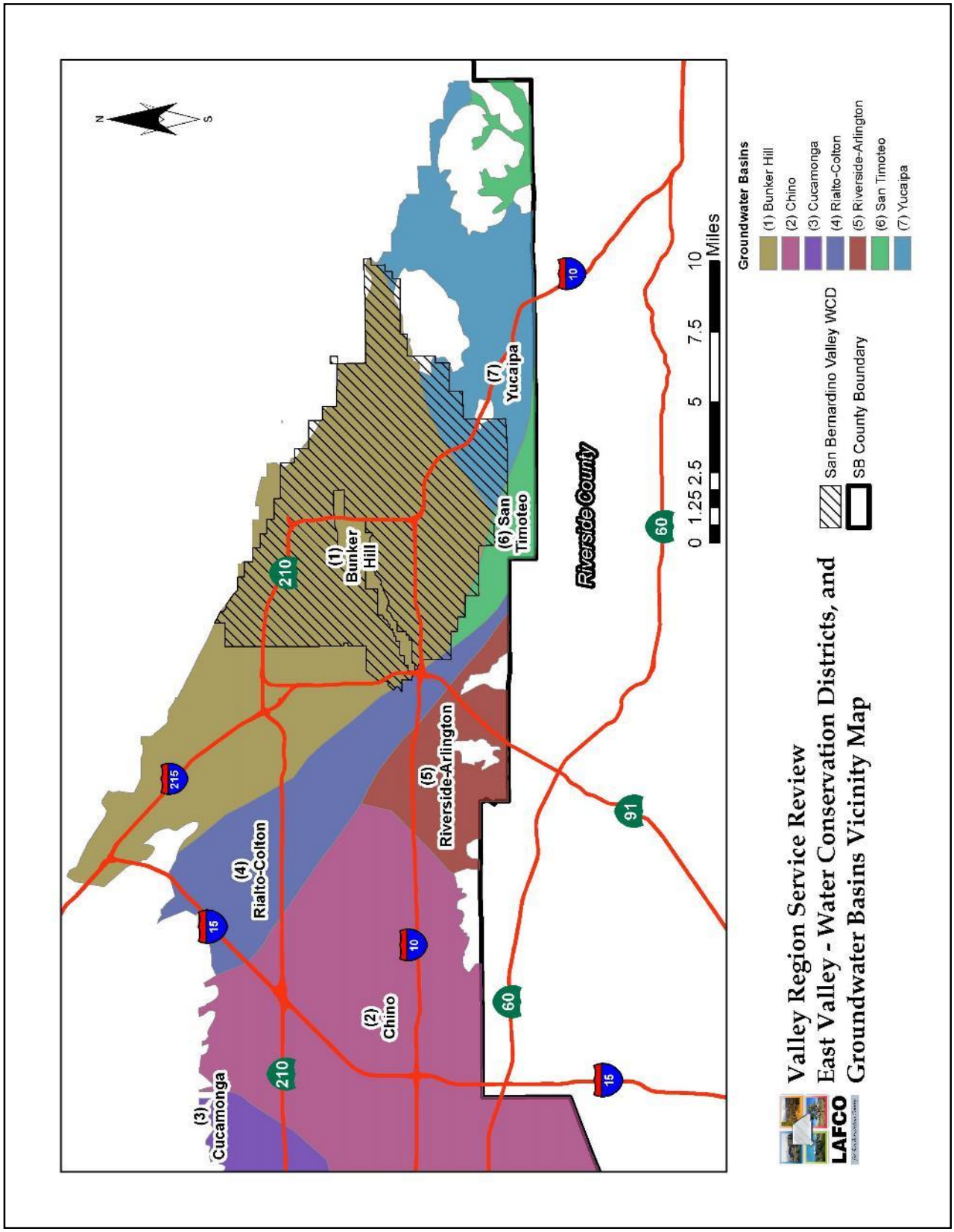
East Valley

The eastern portion of the Valley includes all or portions of the Bunker Hill, Rialto-Colton, Riverside-Arlington, San Timoteo, and Yucaipa Groundwater Basins. The East Valley includes the Cities of San Bernardino, Colton, Loma Linda, Redlands, Rialto, Highland, Grand Terrace, and Yucaipa; and unincorporated communities of Bloomington, Mentone, Muscoy and Oak Glen

The following agencies play a major role in actively recharging the groundwater basins within the general east valley: San Bernardino Valley Municipal Water District and San Bernardino Valley Water Conservation District. The map below shows these East Valley agencies and the groundwater basins followed by a description of each agency.

[4] Fontana Water Company is a retail investor-owned utility company that provides water to approximately 190,000 residents mainly in the City of Fontana, and also serves portions of the cities of Rancho Cucamonga and Rialto as well as unincorporated area, outside the IEUA service area.

[5] San Antonio Water Company is a retail investor-owned utility company that provides water to approximately 3,150 residents in the unincorporated area of Upland.


Valley Region Service Review
East Valley - Water Conservation Districts, and
Groundwater Basins Vicinity Map
LAFCO
Groundwater Basins
(1) Bunker Hill
(2) Chino
(3) Cucamonga
(4) Rialto-Colton
(5) Riverside-Arlington
(6) San Timoteo
(7) Yucaipa
San Bernardino Valley WCD
SB County Boundary
0 1.25 2.5 5 7.5 10
Miles
Riverside County
(1) Bunker Hill
(2) Chino
(3) Cucamonga
(4) Rialto-Colton
(5) Riverside-Arlington
(6) San Timoteo
(7) Yucaipa
215
15
210
10
60
91
N
S

San Bernardino Valley Water Conservation District ("SB Valley WCD") was formed in 1932 under the Water Conservation District Law of 1931, as amended (Water Code §§74000 et seq.). SB Valley WCD's primary role is groundwater conservation in a portion of the Bunker Hill Basin through replenishment of the Basin by spreading surface water from the Santa Ana River and Mill Creek. SB Valley WCD uses its water allocation from the Santa Ana River to channel water through a network of canals and percolation basins that naturally recharge the Basin. The district provides the Daily Flow Report for surface water and annual Engineering Investigation Report for groundwater levels and change in storage as required by the Water Code. SB Valley WCD also serves as one of three court-appointed members of the Big Bear Watermaster, accounting for flows in and out of Big Bear Lake. The SB Valley WCD's boundaries encompass more than 78.1 square miles and include portions of the communities of San Bernardino, Loma Linda, Redlands, and Highland, as well as the unincorporated area of Mentone and various county "islands" within the incorporated cities.

San Bernardino Valley Municipal Water District ("MUNI") was formed in 1954 under the Municipal Water District Law of 1911, as amended (Water Code §§71000 et seq.), as a regional agency to plan for long-range water supplies for the San Bernardino Valley. As a State Water Contractor, MUNI imports water into its service area through participation in the State Water Project. MUNI also manages groundwater storage within its boundaries and serves as Watermaster for the *Western* and *Orange County* Judgments. Although MUNI's principal act provides for a broad range of powers and services, MUNI's primary roles in the San Bernardino Valley are to: (1) import and deliver State Water Project water to wholesale and retail water agencies in San Bernardino Valley; and (2) recharge and replenish groundwater in accordance with the *Western* and *Orange County* Judgments. MUNI's service territory covers about 325 square miles and a population of about 600,000. MUNI spans the eastern two-thirds of the San Bernardino Valley, the Crafton Hills, and a portion of the Yucaipa Valley and includes the cities and communities of San Bernardino, Colton, Loma Linda, Redlands, Rialto, Bloomington, Highland, East Highland, Mentone, Grand Terrace, and Yucaipa.

Additionally, the Beaumont-Cherry Valley Water District, City of San Bernardino Municipal Water Department, East Valley Water District, West Valley Water District, and Yucaipa Valley Water District actively recharge in the West Valley and are discussed in Determination III of this report.

LAFCO Tour of the Facilities of the Water Conservation Districts

On March 2, 2015, representatives from the LAFCO commission and staff toured the facilities of the Chino Basin WCD and SB Valley WCD. The tour consisted of the Water Conservation Center and two storm basins of the Chino Basin WCD and two spreading grounds of the SB Valley WCD.

WATER CONSERVATION SERVICE REVIEW FOR VALLEY REGION

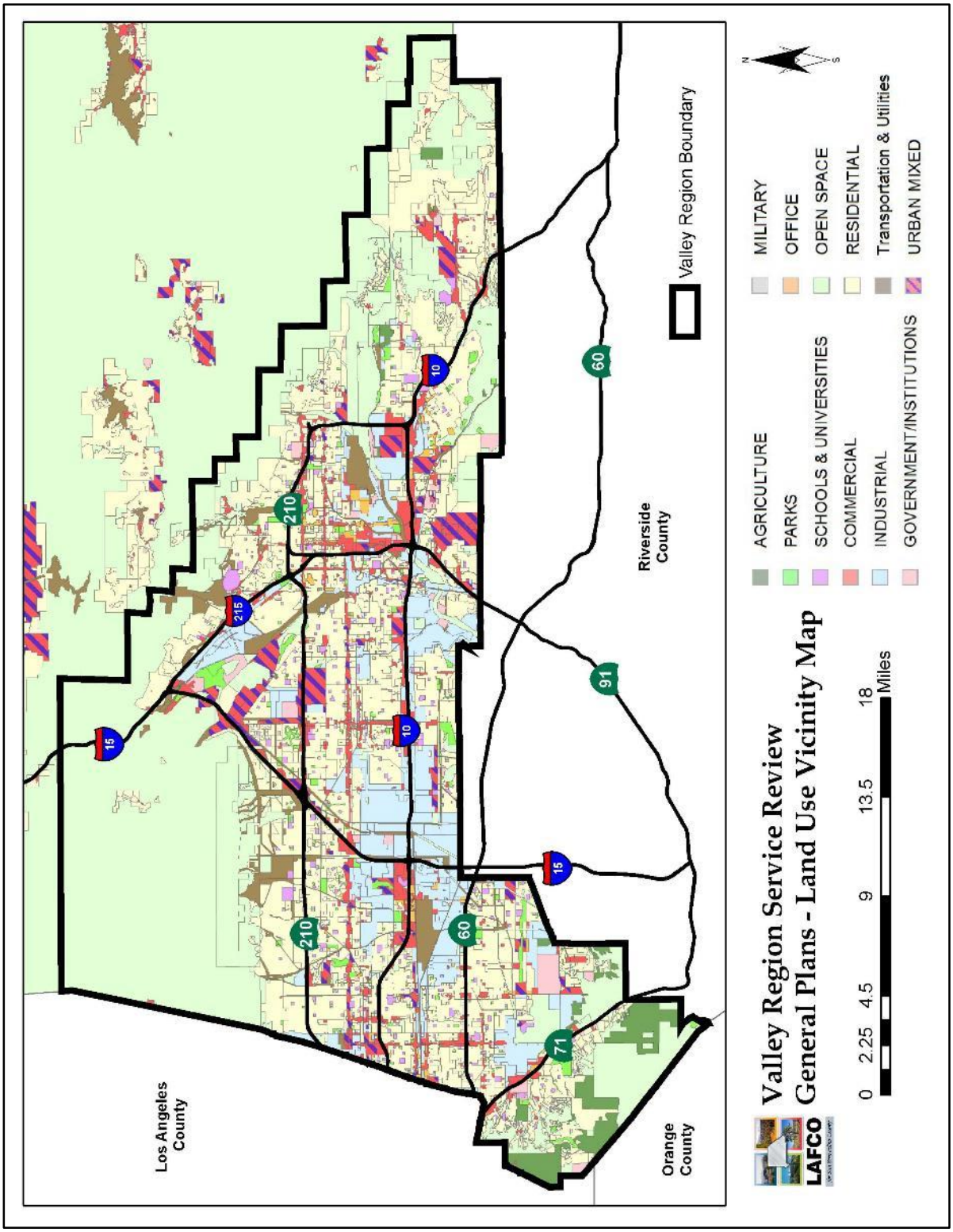
At the request of LAFCO staff the agencies provided information, were interviewed by LAFCO staff, and have been available to LAFCO staff upon request. LAFCO staff also obtained information from public sources, as well as referring to literature and other service reviews conducted in the state on water conservation. LAFCO staff responses to the mandatory factors for consideration in a service review (as required by Government Code 56430) are to follow and incorporate the agencies' responses and supporting materials.

Determination I.
Growth and Population Projections for the Affected Area

A. Land Use Designations

The map below illustrates the land use designations of each city and county jurisdiction within the Valley Region. As shown, residential, urban mixed, and industrial uses are prevalent in the urbanized areas with commercial interspersed. Parks and Open Space are heavy at the southwestern and eastern ends of the Valley Region.

Land Use Designations



Source: San Bernardino Associated Governments

B. Population

Within San Bernardino County, the Valley Region is the most densely populated area, with 73% of the population residing in that region, but accounting for only 2.5% of the county's land area. Based on these figures, the estimated population density of the Valley Region is approximately 2,977 persons per square mile, which is similar to neighboring Los Angeles and Orange Counties, as shown below.[6]

Population Density for San Bernardino County, San Bernardino Valley, and Peer and Neighboring Counties, 2013

County (Major City)	Persons per Square Mile
San Bernardino	**104**
Clark (Las Vegas)	256
Riverside	318
Maricopa (Phoenix)	436
San Diego	766
Miami-Dade (Miami)	1,345
Los Angeles	2,467
San Bernardino Valley Region	**2,977**
Orange (Santa Ana)	3,945

Note: San Bernardino Valley land area is from 2007 and population data are from 2012. The remaining geographies reflect land area data from 2000 and population data from 2013.

Sources: Analysis of data from the U.S. Census Bureau (Census 2000, 2012 American Community Survey 5-Year Estimates, and 2013 Population Estimates Program) and the San Bernardino County Land Use Department, 2007 General Plan

Source: San Bernardino County 2014 Community Indicators Report

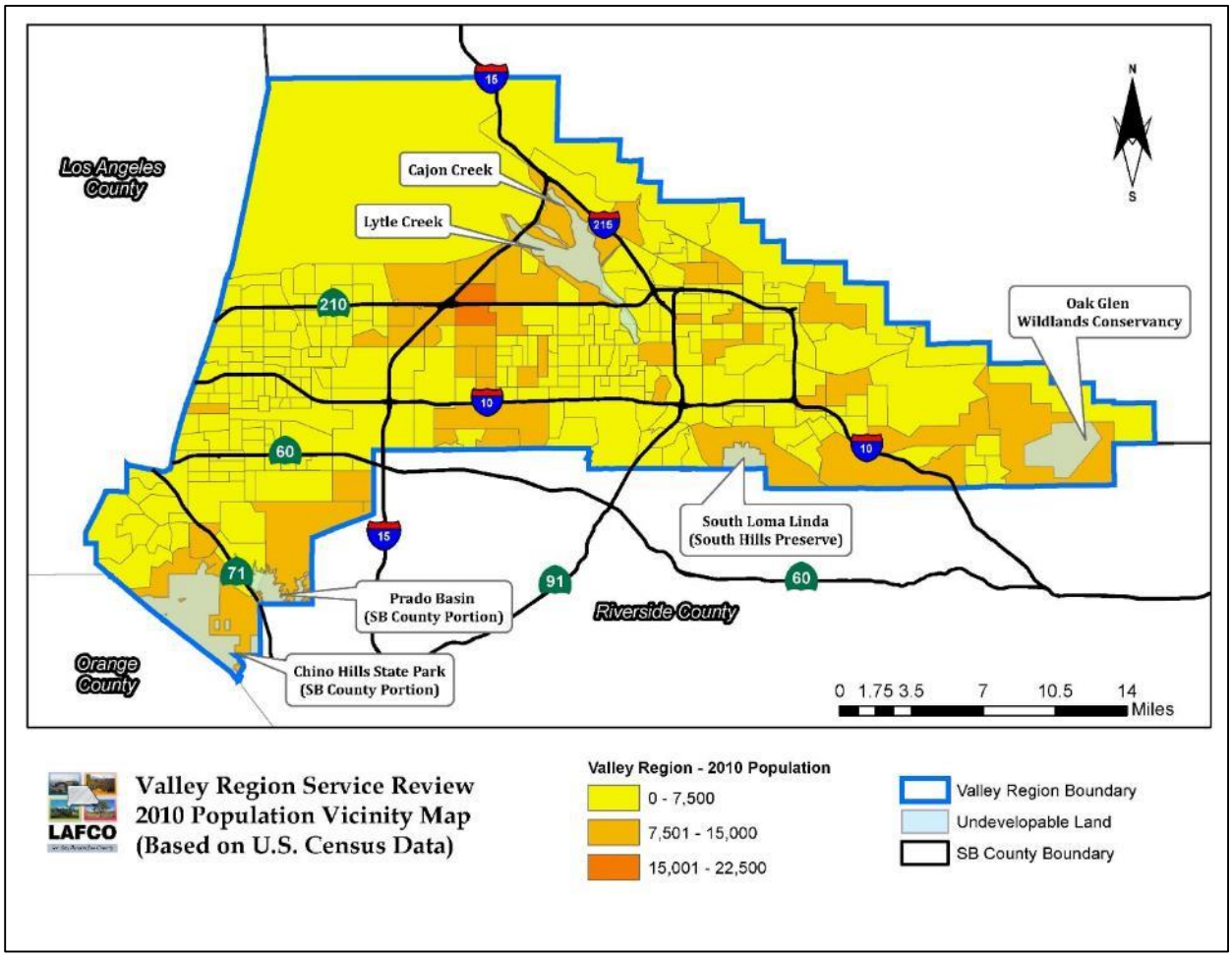
The Valley Region population increased 39% from 1990 to 2010, or at an annual rate of 1.6%. Interestingly, the Valley Region grew at a lesser rate from 2000 to 2010 during the construction boom (15%) than from 1990 to 2000 (20%). The 2014 estimated population is 1.5 million, and projections identify the Valley to grow at marked lesser rate of 0.3% annually through 2020. It is not until 2025 that the growth rate is projected to increase. LAFCO uses a 30-year horizon for its population projections, and its analysis in conjunction with Southern California Associated Governments ("SCAG") projections provides a projected population of 2.1 million in 2045. The 2045 figure would be roughly twice that of 1990 with an evident corresponding increase in population density.

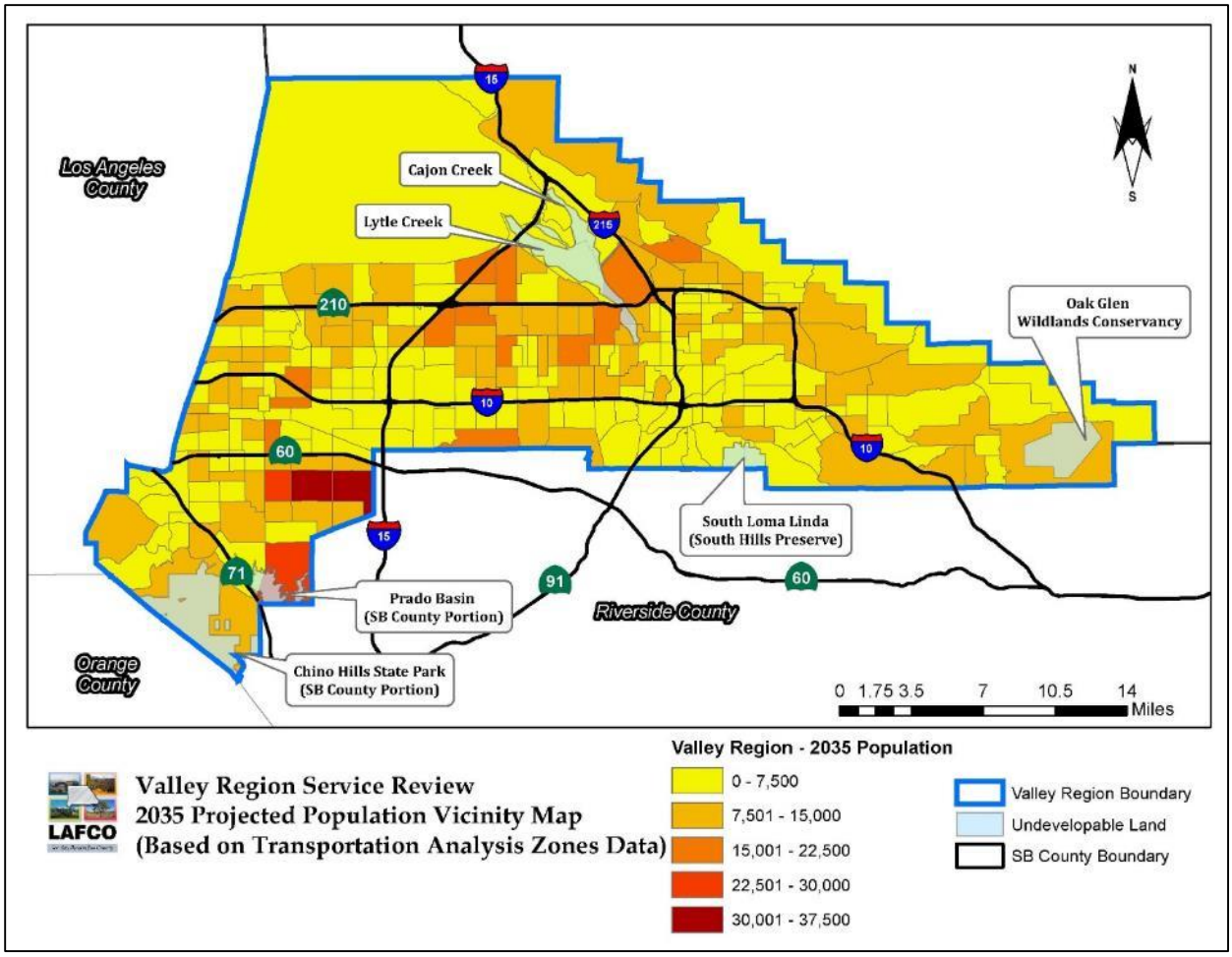
[6] San Bernardino County 2014 Community Indicators Report, produced by The Community Foundation.

Population (2000 – 2045)

Population Source	Census			Estimate	Projected		
Year	1990	2000	2010	2014	2025	2035	2045
Valley Region							
Population	1,064,522	1,280,603	1,476,306	1,510,985	1,710,583	1,899,690	2,119,309
Annual Growth Rate	1.6%				1.1%		
sources:							
1990, 2000, and 2010 population (U.S. Census)							
2014 estimate population (ESRI)							
2025 thorugh 2045 population (SCAG and LAFCO)							

The illustrations below shows population density from the 2010 Census and the 2035 SCAG projections.





C. Conclusion for Determination I.

Within San Bernardino County, the Valley Region is the most densely populated area, with 73% of the population residing within it, but accounting for only 2.5% of the county's land area. Based on these figures, the estimated population density of the Valley Region is approximately 2,977 persons per square mile, which is similar to neighboring Los Angeles and Orange Counties.

The 2014 estimated population is 1.5 million, and projections identify the Valley to grow at a rate of 0.3% annually through 2020. It is not until 2025 that the growth rate is projected to increase. LAFCO uses a 30-year horizon for its population projections, and its analysis, in conjunction with Southern California Associated Governments ("SCAG") projections, provides a projected population of 2.1 million in 2045. The 2045 figure would be roughly twice that of 1990, with presumably twice the density overall.

The population projections do not include the heavy daily business, commercial, education, and industrial activities. Further, the transient traffic on Interstates 10 and 15 (two of four interstates that exit Southern California to the east) has significantly

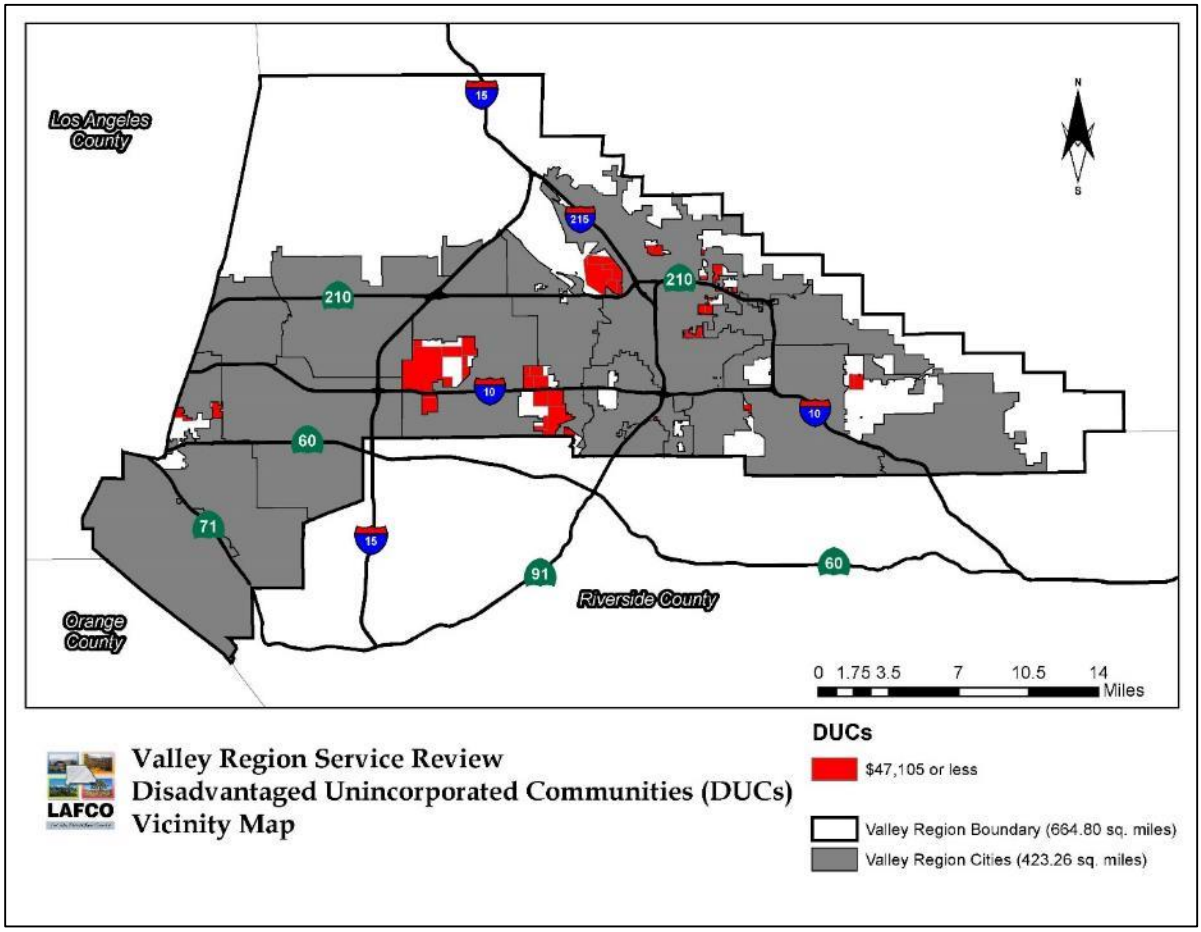
increased in volume each decade and is anticipated to continue to do so. All of this signals that the Valley Region is one of the most densely populated and traveled parts of the state and that conjunctive use of water resources will only intensify for the already impacted groundwater basins.

Determination II.

The location and characteristics of any disadvantaged unincorporated communities within or contiguous to the sphere of influence

LAFCO is required to determine the location and characteristics of any disadvantaged unincorporated communities ("DUC") within or contiguous to the sphere of influence.[7] A DUC is defined by two criteria: median household income and if the area is inhabited.[8] First, a DUC is territory that constitutes all or a portion of a community with an annual median household income that is less than 80% of the statewide annual median household income. For 2014, 80% of the statewide median household income was $47,105[9].

Second, for the purposes of defining a DUC, San Bernardino LAFCO policy defines a community as an inhabited area comprising no less than 10 dwellings adjacent or in close proximity to one another.[10] Uninhabited areas include vacant or government lands. Based upon the two criteria identified, the areas shown in red on the map below are classified as DUCs (meet the median household income criteria and are inhabited).



[7] Government Code §56430(a)(2).
[8] §56033.5
[9] Environmental Systems Research Institute (ESRI) Community Analyst.
[10] San Bernardino LAFCO Project/Application Policy #13.

Conclusion for Determination II.

The Valley Region as defined by LAFCO contains 75 square miles of unincorporated territory (15% of the Valley Region). Of that 75 square miles, 32 square miles (or 43%) is classified as a disadvantaged community; although some of that area includes government-owned, open space, or park land.

Determination III.

Present and planned capacity of public facilities, adequacy of public services, and infrastructure needs or deficiencies including needs and deficiencies related to sewers, municipal and industrial water, and structural fire protection in any disadvantaged, unincorporated communities within or contiguous to the sphere of influence

This section of the report first discusses capture and recharge of surface water and stormwater/runoff followed by agency efforts to reduce consumer consumption. Recharge activities are recorded by the respective watermaster in the area: Chino Basin Water Master (in conjunction with the Inland Empire Utilities Agency) in the West Valley and San Bernardino Valley Municipal Water District in the East Valley. Due to the size of the Valley Region, for presentation purposes only, the illustrations and its associated data are organized by West Valley (generally the area of the Inland Empire Utilities Agency) and the East Valley (generally the area of the San Bernardino Valley Municipal Water District). This Determination is organized as follows:

A. Capture and Recharge of Surface Water and Stormwater/Runoff – West Valley
B. Capture and Recharge of Surface Water and Stormwater/Runoff – East Valley
C. Efforts to Reduce Consumer Consumption – Valley Wide
D. Efforts to Reduce Consumer Consumption – West Valley
E. Efforts to Reduce Consumer Consumption – East Valley

Over the next 25 years, the Valley Region population is expected to significantly increase. It is paramount that the agencies recognize the need to develop and promote programs that protect existing water resources for the region's sustainability and future growth. Conservation and the efficient use of water is the most cost-effective source of water supply reliability and are essential to meeting the Valley region's current and future demand.

A. Capture and Recharge of Surface Water and Stormwater/Runoff – West Valley

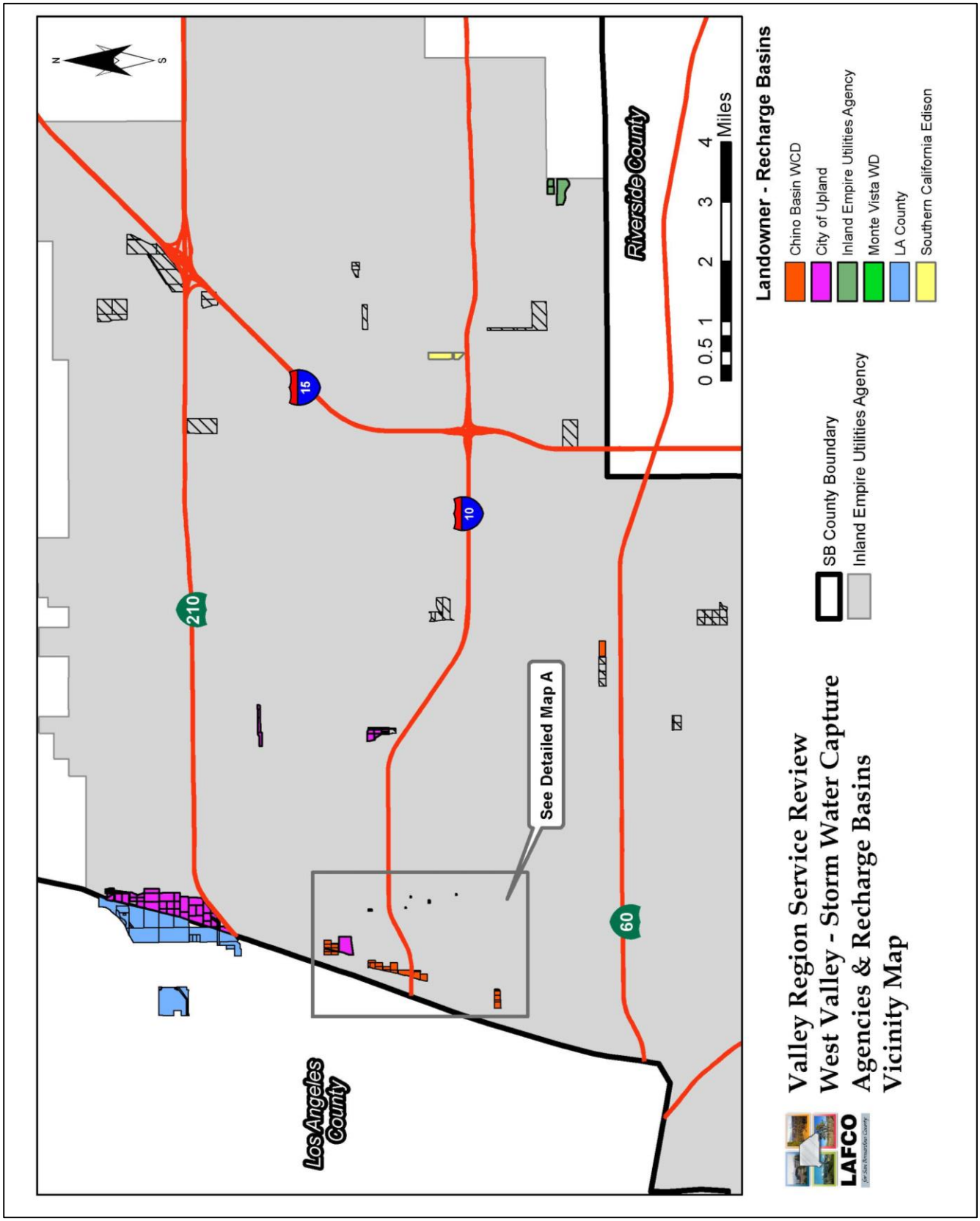
West Valley Overview

There are generally two basins within the West Valley: Chino and Cucamonga, both of which are adjudicated. The figure below is a summary of the two basins from the Department of Water Resources ("DWR"). As part of the California Statewide Groundwater Elevation Monitoring Program and pursuant to the California Water Code §10933, DWR is required to prioritize California groundwater basins, so as to help identify, evaluate, and determine the need for additional groundwater level monitoring. As identified by the DWR, the Chino Basin has been designated as a High Priority basin and the Cucamonga Basin as a Medium Priority basin for future monitoring. Both share similar population, groundwater reliance factors, and have been impacted from the population. The discussion which follows provides additional information on the basins and the efforts to improve water quality through recharge.

California Statewide Groundwater Elevation Monitoring Program								
Upper Santa Ana Valley Basin - West Valley								
			DWR Rating (1 = low, 5 = high)					
Sub-Basin	Sq. Miles	2010 Pop.	Pop.	Pop. Growth	GW Reliance	Impacts	Basin Priority	Impact Comments
Chino	242	898,653	4	2	4	3	High	High nitrates and dissolved solids.
Cucamonga	15	51,001	4	1	3.5	3	Medium	High nitrates reported in 14 of 24 wells tested.

The following agencies actively recharge the groundwater basins (not limited to surface water and stormwater/runoff) or account for recharge within the general West Valley: Chino Basin Water Conservation District, Chino Basin Watermaster (account and implement basin management), Inland Empire Utilities Agency, Monte Vista Water District, and City of Upland. The Inland Empire Utilities Agency encompasses the whole of the agencies under LAFCO purview: Chino Basin Water Conservation District, Monte Vista Water District, and City of Upland. The Chino Basin Watermaster is the court-appointed watermaster for the Chino Groundwater Basin which extends into Los Angeles and Riverside Counties. The adjudicated boundary does not encompass the entirety of the physical boundary, as depicted by the Department of Water Resources. The remaining areas of the physical boundary do not contain significant recharge activities.

The maps below illustrates the agencies that actively capture surface and storm water and the associated recharge sites in the West Valley. This first map identifies the landowner of the recharge basins in the West Valley along with a detail map, and the third map identifies the type of recharge (e.g. storm, imported) within the Chino Basin. The Cucamonga Valley Water District generally comprises the Cucamonga Basin (an adjudicated basin), and it does not actively recharge the basin.


Valley Region Service Review
West Valley - Storm Water Capture
Agencies & Recharge Basins
Vicinity Map
LAFCO
SB County Boundary
Inland Empire Utilities Agency
Landowner - Recharge Basins
Chino Basin WCD
City of Upland
Inland Empire Utilities Agency
Monte Vista WD
LA County
Southern California Edison
0 0.5 1 2 3 4 Miles
Riverside County
Los Angeles County
See Detailed Map A
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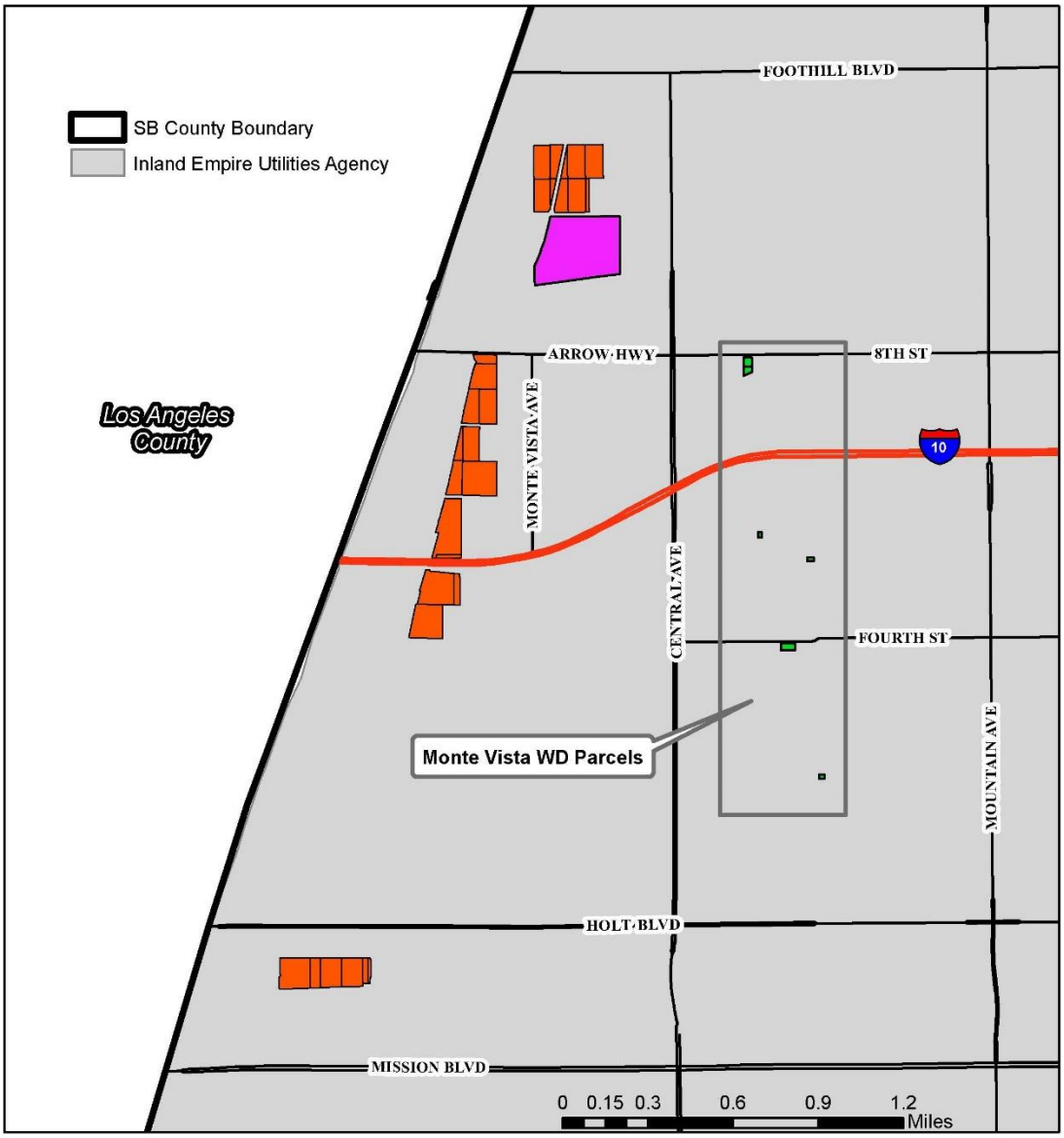


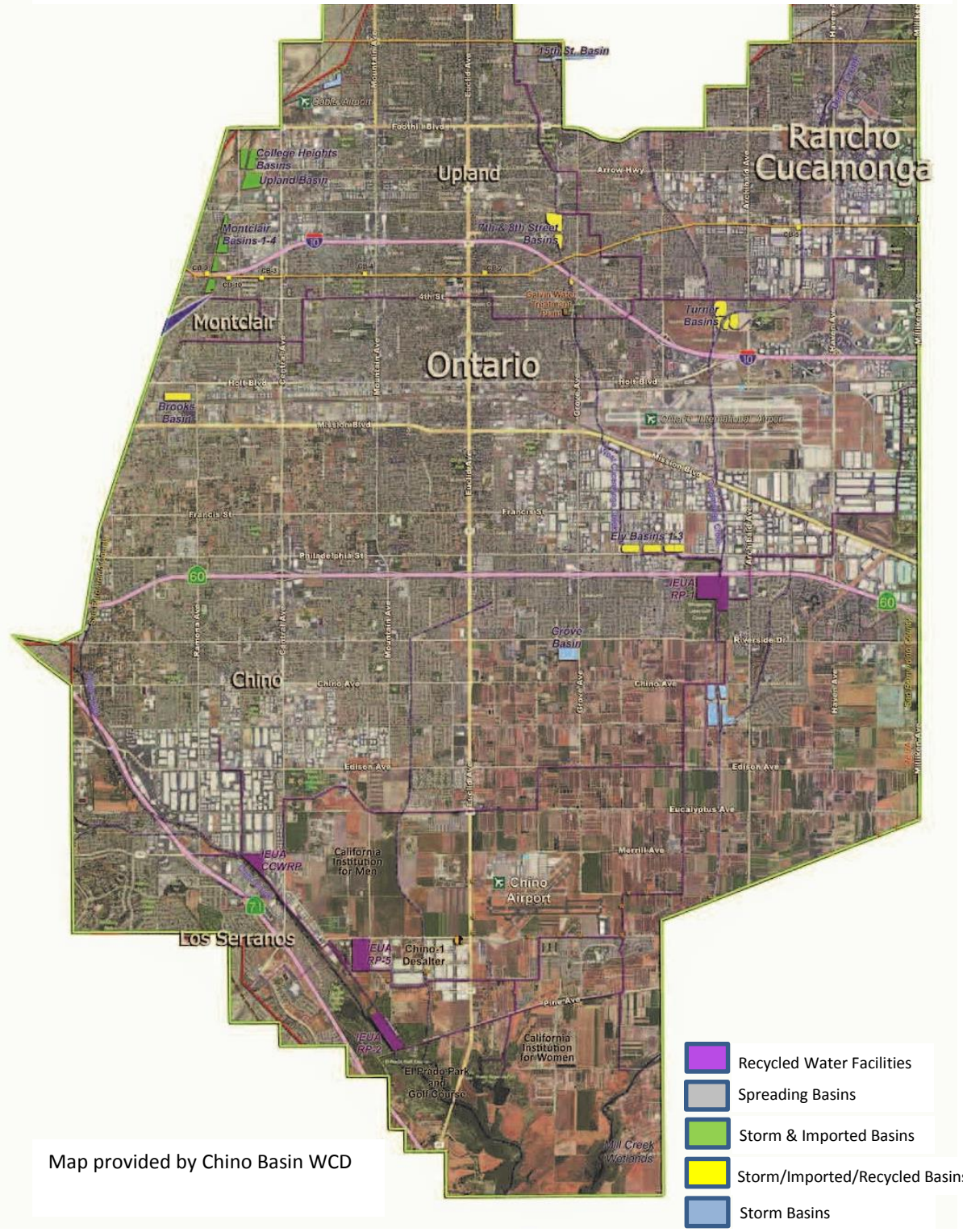
LAFCO

Valley Region Service Review
West Valley - Storm Water Capture Agencies & Recharge Basins
Detailed Map A

Landowner - Recharge Basins

- Chino Basin WCD
- Southern California Edison
- City of Upland
- LA County
- Monte Vista WD

Chino Basin Percolation Basins



Map provided by Chino Basin WCD

Chino Basin Description

The Chino Basin is one of the largest groundwater basins in Southern California containing approximately 5 million acre-feet of water and has an unused storage capacity of approximately 1 million acre-feet. The Chino Basin consists of approximately 235 square miles of the upper Santa Ana River watershed and lies within portions of San Bernardino, Riverside, and Los Angeles counties. Approximately 5% of the Chino Basin is located in Los Angeles County, 15% in Riverside County, and 80% in San Bernardino County. The legal, not the geological, boundaries of the Chino Basin are defined in a court Judgment.[11]

Chino Basin Watermaster

In 1978, the San Bernardino County Superior Court entered a Judgment establishing a new entity, the Chino Basin Watermaster.[12] The Judgment adjudicated all groundwater rights in Chino Basin and contains a physical solution to meet the requirements of water users having rights in or dependent upon the Chino Basin. The Judgment also appointed the Watermaster to account for and implement the management of the Chino Basin. It is composed of three stakeholder groups, called Pools, represented by separate Pool Committees:

- Overlying Agricultural Pool Committee, representing dairymen, farmers, and the State of California;
- Overlying Non-Agricultural Pool Committee, representing area industries;
- Appropriative Pool Committee, representing local cities, public water districts, and private water companies.

The Watermaster board is represented by the parties to the Judgment, and includes nine members which rotate amongst each pool until there is a Court approved change. At present the representatives are:

Member	Agency	Association
Steve Elie, Chair	Inland Empire Utilities Agency	Municipal
Paul Hofer , Vice-Chair	Crops	Agricultural
Arnold Rodriguez, Secretary/Treasurer	Santa Ana River Water Company	Appropriative/Minor
Bob Kuhn	Three Valleys Municipal Water District	Municipal
Mark Kinsey	Monte Vista Water District	Appropriative
Bob Bowcock	Vulcan Materials Company	Non-agricultural
Donald Galleano	Western Municipal Water District	Municipal
Jim Bowman	City of Ontario	Appropriative
Geofrrey Vanden Heuvel	Dairy	Agricultural

[11] Metropolitan Water District of Southern California. Chapter IV – Groundwater Basins Report.
[12] San Bernardino County Superior Court. 1978. Case No. RCV 51010 (formerly Case No. SCV 164327).

The main source of revenue for the Watermaster are assessments. The Watermaster levies and collects Administrative Assessments, Optimum Basin Management Plan ("OBMP") Assessments, and Replenishment Assessments. Administrative Assessments are general administrative and special project expenses incurred by the Watermaster and assessed to the respective pools based on allocations made by the Watermaster. OBMP assessments are levied to the Pools, to implement the OBMP, and Replenishment Assessments are levied to purchase replenishment water to replace production by any Pool during the preceding year which exceeds such Pool's allocated safe yield.

Agencies within the Chino Basin

The figure below describes the agencies that provide for some level of basin management within the Chino Basin. Following the figure is a discussion of the primary recharge agencies and their activities.

Summary of Management Agencies in the Chino Basin

Agency	Role
Chino Basin Watermaster	Court-appointed Watermaster for Chino Basin.
Chino Basin Desalter Authority	Joint Powers Authority established to operate and manage the Chino I and Chino II Desalters.
Chino Basin Water Conservation District (CBWCD)	Operation of some recharge facilities in Chino Basin. The CBWCD also promotes water conservation through an active public education program.
San Bernardino County Flood Control District (SBCFCD)	Operation of some recharge and flood control facilities in Chino Basin.
City of Upland	Operation of one recharge facility in Chino Basin.
Monte Vista Water District	Owns and operates ASR wells in Chino Basin.
Santa Ana Watershed Project Authority (SAWPA)	Joint Powers Authority established to plan and build facilities to protect the water quality of the Santa Ana River Watershed.
San Bernardino County Department of Environmental Health	Regulation of new well permits within vicinity of recharge basins and throughout basin.
Inland Empire Utilities Agency (IEUA)	Implementation of recharge and management strategies. Operation and maintenance of some recharge basins and associated facilities in Chino Basin.
Santa Ana River Watermaster	Watermaster for 1969 Stipulated Judgment that defined water allocations in the Santa Ana River between lower Santa Ana River and upper Santa Ana River producers.
California Department of Health Services	Regulation of water quality in recharge facilities and production wells.
Regional Water Quality Control Board – Santa Ana Region (Regional Board)	Regulation of recharge of recycled water and desalter facilities.

Source: Metropolitan Water District
ASR wells = Aquifer Storage and Recovery wells

Inland Empire Utilities Agency

Historically, IEUA has engaged in wholesale water and wastewater treatment services, and its recycled water has been captured and recharged by downstream water agencies for decades. In the late 1990s, IEUA began to implement groundwater recharge with recycled water at Ely Basin. The initial Ely Basin project was followed by the Chino Basin Watermaster's development of the Optimum Basin Management Program ("OBMP") and the region's efforts (including IEUA) to implement the OBMP. In 2002, the Watermaster, Chino Basin WCD, the San Bernardino County Flood Control District ("Flood Control District") and IEUA joined forces to greatly expand groundwater recharge capacity. The surface spreading operation significantly enhances storm water conservation and replenishment with imported and recycled water. Intense focus continues today on developing the recycled water supply.

IEUA recharges its recycled water is currently at Brooks Basin (owned by Chino Basin WCD), RP3 basin (owned by IEUA), and 8th Street, Ely, Turner, Victoria, Banana, Hickory, Declez, San Sevaine basins (owned by Flood Control District). IEUA is permitted to recharge recycled water at several other Flood Control District sites, but has not yet invested in infrastructure to take water there. All other recharge activities (stormwater and imported water) are performed by IEUA on the behalf of Chino Basin Watermaster.

Under Article X of Chino Basin Watermaster Rules and Regulations, IEUA applied for and received approval from Chino Basin Watermaster in 2002 to recharge up to 30,000 acre-feet per year of recycled water in the Chino Basin consistent with the elements of the 1999 Optimum Basin Management Plan, the Peace Agreement to the Chino Basin Judgment, and the 2001 Chino Basin Recharge Master Plan.

In December 2007, the IEUA Board of Directors approved an aggressive Three Year Business Plan that calls for 50,000 acre feet of connected demand of recycled water by 2013.[13] According to IEUA staff, the plan was last updated in FY 2010-11. Per the updated plan, the goal was to have 50,000 AFY of connected demand by FY 2011-12, with the projected recycled water deliveries of 50,000 AFY by FY 2012-13. Conditions within the region and IEUA's member agencies have been evolving over the past few years, and with the changes, the period at which IEUA estimates to reach the delivery of 50,000 AFY is FY 2019-20. The long-term goal for ultimate beneficial use in the region varies between 65,000 AFY and 78,000 AFY. These numbers are still being revised per IEUA's current planning initiatives.

As a member of the Metropolitan Water District of Southern California ("Metropolitan Water District"), one-third of the water distributed by IEUA is imported through the State Water Project.[14] Recognizing the limitation on imported water supplies caused by

[13] Recycled Water Annual Report

[14] Imported water to the western one-third of San Bernardino Valley is provided through the Metropolitan Water District of Southern California ("MWD") and several of its 26 member agencies. As one of 27 State Water Contractors in California, MWD delivers water to a 5,200-square-mile service area spanning Ventura, Los Angeles, Orange, Riverside, San Bernardino, and San Diego counties. Due to the statewide and regional demand for

drought conditions and environmental restrictions, a key business goal for IEUA is to "drought proof" the region by developing local supplies and maximizing groundwater recharge. IEUA has been able to increase the local supply of water by 33 percent through the construction of recycling plants and piping, new catch basins, and desalting plants.[15] IEUA operates five regional water recycling plants and produces three key "environmentally sustainable" products: recycled water, renewable energy, and high-quality biosolids compost. Protecting the region's vital groundwater supplies is a core element of the IEUA's "drought proof" business goal. The more water recharged into the Chino Groundwater Basin, the more self-reliant and less dependent the region becomes on imported water supplies. It does this through 19 groundwater recharge basins.[16]

As identified IEUA's 2014-19 Strategic Plan, three major recharge objectives stand out:

- Identify and protect the best recharge land sites in the service region by June 2016
- Conduct research to find new methods to safely recharge more water into Chino Basin by June 2016
- Coordinate with the Chino Basin Watermaster on the Recharge Master Plan Update by July 2019

The IEUA Asset Management Plan outlines planned capital projects for the agency's activities. Those related to recharge are listed below:

- Vulcan Pit Flood Control and Aquifer Recharge Project. This project will convert the existing Vulcan mining pit into a functional 60-acre groundwater recharge basin. $100,000 in FY 2014-15. The City of Fontana is the lead agency on the project.
- Wineville Extension Pipeline Segments A and B. A new 24-inch recycled water pipeline along Wineville Ave. from Airport Dr. to Jurupa St. continuing with a new 36-inch recycled water pipeline to RP-3 Groundwater Recharge Basin. The project includes a recycled water turnout to feed RP-3 Basin and a turnout to feed Declez Basin. $6 million in 2014-15 and $21.5 million in 2015-16.
- RP-3 Basin Improvements. Groundwater Recharge Master Plan Update 2013 project #11. IEUA cost share = 50% total cost. $200,000 in 2014-15, $5.1 million in 2015-16.

Colorado River and SWP water, imported water is significantly more expensive to purchase or acquire than groundwater.

[15] Neil Nisperos, "Inland Empire Water Agencies Shoring Up Supply for Times of Drought," *San Bernardino Sun*, 13 January 2015.

[16] 2014-19 Strategic Plan

- Victoria Basin Improvements. Groundwater Recharge Master Plan Update 2013. IEUA cost share = 50% total cost. $24,000 in 2014-15, $126,000 in 2015-16.

Additionally, the Turner Basin Recharge Project involves the installation of new pipe/gate within the two new recharge basins and connecting an existing flood control retention facility as a new recharge basin. IEUA, San Bernardino County, and several local and regional stakeholders developed the West End Conservation and Groundwater Task Force, for the development of a comprehensive plan that will guide future improvement efforts of the Turner / Guasti site. The next phase of the project will be a feasibility / planning study for the entire site, including construction or enlargement of several other recharge basins, appurtenances to allow more recycled water and storm water to be captured and recharged, wetlands, and educational opportunities. This project is partially funded by a Bureau of Reclamation grant of $406,712. The remaining cost of the project is shared between IEUA and the Watermaster.

Chino Basin Water Conservation District

The Chino Basin Water Conservation District owns eight basins that are used to percolate water from local runoff, imported water purchased by Watermaster parties, and recycled water from IEUA. Five of the basins are located in Montclair, two in Upland, and one in Ontario. The eight basins are described below:

Drainage System, Basin	IEUA Role	CBWCD Role	Storage Capacity (AFY)	Water Recharge Source	Notes
San Antonio Channel Drainage System					
College Heights East	A,B,D,F,H,I,J,L,N	G,M	145	Storm, State Project	No need for E, no infrastructure for C
College Heights West	A,B,D,F,H,I,J,M,N	G,L	126	Storm, State Project	No need for E, no infrastructure for C
Montclair 1	A,B,D,F,H,I,K,M,N	E,G,J,L	134	Runoff, storm, State Project	No infrastructure for C
Montclair 2	A,B,D,F,H,I,K,M,N	E,G,J,L	243	Runoff, storm, State Project	No infrastructure for C
Montclair 3	A,B,D,F,H,I,K,M,N	E,G,J,L	49	Runoff, storm, State Project	No infrastructure for C
Montclair 4	A,B,D,F,H,I,K,M,N	E,G,J,L	97	Runoff, storm, State Project	No infrastructure for C
Brooks	A,B,C,D,F,H,I,K,M,N	E,G,J,L	503	Runoff, storm, recycled, State Project	
West Cucamonga Channel Drainage System					
Ely 3 *	A,B,C,D,F,H,I,J,M,N	E,G,L,K	136	Runoff, storm, recycled	

* Ely #1 and #2 are owned by San Bernardino County Flood Control District.

A) Stormwater Passive Capture and Volume Accounting
B) Stormwater Active Diversion and Volume Accounting
C) Recycled Water Delivery and Volume Accounting
D) Imported Water Delivery and Volume Accounting
E) Vector Control Coordination
F) Weeding Monthly in Areas of Impact
G) Landscape and Property Maintenance
H) Operate and Maintain GWR Communication Infrastructure
I) Operate and Maintain Diversion Infrastructure
J) Infiltration Restoration Lead Agency
K) Infiltration Restoration - support agency
L) Basin grading maintenance - lead agency
M) Basin grading maintenance - support agency
N) Biologic Surveys and Biological Permitting

sources: Chino Basin WCD and IEUA

As shown above, IEUA plays a significant role in accounting, operating, and maintaining the Chino Basin WCD basins. The outline below summarizes the activity roles from the figure above:

- **IEUA only, all basins**
  - Stormwater passive capture and volume accounting
  - Stormwater active diversion and volume accounting

  - Imported water delivery and volume accounting
  - Weeding monthly in areas of impact
  - Operate and maintain GWR communication infrastructure
  - Operate and maintain diversion infrastructure
  - Biologic surveys and biological permitting

- **IEUA only, various basins**
  - Recycled water delivery and volume accounting

- **Chino Basin WCD only, all basins**
  - Landscape and property maintenance

- **Chino Basin WCD only, various basins**
  - Vector control coordination

- **IEUA and Chino Basin WCD, various basins**
  - Infiltration restoration - lead agency
  - Infiltration restoration - support agency
  - Basin grading maintenance – lead agency
  - Basin grading maintenance – support agency

The district's basins from FY 2005-06 through FY 2012-13 captured and recharged an average of 9,848 acre-feet of water. Of the 9,848 acre feet of water captured, the annual average includes 2,411 acre-feet of storm and nuisance water; 1,058 acre-feet of recycled water; and 6,378 acre-feet of imported water. According to the district, utilizing the Metropolitan Water District's Tier 2 treated rate ($997/ac. ft.), the nominal present value of the average captured and recharged water is over $9,815,000.

Because storm runoff water represents a potential threat to both residential and commercial property owners, yet is the most economical source for recharge of the Basin water supply, Chino Basin WCD works closely with the Watermaster and the Flood Control District through mutual cooperative efforts, the most effective balance between flood control and water conservation result. As a consequence, a number of Chino Basin WCD land acquisitions and construction projects for water conservation purposes have been made with the Flood Control District and others in mind. Historically, the district has also constructed diversion facilities and improvements to Flood Control District owned basins that help replenish the Chino Basin. Water retained by these facilities would otherwise be lost in flows to the Santa Ana River.

In 2000, the County Board of Supervisors approved a five-year cooperative agreement with five five-year options to extend with the Chino Basin WCD for the construction of additional improvements to the Grove Basin, including an outlet to the detention basin.[17] The Flood Control District completed construction of the Grove Basin Drain in 2000, the Grove Avenue Basin in 2001, and the Riverside Storm Drain in 2004 as a means of

[17] County contract No. 00 -1086. In order to increase ground water recharge through the capture and percolation of storm and local run-off water, the District participated financially in increasing the depth of the San Bernardino County Flood Control District's Grove Basin when constructed in the late 1990s and early 2000s and so includes the recharged water from that basin in the CBWCD's recharge figures.

minimizing future flooding in the Chino Agricultural Preserve area. The Flood Control District, in exchange for financial participation by the Flood Control District in the construction of the Basin, allowed the bottom portion of the Basin to be used for water conservation. As part of the agreement, Chino Basin WCD performs weed abatement on the bottom of Grove Basin and a portion of the slopes. The original term of the cooperative agreement was from October 25, 2000 through October 24, 2005 and has been extended to 2015. Three five-year options remain.

Other Agencies

Monte Vista Water District

The Monte Vista Water District operates four Aquifer Storage and Recovery ("ASR") groundwater wells which inject high quality water into the ground when water is plentiful, usually in wet winter months. When additional groundwater production is needed, in the hot summer months or in times of severe drought, ASR wells reverse operations and extract groundwater from the aquifer similar to typical production wells.

The total injection and recharge capacity of the district's ASR wells is 4.9 million gallons per day, which equates to an annual capacity in excess of 5,000 acre-feet per year (AFY). This represents just over 7% of the total recharge capacity in the Chino Basin. In addition to its ASR program, the district is a party to the Chino Basin Judgment (1978) and a signatory to the Chino Basin Peace Agreement (2000) which incorporates an Optimum Basin Management Program for the Chino Basin. The district has participated in the funding for recharge projects across the Chino Basin, and, for projects that create additional stormwater capture, the district receives additional groundwater production rights.

Finally, IEUA recharges recycled water into the Chino Basin for the benefit of its contracting parties, including the City of Montclair. The Monte Vista Water District has a Recycled Water Purchase Agreement (2007) with the City that gives the district exclusive right to purchase the City's share of this recycled water recharge. The recycled water is recharged in facilities across the Chino Basin under a permit from the Santa Ana Regional Water Quality Control Board.

City of Upland

City staff operates not only its own recharge basins but facilities for IEUA and the Pomona Valley Protective Association in Los Angeles County.

In 2005, the City of Upland, IEUA and Chino Basin Watermaster entered into an agreement that IEUA and Chino Basin Watermaster could utilize the capacity of Upland Basin not used for flood control for groundwater recharge. IEUA and Watermaster contributed $750,000 towards construction of Upland Basin and received a minimum recharge pool volume of 200 acre-feet. With this funding contribution, Upland assured IEUA and Watermaster that the facility would be used to the maximum practical extent for groundwater recharge. Maintenance costs due to recharge activities would be the responsibility of IEUA and Chino Basin Watermaster.

Optimum Basin Management Program

The Superior Court mandated that the Chino Basin Watermaster develop an Optimum Basin Management Plan ("OBMP"), with reports of progress and annual reports to be submitted to the Court and the major parties. The OBMP sets forth an overall management guide to clean the Chino Basin groundwater aquifer (which consists of several subareas) and to increase the yield of the Chino Basin for the water purveyors and other large groundwater producers in the Basin. In its simplest form the program consists of a number of actions that increase the recharge of water into northern and central portions of the Basin; extract high salt and nitrate contaminated water at the south end of the Basin; and provide for conjunctive use by expanding storage in the Basin. A key component of the OBMP implementation program is the recharge of the Chino Basin groundwater aquifer with stormwater, recycled water and imported water both to offset forecast increases in groundwater extraction and to increase the groundwater in storage.

The end result is that 20 recharge basins, almost all originally designed and installed by the Flood Control District, have been prepared to receive a mix of stormwater, recycled water and imported water to increase the volume of groundwater in storage within the Chino Basin. The necessary connections (pipelines and turnouts) have been installed and additional facilities are being considered, reviewed and funded on an ongoing basis.

The Watermaster has identified three recharge priorities. Capture of storm water has been identified as the top priority by the Watermaster. Increasing the yield of the Basin with this high quality source of water will improve groundwater quality and increase the assimilative capacity of the Basin. The second priority for recharge is the use of the high quality recycled water produced at IEUA's wastewater treatment facilities. Over 60,000 acre-feet of recycled water is currently produced and there is approximately 20,000 acre-feet of capacity in the Chino Basin to be recharged. In 2005, the Santa Ana Regional Water Quality Control Board issued the permit for the use of recycled water for groundwater recharge. This is the first permit for indirect potable reuse in California that received unanimous local and statewide support. In 2007, the permit was updated to include additional recharge sites. In 2009, the permit was amended to increase the averaging period used for compliance to 120 months and to allow groundwater underflow to be used as diluent in the computation of the running average Recycled Water Contribution.

The third priority for recharge is the use of imported water supplies. The Groundwater Recharge Master Plan identifies opportunities to use these supplies during wet years when surplus water is available.[18] The Agreement for Operation and Maintenance of Facilities to Implement the Groundwater Recharge Master Plan is commonly referred to as the Four Party Agreement or the Peace Agreement, and was entered into by the Flood Control District, IEUA, Chino Basin WCD, and IEUA to cooperate in a program to implement certain portions of the Recharge Master Plan for the purpose of assuring that the Chino Basin has adequate recharge capabilities to meet its future needs. The

[18] 2011 Urban Water Management Plan

effective date of the agreement was January 23, 2003 and continues through December 31, 2032.

To provide a comprehensive program to increase the recharge of storm-water, recycled water, and imported water into the Chino Basin groundwater aquifer, the Groundwater Recharge Master Plan was developed in 2001 (and updated in 2010) as part of the Watermaster OBMP. A 2013 Recharge Master Plan Update to the 2010 Recharge Master Plan was recently completed. The update evaluated 27 yield enhancing capital projects for the Chino Basin and recommends implementation of 11 projects over the next six years. IEUA has agreed to finance three of the projects (RP 3 basin improvements, Victoria Basin, and Lower Day). The remaining projects require additional investigation to evaluate the feasibility and cost-effectiveness of incorporating the basins into the recharge program.

The same member agencies of the Groundwater Recharge Master Plan (Four Party Agreement) are on the Groundwater Recharge Coordinating Committee ("GRCC"). The purpose of the GRCC is to coordinate and manage the use of the recharge basins for all recharge purposes contemplated under the Groundwater Recharge Master Plan. Each of the Parties is entitled to appoint one member and one alternate member to the GRCC. The GRCC meets quarterly or as often as necessary to facilitate full coordination of groundwater recharge operations.

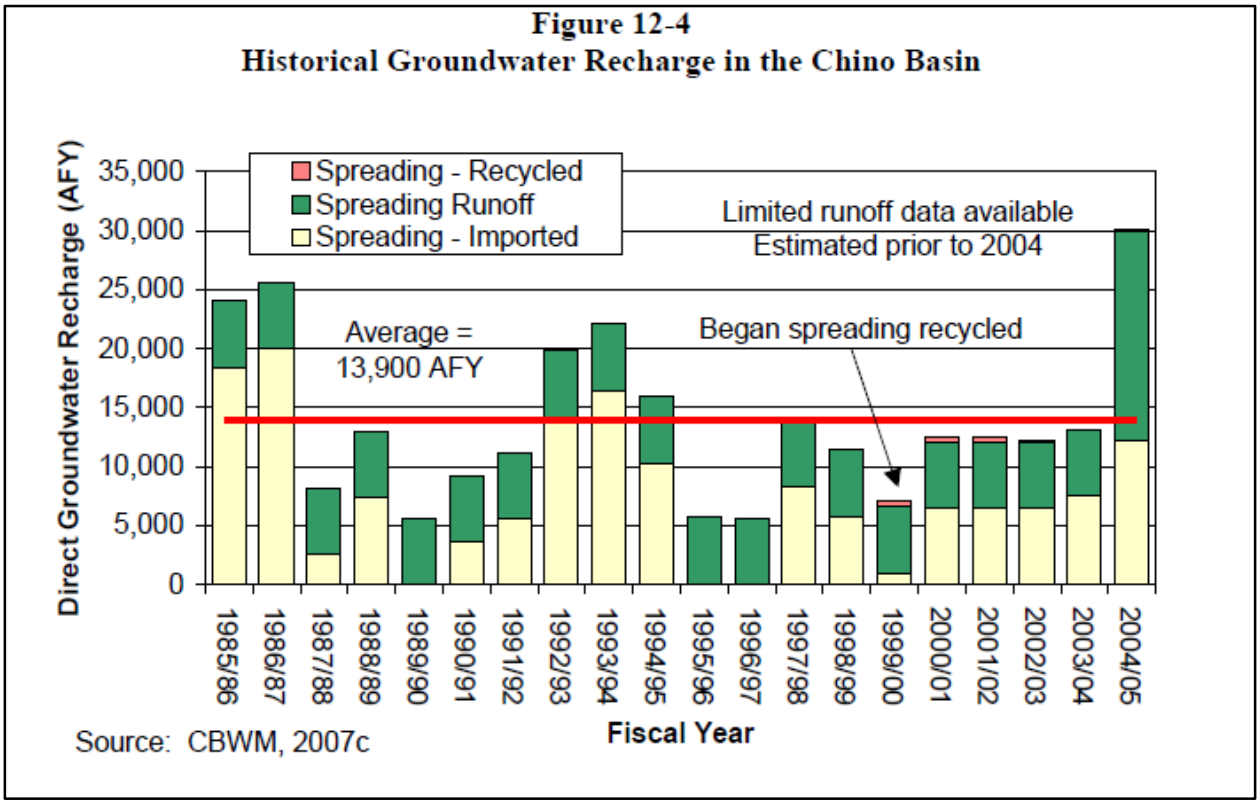
In addition, Watermaster holds the water right permits to divert, percolate and store stormwater. Operation of the facilities is handled by IEUA, which defers to Flood Control District during storm periods. Watermaster and IEUA have a joint recharge permit from the Regional Water Quality Control Board for the recharge of imported, storm and recycled water.

Water purveyors in the Chino Basin also participate in a variety of in-lieu groundwater storage programs whereby they receive imported water from Metropolitan Water District in-lieu of pumping groundwater. These programs result in decreased pumping when water is delivered and increased pumping later. Historically, these have included Metropolitan Water District's cyclic, replenishment water and conjunctive use programs.[19]

Spreading in the Chino Basin

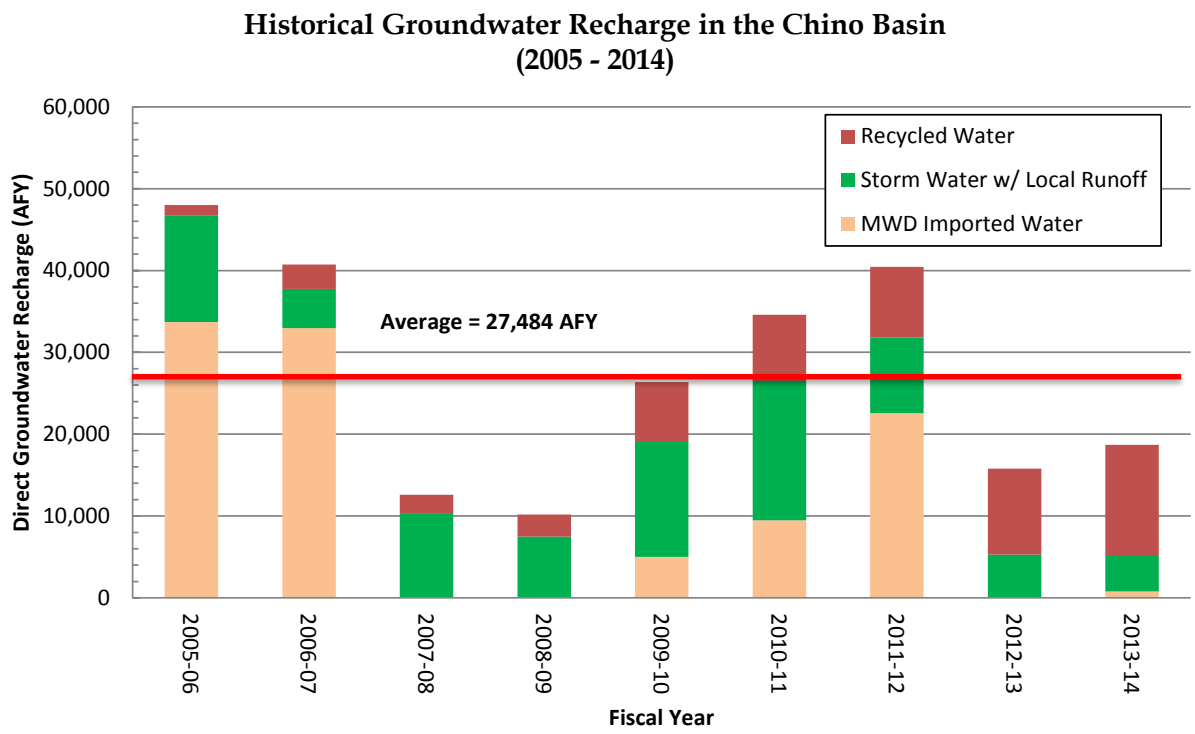
Imported water, recycled water and runoff (to include surface water) are currently spread in the Chino Basin. As shown in the figure below, an average of about 13,900 AFY has been spread between fiscal years 1985-86 and 2004-05.[20] About 7,700 AFY has been recharged with imported water from Metropolitan Water District during this time. Runoff recharge was not measured prior to 2004; however, the Watermaster estimates that the historical runoff spread was approximately 5,600 AFY. In fiscal year 1999-00, recycled water began to be recharged in the Ely Basins and, an average of about 300 AFY of recycled water has been recharged in the Chino Basin through 2004-05.[21]

[19] Chino Basin Recycled Water Groundwater Recharge Program, 2013 Annual Report, 1 May 2014
[20] Chino Basin Watermaster, 2007. Recharge data provided 3/28/07. As cited in Metropolitan Water District.
[21] Metropolitan Water District.



Source: IEUA Recharge Master Plan

Expanding from the above data, 27,484 AFY has been spread from FY 2005-06 through FY 2013-14. Below LAFCO staff has created a figure to illustrate the amount of groundwater recharge from all three sources. As shown, storm water recharge has declined significantly since FY 2010-11 (due to the drought), being less than the storm water recharge average during this timeframe. What was first considered a recharge source to reduce reliance on imported water from Metropolitan Water District, due to the current drought recycled water has now become a necessity for the basin.



Source: IEUA and Chino Basin Watermaster, Summary of Chino Basin Groundwater Recharge Operations (FY 2005-06 through FY 2013-14)
Prepared by LAFCO staff

SUMMARY OF CHINO BASIN GROUNDWATER RECHARGE OPERATIONS									
	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Recycled Water	1,304	2,989	2,340	2,684	7,210	8,065	8,634	10,479	13,593
Storm Water w/ Local Runoff	12,999	4,770	10,243	7,498	14,141	17,051	9,266	5,298	4,299
MWD Imported Water	33,705	32,968	0	0	5,001	9,465	22,560	0	795
TOTAL	48,008	40,727	12,583	10,182	26,352	34,581	40,460	15,777	18,687
units in acre-feet									
source: IEUA and Chino Basin Watermaster, Summary of Chino Basin Groundwater Recharge Operations (FY 2005-06 through FY 2013-14)									
Average = 27,484 acre feet/year									

Cucamonga Valley Basin Description

The Cucamonga Valley Basin comprises roughly 15 square miles and underlies the northern part of upper Santa Ana Valley. It is bounded on the north by alluvium abutting the San Gabriel Mountains and on the west, east, and south by the Red Hill fault. This portion of the upper Santa Ana Valley is drained by Cucamonga and Deer Creeks to the Santa Ana River.

The groundwater rights for the Cucamonga Basin were adjudicated, as defined in the 1958 Judgment of the Superior Court (Decree No. 92645). Currently, the Chino Basin

Watermaster has been designated to manage the Cucamonga Basin. The basin's legal boundary as stipulated in the Judgment is smaller than the geologic boundary of the basin. As defined in the Judgment, the eastern boundary of the basin is not based on geologic features, thus a portion of the geologically defined basin is within the legal boundary of the Chino Basin.

Recharge to the sub-basin is provided by infiltration of stream flow, percolation of rainfall to the valley floor, underflow from the San Gabriel Mountains, and return irrigation flow. Additional recharge to the sub-basin is from storm flow at spreading grounds along Cucamonga Creek and near Red Hill and Alta Loma. Groundwater flow generally is southward from areas of recharge in the north towards the Red Hill fault in the south. As part of the Judgment, San Antonio Water Company is required to recharge a minimum of 2,000 AFY of imported water (mostly runoff) into the basin annually as calculated over a 10-year period. Over this period, 95 percent of any additional water spread may be added to San Antonio Water Company's adjudicated right. It is the goal of the Cucamonga Valley Water District to finalize a management plan for the Cucamonga Basin and work with the San Antonio Water Company to develop a conjunctive use and recharge program to minimize the impacts of overproduction in the Cucamonga Basin.

Retail water providers are the Cucamonga Valley Water District, and the following private entities: San Antonio Water Company, Sunset Water Company, Alta Loma Mutual Water Company, and Foothill Irrigation Company.

No groundwater banking, storage, or transfers occur within the Cucamonga Basin. Total storage space in the basin is unknown.

B. Capture and Recharge of Surface Water and Stormwater/Runoff – East Valley

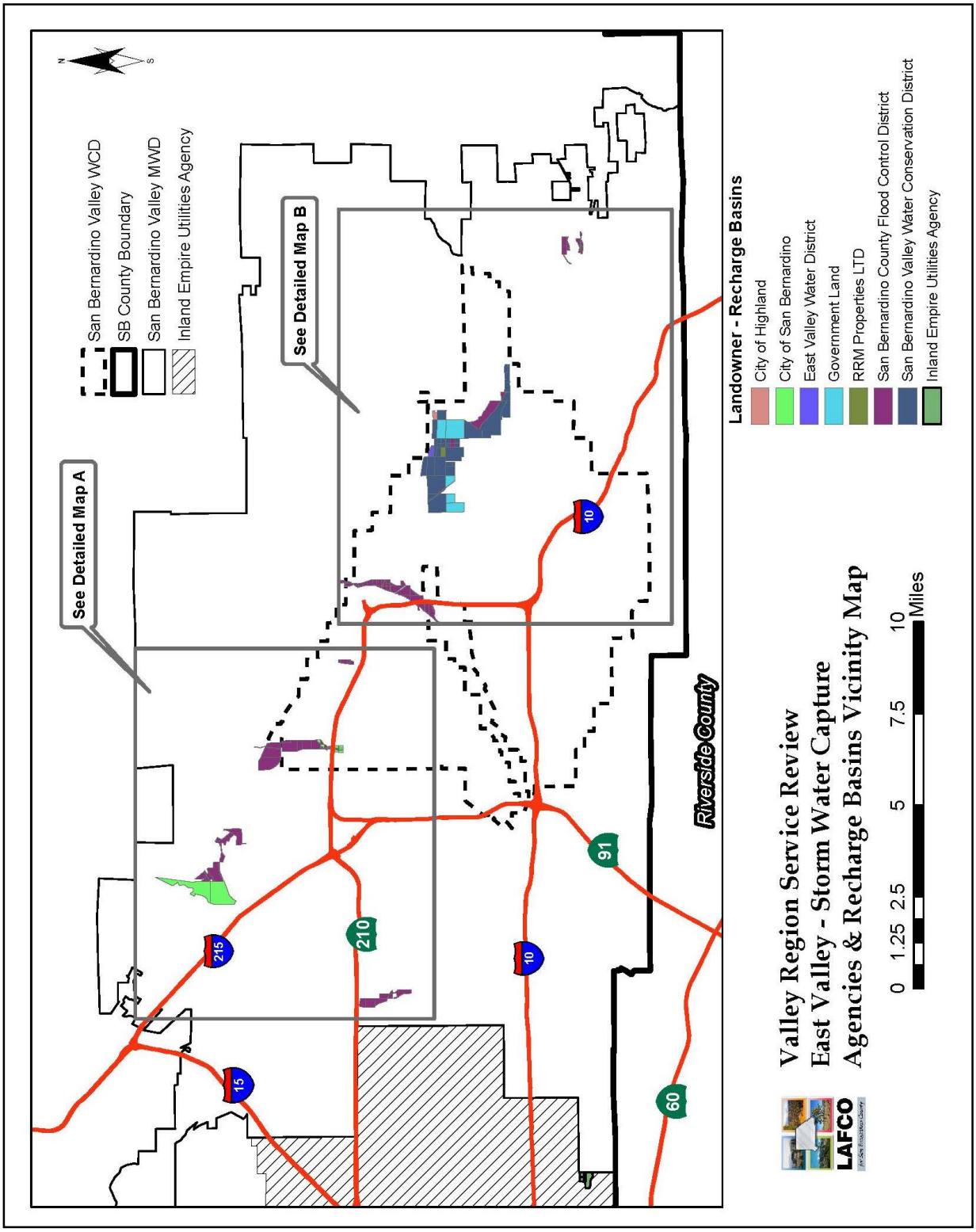
There are, or portions of, five basins within the East Valley. Below is a summary of the basins from the Department of Water Resources ("DWR"). As part of the California Statewide Groundwater Elevation Monitoring Program and pursuant to the California Water Code §10933, DWR is required to prioritize California groundwater basins, so as to help identify, evaluate, and determine the need for additional groundwater level monitoring. As identified by the DWR, the Bunker Hill and Riverside-Arlington basins have been designated as High Priority basins and the others as Medium Priority basins for future monitoring. The discussion which follows provides additional information on the basins and the efforts to improve water quality through recharge.

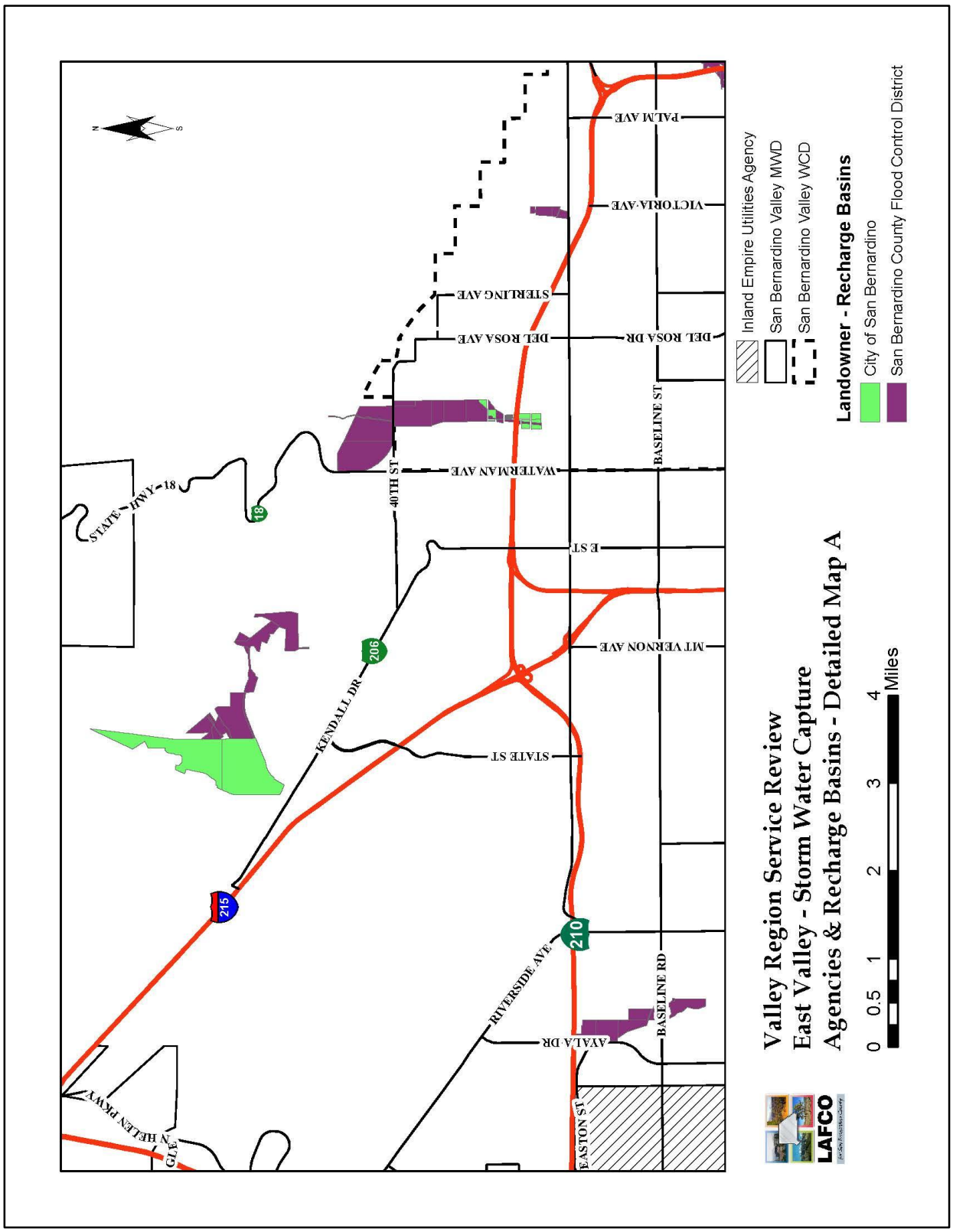
California Statewide Groundwater Elevation Monitoring Program								
Upper Santa Ana Valley Basin - East Valley								
			DWR Rating (1 = low, 5 = high)					
Sub-Basin	Sq. Miles	2010 Pop.	Pop.	Pop. Growth	GW Reliance	Impacts	Basin Priority	Impact Comments
Bunker Hill	127	363,394	4	1	3	3	High	Impacted with toxins from Newmark Superfund site & perchlorate from Crafton-Redlands plume.
Rialto-Colton	47	145,832	4	1	3	3	Medium	Extensive perchlorate contamination in basin.
Riverside-Arlington	92	336,884	4	2	4.5	5	High	Water quality degradation issues known in several public supply wells.
San Timoteo	115	54,169	2	5	2.5	3	Medium	High nitrates and salinity. Upper basin water quality issues.
Yucaipa	40	65,180	3	1	3.5	5	Medium	Overdraft. Documented impacts of nitrates and sulfates.

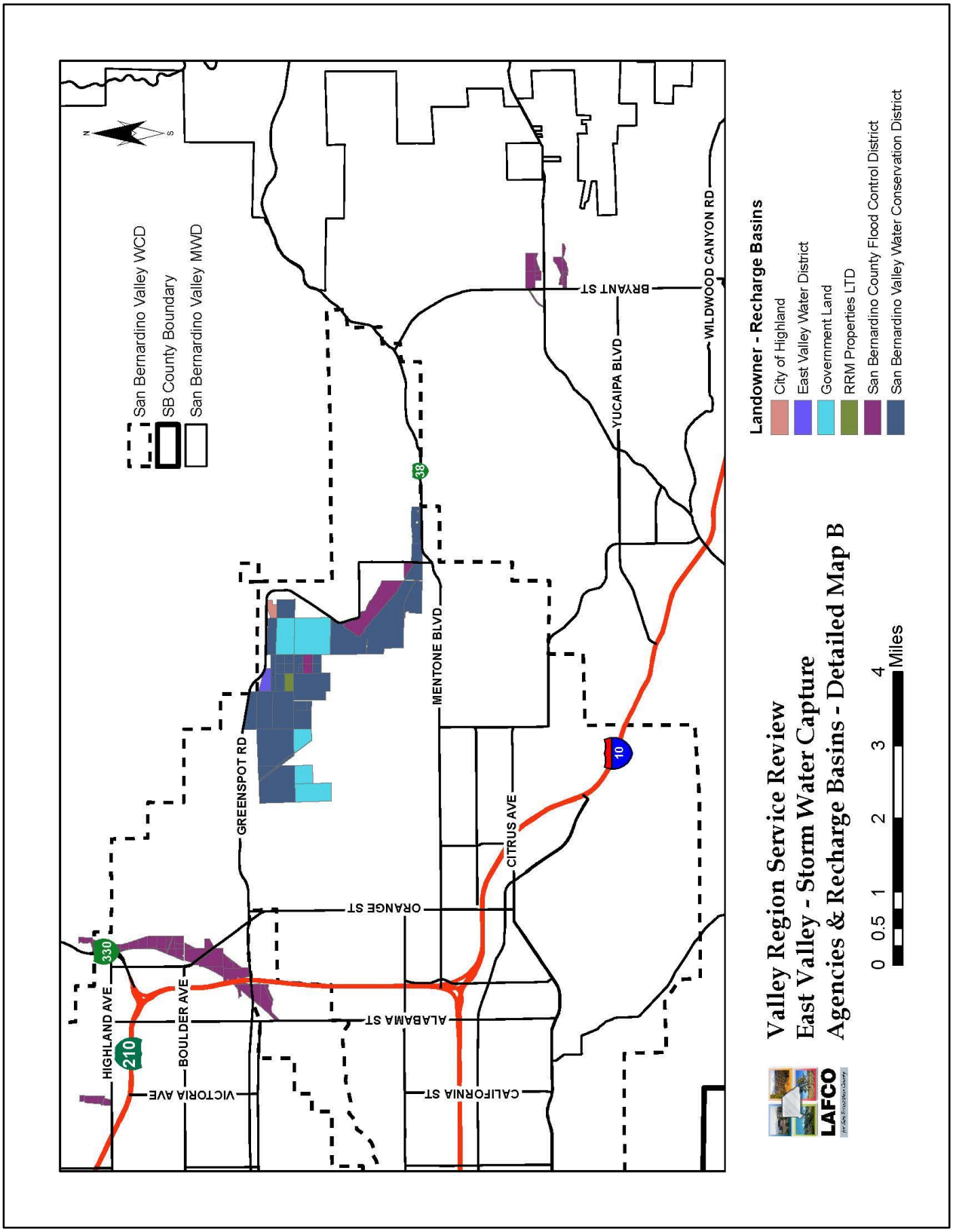
The following agencies actively recharge the groundwater basins (not limited to stormwater/runoff) or account for recharge within the general East Valley. The San Bernardino Valley Municipal Water District encompasses the whole of the agencies under LAFCO review. The San Bernardino Valley Municipal Water District is the court-appointed watermaster for the San Bernardino Basin Area which includes the Bunker Hill Basin in San Bernardino County, which extends into Riverside County.

- Primary Agencies
  - San Bernardino Valley Municipal Water District
  - San Bernardino Valley Water Conservation District
  - San Bernardino County Flood Control District
- Secondary Agencies
  - Beaumont-Cherry Valley Water District
  - City of San Bernardino Municipal Water Department
  - East Valley Water District
  - West Valley Water District
  - Yucaipa Valley Water District

Numerous existing groundwater recharge facilities (spreading grounds or spreading basins) are located in the San Bernardino Basin Area, Rialto-Colton, and Yucaipa basins. The locations of these facilities are shown below, and selected characteristics are summarized in the following table. Existing turnouts serve each recharge facility, with the exception of the Cactus Spreading and Flood Control Basins, which would be served by the Cactus Basins Pipeline proposed by MUNI. A description of each spreading ground follows.


San Bernardino Valley WCD
SB County Boundary
San Bernardino Valley MWD
Inland Empire Utilities Agency
See Detailed Map A
See Detailed Map B
Riverside County
15
215
210
10
91
60
Landowner - Recharge Basins
City of Highland
City of San Bernardino
East Valley Water District
Government Land
RRM Properties LTD
San Bernardino County Flood Control District
San Bernardino Valley Water Conservation District
Inland Empire Utilities Agency
0 1.25 2.5 5 7.5 10
Miles
LAFCO
Valley Region Service Review
East Valley - Storm Water Capture
Agencies & Recharge Basins Vicinity Map


Valley Region Service Review
East Valley - Storm Water Capture
Agencies & Recharge Basins - Detailed Map A
LAFCO
0 0.5 1 2 3 4 Miles
Landowner - Recharge Basins
City of San Bernardino
San Bernardino County Flood Control District
Inland Empire Utilities Agency
San Bernardino Valley MWD
San Bernardino Valley WCD
PALM AVE
VICTORIA AVE
STERLING AVE
DEL ROSA AVE
DEL ROSA DR
BASELINE ST
WATERMAN AVE
40TH ST
E ST
MT VERNON AVE
STATE ST
KENDALL DR
RIVERSIDE AVE
AVALA DR
BASELINE RD
EASTON ST
N HELLEN PKWY
STATE HWY 18
18
206
210
215


San Bernardino Valley WCD
SB County Boundary
San Bernardino Valley MWD
HIGHLAND AVE
BOULDER AVE
VICTORIA AVE
GREENSPOT RD
ORANGE ST
ALABAMA ST
CALIFORNIA ST
MENTONE BLVD
CITRUS AVE
YUCAIPA BLVD
BRYANT ST
WILDWOOD CANYON RD
330
210
38
10
Landowner - Recharge Basins
City of Highland
East Valley Water District
Government Land
RRM Properties LTD
San Bernardino County Flood Control District
San Bernardino Valley Water Conservation District
Valley Region Service Review
East Valley - Storm Water Capture
Agencies & Recharge Basins - Detailed Map B
0 0.5 1 2 3 4
Miles
LAFCO

Facility Name	Owner or Operator	Conveyance Used to Serve Facility: Turnout Name & Capacity (cfs)	Recharge Facility Characteristics[1]: Active Recharge Facility Area[2] (acres)	Percolation Rate[3] (feet/day)	Monthly Capacity (AF)	Groundwater Basin (and Subbasin) Recharged[4]
SAR Spreading Grounds	SBVWCD	Foothill Pipeline Santa Ana Low Flow (288) Santa Ana Intake (200 Max)	64[4]	3	12,000	SBBA (Bunker Hill)
Devil Canyon and Sweetwater Basins	SBCFCD[5]	Foothill Pipeline Sweetwater (37)	30	1.5	1,350	SBBA (Bunker Hill)
Lytle Basins	Lytle Creek Water Conservation Association	Fontana Power Plant Constructed drainage channel	Variable	1.5	Variable	SBBA (Lytle Creek)
City Creek Spreading Grounds	SBCFCD	Foothill Pipeline City Creek (60)	75	1.5	3,375	SBBA (Bunker Hill)
Patton Basins	SBCFCD	Foothill Pipeline Patton (12)	3	0.3	27	SBBA (Bunker Hill)
Waterman Basins	SBCFCD	Foothill Pipeline Waterman (135)	120	0.5	1800	SBBA (Bunker Hill)
East Twin Creek Spreading Grounds	SBCFCD	Foothill Pipeline Waterman (135)	32	1.5	1440	SBBA (Bunker Hill)
Badger Basins	SBCFCD	Foothill Pipeline Sweetwater (22)	15	0.5	225	SBBA (Bunker Hill)
Mill Creek	SBVWCD	Greenspot Pipeline Mill Creek Spreading (50) Mill Creek Intake (110)	66	3	6,000	SBBA (Bunker Hill)
Cactus Spreading and Flood Control Basins	SBCFCD	San Gabriel Valley MWD Lytle Pipeline Lower Lytle Creek (55)	46	1.5	2,070	Rialto-Colton
Wilson Basins	SBCFCD	East Branch Extension Wilson Basins (30)	12	1	360	Yucaipa subbasin
Garden Air Creek	Valley District	East Branch Extension Garden Air Creek (16)0	n/a	n/a	n/a	San Timoteo subbasin

[1] Values are from tabulation on map contained in Water Right Application by Valley District and Western to appropriate water from the SAR or by engineering evaluation of spreading grounds.

[2] Recharge facility area is the geographical extent of each basin that can be inundated for recharge.

[3] Estimated percolation rate. This is the estimated rate at which water can percolate into the ground through the basin, expressed in feet per day. The values used have generally been computed from the annual recharge capacity. These rates are typically about one-half of the percolation rates presented by the USGS (1972). The use of the small percolation rates is reasonable in that it would involve longer-term percolation rates that are typically smaller than short-term rates.

[4] Note that there may be flow out of the subbasin or basin identified. For example, a report by Geoscience Support Services, Inc. (1992) estimated that only 36 percent of the water recharged in the upper Lytle Creek area remains in the Lytle Creek subbasin, while most of it flows to the Rialto-Colton subbasin.

[5] Recharge facility area based upon 4/11/03, SBVWCD Report: "SBVWCD Basin Storage Capacity for SAR and MC." Or by estimating using GIS.

Source: Upper Santa Ana River Watershed: Integrated Regional Water Management Plan. 2015.

In response to the draft staff report, SB Valley WCD clarifies the data in the chart above:

- SAR Spreading Grounds – Diversion capacity at Cuttle Weir is approximately 900 CFS, current capacity under Greenspot trail is 200-250 CFS. Enhanced Recharge Cooperative project is designed to increase to 500 CFS.

- Mill Creek Row - Two 50 CFS canals can deliver a peak of 100 CFS. Improvements are in design to upgrade the reliability at this capacity during more productive storm events.

In response to the draft staff report, Flood Control District clarifies the data in the chart above by noting that its Oak Glen and Wildwood basins are a part of the Yucaipa area basins.

Basin Descriptions

The following descriptions of the five sub-basins is taken from the Department of Water Resources Bulletin 118 (last updated 2004):

Bunker Hill Sub-basin

The Bunker Hill sub-basin underlies the San Bernardino Valley and comprises 120 square miles. This sub-basin is bounded by contact with consolidated rocks of the San Gabriel Mountains, San Bernardino Mountains, and Crafton Hills, and by several faults. The Santa Ana River, Mill Creek, and Lytle Creek are the main tributary streams in the sub-basin. Groundwater generally converges toward the Santa Ana River in the southwestern part of the sub-basin and discharges over the San Jacinto fault at Colton Narrows.

Recharge to the Bunker Hill Sub-basin historically has resulted from infiltration of runoff from the San Gabriel and San Bernardino Mountains. The Santa Ana River, Mill Creek, and Lytle Creek contribute more than 60 percent of the total recharge to the ground-water system. Lesser contributors include Cajon Creek, San Timoteo Creek, and most of the creeks flowing southward out of the San Bernardino Mountains. The sub-basin is also replenished by deep percolation of water from precipitation and resulting runoff, percolation from delivered water, and water spread in streambeds and spreading grounds.

Rialto-Colton Sub-basin

The Rialto-Colton Sub-basin underlies a portion of the upper Santa Ana Valley in southwestern San Bernardino County and northwestern Riverside County and comprises 47 square miles. This sub-basin is bounded by the San Gabriel Mountains on the north, the San Jacinto fault on the east, the Box Spring Mountains on the south, and the Rialto-Colton fault on the west. Lytle Creek drains this part of the valley

southeastward to its confluence with the Santa Ana River in the southern part of the sub-basin.

The principal recharge areas are Lytle Creek in the northwestern part of the sub-basin, Reche Canyon in the southeastern part, and the Santa Ana River in the south-central part. Lesser amounts of recharge are provided by percolation of precipitation to the valley floor, underflow, and irrigation and septic returns. Underflow occurs from fractured basement rock and through the San Jacinto fault in younger Santa Ana River deposits at the south end of the sub-basin and in the northern reaches of the San Jacinto fault system.

Riverside-Arlington Sub-basin

The Riverside-Arlington Sub-basin underlies part of the Santa Ana River Valley in northwest Riverside County and southwest San Bernardino County and comprises 92 square miles. This sub-basin is bound by impermeable rocks of Box Springs Mountains on the southeast, Arlington Mountain on the south, La Sierra Heights and Mount Rubidoux on the northwest, and the Jurupa Mountains on the north. The northeast boundary is formed by the Rialto-Colton fault, and a portion of the northern boundary is a groundwater divide beneath the Bloomington community. The Santa Ana River flows over the northern portion of the sub-basin.

The Riverside-Arlington Sub-basin is replenished by infiltration from Santa Ana River flow, underflow past the Rialto-Colton fault, intermittent underflow from the Chino Sub-basin, return irrigation flow, and deep percolation of precipitation.

San Timoteo Sub-basin

The San Timoteo Sub-basin underlies Cherry Valley and the City of Beaumont in southwestern San Bernardino and northwestern Riverside Counties and comprises 114 square miles. The sub-basin is bounded to the north and northeast by the Banning fault and impermeable rocks of the San Bernardino Mountains, Crafton Hills, and Yucaipa Hills, on the south by the San Jacinto fault, on the west by the San Jacinto Mountains, and on the east by a topographic drainage divide with the Colorado River Hydrologic Region. The surface is drained by Little San Gorgonio Creek and San Timoteo Canyon to the Santa Ana River.

Groundwater is replenished by subsurface inflow and percolation of precipitation, runoff, and imported water. Runoff and imported water are delivered to streambeds and spreading grounds for percolation.

Yucaipa Sub-basin

The Yucaipa Sub-basin underlies the southeast part of San Bernardino Valley and comprises 39 square miles. It is bounded on the north by the San Andreas fault, on the west by the Redlands fault and the Crafton Hills, on the south by the Banning fault, and on the east by the Yucaipa Hills. The average annual precipitation ranges from 12 to 28 inches. This part of the San Bernardino Valley is drained by Oak Glen, Wilson, and

Yucaipa Creeks south and west into San Timoteo Wash, a tributary to the Santa Ana River.

Dominant recharge to the sub-basin is from percolation of precipitation and infiltration within the channels of overlying streams, particularly Yucaipa and Oak Glen Creeks, underflow from the fractures within the surrounding bedrock beneath the sub-basin, and artificial recharge at spreading grounds. Four artificial recharge facilities were noted in 1967 by the Department of Water Resources with a total capacity of about 56,500 af/yr. By increasing the spreading acreage along Oak Glen Creek by 25-50 acres, the capability exists to spread 7,000 to 14,000 af of surface water annually to recharge the Yucaipa Sub-basin.

San Bernardino Basin Area

The Bunker Hill Basin and surrounding areas comprise the San Bernardino Basin Area. The Bunker Hill Basin is an adjudicated groundwater basin through a 1969 judgment in *Western Municipal Water District v. East San Bernardino County Water District* which appointed MUNI and Western Municipal Water District as Watermasters for the San Bernardino Basin Area. As Watermaster, MUNI is required to monitor and replenish the basin when surface diversions and groundwater extractions exceed the determined safe yield. The defining geologic characteristic of the basin is a topography that generally slopes from the foothills of the San Bernardino National Forest down to the San Bernardino Valley floor. The Santa Ana River is a major feature traversing the area, providing a major water supply source for groundwater recharge as well as drainage and flood control. Groundwater extraction and replenishment activities must be carefully balanced in the Bunker Hill Basin due to the unique hydrogeology of the basin. As its primary mission, the San Bernardino Valley Water Conservation District is also responsible for replenishment of the Bunker Hill Basin which it accomplishes through a network of canals, diversion structures, and percolation basins.

According to MUNI, groundwater storage in the San Bernardino Basin Area is currently 650,000 acre-feet lower than it was in the base year, 1934. This new, historic low storage level is about 78,000 acre-feet lower than the previous, historic low storage level recorded in 1965.

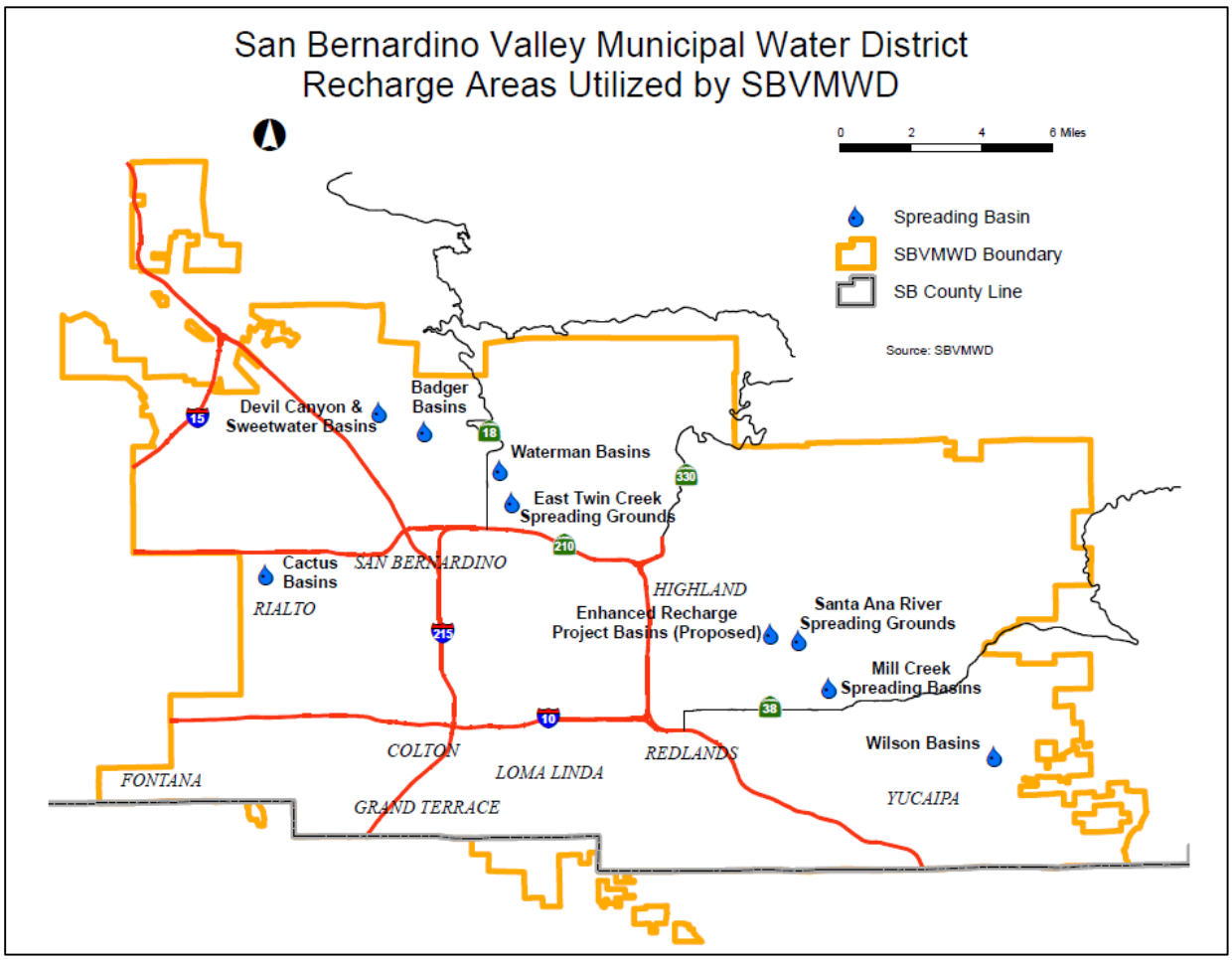
MUNI and SB Valley WCD cooperatively monitor and report on surface and groundwater for the Bunker Hill Basin. SB Valley WCD provides the Daily Flow Report for surface water and annual Engineering Investigation Report for groundwater levels and change in storage as required by the Water Code Section 75601.

San Bernardino Valley Municipal Water District

The San Bernardino Valley Municipal Water District ("MUNI") is responsible for long-range water supply management, including importing supplemental water, and is responsible for most of the groundwater basins within its boundaries and for groundwater extraction over the amount specified in the judgments. It has specific responsibilities for monitoring groundwater supplies in the San Bernardino and Colton-Rialto basins and maintaining flows at the Riverside Narrows on the Santa Ana River. It fulfills its responsibilities in a variety of ways, including importing water through the State

Water Project ("SWP") for direct delivery and groundwater recharge and by coordinating water deliveries to retail agencies throughout its service area.

MUNI receives delivery of SWP water at the Devil Canyon Power Plant Afterbay, which is located just within its northern boundary. Water is conveyed 17 miles eastward to various spreading grounds, agricultural, and wholesale domestic delivery points in the San Bernardino Basin, which are shown in the figure below. Water is also conveyed westward for direct delivery and recharge in the Colton-Rialto basin.



Current and Future Projects

MUNI is currently undergoing or planning the following future recharge projects:[22]

- The Enhanced Recharge in Santa Ana River Basins is a joint project with MUNI, the Western Municipal Water District, Riverside Public Utilities and SB Valley WCD. The first phase involves construction of intake improvements, a sedimentation basin, new canal, 96-inch diameter pipeline and new recharge ponds. The second phase involves construction of additional 96-inch diameter

[22] Neil Nisperos, "Inland Empire Water Agencies Shoring Up Supply for Times of Drought," *San Bernardino Sun*, 13 January 2015.

pipeline to connect to the Metropolitan Water District of Southern California 12-foot diameter Inland Feeder Pipeline. Phase 1 is currently in process and is expected to cost $35 million. Overall, this project is expected to capture and recharge an average of 12,000 acre-feet per year. A grant from the Santa Ana Watershed Project Authority provides additional funding and SB Valley WCD provides land, environmental mitigation support and long term operations.

- Riverside North Aquifer Storage and Recovery Project. A rubber dam that will traverse the Santa Ana River just south of the 10-215 Freeway interchange. The new infrastructure is expected to provide an additional 12,800 acre-feet of water and will help recharge the area's water basin. $25 million.

  Active Recharge Project. New infrastructure to capture more storm water at various creeks connecting to the Santa Ana River. Estimated yield would mean an additional 26,000 acre-feet annually. The cost has yet to be determined, and the district is in the initial stages of identifying locations.

The additional capture and recharge facilities are made possible by the granting of additional Santa Ana River water rights by the State Regional Water Quality Control Board in 2010. The rights were granted to water agencies within the boundaries of MUNI and Western Municipal Water District. Water agencies within MUNI have a right to 72 percent of the new water rights, while agencies within Western have a right to 28 percent of the new water rights (derived from the 1969 Stipulated Settlement (Judgment) that governs groundwater rights in the San Bernardino Basin Area). The water agencies also share proportionally in the cost of improvements to capture and recharge facilities on a proportional basis. The 1969 Judgment provides that the annual "adjusted right" of each plaintiff to extract and export water from the San Bernardino Basin Area is the sum of (a) its base right, which was adjusted based on a determination of safe yield and is currently expressed as a percentage of safe yield; and (b) an equal percentage of any new conservation, provided the conditions described in the judgment are met.

- Other Than Plaintiffs Safe Yield Adjusted Right: 167,238 ac-ft
- Plaintiffs Safe Yield Adjusted Right: 64,862 ac-ft
- Sum of Other Than Plaintiffs and Plaintiffs Safe Yield Adjusted Right: 167,238 + 64,862 = 232,100 ac-ft
- Other Than Plaintiffs—base right expressed as a percentage: (167,238 / 232,100) * 100 = 72.05% (water agencies within MUNI)
- Plaintiffs—base right expressed as a percentage: (64,862 / 232,100) * 100 = 27.95% (water agencies within Western MWD)

San Bernardino Valley Water Conservation District

The San Bernardino Valley Water Conservation District ("SB Valley WCD") and its predecessors have conducted groundwater recharge activities since 1912 or earlier in two areas that overlie the Bunker Hill groundwater basin in the San Bernardino Valley. These areas are at the upper end of the Santa Ana River wash area and on Mill Creek just upstream of the confluence with the Santa Ana River (collectively, the wash area).

The SB Valley WCD diverts surface water flows during both storm and normal runoff from the Santa Ana River and Mill Creek and channels the flows into two separate systems of recharge basins where it percolates into the groundwater basin for later pumping and use by local entities and private producers.

To accomplish the recharge, the district maintains 71 water percolation basins in the Mill Creek and Santa Ana River spreading grounds. The district also plans for, maintains or leases over 3,600 acres in the Santa Ana River Wash at and below the confluence of the Santa Ana River and Mill Creek. With water years 2013 and 2014 being dry years, the district recharged all water that was available; 7,946 acre feet of water successfully recharged into the groundwater basin for the water year ending September 30, 2013 and 8,153 acre feet for the water year ending September 30, 2014.

Until 1979, the Mill Creek Spreading Property was owned by the City of Redlands with the SB Valley WCD operating the recharge functions. In 1979, the City deeded the property to SB Valley WCD for $1 for the sole purpose of water spreading. However, the City retained full rights to operate, build, and expand water facilities on the property.[23] After 2005, a facility has been built and operates seamlessly with other SB Valley WCD facilities.

SB Valley WCD has two water right licenses that allow for up to 10,400 acre feet of Santa Ana River water to be diverted for groundwater recharge during certain periods during the year. SB Valley WCD also claims to hold certain quantities of pre-1914 water rights on the Santa Ana River and Mill Creek.

The Plunge Creek Conservation Project includes new infrastructure and operations to direct and slow stormwater increasing recharge and habitat quality. The joint project with the USFWS and funding from Proposition 84 funding through the Santa Ana Watershed Project Authority, it will increase recharge by approximately 1,200 Acre feet per year on average and increase habitat for the endangered species in the lower Plunge Creek area.

Community Strategic Plan

The Community Strategic Plan for SB Valley WCD was adopted during FY 2012-13 and expanded upon the district's 2010 Strategic Plan. The Strategic Plan completed in 2010 was created to assist the district board and management in the development of a vision for the district shortly after the 2009 effort to consolidate the district was terminated. The purpose of the update was to assess progress from the 2010 plan and to evaluate certain elements of the 2010 plan for community support and financial feasibility. Certain expansion strategies and financial issues were of concern to various communities and district partners. The board set aside the approved plan and commenced with the short term actions and seeking community and partner feedback on the Community Strategic Plan. The following table summarizes the Community Strategic Plan goals as described in more detail as they relate to the district's mission in the rest of the plan.

[23] Letter dated 2 August 2005 from City of Redlands to LAFCO regarding LAFCO 2919 (SB Valley WCD service review).

No.	Community Strategic Plan Goal
1	Increase and enhance basin water resources and conservation management through core mission efforts and enhancement projects.
2	Provide effective stewardship of District lands for environmental, water conservation and habitat management through the Wash Plan.
3	Continue to develop and improve financially sound and efficient District organization with secure foundation to better serve District partners and communities.
4	Deliver services and programs to improve non-retail outdoor water use efficiency and new groundwater recharge in the valley watershed.
5	Support Trails and outdoor recreation identified in the Wash Plan and in cooperation with District Partners and Communities where financially viable.
6	Develop staff and District organization to support District Mission and regional projects and programs.
7	Support and lead regional efforts related to water conservation and management of natural resources with District partners and communities.

Mining

Responsibly planning, managing and developing the district's lands are key to the sustainability of the district and its land holdings. A strategic goal related to this area is to continue to develop an alternate long term funding mechanism for the district to mitigate rates for groundwater producers and to fund district land management needs.

An example of these development proposals is aggregate mining leases which pay royalties to the district. In 2011 the district negotiated a revised agreement with CEMEX to provide Minimum Annual Guaranteed revenue to the district in the case that they did not mine the resources. The district also has agreements with Redlands Aggregate for permitted aggregate mining. In addition, the district has a contract with Robertsons Ready Mix, including a prepaid $5 million royalty, which provides for mining on district property when new permitting is completed under the Wash Plan.

Other Agencies

City of San Bernardino

Per the City of San Bernardino City Charter, the City of San Bernardino operates its water functions through its Municipal Water Department which has its own general manager and Board of Commissioners. The City routinely purchases State Water Project water from MUNI and schedules deliveries with MUNI at the three spreading basins (Devil Canyon, Badger, and Waterman).

Yucaipa Valley Water District

There are two primary recharge facilities. Water recharge occurs in the Wilson Creek Basins and Oak Glen Creek Basins, both facilities are owned by the Flood Control District. The Wilson Creek Basins are operated by the Flood Control District, MUNI, and

Yucaipa Valley WD. The Oak Glen Basins are operated by the Flood Control District, MUNI, Yucaipa Valley WD, and the City of Yucaipa.[24] The Oak Glen Creek Basin impacts portions of the downstream areas of Oak Glen and Wilson Creeks. The project improves flood control and overflow capabilities, passive recreational opportunities, habitat mitigation, and assists the Yucaipa Valley WD in developing adequate groundwater recharge capabilities to meet the future needs of the Yucaipa community. The facilities reduce the amount of water flow and sediment movement in the downstream areas of Oak Glen and Wilson Creeks.

Agreement to Develop and Operate Enhanced Recharge Facilities

In 2012 an agreement to Develop and Operate Enhanced Recharge Facilities was entered into by the SB Valley WCD, MUNI, and Western Municipal Water District (Riverside County). The purpose for the agreement is to allow for collaboration by increasing opportunities to recharge local surface water supplies, as well as State Project Water, in the San Bernardino Basin Area by reducing the time and cost required to permit and construct essential public infrastructure (such as spreading basins); and by working together to achieve an efficient division of labor in the operation and maintenance of water infrastructure.

The goal of the agreement is to harmonize their water resource activities with other uses, for the optimization of coordinated use by all. The other uses include the mining of sand and gravel mineral deposits pursuant to existing leases, and habitat conservation and management, pursuant to a series of multi-agency cooperative initiatives (as yet unapproved) involving local, state, and federal resource management and control agencies. The parties agreed that they must increase groundwater storage in the basin in order to meet current and future demands for water among their constituents. The agreement term is for 25 years with optional renewals.

Pursuant to the agreement, SB Valley WCD is to lease its facilities and land with financial compensation for the purpose of recharging to MUNI and Western MWD, and such use shall be only for the purpose of recharging, storing or conveying water from any source into or through the percolation basins and other facilities owned or controlled by the SB Valley WCD. The Agreement also requires SB Valley WCD to, hold in reserve, money from the lease payments to prepare for basin cleaning.

Current efforts include coordinating engineering, environmental and other planning. In 2013 and 2014 SB Valley WCD supported the final design and permitting as well as the construction and initial operations of the Enhanced Recharge facilities. The district will support these efforts with current field staff and contract personnel. Upon completion of the facilities and initial operations the district will budget to add an additional field staff person to assist in the operations and maintenance of the new facilities, as needed.

MOU between MUNI and County Flood Control District

Flood Control District owns and operates a number of flood control facilities within MUNI's operational boundaries. MUNI and Flood Control District first entered into a

[24] County of San Bernardino. Agreement No. 08-30. 8 Jan 2008.

cooperative agreement for MUNI to deliver water to several Flood Control District detention basins for purposes of recharging the groundwater basin in 1972, and both agencies have continued to cooperatively use these facilities since.

In 2013, MUNI and County Flood Control District entered into a ten-year planning memorandum of understanding for the purpose of working together in the planning and evaluation of Flood Control District facilities for joint use by Flood Control District and MUNI for both flood control and groundwater replenishment operations.[25] The goal of the MOU is to maximize the amount of water recharge performed while acknowledging the primary goal of Flood Control District facilities is to maintain adequate flood protection for the safety and protection of the public.

OWOW Grant

In 2012, the SB Valley WCD was selected for a One Water One Watershed grant under the Santa Ana Watershed Project Authority ("SAWPA") Integrated Regional Water Management Planning program. This project seeks to increase water recharge and endangered habitat in the Upper Plunge Creek. This project developed in conjunction with the Flood Control District, MUNI, and U.S. Fish and Wildlife service will support increased recharge, significantly improve habitat and help restore the healthy function of Plunge Creek. As a collaborative project, its shared benefits efficiently provide services to the region and it is an opportunity to work together with the resources agencies and habitat managers in the region. The project is located on district-owned land east of Orange Street and south of Greenspot Road within Division 1 of the District.

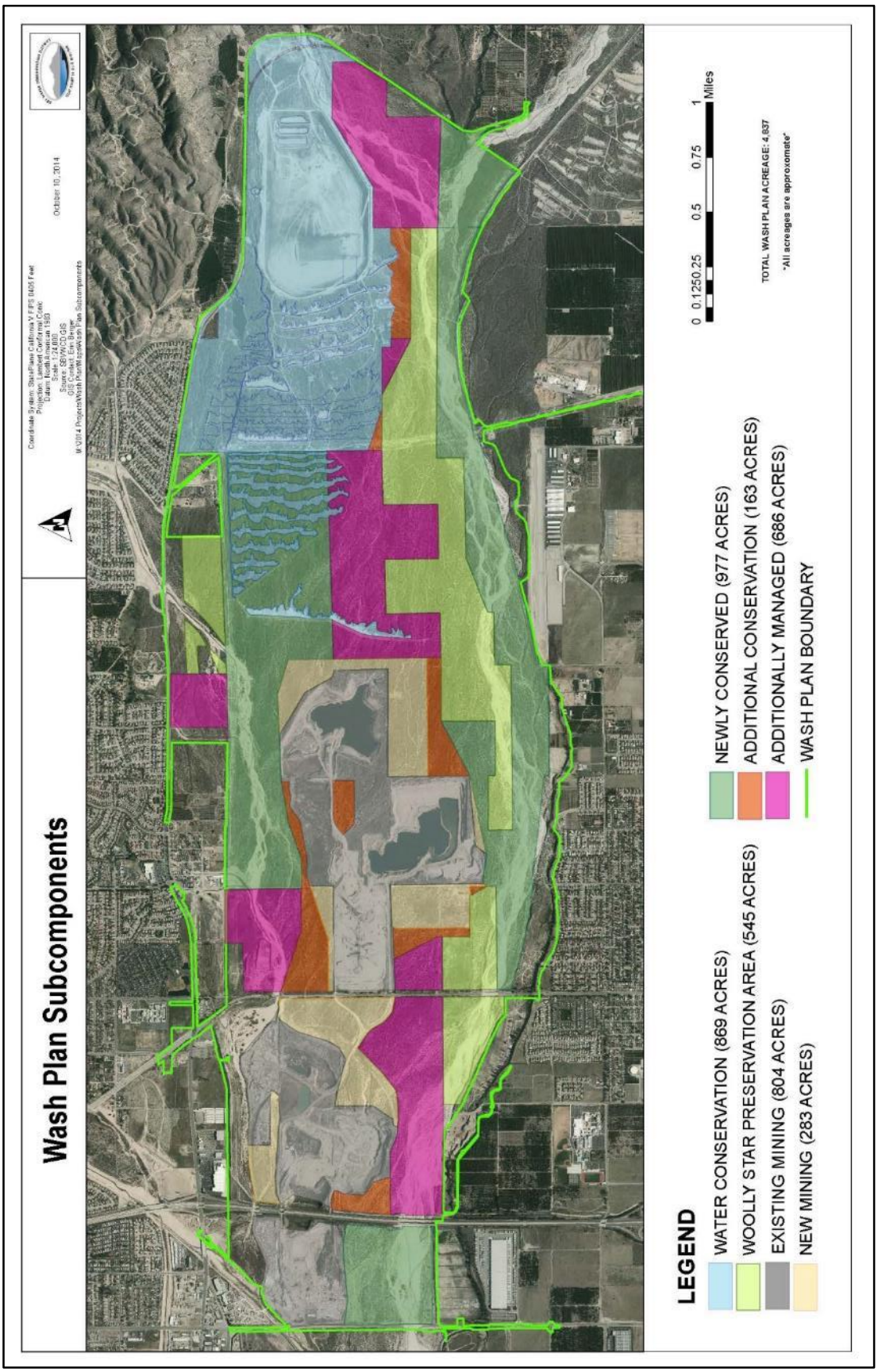
Upper Santa Ana River Habitat Conservation Plan (Wash Plan)

A key planning and management effort related to the land management enterprise is the Upper Santa Ana River Habitat Conservation Plan (also known as the Wash Plan). Located at the confluence of the Santa Ana River and Mil Creek the wash is bounded on south by the Santa Ana River, on the north and east by Greenspot Road, and continues west to Alabama Street. This plan is a long term environmental, infrastructure, and management approach to create a comprehensive program to manage the Wash Area. A map showing the Wash Plan sub-components is shown in the figure below; this map and a map of the Wash Plan covered activities are included as Attachment #2. The development of this plan has been and continues to be difficult and requires the participation of a Task Force, made up of stakeholder communities and partners as well as resource agencies, U.S. Fish and Wildlife Service, the Bureau of Land Management, and the California Department of Fish and Wildlife. The Task Force intends to have an approved program by Fall 2015.

In 2012 and 2013 the SB Valley WCD was able to work with the U.S. Fish and Wildlife Service to refocus efforts and increase progress toward completion of the Wash Plan Habitat Conservation Plan. The plan supports a land exchange between SB Valley WCD and the Bureau of Land Management to improve water recharge thereby enhancing local supplies and continuing to supply the region aggregate for local construction projects. This plan will contribute significant environmental improvements

[25] County Agreement No. 13-608. 23 July 2013.

to habitat for several endangered species including the San Bernardino Kangaroo Rat and the Santa Ana River Woolly Star plant in the wash. The plan also allows expanded water conservation facilities, mining, transportation and trails.


Wash Plan Subcomponents
Coordinate System: StatePlane California V FIPS 0405 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983
Units: Feet
Source: SBVWCD GIS
GIS Contact: Erin Berger
M:\2014 Projects\Wash Plan\Appendix\Wash Plan Subcomponents
October 10, 2014
0 0.1250.25 0.5 0.75 1 Miles
TOTAL WASH PLAN ACREAGE: 4,837
All acreages are approximate
NEWLY CONSERVED (977 ACRES)
ADDITIONAL CONSERVATION (163 ACRES)
ADDITIONALLY MANAGED (686 ACRES)
WASH PLAN BOUNDARY
LEGEND
WATER CONSERVATION (869 ACRES)
WOOLLY STAR PRESERVATION AREA (545 ACRES)
EXISTING MINING (804 ACRES)
NEW MINING (283 ACRES)

Advances to Wash Plan

SB Valley WCD provides various funding for Wash Plan operations on behalf of interested parties. Amounts are to be reimbursed to the district by members of the task force based on the Plan's formative agreement. As of June 30, 2014, the district received repayment of its 2013-14 expenses and its prior advances. The advancements and repayments for the past six audit years are shown below.

Year	2009	2010	2011	2012	2013	2014
Advances	$0	$8,242	$68,875	$51,142	$26,459	$150,043
Repayment	$0	$0	$0	$0	$0	$338,408

Habitat Management and Enhancement

Several strategic goals are related to this planning effort that are summarized by the Wash Plan's commitments to effective stewardship of easement lands owned and managed by the SB Valley WCD. According to SB Valley WCD, habitat management and enhancement in accordance with the Wash Plan is both a requirement and an opportunity for the district. However, SB Valley WCD is not authorized by LAFCO or State Law the function or service of habitat management or similar activity. Further, Water Conservation District Law does not allow for a water conservation district to provide habitat management services. Since March 2006, SB Valley WCD is authorized by LAFCO to provide "water conservation" and "surveys of water supply and resources" pursuant to the *Rules and Regulations of the Local Agency Formation Commission for San Bernardino County Affecting Functions and Services of Special Districts.* Should the district desire to actively provide habitat management and enhancement, it would need to receive special legislation to expand the scope of its authorized activities in Water Conservation District Law as well as submit an application to LAFCO requesting authorization to provide said service. As an alternative to SB Valley WCD providing habitat management and enhancement, the Inland Empire Resource Conservation District could perform this service as its parent act and LAFCO authorize it to do so.

According to SB Valley WCD, the land management aspects of the Wash Plan, however, will secure long-term mining leases and revenue streams to SB Valley WCD to pay for water conservation services, which is both "desirable" and "advantageous" to SB Valley WCD and the public.

Spreading in the San Bernardino Basin Area

Below is MUNI's recharge efforts within the San Bernardino Basin for years 2010-13:

Year	SBBA Recharge (all values in ac-ft)
2010	13,134
2011	14,540
2012	18,077
2013	7,937
Sum	**53,688**

Source: MUNI

C. Efforts to Reduce Consumer Consumption – Valley Wide

For efforts to reduce consumer consumption, the two water conservation districts in the Valley are neither 1) responsible for the demand reductions required by the Water Conservation Act of 2009 (10% demand reduction by 2015 and 20% by 2020), nor 2) responsible for helping the retail agencies within its boundary achieve their water use reductions as the water conservations districts are not "urban wholesale water providers".[26]

Santa Ana River Watershed Action Team

IEUA, Orange County Water District, MUNI, Western Municipal Water District, and Eastern Municipal Water District, formed the Santa Ana River Watershed Action Team ("TEAM") to actively identify large-scale water supply and reliability projects that will provide benefits to the entire Santa Ana watershed. Some of the drought mitigation projects identified by TEAM include turf removal from commercial and residential landscaping, water use efficiency education, and technology based water conservation tools such as aerial imagery of the region to support future conversion to sustainable water budget rates by retail water suppliers.

A key goal for the TEAM is to secure grants and necessary funding, including Department of Water Resources Proposition 84 funding through the Santa Ana Watershed Project Authority's "One Water One Watershed" (OWOW) program, to defray the cost to implement necessary projects. Such collaboration has enabled the Agency and partners to secure federal and state grant funding that has significantly advanced the capital investment in the region.

Inland Empire Garden Friendly

The Inland Empire Garden Friendly program was developed by the four major water suppliers of western Riverside and San Bernardino counties in California with cooperation from a university institute, conservation district and local botanic garden. The Inland Empire Garden Friendly program was created to assist consumers in locating and learning about climate-appropriate plants for the Inland Empire. The program provides educational opportunities and easily identifiable and obtainable sources of climate appropriate plants. The program conducts landscape workshops, plant sales, and provides information on water friendly plants and landscaping techniques. Its website is iegardenfriendly.com. The founding members are:

- Inland Empire Utilities Agency (San Bernardino County)
- San Bernardino Valley Municipal Water District (San Bernardino County)
- Chino Basin Water Conservation District (San Bernardino County)
- Water Resources Institute (San Bernardino County)[27]

[26] Water Code 10608.36

[27] The Water Resources Institute is an academic partnership with the Southern California communities driven by the vision that sustaining water resources rests on sound research, analysis and public policy collaboration.

- Eastern Municipal Water District (Riverside County)[28]
- Western Municipal Water District (Riverside County)[29]
- Rancho Santa Ana Botanic Garden (Los Angeles County)[30]

D. Efforts to Reduce Consumer Consumption – West Valley

Inland Empire Utilities Agency

In 2009, IEUA worked with its member agencies, to create a Regional Water Use Efficiency Partnership Workgroup. The Workgroup initiated an eight-step process that resulted in the creation of a regional Water Use Efficiency Business Plan to guide its future conservation efforts. The purpose of the Plan is to create the strategy to meet the region's per capita water demand goals. Among the proposed actions that the Regional Water Conservation Partnership Workgroup agreed to follow to implement the Plan include the following:

- Maintain existing and new conservation programs that assist the retail water agencies in complying with new regulatory initiatives.
- Maintain existing and develop new conservation programs that achieve a 10 percent reduction in annual water use over the next five years.
- Work with member agencies to coordinate conservation programs to optimize regional savings and streamline reporting requirements.
- Manage regional water use efficiency programs, incentives, and associated funding.

The Plan also identifies cost-effective water use efficiency programs to be implemented in order to achieve regional conservation goals. These programs place a strong emphasis on landscape irrigation efficiency since landscape water use represents a significant portion of the total water demand for the IEUA service area. These plans include: high efficiency nozzle installations, smart controllers for larger landscape sites, turf removal, water budgets, landscape evaluations, and education and outreach programs.

IEUA is a member of the Metropolitan Water District of Southern California ("Metropolitan"). Metropolitan provides rebates to Commercial, Industrial, and Institutional ("CII") customers for various water saving technologies through the Save a Buck Rebate Program and Public Sector Program. Rebates vary from $30 to $2,250 depending on the water savings device. The rebate eligible devices include high

[28] Since its formation in 1950, Eastern Municipal Water District has matured from a small, primarily agricultural-serving agency, to one whose major demands come from domestic customers.
[29] Western Municipal Water District was formed by the voters in 1954 to bring supplemental water to growing western Riverside County. Today, the District serves roughly 24,000 retail and eight wholesale customers with water from the Colorado River, State Water Project and groundwater.
[30] Rancho Santa Ana Botanic Garden promotes botany, conservation and horticulture to inspire, inform and educate the public and the scientific community about California's native flora. The Garden is devoted to the collection, cultivation, study and display of native California plants and to graduate training and research in plant systematics and evolution.

efficiency toilets, waterless urinals, cooling tower conductivity controllers, synthetic turf, pressurized water brooms, weather sensitive irrigation controllers, and locally implemented residential rebate programs, including the Landscape Turf Removal Program and the Landscape Retrofit Program. These rebate programs provide financial incentives to the CII sector to participate in water conservation activities in a cost effective manner.

Each year, IEUA prepares a comprehensive water-use efficiency report (Annual Water Use Efficiency Programs Report) which captures all of the activities from the past fiscal year. This report tracks the progress that has been made against the goals and objectives, identified in its long-term Water-Use Efficiency Plan. Member agencies receive service area specific data, which serves as a roadmap for developing the next annual budget and assists in evaluating overall program performances. For FY 2012-13, the direct water savings achieved through these regional water conservation activities is estimated at 646 acre-feet per year with an average lifetime savings of 7,376 acre-feet. For FY 2013-14, the direct water savings achieved through these regional water conservation activities is estimated at 486 acre-feet per year with an average lifetime savings of 4,216 acre-feet. These new water savings are in addition to IEUA's cumulative lifetime water savings of 101,983 acre-feet for all conservation activities since 1992.

IEUA operates the Chino Creek Wetlands and Educational Park located adjacent to the IEUA headquarters in Chino.[31] The park consists of 22 acres that have been landscaped with a wide variety of “California Friendly” trees and grasses and features a state-of-the-art irrigation management system. Some of the key components of the park are the community education elements that weave throughout the site. The park serves as a demonstration area for the community on improving water supply, storm water treatment and water efficiency. It is a place for individuals to enjoy at their leisure as well as a facility to provide educational programs to students. The park’s construction was partially funded by a grant from the State Water Resources Control Board. The Park’s Water Discovery program has received a total of 212 field trips with 10,890 students since the inception of the program. In addition to the field trips, 7,266 community members and 4,384 students have taken part in IEUA’s annual Earth Day celebration since 2007.

Since 2004, IEUA has reached over 19,000 students with its Garden in Every School program.[32] The Garden in Every School Program educates the school, family, and community about water-wise usage through a garden landscape, featuring drought tolerant plants and efficient irrigation. The program works as an assisted grant: first, applicants participate in a mandatory introductory workshop. Then, selected applicants are awarded a grant valued at $4,500 for IEUA to assist in the installation of an up to 2,000 square foot garden. The garden is designed, created, and installed through a series of hands on work sessions with teachers, parents, students, and program staff. IEUA participating agencies are eligible to participate in this program.

[31] The Chino Basin Water Conservation District and Monte Vista Water District are among the sponsors of the park.
[32] Sponsors of the program include: Inland Empire Utilities Agency and the Regional Conservation Partnership, composed of the Cities of Chino, Chino Hills, Ontario, Upland, Cucamonga Valley Water District, Monte Vista Water District, Fontana Water Company and San Antonio Water Company.

Additional IEUA programs include its Solar Cup (sponsoring race-powered boats in a high school competition), School Assembly Program (sponsoring National Theater for Children focusing on water supply issues and water savings tips), and STEM (offering schools with STEM activities).

Chino Basin Water Conservation District

A primary function of Chino Basin WCD, as identified by its mission statement, is educating the community to conserve water as well as assisting the community in retrofitting efforts. The district opened its renovated Water Conservation Center campus in 2014. The Center includes a landscape design room where one can draft a water wise landscape, classroom that holds 50 people, an educational lobby exhibit and a dedicated classroom building and edible garden area for Children's Education. The newly renovated water-wise demonstration features nine demonstration zones with over 300 water wise plant species arranged by type and water needs. The 1.5 acre garden is open to the public for self-guided or staff guided tours and includes educational signage and demonstration exhibits that teach about water-wise landscaping, efficient irrigation and good maintenance practices. The district site also includes a demonstration parking lot that showcases various permeable pavements and Low Impact Development techniques; and a wilderness park that contains examples of 40 tree species that require low water - both are open to the public. At the Center, the district conducts workshops, hosts public events, accepts and actively pursues field trip visits from schools, and showcases various construction and landscape designs that reduce water consumption. In 2012-13 the district taught 24 workshops which had an average attendance of 25.

One of the district's longest running programs, an annual Earth Day field trip event, has reached over 25,000 5th graders with water conservation education since 1992. The district also offers daily teaching field trips, focused on water conservation and with curriculum that is compliant with state education standards. This past school year the program reached over 4,300 local school children, their teachers and many parents. In addition to these on-site programs, the District runs a water conservation poster contest which received 2,600 entries from 133 classes last year and a grant program that, since 1999, has provided up to $5,000 for college bound students who are studying towards a career in a water related field.

<u>Landscape Audits</u>

The district administers landscape and irrigation audits in partnership with IEUA and the eight member retail member agencies. Additionally, the district conducts landscape design consultations, and has financially assisted public schools and parks within its boundaries to help offset the costs of onsite irrigation system conversion as a result of connecting to the recycled water system, thus reducing the need for potable water. Chino Basin WCD also provides incentives for public sector schools and parks within its service area. The figure below identifies the district's landscape audit program performance from FY 2007-08 through FY 2013-14.

Chino Basin WCD – Landscape Evaluation and Audit Program

Year	Total Site Audits	Total Irrigated Acreage Audited	Total Potential Water Savings (AF/yr)
FY 07-08	24	36	196
FY 08-09	135	289	782
FY 09-10	105	114	303
FY 10-11	78	86	173
FY 11-12	114	64	71
FY 12-13	48	14	49
FY 13-14	83	15	38

Source: IEUA, Annual Water Use Efficiency Programs Report, FY 2013-14

Conservation Contracts with IEUA

Other agencies contract with Chino Basin WCD to provide conservation programs on its behalf. Documents provided by the district identify IEUA as the main agency that contracts with the district to carryout efforts to reduce consumer consumption. Below is a summary of the current contracts between Chino Basin WCD and IEUA.

- Implementation and Completion of Landscape Audits for Customer Sites Currently Identified as Potentially Significant Water Conservation Candidates within the IEUA Service Area.
  - Contract Date: September 2010
  - Latest Amendment Date: August 2014
- Residential Landscape Training Program
  - Contract Date: January 2011
  - Latest Amendment Date: August 2014
- Dedicated Irrigation Landscape Meters Water Budget Program
  - Contract Date: December 2012
  - Latest Amendment Date: August 2014
- Implementation and Completion of Landscape Transformation Services for Customer Service within the IEUA Service Area
  - Contract Date: July 2013
  - Completed July 2014
- Garden in Every School Program Services within the IEUA Service Area
  - Contract Date: September 2013
  - Latest Amendment Date: November 2014

Service Outside of Boundaries

Chino Basin WCD administers landscape and irrigation audits in partnership with IEUA and the eight member retail member agencies, and other agencies contract with the district to provide conservation programs on its behalf.

Pursuant to Government Code Section 56133, LAFCO is charged with the responsibility for reviewing and taking action on any city or district contract to extend service outside of its jurisdiction. Even though the district's parent act, Water Conservation District Law of 1931, does not explain this circumstance, Section 56133 subjects all those agencies under LAFCO purview to this requirement. However, the law provides for exemptions such as for contracts issued prior to January 1, 2001 for contracts or agreements solely involving two or more public agencies where the public service to be provided is an alternative to, or substitute for, public services already being provided by an existing public service provider and where the level of service to be provided is consistent with the level of service contemplated by the existing service provider.

Should it be necessary to request an exemption on the basis of two government agencies contracting for service, LAFCO staff recommends that the district submit an application to LAFCO requesting an exemption under Government Code 56133(e).

Weather Based Irrigation Controllers

In July 2012 the Bureau of Reclamation contracted with the district to install 300 Weather Based Irrigation Controllers in residential homes within the district's service area and provide two years of data monitoring. The Program currently provides better irrigation management for 300 residential accounts and the reduction of approximately 225 acre-feet per year of water supply year-round. Indirect benefits from reduced water use include reduced energy costs and greenhouse gas emissions from water conveyance, deferred generation of new water sources, and water quality benefits from reduced urban runoff. Additionally, the program assists water agencies within the district's service area comply with the 20x2020 Water Conservation Plan. The contract stipulates that the Bureau and the district equally split the program cost at roughly $92,000 each. The potential savings per home is 0.1625 acre-feet per year ("AFY") which equates to 49 AFY savings after all 300 controllers are installed.

Qualified Water Efficient Landscaper Certification Program

The Qualified Water Efficient Landscaper (QWEL) Program (developed by the Sonoma Saving Water Partnership and the Environmental Protection Agency) provides landscape professionals with 20 hours of education on principals of proper plant selection for the local climate, irrigation system design and maintenance, and irrigation system programming and operation. QWEL certification is a valuable tool for consumers to be able to select landscape and maintenance professional who understand and have value for water and resource conservation. Seven district staff are QWEL certified and can teach the class to others. The District has received QWEL Board and EPA certification as an adopter of the QWEL program and as an EPA WaterSense Labeled Professional Certification Program provider.

Other Agencies

For the other public agencies in the West Valley, conservation efforts can be categorized in three ways: funded by the agency alone, in partnership with another agency/district or regional programs. Focusing on those funded by the agency alone, all

of the other agencies in some manner provide water conservation materials to its customers and have programs in order to reduce consumer consumption. Below are examples of these efforts as provided by the agencies.

City of Chino

In 2009, the City of Chino amended its Water Conservation Ordinance to respond to the then current water shortage caused by drought conditions prevailing in the state. The Ordinance implements Water Conservation measures to reduce the quantity of water used by persons in the City. The ordinance further defines permanent measures to prevent the waste of water resources and also defines three stages of water shortage contingency where additional measures of potable water use are limited or curtailed. The City administers a code compliance program designed to increase public awareness of municipal codes such as the Water Conservation Ordinance. The City's retail water rates are based on volumetric rates which meets the definition of "Conservation Pricing" as defined by the California Urban Water Conservation Council.[33] Additionally, the City employs a Water Conservation Coordinator.

City of Chino Hills

The City of Chino Hills has adopted an ordinance to minimize the potential for water shortage through the practice of water conservation.

City of Upland

Landscape classes are primarily sponsored by the City. The classes are paid entirely by IEUA as part of its annual regional conservation program. Additionally, the City is retrofitting City facilities (park and median irrigation systems, restroom facilities, and turf removal). Although these are partially funded by rebates, the City has made the largest contribution financially and administered the programs with City staff. Upland recently received a grant from the Bureau of Reclamation for Weather Based Irrigation Controllers in medians which was completed in 2014. The City also tested some unique products including geyser stops, water fountains that refill water bottles and a DVD specifically made for Upland showcasing its unique water resources, conservation methods and the water system. The City employs a water conservation specialist and also has a water conservation ordinance.

Cucamonga Valley Water District

The Cucamonga Valley Water District provides a quarterly newsletter, *The Pipeline*, to customers, conducts landscape workshops, conducts landscape tours, and has conservation information available on its website.

[33] The California Urban Water Conservation Council was created to increase efficient water use statewide through partnerships among urban water agencies, public interest organizations, and private entities. The Council's goal is to integrate urban water conservation Best Management Practices into the planning and management of California's water resources.

The district and the Frontier Project operate demonstration gardens which are open to visit each weekday. The gardens provide information on water wise landscaping and feature over 100 water savvy plants. Additionally, the district provides landscape consultations for the homes of district customers to identify water waste in the home's landscape. Each spring, the district hosts a Water Savvy Garden Tour (previously Landscape Tour) to educate residents about the beauty and benefits of water saving landscapes. Since its inception in 2009, the Water Savvy Garden Tour has educated over 600 residents on how they can make changes in their yards to use water efficiently.

Monte Vista Water District

The Monte Vista Water District has a robust water conservation program and provides regular communications to its customers regarding these programs. The district has also developed a special water conservation communication campaign, "Watch the Water," which seeks to heighten customers' awareness of how and when they use water in their daily lives. Within the past five years, the district has declared water shortages and requested that customers adopt additional conservation measures. The district in 2010 adopted a tiered rate structure.

The district regularly communicates about conservation with its customers using multiple methods and media, including but not limited to the following: its newsletter, *The Waterline*, which is inserted into bimonthly customer bills 2 -3 times per year, bill inserts, information provided on its website, and presentations delivered to community groups, at educational events, and before gardening classes.

Fontana Water Company

The Fontana Water Company provides water conservation materials to its customers, conducts gardening workshops, has a high-efficiency toilet program, has adopted two-tiered water conservation rates per direction of the California Public Utilities Commission, and has adopted a Water Conservation and Rationing Plan.

Other Efforts

Formed in 1989 by various agencies in Los Angeles and San Bernardino County, the Water Education Awareness Committee ("WEWAC") works with school districts to promote water conservation, acquaint children and adult consumers with the critical importance of water, provide them with information on water use efficiency, and sponsor teachers' Project Water Education for Teachers training. WEWAC members co-sponsor educational programs for students at all grade levels. WEWAC's website, www.UseWaterWisely.com, provides user friendly information to the general public. Members in San Bernardino County include: Cities of Chino, Chino Hills, Ontario, and Upland; and the Chino Basin WCD, Cucamonga Valley Water District, Fontana Water District, Golden State Water Company, IEUA, and Monte Vista Water Company.

E. Efforts to Reduce Consumer Consumption – East Valley

Iefficient.com

A group of water agencies in east San Bernardino County and north Riverside County surveyed about 400 residents in March 2014 to determine their knowledge of several water related facts as a way of determining the kinds of messaging water agencies need to do to better inform their customers.

The group launched a public relations campaign and a website at www.iefficient.com to heighten public awareness of water facts and the things businesses and residents need to do to conserve water, not just during the current drought, but on an ongoing basis. In San Bernardino County, the members include: the Cities of Colton, Loma Linda, and Redlands; East Valley Water District, Marygold Mutual Water Company, Riverside Highland Water Company, MUNI, SB Valley WCD, Western Heights Mutual Water Company, and Yucaipa Valley Water District.

San Bernardino Valley Municipal Water District

MUNI offers large water users (1,500 ccf per year, or higher) a financial incentive to invest in weather stations and weather based irrigation controllers, and has developed a brochure that offers a variety of water efficient plants that do well in the Southern California climate.

MUNI Contract with IERCD

The performance of environmental education programs to a variety of audiences within the district's service area is a key function of the Inland Empire Resource Conservation District ("IERCD"). The original contract between MUNI and the IERCD for performance of Water Use Efficiency presentations was signed in 2007, making MUNI one of the IERCD's most critical education partners. The Water Use Efficiency programs performed on behalf of MUNI focus on MUNI's core function and central role in provision of water to residents in the Inland Empire as well as importance of and methods for water conservation. In addition to the interactive discussion, students also participate in either the 3D model illustrating local water connectivity and need for conservation, or in planting and taking home a drought-tolerant native California plant.

Water Use Efficiency Program

As a wholesaler, MUNI is not responsible for the demand reductions required by the Water Conservation Act of 2009 – SBX7-7 (10% demand reduction by 2015 and 20% by 2020) but is responsible for helping the retail agencies within its boundary achieve their water use reductions (Water Code §10608.36). MUNI's water use efficiency program is designed to help the retail agencies within its service area achieve their demand reductions through:

- Weather Based Irrigation Controller Program (WBIC) – Muni pays 50% of the installation and maintains the weather stations for free, water savings 20%

- Provides free sprinkler nozzles (25% cost from MUNI, 75% from retail agency), water savings 30%
- Inland Empire Garden Friendly Program – MUNI pays 90%, water savings 70%
- Rebates (efficient toilets, nozzles, washers, etc.) – MUNI pays 25%
- Regional Rebate website – one location for retail customers to find rebate programs. MUNI pays 25% of website cost and all of hosting cost.

San Bernardino Valley Water Conservation District

SB Valley WCD also participates with the IERCD in its Elementary School Education efforts. By partnering with the IERCD the District can convey messages about conservation and its efforts to help while supporting the existing programs. This cost effective program shares staff and facilities, and achieves multiple goals at a low cost.

The District currently budgets very limited funding toward conservation education and outreach efforts. Instead, it focuses on water recharge efforts in cooperation with other agencies.

SB Valley WCD is the local sponsor (with the Basin Technical Advisory Committee, Conservation Subcommittee) to provide QWEL training for landscapers. Instructors are to be drawn from local district conservation staff and IERCD staff. The district cosponsored the cost of the training for participants from the service area. The training was held in cooperation with Chino Basin WCD at their facilities in December 2014. In response to the draft staff report, SB Valley WCD states that it works closely with agricultural and commercial groundwater producers to address conservation opportunities and is an active participant in the regional iEfficient program and helps fund the program.

Other Agencies

<u>City of San Bernardino Municipal Water Department</u>

The City of San Bernardino Municipal Water Department has approved water rates including water conservation charges and tiers as well as water supply shortage measures as a result of natural disasters or other emergency events. In 2010 the City implemented a Replenishment Charge as part of the rate structure to recover the cost of water purchased to replenish the basin in the amount of $0.09 per billing unit (100 cubic feet of water, or about 750 gallons). Since the Replenishment Charge was established in 2010, the City has purchased and delivered a total of over 65,000 acre-feet in three spreading basins (Devil Canyon, Badger, and Waterman).

Additionally, the City engages in activities to reduce consumer consumption:

- Annual Water Conservation Poster Contest
- Bi-Annual Drought Tolerant Landscaping Class Flyer
- Bill Inserts / Plant Sale Flyers
- Free Household Conservation Kit (contents & installation instructions)

- Water Conservation Rebate Program (toilets, sprinklers, washing machine, drought-tolerant plants)
- Water Conservation / Education Elementary- Middle Schools
- Literature/Handouts for various local public events

City of Redlands

The City of Redlands Water Conservation Plan is codified in its Municipal Code (Section 13.06). The conservation programs of the City include a water efficiency rebate program, water audits, annual poster contest, handouts, webpage, as well as employing a conservation coordinator. At City Hall the planters have been replaced with drought tolerant plants and information on drought-tolerant plants is accessible at this location.

South Mesa Water Company

At this time the South Mesa Water Company does not have recharge facilities, but it is conducting a ground water study within the Yucaipa basin. Through this study it is working with MUNI, USGS, and Geoscience to find the best locations for potential recharge.

West Valley Water District

The West Valley Water District in 2010 adopted its first Water Conservation Program that addressed issues related to the Best Management Practices set forth by the California Urban Water Conservation Council, which substantially addresses the measures the district is taking to meet the requirements of the Water Conservation Act of 2009. Effective January 2013 rates are now tiered pricing to promote conservation.

Efforts to reduce consumer consumption include: a water conservation coordinator position, water conservation poster contest, quarterly newsletter, waterwise demonstration garden, conservation section of website, new customer packet, partnership with MUNI to promote Weather Based Irrigation Control program, workshops and classes, water audit program, Inland Empire Garden Friendly Program, and rebates for efficient fixtures (25% cost share).

Yucaipa Valley Water District

The Yucaipa Valley Water District disseminates materials via workshops, facility tours, school programs, website, and community events, as well as employing a water resource manager. The district actively participates as a partner in California Urban Water Conservation Council, which requires the district to comply with the Best Management Practices for water conservation.

Inland Empire Resource Conservation District

According to the Inland Empire Resource Conservation District, it provides the following services for water conservation education/outreach:

- Installation of small demonstration gardens on campuses of community centers and schools; since 2012 the district has installed 11 of these which involve approximately 40 plants, mulch, rock, and accompanying education programming.

- Performance of water conservation-focused educational programming in K-12 campuses throughout the district. The district performed 176 of these programs last year, most of which were funded by its water provider partners in individual service areas including:

    - San Bernardino Valley Municipal Water District
    - San Bernardino Valley Water Conservation District
    - The City of San Bernardino Municipal Water Department
    - Yucaipa Valley Water District
    - West Valley Water District

F. Conclusion for Determination III.

Integration of flood and stormwater management strategies with recharge and conjunctive use opportunities contributes to water supply reliability in the region. The San Bernardino Valley region has been significantly urbanized over the past several decades and the area continues to grow with numerous in-fill development projects. As the amount of impervious surface increases with urbanization, the runoff, and, therefore, storm and flood flows are also increasing. Without adequate flood control systems to capture and contain these surface waters for recharge, the opportunities for water supply, water quality, and environmental improvement are greatly lessened or lost. Therefore, formulating strategies to further capture storm runoff and use it for recharge of the groundwater basins will provide both flood management and water supply benefits to the region.

As identified by the Department of Water Resources, the Chino, Bunker Hill, and Riverside-Arlington basins have been designated as High Priority basins and the other basins as Medium Priority basins for future monitoring. Within the Chino Basin, storm water recharge has declined significantly since FY 2010-11 (due to the drought), being less than the storm water recharge average during the previous 10 years. Recycled water was first considered a recharge source to reduce reliance on imported water from the Metropolitan Water District of Southern California. However, due to the current drought and restrictions placed upon the State Water Project, recycled water has now become a necessity for the basin. In the San Bernardino Basin Area, groundwater storage is now at the lowest level in recorded history, easily surpassing the previous low point in 1964, which took place at the end of a 20-year drought. In turn, multiple recharge and recovery projects are moving forward to be able to capture and use as much of the local supply as possible in order to lessen reliance on the State Water Project.

In response to efforts to reduce consumer consumption, the two water conservation districts in the Valley are neither 1) responsible for the demand reductions required by the Water Conservation Act of 2009 (10% demand reduction by 2015 and 20% by

2020), nor 2) responsible for helping the retail agencies within their respective boundary achieve their water use reductions as the water conservations districts are not “urban wholesale water providers”. The Inland Empire Garden Friendly program was developed by the four major water suppliers of western Riverside and San Bernardino counties with cooperation from a university institute, conservation district and local botanic garden. The Inland Empire Garden Friendly program was created to assist consumers in locating and learning about climate-appropriate plants for the Inland Empire.

Specific to the West Valley portion of the region, the Chino Basin WCD has long provided water conservation sustainability services to its constituents through demonstration and education and it provides this service well. To further its demonstration and education service, it opened its Water Conservation Center campus in 2014. However, the service of Chino Basin WCD is limited to within its boundary which encompasses only a portion of the Chino Basin. Chino Basin WCD has received QWEL (Qualified Water Efficient Landscaper Board) and EPA certification as an adopter of the QWEL program and as an EPA WaterSense Labeled Professional Certification Program provider. QWEL certification is a valuable tool for consumers to be able to select landscape and maintenance professional who understand and have value for water and resource conservation. Seven district staff are QWEL certified and can teach the class to others.

For the East Valley portion of the region, the SB Valley WCD currently budgets very limited funding toward conservation education and outreach efforts. Instead, it focuses on water recharge efforts in cooperation with other agencies such as providing school and other outreach through Inland Empire Resource Conservation District. Additionally, SB Valley WCD actively supports and helps fund the iEfficient initiative, leads a Basin Technical Advisory Committee subcommittee for landscape education for implementing the qualified water efficient landscaper program (QWEL), and has a certified trainer on staff.

Determination IV.
Financial ability of agencies to provide services

This determination outlines the accounting practices of the agencies, reviews debt and obligations, net assets, and fund balance in order to determine the financial ability to provide services. LAFCO staff obtained copies of the agencies' financial documents from the agencies and public sources: San Bernardino County Assessor, San Bernardino County Auditor, California Public Employees Retirement System, and the California State Controller's report for cities and special districts.

This Determination reviews two water conservation districts and the governmental activities of the two municipal water districts, and is organized as follows:

A. Property Tax
B. Fiscal Indicators to include Service Obligation, Liquidity, Debt Service (Governmental), Pension Payments, and Other Post-Employment Benefits Payments
C. Additional Information on Governmental Activities
D. Appropriations Limits
E. Conclusion for Determination IV

A. Property Tax

The two municipal water districts receive a healthy share of the one percent general levy. Property tax revenue is the primary revenue source for the Chino Basin WCD, and the SB Valley WCD receives a small amount of property tax revenue for its general operations, comprising two to four percent of revenue.

Property Tax Rates

The table below is a breakdown of the share that each agency receives within its boundaries. As shown, for water conservation districts property taxes are collected on the assessed value of land only, not to include improvement value. SB Valley WCD receives just 0.03% of every property tax dollar collected which does not result in significant revenue. Conversely, as discussed in the property tax section below, the tax receipts for the Chino Basin WCD result in significant revenue for its water conservation education operations. As for IEUA, most areas of the agency contribute two shares of the general levy tax: 1) the first is identified as Improvement District C which comprises all but seven tax rate areas of the agency, and 2) a second share from its original boundary and its subsequent annexations.[34]

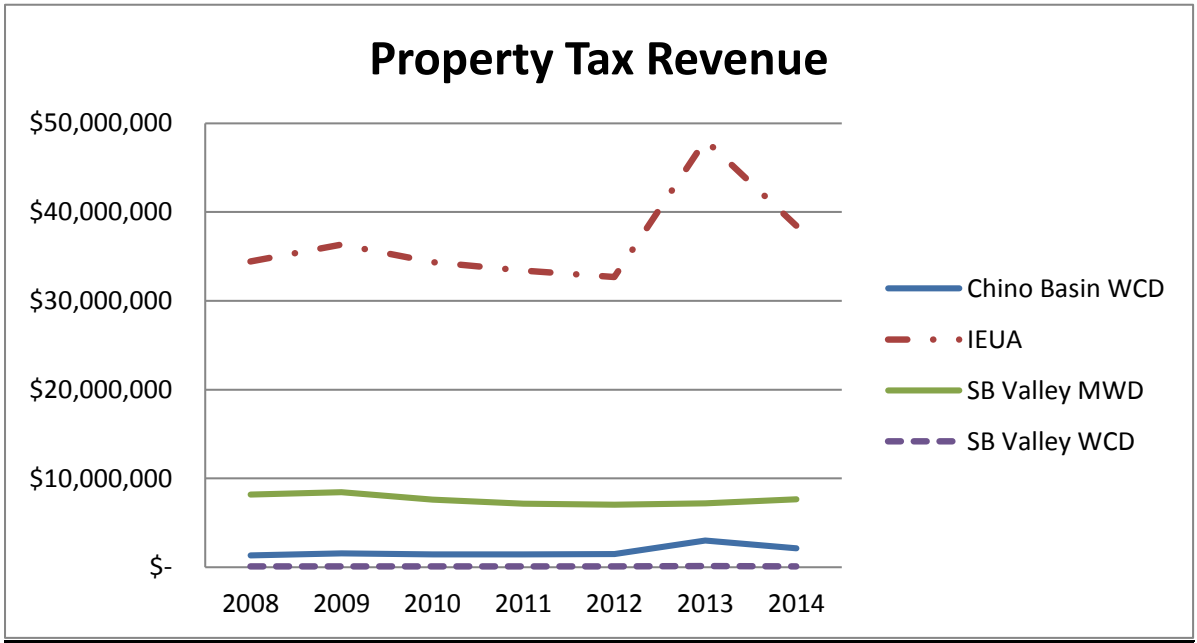
Agency Property Tax	Avg. Agency	No. of Tax	No. of Tax Rate

[34] Seven tax rate areas for IEUA do not contribute to Improvement District C.

(as identified by County Assessor)	**Share of 1% General Levy**	**Rate Areas in 2013-14**	**Areas with Allocation**
Chino Basin WCD, land only	0.30%	301	244
IEUA, Imp. Dist. C (most of district)	2.90%	673	564
IEUA, Original (original boundary)	1.60%	310	273
IEUA, Bryant (annexation)	1.70%	3	2
IEUA, Mid Valley (annexation)	1.50%	365	292
IEUA, 1969 Annex/Imp. Dist. 1	3.80%	22	2
SB Valley MWD	2.80%	752	555
SB Valley WCD, land only	0.03%	237	181

Property Tax Revenue

As this revenue source is relatively stable and lags about two years behind changes in market conditions, this indicator can potentially depict the level of stability of an agency's revenue base. However, this is particularly problematic when the overall tax base is capped at a maximum two percent growth under Proposition 13 (not to include property sales) and while districts experienced decreasing property values. Increases in costs for labor and benefits, training, replacement of equipment and facilities all have grown at a rate greater than two percent.



Property Tax Revenue	2008	2009	2010	2011	2012	2013	2014
Chino Basin WCD	$ 1,318,797	$ 1,549,465	$ 1,461,934	$ 1,455,474	$ 1,481,375	$ 3,017,994	$ 2,112,709
IEUA	$ 34,451,122	$ 36,324,998	$ 34,355,385	$ 33,419,237	$ 32,694,517	$ 48,086,946	$ 38,486,730
SB Valley MWD	$ 8,194,132	$ 8,459,659	$ 7,603,643	$ 7,151,954	$ 7,043,595	$ 7,179,629	$ 7,661,949
SB Valley WCD	$ 83,264	$ 83,042	$ 76,916	$ 79,880	$ 76,976	$ 129,852	$ 108,138

In 2012-13 the agencies received a large property tax distribution due to one-time payment for the agency's share of the unobligated funds returned by the Redevelopment Successor Agencies for re-distribution to eligible taxing agencies. The "one-time" receipts are the result of the dissolution of redevelopment agencies which

took effect on February 1, 2012. Those agencies in the Chino Basin benefited more than those in the San Bernardino Valley due to the number of redevelopment agencies.

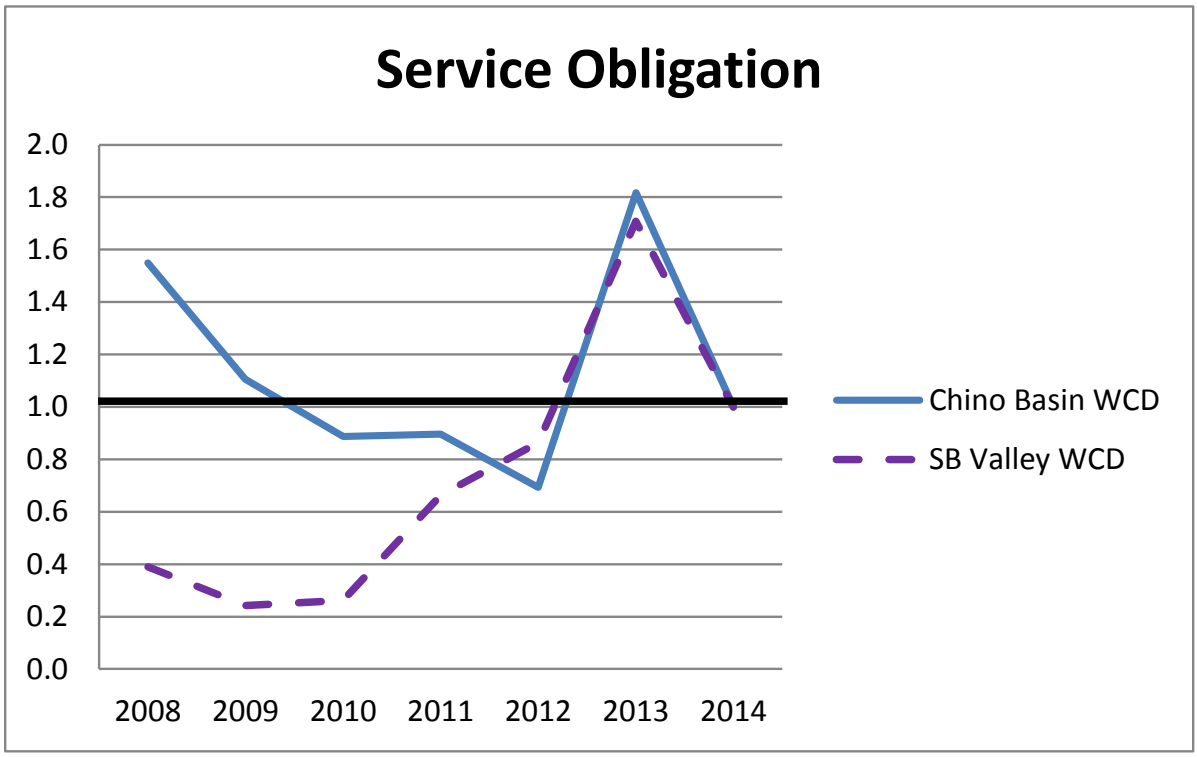
For IEUA, a majority of the increase in non-operating revenues was due to the Successor Agency Pass-through Payment increase of $9.3 million over the prior year.

B. Fiscal Indicators – Governmental Activities

The accumulation of consistently presented financial information allows a reader to understand an agency's financial position and determine whether there is improvement or deterioration. The following indicators are for the governmental activities of the districts (water conservation/recharge); this does not include the business-type activities of IEUA or MUNI. As of March 3, 2015, the FY 2013-14 audit has not been completed for one district, therefore the fiscal indicator analysis is through 2012-13.

Service Obligation

Service Obligation measures whether or not a government's annual revenues were sufficient to pay for annual operations. In most cases, as the percentage of general revenues decreases, an agency loses its ability to respond to changing conditions and to citizens' needs and demands. It is calculated by dividing operating expenditures by operating revenues. A ratio of one or higher indicates that a government lived within is annual revenues.



Service Obligation							
	2008	2009	2010	2011	2012	2013	2014
Chino Basin WCD	1.5	1.1	0.9	0.9	0.7	1.8	1.0
SB Valley WCD	0.4	0.2	0.3	0.7	0.9	1.7	1.0

SB Valley WCD's healthy increase in this indicator can be attributed to both an increase in operating revenues and a decrease in operating expenditures.

The following explains the decline identified above for Chino Basin WCD:

- 2009 – Property tax revenues increased and interest earnings decreased causing an overall decrease in revenue; expenses increased due to increased personnel and beginning first phase of the District's capital improvement plan to construct new office headquarters and educational facility.

- 2010 – Property tax revenues and interest earnings decreased; expenses for programs and continuing capital improvements were offset by a decrease in grounds maintenance expenses due to on-going construction.

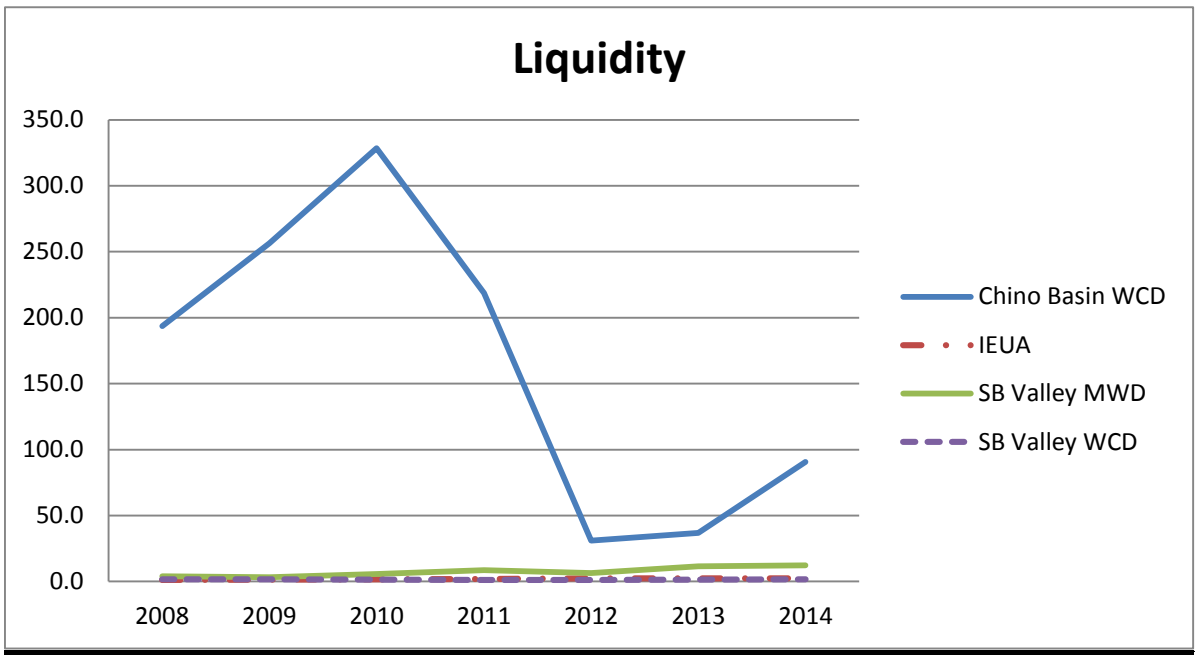
- 2011 – Property tax revenues and interest earnings decreased; expenses for increased personnel, programs, and basin maintenance expenses, in addition to continuing phases of the District's capital improvement plan were offset by a decrease in public education activities at the District due to construction at District facilities.

- 2012 – Property tax revenues increased slightly from the prior year. Decrease in interest earnings is due to lower interest rates and lower cash balances related to the self-funding of the District's capital improvement plan which came from the sale of unutilized district property. Increase in operating expenditures was primarily due to an approximately $650,000 increase in depreciation expense related to the disposal of District's old administration building as part of the final phase of the District's capital improvement plan.

As discussed further below, the SB Valley WCD increased its groundwater assessment in 2011 and 2012, which increased operating revenues.

Liquidity

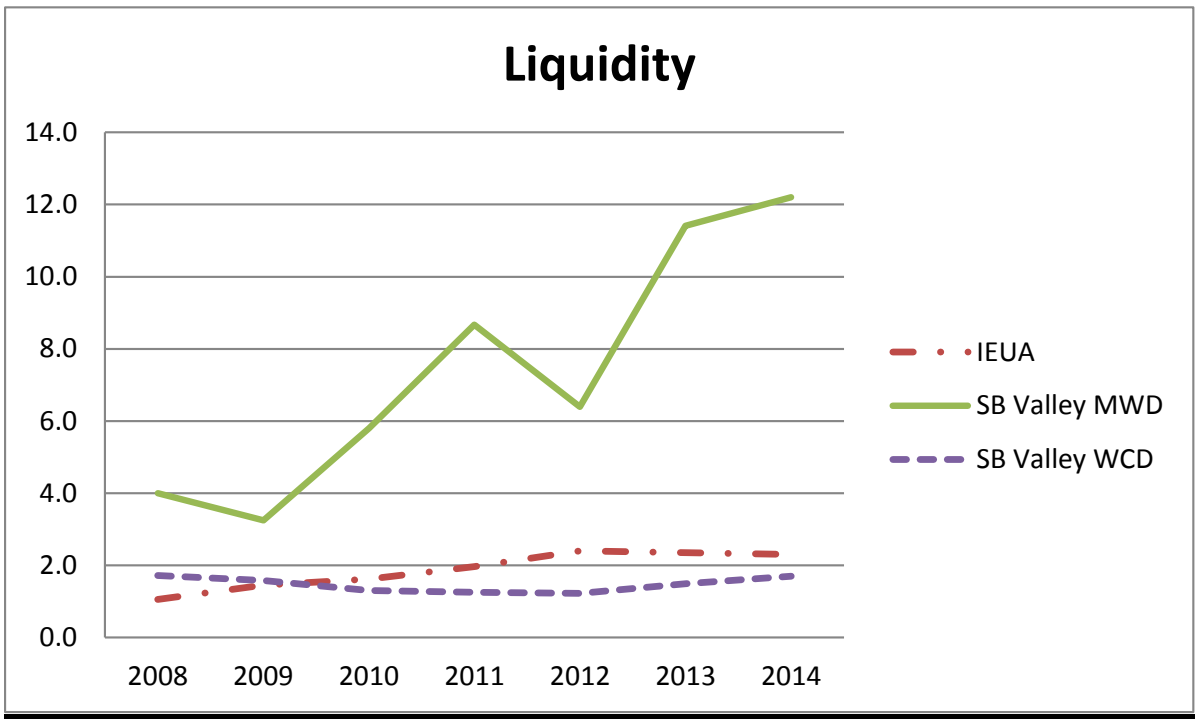
Liquidity measures a government's ability to meet its short-term obligations. In other words, if a short-term obligation became due would the agency be able to satisfy that obligation with cash. It is calculated by dividing current liabilities by cash and investments. The higher the ratio suggests a government is better able to meet its short-term obligations. For agencies not meeting its service obligations (see previous indicator), the literature suggests a ratio of ten or above.



Liquidity							
	2008	2009	2010	2011	2012	2013	2014
Chino Basin WCD	193.7	256.4	328.6	218.6	31.1	36.8	90.7
IEUA	1.1	1.4	1.6	2.0	2.4	2.4	2.3
SB Valley MWD	4.0	3.3	5.8	8.7	6.4	11.4	12.2
SB Valley WCD	1.7	1.6	1.3	1.2	1.2	1.5	1.7

Chino Basin WCD in this indicator displays an outlier in relation to the other agencies. Chino Basin WCD currently maintains a significant cash reserve due to the prior sale of some of the district's land holdings. A significant portion of reserves are designated for on-going programs, and potential acquisition and development of water recharge basins in accordance with the District's Master Plan. The yearly decrease in cash reserves is due to on-going Capital Improvement Projects in accordance with the District's Master Plan. Increase in current liabilities in fiscal year 2012 is related to ongoing capital improvement projects.

In order to illustrate this indicator for the other agencies, the graphical display below does not include the Chino Basin WCD.

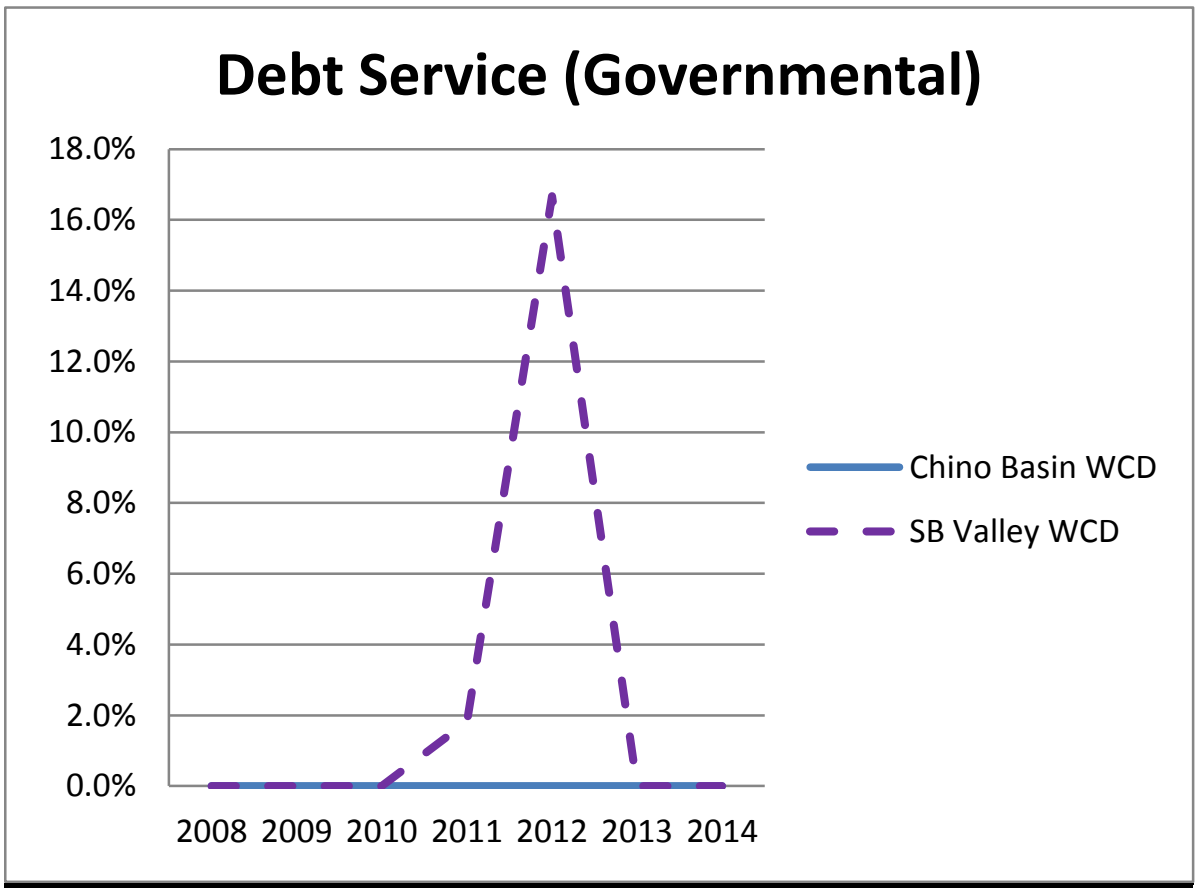


Liquidity							
	2008	2009	2010	2011	2012	2013	2014
IEUA	1.1	1.4	1.6	2.0	2.4	2.4	2.3
SB Valley MWD	4.0	3.3	5.8	8.7	6.4	11.4	12.2
SB Valley WCD	1.7	1.6	1.3	1.2	1.2	1.5	1.7

The SB Valley WCD holds a prepaid royalty on aggregate materials under lease which must be repaid if not mined on District lands, this is shown as a current liability whether or not it is displayed that way based on audit standards.

Debt Service

Debt Service looks at service flexibility by determining the amount of total expenditures committed to annual debt service. It is calculated by dividing operating expenses by debt service. Service flexibility decreases as more resources are committed to annual debt service.



Debt Service (Governmental)							
	2008	2009	2010	2011	2012	2013	2014
Chino Basin WCD	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
SB Valley WCD	0.0%	0.0%	0.0%	1.8%	16.7%	0.0%	0.0%

Chino Basin WCD does not have any long-term debt.

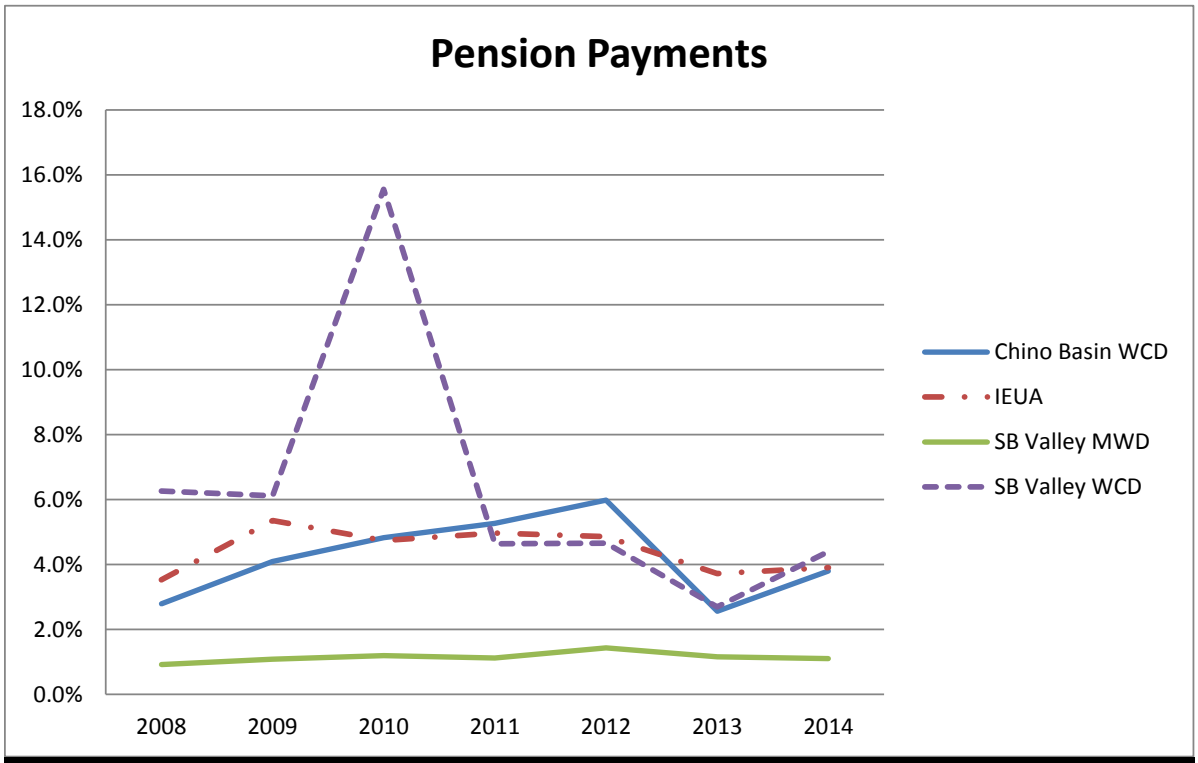
SB Valley WCD has limited debt and does not include debt service in rates. Most capital projects are done in cooperation with partners such as MUNI and Western Municipal Water District. Debt shown is recognized CalPERS debt, the side note was repaid in 2012.

Not shown in the chart above, is IEUA debt for the Ground Water Basin Enhancement Project funded by the 2008B Variable Rate Bonds (refinancing the 2002A Bonds in May 2008). Debt principal and interest payments are equally reimbursed by the Chino Basin Watermaster and the IEUA. IEUA's portion is supported by a fund transfer from the Regional Wastewater Capital Improvement Fund. At June 30, 2014, the 2008B bond had $45,850,000 in principal outstanding. The bonds mature through 2032 with annual installments ranging from $1.66 million to $3.48 million.

Pension Payments

Each agency is a member of the California Public Employees Retirement System (CalPERS).[35] CalPERS provides retirement and disability benefits, annual cost-of-living adjustments, and death benefits to plan members and beneficiaries. CalPERS acts as a common investment and administrative agent for participating public entities within the State of California. Benefit provisions and all other requirements are established by state statute and city ordinance.

The Pension Payments indicator below depicts the relationship between the pension payments as a percentage of an agency's revenues. It is calculated by dividing annual pension cost by total revenue (operating and non-operating revenue). For all the agencies, pension costs as a percentage of total revenues generally increased through 2012 with a decrease in 2013. This decrease was due to the one-time receipt of pass-through property tax revenues.



Pension Payments	2008	2009	2010	2011	2012	2013	2014
Chino Basin WCD	2.8%	4.1%	4.8%	5.3%	6.0%	2.6%	3.8%
IEUA	3.5%	5.4%	4.7%	5.0%	4.9%	3.7%	3.9%
SB Valley MWD	0.9%	1.1%	1.2%	1.1%	1.4%	1.2%	1.1%
SB Valley WCD	6.3%	6.1%	15.6%	4.6%	4.7%	2.7%	4.4%

[35] CalPERS issues a Comprehensive Annual Financial Report (CAFR). The CAFR is issued in aggregate and includes the sum of all CalPERS plans. Copies of the CalPERS CAFR may be obtained from the CalPERS Executive Office, 400 P Street, Sacramento, California 95814.

The annual pension cost for these districts is shown in the chart below. In 2010, SB Valley WCD reduced staffing, which in turn reduced its pension costs the following year.

Annual Pension Cost

Agency	2009	2010	2011	2012	2013	2014
Chino Basin WCD	$ 83,518	$ 78,382	$ 82,844	$ 92,985	$ 78,305	$ 82,065
IEUA	5,083,038	4,747,436	4,730,153	4,976,080	4,875,602	4,769,984
MUNI	824,594	804,058	793,239	999,768	973,159	982,982
SB Valley WCD	125,441	149,714	50,376	63,658	67,671	96,258

source: District audits

The employer contribution rate that each agency pays to CalPERS is shown in the chart below. Beginning with FY 2015-16 CalPERS will collect employer contributions toward each agency's unfunded liability and side fund as dollar amounts instead of the prior method of a contribution rate. This will allow for better tracking of the unfunded liability by employers as well as allowing them to pay it down faster if they choose. As for IEUA, the additional contribution payments do not apply to that agency; additional contribution payments only apply to smaller agencies (in terms of employee count) in risk pools. Therefore, additional contribution payments do not apply to IEUA. Rather, the 2016 total employer contribution rate for IEUA includes the employer normal cost (8.269%) and the unfunded rate (9.749%), or 18.018% as shown below.

The high rate for MUNI is a combination of the normal cost to participate in the plan, the side fund to account for adopted benefit amendments, and its share of the plan's unfunded liability.

Employer Contribution Rates and Unfunded Liability Payments

Agency	2011	2012	2013	2014	2015	2016	
Chino Basin WCD	7.209%	8.197%	8.311%	8.486%	8.435%	7.163%	$8,467
IEUA	11.727%	14.753%	15.332%	16.105%	16.641%	18.018%	$0
MUNI	29.145%	31.777%	33.421%	33.029%	34.392%	13.995%	$597,198
SB Valley WCD	14.126%	16.435%	16.957%	14.660%	15.701%	9.671%	$34,629

source: CalPERS, October 2014

Looking forward, the chart below identifies the projected employer contribution rates and unfunded liability payments through 2021. As shown, the Normal Cost remains static for Chino Basin WCD, MUNI, and SB Valley WCD with increasing unfunded liability payments for the two water conservation districts. As of now, the CalPERS projections identify a marked decrease for MUNI's unfunded liability payments. IEUA is in its own pool since it is a large employer, and its unfunded liability payment is a component of the overall rate.

Projected Employer Contribution Rates and Unfunded Liability Payments

Agency	2017		2018		2019		2020		2021	
Chino Basin WCD	7.6%	$11,217	7.6%	$14,124	7.6%	$17,194	7.6%	$20,437	7.6%	$20,764
IEUA	18.8%	$ 0	19.2%	$ 0	19.7%	$ 0	20.1%	$ 0	20.1%	$ 0
MUNI	15.0%	$647,780	15.0%	$700,861	15.0%	$225,178	15.0%	$380,930	15.0%	$396,636
SB Valley WCD	10.1%	$40,192	10.1%	$46,058	10.1%	$52,241	10.1%	$58,751	10.1%	$60,070

source: CalPERS, October 2014

The information below shows the actuarial accrued liability, market value of assets, unfunded liability, and funded ratios. The funded status is a measure of how well funded a plan or risk pool is with respect to assets vs. accrued liabilities. A ratio greater than 100% means the plan or risk pool has more assets than liabilities and a ratio less than 100% means liabilities are greater than assets. The funded ratio based on the market value of assets is an indicator of the short-term solvency of the plan.

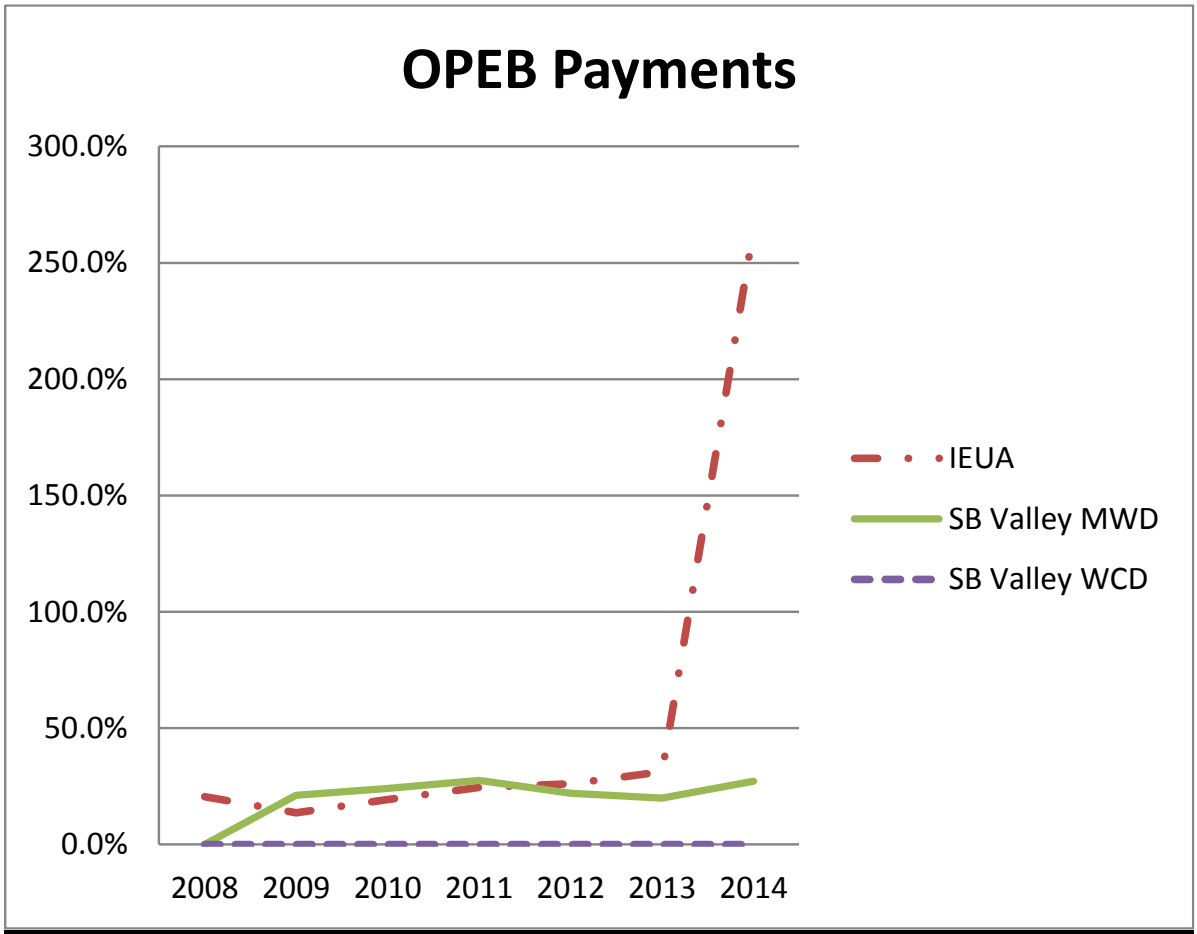
Agency Plans' Funded Status as of June 30, 2013

Agency	Accrued Liability	Plan's Market Value of Assets	Plan's Unfunded Liability	Funded Ratio
Chino Basin WCD	$1,503,454	$1,267,647	$235,807	84.3%
IEUA	138,490,379	99,338,537	39,151,842	71.7%
MUNI	21,556,078	15,820,011	5,736,067	73.4%
SB Valley WCD	2,953,003	2,249,969	703,034	76.2%

source: CalPERS, October 2014

OPEB Payments

The Other-Post Employment Benefits (OPEB) Payments indicator below monitors whether an agency is able to pay or is paying the amount required to fund the OPEB system as determined by its actuary. It is calculated by dividing OPEB payments by OPEB annual cost. IEUA, MUNI, and SB Valley WCD provide OPEB to its retired employees, although at varying benefits and costs. For example, for employees hired before April 19, 2011, MUNI pays the cost of the monthly medical and dental insurance premiums for retired employees and their dependents who have reached at least age 50 with a minimum of 10 years of service. For employees hired after April 19~ 2011 who have reached the age of 60 with a minimum of 15 years of service, MUNI will pay the cost of monthly medical and dental insurance premiums for retired employees and their dependents, until the retired employee reaches the age of Medicare eligibility.



OPEB Payments	2008	2009	2010	2011	2012	2013	2014
IEUA	20.6%	13.7%	19.3%	24.5%	26.1%	31.3%	263.5%
SB Valley MWD	-	21.2%	24.1%	27.7%	22.1%	20.0%	27.3%
SB Valley WCD	-	-	-	0.0%	0.0%	0.0%	0.0%

What the agencies do have in common is not contributing the full amount of the annual OPEB cost. For IEUA, as of July 1, 2013, the most recent actuarial valuation date, the plan was unfunded. The actuarial accrued liability for benefits was $17,476,486 and the actuarial value of assets was nil, resulting in unfunded actuarial accrued liabilities (UAAL) of $17,476,486. As of June 30, 2013, no decision has been made to fund the actuarially calculated OPEB liability. For the past three years, the percentage of OPEB contributed has been 24%, 26%, and 31%. The IEUA 2014-15 Budget identifies a prefunding payment of $3.5 million for the IEUA OPEB liability from designated reserves in the Administrative Services fund. On May 21, 2014, the IEUA Board approved the establishment of a trust account with the California Employee Retirement Benefit Trust (CERBT). To date, a total of $6.8 million has been paid into the trust account which eliminated the accrued liability reported in the Agency's financial report for fiscal year ending 2013-14.

MUNI intends to pre-fund its OPEB with CalPERS through the California Employers' Retiree Benefits Trust (CERBT) Fund. The CERBT is a trust fund that allows public

employers to prefund the future cost of their retiree health insurance benefits and OPEB obligations for their covered employees or retirees. The district has not adopted a funding policy for its OPEB obligation. For the past three years, the percentage of OPEB contributed has been 28%, 22%, and 20%.

SB Valley WCD first completed an OPEB actuarial study in 2011. The study indicated an annual contribution for OPEB at $962 per year with an accrued liability of $3,118. The district contributed $3,118 in 2011 and has contributed at least $962 per year for the following two years (2012 and 2013). In 2014, the district, as required, updated the actuarial study which concluded that based on experience, the annual OPEB contribution should be $8,883. The unfunded liability was estimated at $29,305. Based on Board direction the unfunded liability difference was funded in 2014. The district budgets $8,883 annually to fund the OPEB Reserve. The district intends to convert the OPEB Reserve to a Trust in the coming fiscal year.

C. Additional Information on Governmental Activities

The information below provides additional information on the financial workings of the agencies reviewed. In depth review focusing on the water conservation activities of the two municipal water districts cannot be extracted from its financial documents and the State Controller Reports for Special Districts. For this report, in depth reviews occur for the water conservation districts. The subsequent service review for wholesale and retail water will include in depth reviews for the municipal water districts.

Chino Basin WCD

Net Position

The accumulation of consistently presented financial information allows a reader to understand an agency's financial position and determine whether there is improvement or deterioration. One such measure of improvement or decline is the change in net position. Net position has increased by 2% since FY 2008-09 as shown on the chart below. During this time Total Assets have increased by 3% and Total Liabilities have increased by 86% (with construction of the district's new headquarters and demonstration garden in 2012-13). From the Net Assets perspective, the financial health of the Governmental Funds overall has increased during the past five years. As of June 30, 2014, the district had $23.6 million in net assets. Of this amount, most is cash followed by investment in capital assets, net of related debt.

NET POSITION							
	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	5-yr Var.
Assets:							
Cash & cash equivalents	19,934,788	19,626,327	17,566,715	16,963,911	13,508,040	13,100,943	-34%
Other	142,340	229,559	261,887	220,858	72,516	80,611	-43%
Capital assets (net)	3,048,296	3,117,994	5,077,611	5,535,259	10,383,193	10,544,644	246%
Total Assets	$ 23,125,424	$ 22,973,880	$ 22,906,213	$ 22,720,028	$ 23,963,749	$ 23,726,198	3%
Liabilities:							
Current liabilities	77,735	59,727	80,351	545,641	366,853	144,455	86%
Long-term liabilities	-	-	-	-	-	-	
Total Liabilities	$ 77,735	$ 59,727	$ 80,351	$ 545,641	$ 366,853	$ 144,455	86%
Change in Net Position	**$ 95,776**	**$ (133,536)**	**$ (88,291)**	**$ (651,475)**	**$ 1,422,509**	**$ (15,153)**	
Total Net Position	$ 23,047,689	$ 22,914,153	$ 22,825,862	$ 22,174,387	$ 23,596,896	$ 23,581,743	2%
Net Assets:							
Invested in capital assets, net of related debt	3,048,296	3,117,994	5,077,611	5,535,259	10,383,193	10,544,644	246%
Restricted	-	-	-	-	-	-	
Unrestricted	19,999,393	19,796,159	17,748,251	16,639,128	13,213,703	13,037,099	-35%
Total Net Position	$ 23,047,689	$ 22,914,153	$ 22,825,862	$ 22,174,387	$ 23,596,896	$ 23,581,743	2%
Increase from prior year	1.0%	-0.6%	-0.4%	-2.9%	6.4%	-0.1%	
source: Statement of Net Assets/Position							

Expanding upon the Unrestricted Net Position line item from the figure above, the district has designated or set aside significant amounts cash for the following categories: major structural failures, water conservation projects, recycled water conservation, and operating revenue.

UNRESTRICTED NET POSITION							
	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	
Non-spendable net assets:	15,480	15,263	66,253	13,066	13,184	31,771	105%
Spendable net assets designated:							
Major structural failures	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	0%
Water conservation projects	11,778,000	11,778,000	9,942,640	10,196,033	6,933,749	6,665,558	-43%
Recycled water conservation	3,993,975	3,993,975	3,869,029	3,830,029	3,666,770	3,739,770	-6%
Operating Reserve	2,711,938	2,508,921	2,370,319	1,100,000	1,100,000	1,100,000	-59%
Total Unrestricted Net Position	**$ 19,999,393**	**$ 19,796,159**	**$ 17,748,241**	**$ 16,639,128**	**$ 13,213,703**	**$ 13,037,099**	**-35%**
source: Notes to the Basic Financial Statements							

Fund Balance

Considering net position alone does not indicate if an agency has enough fund balance to operate short and long-term operations. Governmental funds focus on the availability of resources on a short-term basis, showing inflows and outflows and resulting in an ending balance of spendable resources. A trend of operating surpluses or deficits is a key indicator of the financial health of an agency. The chart below shows fund balances for the governmental activities for the past five audited years. The fund balance has decreased by 35% since FY 2008-09 (with construction of the district's new

headquarters and demonstration garden in 2012-13) with Total Revenues increasing by 7% (with a one-time receipt of former redevelopment property taxes in 2012-13) and Total Expenditures increasing by 28%.

Unassigned Fund Balance

The 2013-14 audit identifies Total Fund Balance of $13.1 million, which represents 544% of Total Expenditures as shown in the second figure below. For an agency with no retail service infrastructure such as water lines, the industry guidelines recommend a minimum 10% reserve based on the annual expenditures. This fund balance amount includes the $1.1 million assigned as a one-year operating reserve and $6.0 million for "recharge improvements". The program offers financial assistance to convert publicly owned parks and schools within the District boundaries from using potable (drinking) water to recycled water to irrigate their outdoor landscaping.

It is important to note that a significant portion of district reserves are designated for on-going programs (see Unrestricted Net Assets above), and potential acquisition and development of water recharge basins in accordance with the District's Master Plan. Nonetheless, the district has high liquidity, no long-term debt, and meets its service obligations (after capital projects).

FUND BALANCE							
	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	5-yr Var.
Non-spendable:	$ 15,480	$ 15,263	$ 66,253	$ 13,066	$ 13,184	$ 31,771	
Committed:							
Recycled water programs				146,259	73,000	3,739,770	
Capital Projects			200,531	5,309,968	722,938		
Assigned:							
Compensated absences		24,998	29,280	29,883	-	37,557	
Recycled water programs				3,683,770	3,666,770	-	
Operating reserve - 1 year				1,100,000	1,100,000	1,100,000	
LEAP - 2 year reserve				268,954	300,000	300,000	
Structural failures				1,500,000	1,500,000	1,500,000	
Carry forward						126,358	
Capital Projects			12,638,220	4,497,393	2,591,858	6,000,000	
Unassigned:	20,011,501	19,672,747	4,732,124	6,432	3,276,043	239,200	
Total Fund Balances	$ 20,026,981	$ 19,713,008	$ 17,666,408	$ 16,555,725	$ 13,243,793	$ 13,074,656	-35%
Revenues:							
Charges: landscape audits	-	7,200	18,750	18,950	20,888	27,728	
Charges: edu. workshops		-	-	11,600	8,340	1,000	
Charges: rent of basin space	5,607	3,692	-	-	-	-	
Grants & contributions	41,729	63,349	75,878	5,933	16,042	19,188	-54%
Property taxes	1,549,465	1,353,785	1,455,474	1,481,375	3,131,280	2,112,709	36%
Investment earnings	486,553	160,178	107,067	61,636	33,011	56,330	-88%
Other		783	7,157	10,387	11,399	15,340	
Total Revenues	$ 2,083,354	$ 1,588,987	$ 1,664,326	$ 1,589,881	$ 3,220,960	$ 2,232,295	7%
Expenditures:							
Salaries & benefits	860,645	805,103	897,080	919,379	882,098	933,684	8%
Basin & garden maint.	260,807	88,912	264,350	79,908	112,070	604,513	132%
Public education	114,773	300,800	152,646	109,023	153,963	89,019	-22%
Materials & services	521,106	560,179	352,274	400,505	452,159	357,725	-31%
Total Exp. (no cap. outlay)	1,757,331	1,754,994	1,666,350	1,508,815	1,600,290	1,984,941	13%
Capital outlay	120,150	147,966	2,044,577	1,191,749	4,932,602	416,491	247%
Total Expenditures	$ 1,877,481	$ 1,902,960	$ 3,710,927	$ 2,700,564	$ 6,532,892	$ 2,401,432	28%
Revenues less Expenditures:	**$ 205,873**	**$ (313,973)**	**$ (2,046,601)**	**$ (1,110,683)**	**$ (3,311,932)**	**$ (169,137)**	
Fund Balances, Ending	$ 20,026,981	$ 19,713,008	$ 17,666,407	$ 16,555,725	$ 13,243,793	$ 13,074,656	-35%
Increase from prior year	1.0%	-1.6%	-10.4%	-6.3%	-20.0%	-1.3%	
sources: Statement of Revenues, Expenditures, and Changes in Fund Balance; Notes							

As shown in the chart above, there are no assigned funds for Compensated Absences in FY 2012-13. According to the district, the compensated absences liability remains and the assigned funds to cover the liability was unintentionally misclassified as unassigned. The district notified its auditor of the erroneous error, which was corrected for the 2013-14 audit to show a balance of $35,557 as of June 30, 2014.

Expanding upon the Fund Balance discussion from above, as a measure of a district's general fund liquidity, it may be useful to compare both unassigned fund balance and total fund balance to total fund expenditures. At the end of FY 2013-14, unassigned fund balance of the general fund was $239,200 while total fund balance reached $13,074,656. Unassigned fund balance represents 10 percent of total general fund expenditures (previous year 50%), while total fund balance represents 544 percent of

that same amount (previous year 203%). Therefore, a total fund balance of this magnitude seems disproportionate to the services the district provides.

GENERAL FUND LIQUIDITY	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Total GF expenditures	$ 1,877,481	$ 1,902,960	$ 3,710,927	$ 2,700,564	$ 6,532,892	$ 2,401,432
Unassigned GF fund balance	20,011,501	19,672,747	4,732,124	6,432	3,276,043	239,200
(as a % of total expenditures)	**1066%**	**1034%**	**128%**	**0%**	**50%**	**10%**
Total fund GF balance	20,026,981	19,713,008	17,666,407	16,555,725	13,243,793	13,074,656
(as a % of total expenditures)	**1067%**	**1036%**	**476%**	**613%**	**203%**	**544%**
sources: Balance Sheet and Statement of Revenues, Expenditures, and Changes in Fund Balance						

Director Expenses

The figure below identifies Director Expenses as provided by the district. A review of the district's agendas identifies that the district board met 14 times in calendar year 2014 with an additional combined 53 director meetings/events at a per diem rate of $150 per meeting. Additionally, board members receive medical insurance totaling $16,135 in FY 13-14.

Chino Basin WCD - Seven Board of Directors Expenses and Reimburesements					
Fiscal Year	**Per Diem Compensation**	**Mileage Reimbursement**	**Parking Fees, Tolls**	**Medical Insurance**	**TOTAL**
2010-11	$ 19,050	$ 1,115	$ 8	$ 12,203	$ 32,376
2011-12	22,950	2,029	63	16,805	41,847
2012-13	17,400	966	12	17,631	36,009
2013-14	22,650	1,150	65	16,135	40,000

SB Valley WCD

The financial operations of the SB Valley WCD are unique and complex and require the following discussion. The most recent audit for SB Valley WCD is for FY 2013-14.

Net Position

The accumulation of consistently presented financial information allows a reader to understand an agency's financial position and determine whether there is improvement or deterioration. One such measure of improvement or decline is the change in net position. Net position has increased by 11% since FY 2008-09 as shown on the chart below, with most gains realized during the past two audit years. During this time Total Assets have increased by 4% and Total Liabilities have decreased by 2%. From the Net Assets perspective, the financial health of the district overall has increased during the past five years. As of June 30, 2014, the district's net position was $5.0 million. Of this amount, most is unrestricted. In response to the draft staff report, the district states that

while the district's assets are mostly unrestricted from an accounting perspective they are subject to the District's Reserve Policy.

NET POSITION							
	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	5-yr Var.
Assets:							
Cash & investments	8,091,273	6,613,884	6,360,057	6,194,467	7,511,352	8,392,451	4%
Other	285,707	250,297	377,261	493,664	631,679	502,139	76%
Capital assets (net)	1,396,720	1,481,052	1,460,704	1,373,408	1,283,635	1,278,721	-8%
Total Assets	$ 9,773,700	$ 8,345,233	$ 8,198,022	$ 8,061,539	$ 9,426,666	$ 10,173,311	4%
Liabilities:							
Current liabilities	154,886	75,361	112,620	51,840	52,289	85,995	-44%
Long-term liabilities	5,078,072	5,061,495	5,202,772	5,050,810	5,062,433	5,043,583	
Total Liabilities	$ 5,232,958	$ 5,136,856	$ 5,315,392	$ 5,102,650	$ 5,114,722	$ 5,129,578	-2%
Change in Net Position	**$ (832,656)**	**$ (1,332,365)**	**$ (325,747)**	**$ 76,259**	**$ 1,353,055**	**$ 731,789**	
Total Net Position	$ 4,540,742	$ 3,208,377	$ 2,882,630	$ 2,958,889	$ 4,311,944	$ 5,043,733	11%
Net Position:							
Invested in capital assets, net of related debt	1,396,720	1,481,052	1,460,704	1,373,408	1,283,635	1,278,721	-8%
Restricted:	-	-	-	-	-	-	
Unrestricted	3,144,022	1,727,325	1,421,926	1,585,481	3,028,309	3,765,012	20%
Total Net Position	$ 4,540,742	$ 3,208,377	$ 2,882,630	$ 2,958,889	$ 4,311,944	$ 5,043,733	11%
Increase from prior year	-15.5%	-29.3%	-10.2%	2.6%	45.7%	17.0%	
source: Statement of Net Assets/Position							

Revenue Sources

SB Valley WCD's General Fund revenues include receipt of the one percent general levy property tax, mining lease revenues/royalties, groundwater assessments, and interest income. Mining royalties fluctuate based on several variables, including the market demand for aggregate, the economic health of the mining entities, and the terms and conditions of the leases. The district reserves are adequate to ensure future operations and the variability of its revenue sources. The investments include significant funding provided as a prepayment of mining royalties. Investment of these cash reserves provides a small but sustainable amount of revenue to the district.

NET INCOME							
	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	5-yr Var.
Operating revenues:							
Groundwater assessments	532,378	434,397	601,466	671,192	896,150	919,338	73%
Water spreading ops				157,298	653,388	354,550	
Services for other agencies	24,486	28,956	30,000	30,000	30,000	30,000	23%
Total Oper. Revenue	$ 556,864	$ 463,353	$ 631,466	$ 858,490	$ 1,579,538	$ 1,303,888	134%
Operating expenses:							
Water spreading ops							
Prof. Services	1,314,616	630,938	281,386	167,750	139,159		-100%
Salaries & Benefits	873,062	954,158	538,793	580,931	564,807		-100%
Other			80,811	141,140	69,597	1,312,446	
Other	381,821	359,454	2,194	1,028	6,750		-100%
Depreciation	63,892	71,559	99,224	105,948	101,985	94,204	47%
General & admin							
Director's fee/expense	152,303	195,094	92,231	123,721	95,319		-100%
Other	99,252	83,545	75,676	69,990	56,084		-100%
Total Oper. Expenses	$ 2,884,946	$ 2,294,748	$ 1,170,315	$ 1,190,508	$ 1,033,701	$ 1,406,650	-51%
Non-operating rev. (expense):							
Property taxes	$ 83,042	$ 76,916	$ 79,880	$ 76,976	$ 129,852	$ 108,138	30%
Royalty income	$ 1,196,989	$ 205,315	$ 47,106	$ 201,064	$ 264,912	$ 416,294	-65%
Rental income, net			$ 120,966	$ 77,867	$ 75,098	$ 77,817	
Other	$ 215,395	$ 216,799	$ 145,238	$ 39,884	$ 337,356	$ 232,302	8%
Total non-operating	$ 1,495,426	$ 499,030	$ 393,190	$ 395,791	$ 807,218	$ 834,551	-44%
Net income (loss)	**$ (832,656)**	**$ (1,332,365)**	**$ (145,659)**	**$ 63,773**	**$ 1,353,055**	**$ 731,789**	
* The categories for Operating Expenses in 2013-14 changed to District Operations ($1,026,077), Regional Programs ($99,171), and Gen & Admin ($187,198) .							
sources: Statement of Activities (2009-2010); Statement of Revenues, Expenditures, and Changes in Net Position (2011-2014)							

Emergence from Financial Difficulty

The district has recently come out of a difficult financial time which began in 2006, accelerated in 2008, and continued through 2011. This situation mirrored the overall economic slow-down; however, the effect on the district was more severe because all sources of the revenues were impacted at the same time. Since this time the district has revised its financial structure, reduced costs and implemented various policies that will reduce the likelihood and severity of these occurrences in the future. The district implemented cost reductions documented in the annual budgets including the reduction from seven to five divisions for the board of directors as allowed by special legislation.

In 2011 the district established a Land Management Enterprise to better clarify the roles of the district and to provide better accountability of the sources and use of funding provided in the various areas of the district's efforts. In 2011 and 2012 the Groundwater Charge was increased by 25% and 15% respectively to allow the groundwater enterprise to raise adequate revenue to operate the Water Enterprise facilities within its financial ability without subsidy from the district reserves or other enterprises. The Land Management Enterprise holds the district's land holdings not directly related to current water recharge activities. Revenue related to this enterprise includes mining royalties, land leases, commercial property leases and easement payments for encroachments and encumbrances.

The district's operating revenues increased in 2012 by 36% or $227,024 primarily due to a $69,726 increase in groundwater assessments and a $157,298 increase in water spreading revenues (mainly due to reimbursement from a spreading agreement with MUNI. In 2013, operating revenues increased 84% or $721,048 primarily due to a $224,958 increase in groundwater assessments and a one-time receipt of $496,090 related to water spreading activities (which includes a one-time payment of $303,251 for the East Branch Extension II Easement Condemnation). For 2014, operating revenues were marginally above operating expenses.

In 2012, non-operating revenues increased by 12% or $54,720 due primarily to a $153,958 increase in royalty revenues and a $38,858 increase in rental income that was offset by a $160,343 decrease in other non-operating revenues. Non-operating revenues increased by 83% or $422,788 in 2013 due primarily to a $52,876 increase in property tax revenues, a $63,848 increase in royalty revenues, and a $311,818 increase in other non-operating revenues related to a one-time receipt from the Department of Water Resources for the East Branch Extension II Easement Condemnation.

Reserves

Also, in 2012 and 2013, district policies were updated to revisit reserve levels and provide for implementation when revenue was available. The table below shows designated cash and cash equivalent balances after full implementation of these policies. The Land Resources Reserve and Groundwater Recharge Enterprise Reserve contain deferred capital projects anticipated for completion in 2015 and 2016.

Fund	2013 Balance	2014 Balance
Groundwater Recharge Enterprise	$1,229,001	$1,524,057
Groundwater ER Maintenance	50,000	100,000
Land Resource Reserve[36]	679,206	927,180
Post-employment/CalPERS Trust	3,118	32,423
Self-Insurance Reserve	10,000	15,000
General Operating Reserves	510,027	640,324
Groundwater Assessment Rate Stabilization	-	38,340
Redlands Plaza Reserve	-	55,127
Habitat Management Trust	-	-
Capital Improvement/Equip Reserve	-	60,000
TOTAL	**$2,511,352**	**$3,392,451**
Prepaid Aggregate Royalty/Liability (1 yr callable)		$5,000,000

source: SB Valley WCD June 30, 2013 & 2014 audits

[36] The Land Management Enterprise holds the District's land holdings not directly related to current water recharge activities. Revenue related to this enterprise includes mining royalties, land leases, commercial property leases and easement payments for encroachments and encumbrances. These revenues enhance the District's financial position through one time and recurring revenue opportunities which can support the District's core functions and augment reserves to stabilize rates and allow funding of improvements.

General Fund Reserve

According to SB Valley WCD, reserves are funded in all critical areas of risk. The General Fund Reserve may contain up to two years of the General Fund costs of the district, which currently contains $540,273 which is about one year of General Fund operations. The district's other reserves are allocated by policy. The Groundwater Reserves are funded at about $1.6 million, about 90% of the maximum by policy, however a significant portion of that will likely be needed in Capital Improvements for Mill Creek Diversion Rehabilitation. The land resources reserve is currently over funded at $968,387; however this reserve is used to make safety repairs and improvements planning for the next two fiscal years. The district has a Capital Improvement/Equipment reserve currently funded at about $400,000, which provides capacity for pay-go project and equipment replacement.

Similar to Chino Basin WCD, the district has high liquidity, no long-term debt, and meets its service obligations (after capital projects). Therefore, an unassigned fund balance of this magnitude seems disproportionate to the services the district provides.

In response to the draft staff report, the District states that

> "…it currently has a counter-cyclic revenue and expense cycle. In drought, pumping from the groundwater basin increases and costs for maintenance moderate, while operations are somewhat reduced. During wet periods, the cost of vegetation removal operations and the cleanup of silt and sediment can be extensive, to prepare for the next season. Without accumulating this reserve for the Groundwater Enterprise, rates would be highly variable based on annual cost. During rate hearings the District had repeatedly heard that fluctuations in rates paid by cities and districts were difficult as they set rates for 3-5 years in advance. Additionally, the District is presently designing capital improvements which will use much of the reserve attributable to Groundwater. Future land management costs will utilize land management funds."

<u>Groundwater Assessments</u>

Lastly, in April 2014 the district again increased its groundwater assessment rates from $3.14 to $3.23 for agriculture and from $11.28 to $11.62 per acre foot for non-agricultural uses. The FY 2014-15 budget identifies revenue increases of $947 for agricultural uses and $36,737 for non-agricultural uses.

<u>Director Expenses</u>

The figure below identifies Director Expenses as outlined in its budgets. The board of director per-diem of $197 per meeting up to a maximum of 10 meetings per month and expenses for District and other meetings is set by Ordinance No. 2014-1 and Resolutions No. 509A & 509B. A review of the district's minutes identifies that the district board meets roughly 13 times a year with quarterly meetings of the finance committee, operations committee, and outreach committee. Therefore, a fair estimate for stipends and travel expenses for district board and committee meetings would be $18,000. Board members do not receive health, life insurance, or retirement benefits. This leaves over $64,000 annually (from 2010-11 through 2013-14) for what is believed to be fees for partner agency attending association meetings, seminars, and

conferences. To illustrate the point, dividing the 2013-14 Directors Fees ($68,000) by the per diem ($197) and five board members equates to 69 meetings a year per director. This additional amount related to Directors Fees appears to be high for any district, more so given the limited nature of the district.

Activity	2010-11	2011-12	2012-13	2013-14
Director Fees	$64,155	$66,487	$69,541	$68,000
Mileage	879	2,145	2,850	3,000
Air Fare	1,201	2,822	5,100	4,750
Other Travel	165	192	350	500
Meals	1,021	1,333	2,930	2,930
Lodging	6,414	3,029	3,758	3,500
Conference/Seminar	11,627	5,000	4,500	4,590
Total	**$85,462**	**$81,008**	**$88,029**	**$87,270**
No. of Directors	7	7	5	5

Habitat Management Reserve/Trust (future)

According to the FY 2014-15 budget, the Habitat Management Reserve/Trust is to provide multi-year funding to support future habitat projects in support of the Wash Plan related project requiring restricted reserve funds for payment of future costs. These funds may be contributed to a trust for safekeeping if required. The district does not currently have any habitat management requirements budgeted for reserve but will when the Wash Plan is implemented. The level for this reserve will be determined when a plan is approved by the board.

However, SB Valley WCD is not authorized by LAFCO or State Law the function or service of habitat management or similar activity. Further, Water Conservation District Law does not allow for a water conservation district to provide habitat management services. Since March 2006, SB Valley WCD is authorized by LAFCO to provide “water conservation” and “surveys of water supply and resources” pursuant to the *Rules and Regulations of the Local Agency Formation Commission for San Bernardino County Affecting Functions and Services of Special Districts.* Should the district desire to actively provide habitat management and enhancement, it would need to receive special legislation to expand the scope of its authorized activities as well as submit an application to LAFCO requesting authorization to provide said service.

As an alternative to SB Valley WCD providing habitat management and enhancement, the Inland Empire Resource Conservation District could perform this service as its parent act and LAFCO authorize it to do so.

IEUA and MUNI

Information on the governmental activities of the two municipal water districts are briefly discussed below. A full review of these districts’ financial activities will take place in the service review for wholesale, retail, and recycled water.

IEUA

Recharge Water Fund

IEUA's Recharge Water Fund records the activities related to the operation and maintenance of the nineteen groundwater recharge basins and pertinent facilities. Through the joint efforts of the Watermaster, the Chino Basin WCD, and Flood Control District, IEUA performs all of the operation and financial functions related to its recharge activities. Costs include general basin maintenance and restoration, groundwater administration, compliance reporting, environmental documentation and contracted services that are fully funded by the Watermaster, with IEUA funding its pro-rata share of costs based on recharged deliveries of recycled water. The operations and maintenance budget is partially funded by the Watermaster and IEUA. Revenues include reimbursements from the Watermaster, inter-fund transfers from IEUA's Regional Wastewater Capital and Recycled Water funds, grant proceeds and interesting earnings on the programs reserve balance.

The Recharge Water Fund's total operating expenses recorded in FY 2013-14 were $2,362,352 compared to $2,339,554 in FY 2012-13, resulting in an increase of $22,798. The increase was due to: 1) operation expenses related to repairs; and 2) higher depreciation expenses resulting from the completion and capitalization of various capital projects. At June 30, 2014, total net position was $33,201,574, a decrease of $66,951 over the prior fiscal year.

Water Resources Fund

The Water Resources Fund records the fiscal activities associated with providing water resources and water use efficiency programs within the agency's service area. These programs include management and distribution of imported water supplies, development and implementation of regional water use efficiency initiatives, water resource planning and support for regional water supply programs including recycled water, groundwater recharge, and storm water management. The Water Resources Fund's major revenue source can be attributed to the surcharge for imported water sold within the service area and a monthly meter service charge per meter. The regional water conservation programs receive dedicated funding, including a portion of the imported water acre foot surcharge and water meter service charge, and program grants and reimbursements from various sources including state, federal, and local agencies.

As for the IEUA in general, the increase in Net Position for 2012-13 included an operating loss of $41.9 million. This is due in part to the agency being required by the California State Controller's office to report property taxes as non-operating revenue. However, the majority of the property tax revenues are used for State Water Project expenditures which are included in operating expenses from which it will draw upon the funds. As of June 30, 2014, the Water Resources Fund has total assets of $12.3 million and liabilities of $9.2 million, resulting in a total net position of $3.1 million.

MUNI

MUNI had unrestricted Net Position of $108.0 million at June 30, 2013, a substantially high figure. The Board of Directors has designated $18 million of this reserve to be retained for the purpose of self-insuring the district against any claims made against the district. MUNI has an extensive future capital improvement plan which consists of many projects including: Enhanced Santa Ana River Spreading, Central Feeder Phase 2, Santa Ana River Tributary / Storm Water Capture and Recycled Water System.

D. Appropriations Limit

Article XIIIB of the State Constitution (the Gann Spending Limitation Initiative)[37], mandates local government agencies receiving the proceeds of taxes to establish an appropriations limit. Without an appropriations limit, agencies are not authorized to expend the proceeds of taxes. Section 9 of this Article provides exemptions to the appropriations limit, such as Section 9(c) exempts the appropriations limit for special districts which existed on January 1, 1978 and which did not levy an ad valorem tax on property in excess of $0.125 (12 ½ cents) per $100 of assessed value for the 1977-78 fiscal year. According to the *County of San Bernardino 1977-78 Valuations/Tax Rates* publication, the FY 1977-78 tax rate for the districts was as follows:

1977-78 Tax Rates per $100 of Assessed Value

District	Chino Basin WCD	IEUA	MUNI	SB Valley WCD
Tax Rate	.2145	.3300	.9500	.0300
Subject to Limit	Yes	Yes	Yes	No

As identified above, Chino Basin WCD, IEUA, and MUNI are subject to the limit. IEUA and MUNI annually adopt the limit as part of its budget process. For FY 2014-15, the IEUA limit is $150,204,136 and the MUNI limit is $24,215,427. Further, Section 1.5 reads that the annual calculation of the appropriations limit for each entity of local government shall be reviewed as part of an annual financial audit. A review of the audits for IEUA and MUNI does not identify the annual calculation of the limit. LAFCO staff recommends that IEUA and MUNI include this requirement in future audits.

For this service review, in September 2014 LAFCO provided Chino Basin WCD with information regarding the appropriations limit, which included excerpts from the State Constitution and Government Code, examples of calculating the limit, and calculation models from the State Department of Finance. On January 12, 2015 the district established its appropriations limit by resolution. The appropriations amount subject to the Gann Limit for FY 2014-15 is $6,359,773.

[37] In 1979 the voters amended the California Constitution by passing Proposition 4 (the Gann Initiative), requiring each local Government to set an annual appropriations limit (the Gann Limit).

E. Conclusion for Determination IV.

The Chino Basin WCD has a high unassigned fund balance that seems disproportionate to the services the district provides. MUNI had an unrestricted Net Position of $108 million at June 30, 2013, a substantially high figure. The Board of Directors has designated $18 million of this reserve to be retained for the purpose of self-insuring the district against any claims made against it.

SB Valley WCD has recently come out of a difficult financial time which began in 2008 and continued through 2011. This situation mirrored the overall economic slow-down; however, the effect on the district was more severe because all sources of its revenues were impacted at the same time. Since this time the district has revised its financial structure, reduced costs and implemented various policies that will reduce the likelihood and severity of these occurrences in the future. The district implemented cost reductions documented in the annual budgets including the reduction from seven to five divisions for the board of directors as allowed by special legislation (SB-235). In 2011 and 2012 the Groundwater Charge was increased by 25% and 15% respectively to allow the fund to raise adequate revenue to operate the facilities within its financial ability without subsidy from the district reserves or other enterprises. The district has high liquidity, no long-term debt, and meets its service obligations (after capital projects). Therefore, a high unassigned fund balance seems disproportionate to the services the district provides. In response to the draft staff report, SB Valley WCD states that it has a counter-cyclic revenue and expense cycle and that without accumulating this reserve rates would be highly variable and is presently designing capital improvements which will use much of the reserve attributed to groundwater. Should the district desire to actively provide habitat management and enhancement (related to the Wash Plan), it would need to receive special legislation to expand the scope of its authorized activities as well as submit an application to LAFCO to request authorization to provide said service.

Chino Basin WCD, IEUA, and MUNI are subject to an appropriations limit as outlined in the State Constitution. San Bernardino Valley WCD is not subject to the appropriations limit as it was determined to be exempt due to its limited tax rate in 1977-78. IEUA and MUNI annually adopt the limit as part of its budget process. A review of the audits for IEUA and MUNI does not identify a review of the annual calculation of the limit as required by the Constitution. LAFCO staff recommends that IEUA and MUNI include this requirement in future audits. Chino Basin WCD established its appropriations limit on January 12, 2015 and has indicated it will be reviewed in future audits.

Determination V.
Status of, and opportunities for, shared facilities

A. Status of shared facilities

Throughout the Valley Region there are numerous partnerships between the Flood Control District, municipal water districts, and water conservation districts for stormwater capture. Interestingly, this symbiotic relationship produces both economies of scale and duplication of service. The relationships produce economies of scale in that Flood Control District and the municipal water districts can utilize the already existing basins of the conservation districts. These relationships are memorialized in written agreements, detailed in Determination III and on file at the LAFCO office.

West Valley

One such relationship in the West Valley is the Groundwater Recharge Master Plan which identifies opportunities to use these supplies during wet years when surplus water is available.[38] The Agreement for Operation and Maintenance of Facilities to Implement the Groundwater Recharge Master Plan is commonly referred to as the Four Party Agreement, and was entered into by the Flood Control District, IEUA, Chino Basin WCD, and IEUA to cooperate in a program to implement certain portions of the Recharge Master Plan for the purpose of assuring that the Chino Basin has adequate recharge capabilities to meet its future needs. The effective date of the agreement was January 23, 2003 and continues through December 31, 2032.

To provide a comprehensive program to increase the recharge of storm-water, recycled water, and imported water into the Chino Basin groundwater aquifer, the Groundwater Recharge Master Plan was developed in 2001 (and updated in 2010) as part of the Watermaster OBMP. A 2013 Recharge Master Plan Update to the 2010 Recharge Master Plan was recently completed. The update evaluated 27 yield enhancing capital projects for the Chino Basin and recommends implementation of 11 projects over the next six years. IEUA has agreed to finance three of the projects (RP 3 basin improvements, Victoria Basin, and Lower Day). The remaining projects require additional investigation to evaluate the feasibility and cost-effectiveness of incorporating the basins into the recharge program.

The same member agencies of the Groundwater Recharge Master Plan (Four Party Agreement) are on the Groundwater Recharge Coordinating Committee ("GRCC"). The purpose of the GRCC is to coordinate and manage the use of the recharge basins for all recharge purposes contemplated under the Groundwater Recharge Master Plan. Each of the Parties is entitled to appoint one member and one alternate member to the GRCC. The GRCC meets quarterly or as often as necessary to facilitate full coordination of groundwater recharge operations.

[38] 2011 Urban Water Management Plan

Another example is Chino Basin WCD ownership of stormwater capture basins with IEUA contributing an operating and accounting role, as shown in the figure below.

Drainage System, Basin	IEUA Role	CBWCD Role	Storage Capacity (AFY)	Water Recharge Source	Notes
San Antonio Channel Drainage System					
College Heights East	A,B,D,F,H,I,J,L,N	G,M	145	Storm, State Project	No need for E, no infrastructure for C
College Heights West	A,B,D,F,H,I,J,M,N	G,L	126	Storm, State Project	No need for E, no infrastructure for C
Montclair 1	A,B,D,F,H,I,K,M,N	E,G,J,L	134	Runoff, storm, State Project	No infrastructure for C
Montclair 2	A,B,D,F,H,I,K,M,N	E,G,J,L	243	Runoff, storm, State Project	No infrastructure for C
Montclair 3	A,B,D,F,H,I,K,M,N	E,G,J,L	49	Runoff, storm, State Project	No infrastructure for C
Montclair 4	A,B,D,F,H,I,K,M,N	E,G,J,L	97	Runoff, storm, State Project	No infrastructure for C
Brooks	A,B,C,D,F,H,I,K,M,N	E,G,J,L	503	Runoff, storm, recycled, State Project	
West Cucamonga Channel Drainage System					
Ely 3 *	A,B,C,D,F,H,I,J,M,N	E,G,L,K	136	Runoff, storm, recycled	

* Ely #1 and #2 are owned by San Bernardino County Flood Control District.

A) Stormwater Passive Capture and Volume Accounting
B) Stormwater Active Diversion and Volume Accounting
C) Recycled Water Delivery and Volume Accounting
D) Imported Water Delivery and Volume Accounting
E) Vector Control Coordination
F) Weeding Monthly in Areas of Impact
G) Landscape and Property Maintenance
H) Operate and Maintain GWR Communication Infrastructure
I) Operate and Maintain Diversion Infrastructure
J) Infiltration Restoration Lead Agency
K) Infiltration Restoration - support agency
L) Basin grading maintenance - lead agency
M) Basin grading maintenance - support agency
N) Biologic Surveys and Biological Permitting

sources: Chino Basin WCD and IEUA

East Valley

In the East Valley, since 1972 Flood Control District has allowed MUNI to utilize Flood Control detention/debris basins for groundwater recharge when they are not needed for flood control. The legal agreement that defines this relationship is in the process of

being updated. In the meantime, Flood Control District continues to allow MUNI to utilize Flood Control detention/debris basins for groundwater recharge per the terms of the original agreement. Nearly all of the MUNI's facilities have been constructed through participation with other agencies. Projects that involve multiple agencies reduce costs by eliminating parallel facilities. Below is a list of past and current MUNI projects that involve other agencies, as provided by MUNI and reformatted by LAFCO staff.

Facility	Status	Participating Agency
Lytle Creek Pipeline	Complete	San Gabriel Valley Municipal Water District
Foothill Pipeline, SARC Pipeline, Greenspot Pipleline, Yucaipa Pipeline, East Branch Extension (Phase 1)	Complete	San Gorgonio Pass Water Agency
Baseline Feeder Wells and Pipeline	Complete	West Valley Water District, City of Rialto, Riverside Highland Mutual Water Company
Baseline Feeder Wells Extension South	Complete	Western Mutual Water District, City of San Bernardino (operate)
Yucaipa Connector Pipeline	Complete	San Gorgonio Pass Water Agency, CA Dept of Water Resources
Mentone South Pipeline, Mentone East Pipeline, (East Branch Extension Pipeline, Phase II)	Construction	San Gorgonio Pass Water Agency, CA Dept of Water Resources
Citrus Reservoir & Pump Station	Construction	San Gorgonio Pass Water Agency, CA Dept of Water Resources
Crafton Hills Pump Station Extension	Construction	San Gorgonio Pass Water Agency, CA Dept of Water Resources
Crafton Hills Reservoir Extension	Construction	San Gorgonio Pass Water Agency, CA Dept of Water Resources
Enhanced Recharge in Santa Ana River Basins Project (stormwater capture)	Design permitting, Land acquisition	Western Municipal Water District, SB Valley Water Conservation District, Riverside Public Utilities, Meeks & Daley Water Company, Riverside Highland Water Company, University of CA, Riverside
Foothill Pump Station	Complete	Metropolitan Water District of So. Cal.
Central Feeder Pipeline, Redlands Reservoir & Pump Station	Complete	Currently developing partnerships, State grants
10th Street Pipeline	Complete	Owned by San Bernardino Municipal Water Dept. MUNI owns 61.98% of capacity
Virginia Street Pipeline	Complete	Owned by San Bernardino Municipal Water Dept. MUNI owns 46.73% of capacity
Texas Street Reservoir	Complete	Owned by City of Redlands, MUNI owns 2.3 million gallons of capacity

In 2012 an agreement to Develop and Operate Enhanced Recharge Facilities was entered into by the SB Valley WCD, MUNI, and Western Municipal Water District

(Riverside County). The purpose for the agreement is to collaborate by increasing opportunities to recharge local surface water supplies, as well as State Project Water, in the San Bernardino Basin Area by reducing the time and cost required to permit and construct essential public infrastructure (such as spreading basins); and by working together to achieve an efficient division of labor in the operation and maintenance of water infrastructure. The goal of the agreement is to harmonize their water resource activities with other uses, for the optimization of coordinated use by all. Pursuant to the agreement, SB Valley WCD is to lease its facilities and land with financial compensation for the purpose of recharging to MUNI and Western MWD, and such use shall be only for the purpose of recharging, storing or conveying water from any source into or through the percolation basins and other facilities owned or controlled by the SB Valley WCD. The Agreement also requires SB Valley WCD to, hold in reserve, money from the lease payments to prepare for basin cleaning.

B. Opportunities for shared facilities

Multiple opportunities exist for additional shared facilities. Agencies that have a mandate or need to capture stormwater can contract with other agencies that own land in a particular location. As for water education, the Chino Basin WCD operates the sole demonstration garden within the Chino Basin. Consolidation of all water education efforts in the Chino Basin to be performed by Chino Basin WCD would maximize the use of its newly constructed facilities.

As long as there are multiple agencies authorized to provide stormwater capture the opportunity to share facilities will remain. In the West Valley, the Watermaster and IEUA are working together to develop two new retention facilities at the Turner Basin. The City of Ontario and San Bernardino Associated Governments (SANBAG) agreed to spend $4.5 million to dig out 175,000 cubic yards of soil to form a new water retention basin. In exchange they are keeping the soil for a railroad crossing project.

The opportunity for a shared demonstration facility in the East Valley similar to that of Chino Basin WCD or Cucamonga Valley Water District would benefit the East Valley. Instead of one agency bearing the cost of such a facility, utilizing an existing joint powers mechanism would be preferred. Moreover, such facilities already exist under the Chino Basin WCD and Cucamonga Valley Water District. The East Valley agencies could contract with either of these districts for use of its facilities when needed.

C. Conclusion for Determination V.

Throughout the Valley Region there are numerous partnerships between the Flood Control District, the municipal water districts, and the water conservation districts for storm water capture. This symbiotic relationship produces both economies of scale and duplication of service. As long as there are multiple agencies authorized to provide stormwater capture the opportunity to share facilities will remain.

Determination VI.
Accountability for community service needs, including governmental structure and operational efficiencies

A. Governmental Structure

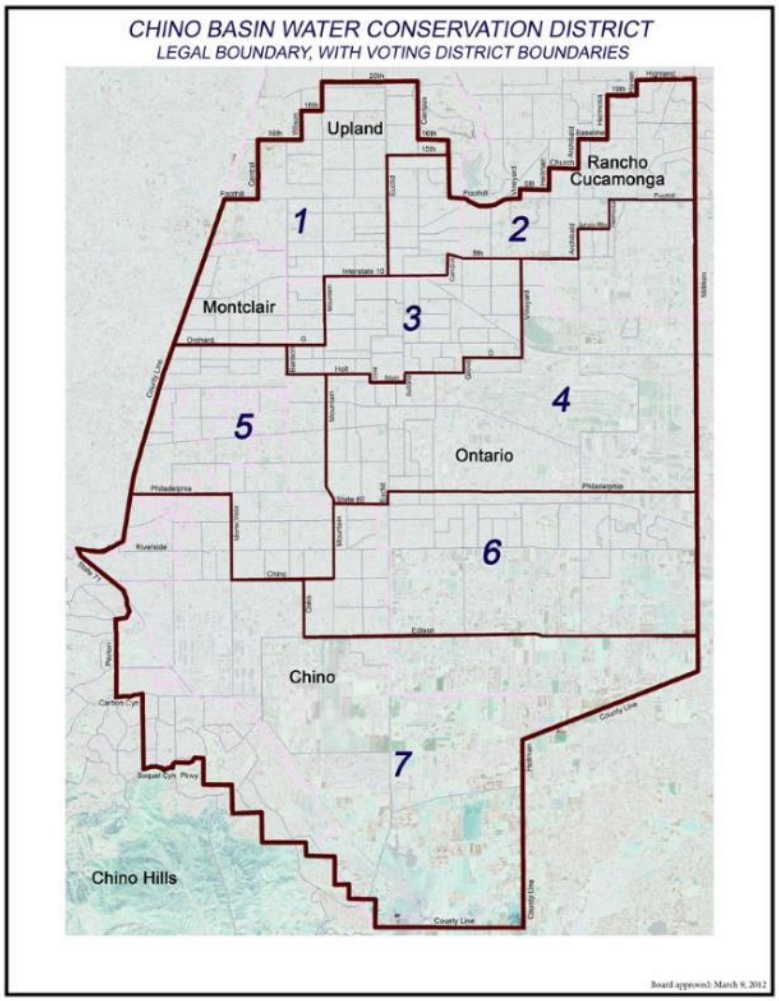
Board of Directors

The primary districts reviewed in this report are independent special districts each governed by a board of directors. Members have been either elected at-large by the voters or appointed in-lieu of election by the County Board of Supervisors to four-year staggered terms.

Chino Basin WCD

The Chino Basin WCD is governed by a seven-member board elected by division and operates with eight committees: Finance, Personnel, Education, Recycled Water, Facilities, Advertising (Ad-hoc), Basin Landscape, and Potential Storm Water Capture Facilities (Ad-hoc). A review of the election results from the County Registrar of Voters website and County Clerk of the Board database since 1996 identifies competitive elections in 1997 (2 of 4 seats), 1999 (2 of 3), 2001 (2 of 4), 2008 (1 of 4), and 2012 (1 of 4). The current composition of the board is shown below with a map of the voting divisions to follow:

Board Member	Title	Term	Division	Elected/Appointed last election
Terry King	Director	2018	1	Appointed In-Lieu of election
Kati Ooten Parker	President	2016	2	Appointed In-Lieu of election
Margaret Hamilton	Director	2018	3	Appointed In-Lieu of election
Paul Hofer	Vice-President	2016	4	Appointed In-Lieu of election
Al Yoakum	Director	2016	5	Elected
Hanif Gulmahamad	Director	2016	6	Appointed In-Lieu of election
Geoffrey Vanden Heuvel	Treasurer	2018	7	Appointed In-Lieu of election



A review of the election results from the County Registrar of Voters website and County Clerk of the Board database identifies that since 2003 there have been only two competitive elections, the remainder have not yielded enough interested and qualified candidates for a competitive election to be conducted, resulting in appointments in-lieu of election. There is a correlation with the pool of potential candidates to hold office (registered voters) and the number of candidates seeking office. In a recent edition of its report, *What's So Special about Special Districts*, the state Senate Local Government Committee states that the, "narrow and technical nature of a district's activities often results in low civic visibility until a crisis arises."[39]

The public's lack of knowledge of the district as well as having seven divisions instead of five may be contributing to the lack of competitive elections. Therefore, a reduction in board members from seven to five, as did SB Valley WCD, may allow for competitive elections.

[39] California Senate Local Government Committee, *What's So Special about Special Districts?*, Fourth Edition, October 2010.

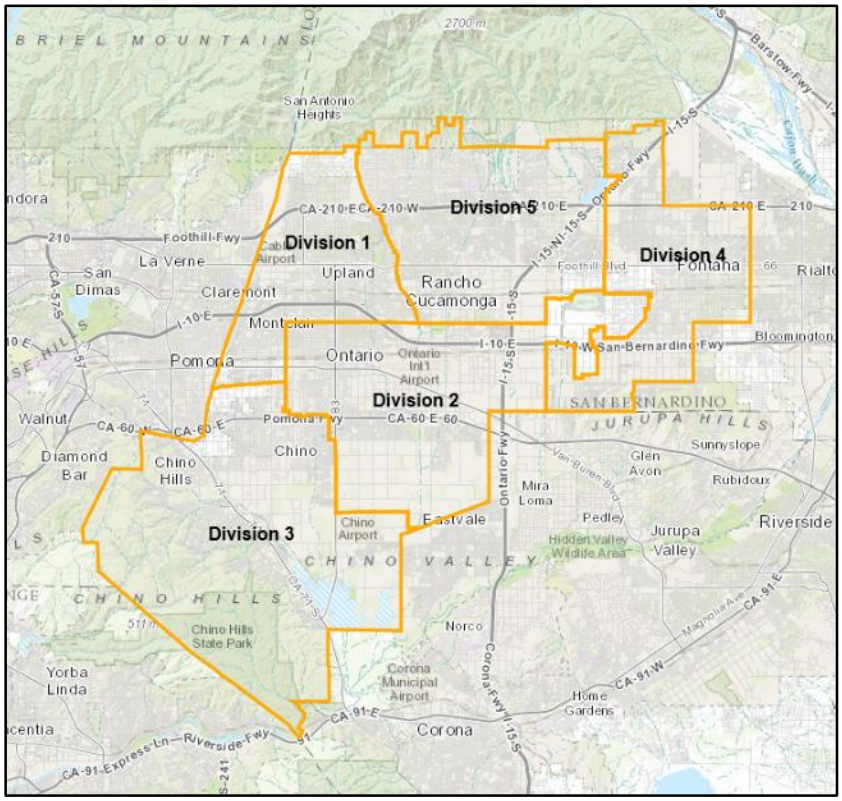
Currently, the District employs a total of 14 employees consisting of 12 full-time employees (one General Manager, one Conservation Specialist, one Community Outreach/Education Coordinator, one Administrative Assistant, one Office Assistant, two Conservation Technicians, three Landscape Maintenance Workers, one Facility/Landscape Maintenance Supervisor), one part time employee (Technical Writer), and two part time interns.

Specific to the education function of the district, two full time employees are assigned 100% of their efforts to education (Community Outreach and Education Coordinator and Community Outreach and Education Assistant). The Conservation Specialist current is assigned 75% of time to education, which is planned to transition to 100%. The Conservation Assistant is assigned 50% of the time to education. Five additional employees are QWEL certified and teach the classes to professional landscapers. Due to the drought and the Governor's direction on water conservation, it is the district's desire to have all employees involved in water conservation.

IEUA

A five-member Board of Directors governs the Inland Empire Utilities Agency. Each director is elected by division, Division 1 (Upland/Montclair); Division 2 (Ontario); Division 3 (Chino/Chino Hills); Division 4 (Fontana); Division 5 (Rancho Cucamonga), and serves a four-year term. A review of the election results from the County Registrar of Voters website and County Clerk of the Board database since 1996 identifies competitive elections in 1996 (2 of 2 seats), 1998 (1 of 3), 2000 (1 of 2), 2004 (2 of 2), 2006 (2 of 3), 2008 (2 of 2), 2010 (3 of 3), and 2014 (1 of 3). The current composition of the board is shown below with a map of the voting divisions to follow:

Board Member	Title	Term	Division	Elected/Appointed last election
Terry Catlin	President	2016	1	Appointed in lieu of election
Gene Koopman	Director	2018	2	Elected
Steven Elie	Secretary/Treasurer	2018	3	Appointed in lieu of election
Jasmin Hall	Director	2018	4	Appointed in lieu of election
Michael Camacho	Vice President	2016	5	Appointed in lieu of election



The Agency's staff consisted of 295 authorized positions, of which 258 were filled as of June 30, 2014. The Agency is organized with five executive staff (General Manager, Executive Manager of Policy Development, Executive Manager of Operations, Executive Manager of Engineering, and the Chief Financial Officer) and 12 management staff. Of the 258 employees, 2.6 Full Time Equivalent positions were dedicated to recharge water programs and 4.3 to water related activities and conservation programs.

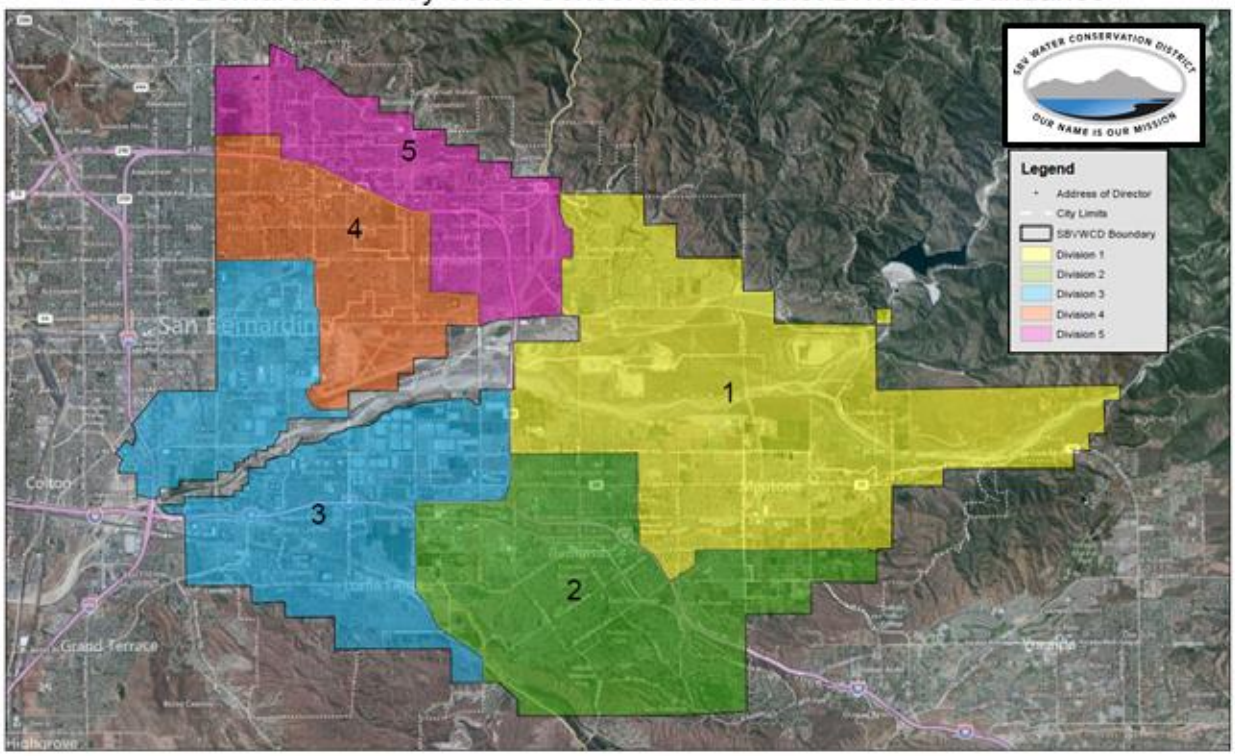
SB Valley WCD

The SB Valley WCD is governed by a five member Board of Directors, elected within divisions. Up until December 2013, the District had seven seated Board Members. In October 2012 it acted to reduce its number of elected representatives in accordance with the requirements of SB-235, a bill sponsored by the district to allow it to reduce from seven board members to five board members. The Board adopted Resolution No. 481 Implementing Senate Bill 235, ordered the reorganization of the divisions, and reduced the number of board members from seven to five in September 2012.

Board elections are held by mail ballot in the August of each odd year. A review of the election results from the County Registrar of Voters website and County Clerk of the Board database since 1996 identifies competitive elections in 1997 (1 of 4 seats), 1999 (1 of 3), 2001 (1 of 4), 2009 (1 of 4) and 2011 (1 of 3). Since the reorganization of the divisions, all board members have been appointed. The current composition of the board is shown below with a map of the voting divisions to follow:

Board Member	Title	Term	Division	Elected/Appointed last election
Richard Corneille	President	2015	1	Appointed in lieu of election
David Raley	Director	2017	2	Appointed in lieu of election
Manuel Aranda Jr.	Director	2015	3	Appointed in lieu of election
John Longville	Director	2017	4	Appointed in lieu of election
Melody Henriquez-McDonald	Vice-President	2017	5	Appointed in lieu of election

San Bernardino Valley Water Conservation District Division Boundaries

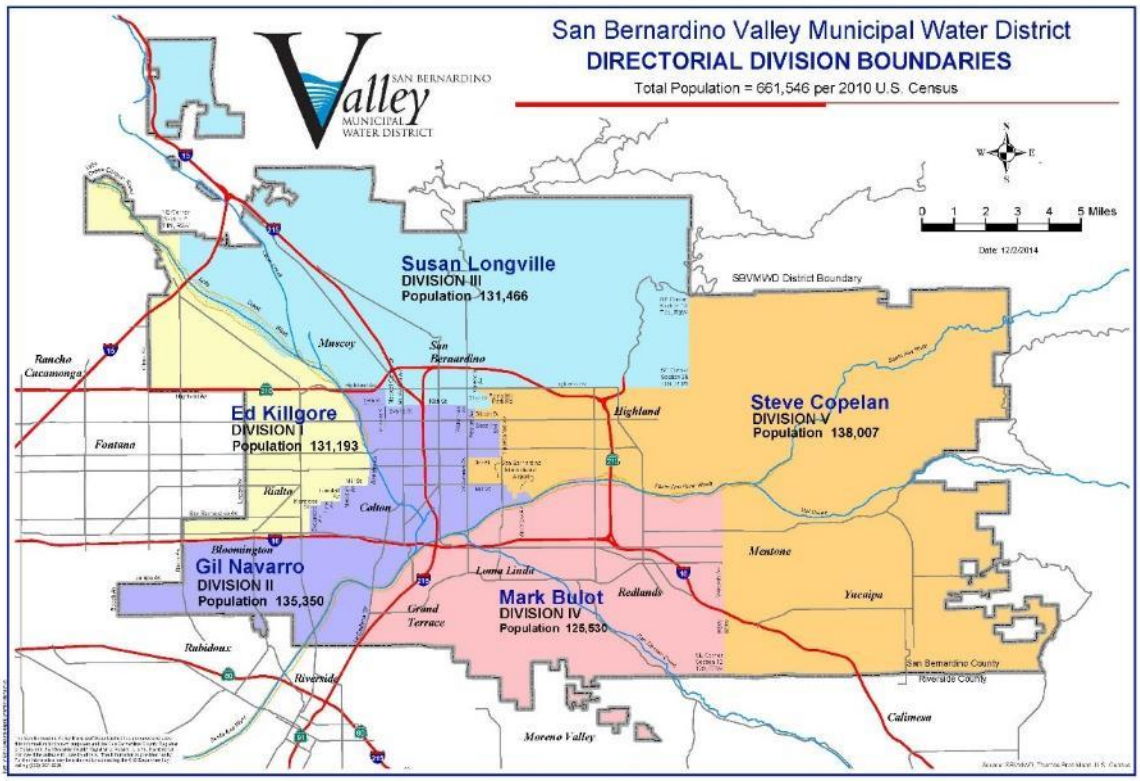


SB Valley WCD currently has six full time staff authorized by the Board: two field staff, two administrative staff, Land Resources Manager, and General Manager. Part time interns change as students are hired and graduate. Currently, there are no other part time staff. For large maintenance activities, temporary labor may assist the field staff.

MUNI

San Bernardino Valley Municipal Water District is governed by a five member board of directors that each represent one division within MUNI's service area. A review of the election results from the County Registrar of Voters website and County Clerk of the Board database since 1996 identifies competitive elections in 1996 (1 of 2 seats), 1998 (3 of 3), 2000 (2 of 2), 2008 (1 of 2), 2010 (3 of 3), 2012 (2 of 2), and 2014 (3 of 3). The current composition of the board is shown below with a map of the voting divisions to follow:

Board Member	Title	Term	Division	Elected/Appointed last election
Ed Killgore	Treasurer	2016	1	Elected
Gil Navaro	Secretary	2016	2	Elected
Susan Longville	Director	2018	3	Elected
Mark Bulot	President	2018	4	Elected
Steve Copelan	Vice-President	2018	5	Elected



B. Governmental Structure Opportunities

The State has published advisory guidelines for LAFCOs to address all of the substantive issues required by law for conducting a service review [40]. The Guidelines address 49 factors in identifying an agency's government structure options. Themes among the factors include but are not limited to: more logical service boundaries, elimination of overlapping boundaries that cause service inefficiencies, economies of scale, opportunities to enhance capital improvement plans, and recommendations by a service provider.

In some cases, functional consolidation or integration can reduce costs so that services can be maintained and improved with fewer dollars. A service review should address possible options for the community to consider for the future. Movement towards these

[40] State of California. Governor's Office of Planning and Research. "Local Agency Formation Commission Municipal Service Review Guidelines", August 2003.

scenarios would include, but not be limited to, the requirement to prepare a plan for service, fiscal impact analysis, and any other required studies.

1. Reorganization to include Consolidation of the Water Conservation Districts

In the West Valley and East Valley there is overlap of both storm water capture and water education activities by the water conservation districts and the municipal water districts, as well as the Flood Control District. In each circumstance, the water conservation district is 1) a single purpose district (in fact the two water conservation districts in San Bernardino County are the only water conservation districts in the state that do not provide wholesale or retail water), 2) is not the only agency within its basin that provides stormwater capture or water education, 3) is overlaid by a municipal water district and flood control district that are authorized and actively provide stormwater capture, and 4) is overlaid by a municipal water district that engages in water education activities regionally. Therefore, the discussion of streamlining these activities in the Valley Region is warranted.

To dissolve a water conservation district, Water Conservation District Law requires a petition signed by 60% of the registered voters within a water conservation district to support the dissolution. This requirement would have to occur for each of the water conservation districts. Therefore, dissolution of either water conservation district is not likely given these requirements. Instead, consolidation of a water conservation district provides a more likely mechanism.

Consolidation offers the greatest level of benefit for resource management, seamless operations, and standardized coverage. For stormwater capture, overhead would reduce as shared equipment and labor would result in savings. All areas would participate in capital costs for new equipment and facility upgrades. The redundancies for multiple elected and appointed officials as well as leadership staff would be eliminated. It would be expected that a single agency could use resources more effectively, and water education activities could consolidate thereby resulting in a single, streamlined message.

Under the consolidation option, by statute all assets and liabilities of consolidating organizations accrue to the new entity. Thus, the consolidated district would receive title to all assets of the existing districts and would become responsible for subsequent capital improvements required. Terms and conditions imposed by LAFCO on the reorganization would specify such transfer and restrictions. In the case of outstanding debt, a condition would be imposed by LAFCO whereby the area that incurred the debt pays off that debt. Therefore, the other consolidating agencies would not be subject to such debt payments. An application for consolidation would include a condition that all property tax revenue from each district would transfer to the consolidated district.

a. Regional - One Water Conservation District for the Valley Region

Since the formation of the two water conservation districts in the Valley, there are significant gaps in coverage of a water conservation district, particularly within the Rialto-Colton basin. This scenario would include consolidation of the two water conservation districts and annexation of the remainder of the Valley Region.

Historically, the two water conservation districts were formed by the needs of the respective areas. SB Valley WCD was preceded by a voluntary water conservation association formed in 1908 for water recharge and protection of water rights. Chino Basin WCD was formed in 1949 to protect the Chino Groundwater Basin.

The benefits of a single regional agency responsible for water conservation is that the consolidated agency could be the primary agency responsible for water conservation for the entire Valley Region to include storm water capture and public education. The area in between the two water conservation districts is covered by the Lytle Creek Water Conservation Association[41]. For public education, this would provide a single voice on the matter thus removing the fractured message, program, and educational opportunities. Also, the newly constructed facilities of the Chino Basin WCD (Water Conservation Center and Waterwise Demonstration Garden) would be available to the entire Valley Region. In response to the draft staff report, SB Valley WCD states that it believes that the local nature of water conservation is important. While public education does benefit from coordination and unification such as is done in the East Valley with iEfficient and cooperatively funding Inland Empire RCD programs, the district does not believe that public education would be specifically enhanced by consolidation.

However, this would not streamline the storm water capture activity because the Flood Control District and the municipal water districts would continue to contract with the water conservation district. While there would be one less water conservation district in sum, the level of contracting between the consolidated water conservation district and other agencies would remain. Thus, it appears that economies of scale for stormwater capture would not be maximized in this regard. Moreover, each basin is unique with its own geology and challenges. Total basin management (one agency to oversee all activities per sub-basin) would maximize efficiencies instead of a regional storm water capture agency. Further, the Chino Basin and San Bernardino Basin Area are adjudicated and basin management is paramount.

While LAFCO staff supports this effort and the consolidation if proposed by the two agencies could not be denied by the Commission, it appears that the two Municipal Water Districts would not support this jurisdictional change.

[41] A 1924 judgment allocated all water rights in the Lytle Creek Region to the various user agencies.

b. Regional - San Bernardino County Flood Control District Assuming all Storm Water Capture

The special legislation forming the San Bernardino County Flood Control District prescribes water conservation activities as one of its functions for the waters of San Bernardino County. This scenario would include the consolidation of the two water conservation districts with the Flood Control District with the consolidated district being the Flood Control District. This would reduce the duplication of the agencies that are authorized to perform storm water capture (all the agencies reviewed in this report). The result would be the Flood Control District as the primary storm water capture agency in the Valley Region. Additionally, the Flood Control District could jointly manage the movement of flood water and capture of storm water.

Similar reasoning as with the consolidation of the water conservation districts option described above, the unique geography of each basin along with its own challenges would not a support total basin management approach. Further, the Chino Basin and San Bernardino Basin Area are adjudicated and basin health is paramount. For these reasons, the overlying municipal water districts would probably not support this scenario.

In addition, as a part of the processing of this service review, the Flood Control District has identified that its primary function is to move flood waters as quickly and safely through the area so as not to cause damage. Lacking support of the two municipal water districts and the Flood Control District, this option is not likely.

c. Consolidation of the Water Conservation District and its Respective Municipal Water District

In this scenario, the smaller water conservation district consolidates with the larger municipal water district. In the West Valley this would include Chino Basin WCD and IEUA, and in the East Valley this would include SB Valley WCD and MUNI. The discussion immediately below describes consolidation between the water conservation districts with the municipal water districts in general. A discussion of each specific consolidation scenario also follows.

Each municipal water district overlays the entirety of the respective water conservation district and both are authorized to and actively perform water conservation activities. Further, the municipal water district contracts with the water conservation district to provide conservation programs on its behalf. Therefore, economies of scale can be achieved through consolidation.

Should an agency submit an application to LAFCO to consolidate a water conservation district with a municipal water district, the plan for service would need to show that storm water capture and water education would not decrease. Further, the application would need to show the effects, if any, on the adjudications and contract with the Department of Water Resources for the State

Water Project. The municipal water districts in essence would institute a water conservation division to continue all water conservation activities.

Water Conservation Act of 2009

For efforts to reduce consumer consumption, the two water conservation districts in the Valley are neither 1) responsible for the demand reductions required by the Water Conservation Act of 2009 (10% demand reduction by 2015 and 20% by 2020), nor 2) responsible for helping the retail agencies within its boundary achieve their water use reductions as the water conservations districts are not "urban wholesale water providers".[42] Therefore, the water conservation districts lack the ability to significantly contribute to important water conservation legislation regarding reducing consumer consumption.

Sustainable Groundwater Management Act of 2014

The Sustainable Groundwater Management Act of 2014 enacted comprehensive legislation aimed at strengthening local control and management of groundwater basins throughout the state. The Act provides provide tools and authorities for local agencies to achieve the sustainability goal over a 20-year implementation period. The first step to implement the Act is for local agencies to form local groundwater sustainability agencies (GSAs) by June 1, 2017. The second step is the adoption of groundwater sustainability plans (GSPs) by January 31, 2020 for basins determined by the Department of Water Resources to be in critical overdraft and by January 31, 2022 for those not in critical overdraft. Once the GSPs are in place, local agencies have 20 years to fully implement them and achieve the sustainability goal.

Current interpretation of the Act reads that adjudicated basins are exempt from creating a GSA and a GSP, but still requires reporting to the state. In this case, the court-appointed receivers (Chino Basin Watermaster and MUNI) can fulfill the reporting requirement to the state. Further, in the Chino Basin the IEUA and the Chino Basin Watermaster jointly report to the court on basin monitoring. Additionally, some basins extend beyond the adjudicated boundary, and in this case the larger agency may be the best suited to perform the task of the GSA, being the municipal water districts in the Chino Basin and San Bernardino Basin Area.

i. <u>West Valley - Consolidation of Chino Basin Water Conservation District and the Inland Empire Utilities Agency</u>

Moving towards total basin management, the Chino Basin WCD's boundaries only cover approximately the westerly 50% of the Chino Groundwater Basin, with the other 50% composed of 30% in San Bernardino County and 20% in Riverside and Los Angeles Counties. The IEUA encompasses the entire Basin portion that is within San Bernardino County.

[42] Water Code 10608.36

Previous Dissolution Proposals

In 1969, LAFCO considered a proposal submitted by the County to dissolve the Chino Basin WCD (LAFCO 823). The County's application to LAFCO reasoned that the district received property taxes yet provided few if any services and that other districts can and do provide similar services. However, the proposal was terminated because the Commission determined that the district was not considered a district under the terms of the former District Reorganization Act (therefore not under LAFCO purview at that time), and LAFCO statute directed the process to return to the district's principal act.

In 1983 the San Bernardino LAFCO Commission directed its staff to conduct a special study on water conservation in the Chino Basin to include the multifaceted areas of water conservation, water resource management, and water reclamation. The special study produced a paper titled, A Position Paper Expressing Concern for the Water Conservation Program within the Chino Basin. A copy of the paper is included as Attachment #4 to this report.

The paper reiterated how important is it, and will continue to be, that the region have a coordinated program to conserve natural waters. The paper found that there was no coordinated program at that time and that efforts in water conservation were fragmented, and enormous quantities of water which might be preserved were lost to the area. The paper indicated several options as to funding and as to an organizational structure which might provide a coordinated program. In examining the options for solution, considering expertise, staffing and resources, the paper indicated that the two agencies best suited to perform a coordinated conservation effort were the Chino Basin Municipal Water District (now Inland Empire Utilities Agency) and the County Flood Control District – but neither of these would want the assignment without the assurance of full support from all the other benefitting agencies. The summary of responses from water agencies in the basin generally supported the conclusions of the study and supported a coordinated effort for water conservation, but no specific plans were identified.

According to the initial service review in 2002 for Chino Basin WCD, around 1997 the County of San Bernardino, in participation with LAFCO staff, explored the possibility of dissolving the district, with the water conservation functions to be succeeded by either IEUA or the Flood Control District. The County drafted legislation, which later failed to pass, to clarify the process that would occur if dissolution were proposed. Legislation was necessary because the district is an unusual agency that was partly under LAFCO jurisdiction and partly under the jurisdiction of its own principal act. At that time, LAFCO could review and consider and approve or deny reorganizations, but the protest hearing followed the provisions of the principal act which made it impossible for dissolution or consideration or any change to occur without agreement of the district board of directors. In this case, the district board did not agree that the district should be dissolved or

consolidated with another agency but suggested that the district provides a unique service in the West Valley.

Present

In the materials presented to LAFCO for this service review, Chino Basin WCD states that it has the primary responsibility and emphasis upon the spreading and conservation of natural run-off water. If this function were consolidated into another water organization that is multi-function, the conservation aspect could lose its primary emphasis. However, IEUA currently has substantial financial resources and various legal and stewardship obligations to ensure continued successful groundwater resource management. Part of IEUA's Vision is to continue to develop and protect local water supplies in an effort to "drought-proof" the Chino Basin region and promote water reliability by:

- Expanding use of recycled water in irrigation, landscaping and industrial uses in lieu of more costly imported water;
- Maintain groundwater recharge basins in order to optimize the recharge of storm water, recycled water and replenishment imported water supplies;
- Protect the quality of local water supplies by reducing salt and other emerging contaminants; and
- Promote water conservation and water use efficiency through education and outreach programs that inform the public of the importance of protecting water

This option is feasible given the information and reasoning identified above. The Chino Basin WCD has expressed its opposition to such a change and the IEUA has not publicly provided its position on this scenario.

ii. <u>East Valley - Consolidation of San Bernardino Valley Water Conservation District and San Bernardino Valley Municipal Water District</u>

In March 2006, San Bernardino LAFCO, per determinations and findings in Resolution 2893, approved a "zero" sphere of influence for SB Valley WCD. LAFCO's position at that time was that a single water conservation entity should address the water conservation services in the Bunker Hill Groundwater Basin, and SB Valley WCD should be consolidated with the San Bernardino Valley Municipal Water District (MUNI) in the future. The "zero" sphere was determined by LAFCO to be"…subject to review and change in the event a future significant change of circumstances so warrants." In July 2008, a proposed consolidation of SB Valley WCD and MUNI was denied by LAFCO.

The same arguments for the consolidation of Chino Basin WCD and IEUA apply to this scenario. During the processing of this service review, both the SB Valley WCD and MUNI have expressed the lack of desire to consolidate

given the contentious nature of the previous consolidation proposal and the deep and painful wounds that linger.

2. Formation of a Groundwater Sustainability Council for the East Valley

In response to the recent groundwater legislation to form groundwater sustainability agencies (GSAs) by June 1, 2017, and as an alternative to consolidating San Bernardino Valley Water Conservation District, San Bernardino Valley Municipal Water District, and the East Valley Water District ("East Valley WD") have submitted a joint letter signed by the respective general managers on the possible formation of a Regional Sustainable Groundwater Management Council. Copies of the letter dated December 12, 2014 and April 1, 2015 are included as Attachment #5. The concept has been vetted with each board with universal intent to move forward.

In sum, the letter expresses the following:

- We agree the questions LAFCO is asking are important.
- We support the intent of the questions and MSR [service review] process.
- We feel consolidation is damaging to the working relationships of the agencies.
- Basin water agencies are proposing a Regional Groundwater Sustainability Council, related to recent groundwater legislation requirements.
- With this proposal and the agencies' working relationships, consolidation is unneeded and produces an inferior result.

The letter identifies the goals of the Council at this time as:

- Develop collaborative management to ensure efficiency and fairness of costs to beneficiaries. The following agencies are expected to become members which eliminates equity issues in the current SB Valley WCD groundwater charge: Cities of Riverside, Redlands, San Bernardino, Loma Linda, Colton, and Yucaipa; East Valley WD; West Valley WD; agricultural and industry; mutual water companies; Fontana Union Water company, MUNI, and SB Valley WCD.
- Develop regional Groundwater Sustainability Council structure to help basin users meet sustainability need and share responsibility.
- Replace [SB Valley WCD] Groundwater Charge with part of basin sustainability funding.
- Use the opportunity to develop a cost model fair to all producers, small and large, public and private, in a collaborative manner.
- Protect recharge lands and long-term ability to recharge.
- While not all water related entities have had adequate time to discuss all elements of the Groundwater Sustainability Council, there is demonstrated support for moving to form such an organization.

The Groundwater Sustainability Council will be implemented through an agreement that will provide for the equitable funding of groundwater recharge for each basin covered by the Council. The Council's purpose will in no way change the existing

authority of the elected city councils and special district boards of directors that make up the Council. These governmental structures will fully retain their legislative authority to set rates, appropriate funds, etc. The Council, made up of general managers or equivalent staff representatives, will perform the scientific studies to determine the water supply and funding needs and then develop recommendations for their respective boards.

While this scenario does not achieve the full range of economies of scale in a consolidation, the formation of this Council would in essence be a functional consolidation, an effort that this Commission has historically supported.

Of note, this option does not require LAFCO approval except in the instance of service outsider an agency's boundaries. Pursuant to Government Code Section 56133, LAFCO is charged with the responsibility for reviewing and taking action on any city or district contract to extend service outside of its jurisdiction. If an agency is anticipated to actively provide a service outside of its boundary it would need to submit an application to LAFCO requesting either approval or exemption from Section 56133. In this scenario, if the San Bernardino WCD is intended to perform activities outside its boundaries, that contract would need to be reviewed and approved by LAFCO.

3. West Valley – Sphere of Influence Expansion for the Chino Basin Water Conservation District to encompass the Chino Groundwater Basin

   The Chino Basin WCD has long provided water conservation sustainability through demonstration and education and it provides this service well. To further its demonstration and education service, it opened its Water Conservation Center campus in 2014. However, the Chino Basin WCD does not encompass the entire Chino Basin nor does it encompass all of the San Bernardino County portion of the Basin. A sphere of influence expansion would allow the district to have a greater role in recharge planning and education activities throughout the Basin. This would ultimately support the position that the Chino Basin WCD and IEUA should be one agency for the future.

4. East Valley – Sphere of Influence Expansion for the San Bernardino Valley Water Conservation District to encompass the Remainder of the Bunker Hill Basin

   The San Bernardino Valley Water Conservation District has submitted an application to LAFCO requesting expansion of its sphere of influence from a zero sphere designation to one that extends beyond its boundary to include territory along the Santa Ana River (LAFCO 3173). Per Government Code Section 56076, a "Sphere of influence" means a plan for the probable physical boundaries and service area of a local agency, as determined by the commission.

   However, LAFCO and its staff have continually expressed its sentiments that the district move towards expanding its sphere of influence to encompass the entirety of the Bunker Hill Basin. Therefore, the staff would recommend that LAFCO 3173 be modified to address the boundaries of MUNI as an alternative for further discussion.

In response to the draft staff report, the District requested in LAFCO 3173,

> "a sphere that was supported by the agencies it currently serves. Our request has not changed. However, to address LAFCO suggestions, the 2014 Groundwater Management Act and build on the broad cooperative environment building in East Valley, the District with Muni, East Valley Water District and others is organizing the Groundwater Sustainability Council [GSC] to address the same issues LAFCO raises here. We feel that there is an opportunity to solve several issues in this cooperative coordinated effort that would not be solved in consolidation or changes to spheres themselves. However we do agree that the sphere, as ultimate service area, should be addressed with the GSC. We strongly believe that LAFCO should allow the GSC to form and implement its programs and assess the needs for changes to services based on its efforts and the developing changes being considered."

5. Maintenance of the Status Quo

The maintenance of the current government structure is always an option. It is likely that IEUA will be involved in some manner for the reporting related to the groundwater legislation as it already jointly reports to the court, along with the Watermaster, for the Chino Basin. Therefore, the role of the Chino Basin WCD would remain duplicative.

In the East Valley, the groundwater sustainability agency is proposed to the Groundwater Sustainability Council described above. Nonetheless, the role of the SB Valley WCD would remain duplicative as MUNI and Western Municipal Water District are the Watermaster for the San Bernardino Basin Area.

C. Conclusion for Determination VI.

Within at least the past ten years, the two water conservation districts have not consistently yielded enough candidates for the board of directors to field competitive elections. This has resulted in the majority of the seats being filled by appointments in lieu of election. The elections for the Municipal Water Districts are more competitive: IEUA has had an election for at least one board member in eight out of the last ten election cycles; and MUNI has had an election for at least one board member in seven out of the last ten election cycles.

Given the determinations of this service review, LAFCO staff's position is that one of two options should be supported by the Commission: (1) the consolidation of the two Water Conservation Districts into a single Water Conservation District serving the entirety of the Valley region and bringing the educational opportunities to a much broader constituency, or (2) two water conservation districts should consolidate with its respective overlaying municipal water district.

The first scenario of a single Water Conservation District encompassing the Valley has not been supported by any of the districts citing such concerns as separate basin activities and resources to the location of operations and governance. While this

scenario would provide direct control of the consolidation process by the Water Conservation Districts and provides for a means to extend the conservation educational elements to all of the urban valley region, it appears that it has been discounted by all involved in the study. Without support from some quarter of the affected agencies, success would not be anticipated.

Turning to option two, consolidation with the respective Municipal Water Districts, for SB Valley WCD, a proposed consolidation of the SB Valley WCD and the San Bernardino Valley Municipal Water District was denied by LAFCO on the basis that the financial and structural issues identified by staff were being addressed by the District and consolidation would not offer an assurance of the continued services. During the processing of this service review, both the SB Valley WCD and MUNI have outlined their reluctance to consolidate given the contentious nature of the previous process and the deep and painful wounds that linger. However, as a part of this service review these agencies, along with East Valley Water District, have submitted an outline to form a Groundwater Sustainability Council ("Council") for stormwater capture, water import funding, and groundwater recharge which they are circulating to the east valley retailers. This effort proposes a means or mechanism to coordinate key functions and shared services and facilities, absent formal consolidation. The Council would be the responsible entity for ensuring adequate stormwater capture, imported water funding, and groundwater recharge efforts. The Council would be composed of the general managers of the water producers from the basin. While this scenario does not achieve consolidation it moves toward shared services and facilities, and it provides a means to move towards more efficient provision of this service in the East Valley area. While not the preferred method for service provision, LAFCO staff would support this option absent a desire for consolidation by the agencies. The one caveat with the structure is that the general managers form the council rather than elected officials which does not allow for a true functional consolidation as a joint powers authority would. Given the proviso identified above, LAFCO staff supports this effort and in doing so recommends that the Commission modify LAFCO 3173 to evaluate the alternative of modifying the SB Valley WCD's sphere of influence to be more in line with the Council's proposed efforts.

For the West Valley, efforts and sentiments to dissolve the Chino Basin WCD date back to at least 1969 based on the reasoning that the district's functions and services could be assumed by an overlying agency that has the same authorized functions and services (IEUA or Flood Control District). Given the information gathered and the determinations of this service review, LAFCO staff's position is that the best option for continuing the level of service currently offered for the entire West Valley would be for the Chino Basin WCD to consolidate with the IEUA. Should these districts not desire to put forth an application to LAFCO, the formation of an alliance, joint powers authority, or council similar to that as being proposed in the East Valley, as identified above, would move towards achieving greater economies of scale. Therefore, LAFCO staff recommends that the Commission initiate a sphere of influence proposal to evaluate an expansion of the Chino Basin WCD's existing coterminous sphere.

In order to address these recommendations, LAFCO staff is proposing that the Commission:

- Initiate a sphere of influence review for the Chino Basin Water Conservation District to include analysis of the following alternatives:
    - Expansion of the sphere of influence to be coterminous with the sphere of influence of IEUA;
    - Expansion to include the whole of the Chino Basin; or,
    - Designation of a zero sphere of influence.

- Modify LAFCO 3173 to include the analysis of the following alternatives for consideration:
    - Expansion of the sphere of influence to be coterminous with the sphere of influence of MUNI,
    - Include the whole of the Bunker Hill Basin, or
    - The request initiated by the District to expand the sphere of influence from its current zero sphere designation to include the district's boundary plus an additional 1,973 acres.

ATTACHMENTS

1. Maps
    a. Location
    b. Water Conservation Districts and Basins

2. Maps of the Upper Santa Ana River Habitat Conservation Plan (Wash Plan)

3. Financial Statements for the Agencies
    a. Chino Basin Water Conservation District: June 30, 2014
    b. Inland Empire Utilities Agency: June 30, 2014
    c. San Bernardino Valley Municipal Water District, June 30, 2014
    d. San Bernardino Valley Water Conservation District, June 30, 2014

4. 1983 LAFCO Special Study on Water Conservation in the Chino Basin

5. Letters dated April 1, 2015 and December 12, 2014 regarding Regional Sustainable Groundwater Management Council for the East Valley

6. Information Provided by the Chino Basin Water Conservation District dated March 2, 2015

7. Responses to the Draft Staff Report
    a. Chino Basin Water Conservation District
    b. Inland Empire Utilities Agency
    c. San Bernardino Valley Municipal Water District
    d. San Bernardino Valley Water Conservation District
    e. San Bernardino County Flood Control District