PALMDALE RECYCLED WATER AUTHORITY (PRWA)
HELD AT CITY OF PALMDALE
CITY HALL COUNCIL CHAMBER
38300 SIERRA HIGHWAY, SUITE B
PALMDALE, CALIFORNIA
SPECIAL MEETING AGENDA NO. 55
MAY 18, 2020
6:00 P.M.
www.cityofpalmdale.org
www.palmdalewater.org

WELCOME

As a result of the COVID-19 emergency, and resulting orders and direction from the President of the United States, the Governor of the State of California, and the County of Los Angeles Department of Public Health, as well as the City of Palmdale emergency declaration, social distancing guidelines will be followed by all who physically attend this meeting. The Board of Directors may choose to participate via conference call.

PLEASE NOTE: City Hall is open by appointment only. City office hours are Monday through Thursday, 7:30 a.m. to 6:00 p.m., closed every Friday. You can view this agenda and related items on our website at https://cityofpalmdale.org/379/Palmdale-Recycled-Water-Authority-PRWA. You can request a copy of this agenda or attachments, if any, by contacting the City Clerk's Office at 661-267-5151.

A **three-minute time limit** will be imposed on all speakers other than staff members.

In accordance with the Americans with Disabilities Act of 1990, if you require a disability-related modification or accommodation to attend or participate in this meeting, including auxiliary aids or services, please call the City of Palmdale Office of the City Clerk at least 72 hours prior to the meeting.

Your courtesy is requested to help our meeting run smoothly. If you'll be kind enough to follow these simple rules, we can make the best possible use of your time and ours:

- Please refrain from public displays or outbursts such as unsolicited applause, comments, cheering, foul language, or obscenities.
- Any disruptive activities that substantially interfere with the ability of the Board of Directors to carry out its meeting will not be permitted and offenders will be requested to leave the meeting.
- Please turn off or mute your cell phones and mobile devices.

1. CALL TO ORDER.

2. **PLEDGE OF ALLEGIANCE.**

3. **ROLL CALL: CHAIR HELEN VELADOR, DIRECTORS KATHY MAC LAREN, VINCENT DINO, AUSTIN BISHOP AND JUAN CARRILLO**

4. **CONSENT CALENDAR – PUBLIC COMMENTS ONLY:** If you wish to comment on any item(s) listed on the Consent Calendar on this agenda, please come forward to the podium and state the item number(s) and your comments. **PLEASE NOTE: A three-minute time limit** will be imposed on each speaker other than staff members.

5. **CONSENT CALENDAR:**
NOTICE: All matters listed under the Consent Calendar will be enacted by one motion unless an item(s) is pulled by the Board, in which case the item(s) will be removed from the Calendar and will be considered separately following this portion of the Agenda.

   5.1 Adopt Resolution No. PRWA 2020-003, a Resolution of the Board of Directors of Palmdale Recycled Water Authority, Palmdale, California approving the adoption of the 2019 update to the Antelope Valley Integrated Regional Water Management Plan. (Staff Reference: Executive Director LaMoreaux)

   5.2 Approve the Minutes from the previous meeting held on February 27, 2020. (Staff Reference: Secretary Smith)

Staff Recommendation: Move to approve the recommendations and findings on all items listed under this Consent Calendar. (Voice Vote - Requires a majority to approve.)

6. **NON-AGENDA ITEMS - PUBLIC COMMENTS:** This portion of the Agenda allows an individual the opportunity to address the Board of Directors on any subject regarding Palmdale Recycled Water Authority business. Under state legislation, no action can be taken on items not specifically referenced on the Agenda. **PLEASE NOTE: A three-minute time limit** will be imposed on each speaker other than staff members.

7. **REQUESTS FOR NEW AGENDA ITEMS:**

8. **INFORMATIONAL REPORT OF THE BOARD OF DIRECTORS, EXECUTIVE DIRECTOR, AND ASSISTANT EXECUTIVE DIRECTOR.**

9. **ADJOURNMENT** to June 15, 2020 at 7:00 p.m. at the City of Palmdale City Hall Council Chamber located at 38300 Sierra Highway, Suite B, Palmdale, California.

Complete packets can be viewed at City Hall by appointment only, located at 38300 Sierra Highway, Suite A, Palmdale, California. You can also view the Agenda for the Palmdale Recycled Water Authority on the City's website at www.cityofpalmdale.org or the Palmdale Water District website at www.palmdalewater.org.

Thank you for attending your Palmdale Recycled Water Authority meeting. If you have any further questions, please contact the Secretary's Office at (661) 267-5151, Monday through Thursday, 7:30 a.m. to 6:00 p.m., closed every Friday.

PALMDALE RECYLED WATER AUTHORITY

BOARD MEMORANDUM

DATE: May 13, 2020 **May 18, 2020**

TO: BOARD OF DIRECTORS **Board Meeting**

FROM: Mr. Dennis D. LaMoreaux, Executive Director

RE: ***AGENDA ITEM NO. 5.1 – CONSIDERATION AND POSSIBLE ACTION ON APPROVAL OF THE ADOPTION OF THE 2019 UPDATE TO THE ANTELOPE VALLEY INTEGRATED REGIONAL WATER MANAGEMENT PLAN (LaMOREAUX)***

Recommendation:

Staff recommends that the Board approve the resolution adopting the 2019 update to the Antelope Valley Integrated Regional Water Management Plan.

Alternative Options:

There is no other alternative option.

Impact of Taking No Action:

The impact of taking no action will be the loss of funding for the Phase 2 Recycled Water project and future funding from the State.

Background:

In May 2006, the PRWA and other community participants set about developing a broadly supported integrated water resource management plan ("Plan") that defines a meaningful course of action to meet the expected demands for water within the entire Antelope Valley Region between then and 2035. The consensus was to develop this water resource management plan consistent with a State sponsored program (the Integrated Regional Water Management Program) that makes grant funds available to support sound regional water management. As a result, the Regional Water Management Group ("Group"), a coalition of eleven (11) public agencies responsible for various water-related issues, was formed in accordance with Section 10537 of the California Water Code. This Plan was completed and adopted by the Group in 2008 by all members of the Group.

In 2012, the Group began development of this Update to the Plan to incorporate changes in the Region's water resources that have occurred since 2007. This Plan also was updated on 2013. The 2019 Update to the IRWM Plan contains information to help take action to meet shared objectives to meet long-term water management for the entire region.

The Plan, which fulfills the State requirement for a water resource management plan, is a comprehensive plan for the conservation, use, and reuse of the water resources in the Antelope Valley. It defines a clear vision and direction for the sustainable management of water resources in the Antelope Valley Region for the next twenty-five years, and contains a strategy to provide a wide range of crucial water-related services necessary to support the well-being of people living in this diverse and vibrant region. The reliability of water supplies is especially important in the near term, given the ongoing State Water Project uncertainties and the current overdraft condition of the underground aquifers in the Antelope Valley. The development of additional water supplies will provide a hedge against future droughts and will allow for the continued growth and economic development of the Antelope Valley.

Development of the Plan has fostered greater coordination, collaboration and communication among public agencies within the Antelope Valley and other interested stakeholders, and implementation of the Plan has achieved greater water-use efficiencies, enhance public services, and build public support for vital projects. This regional collaboration has promoted a more efficient, comprehensive, and effective approach to water resource management while being responsive within a regional context to the needs of individual communities and jurisdictions.

The following is a list of the Antelope Valley Region's stakeholders that have participated in the development of the Plan and its 2019 Update:

State Water Project Contractors: Antelope Valley-East Kern Water Agency (AVEK), Littlerock Creek Irrigation District, and Palmdale Water District.

Retail and Mutual Water Purveyors: Los Angeles County Waterworks District #40, Quartz Hill Water District, Rosamond Community Services District, Antelope Park Mutual Water Company, Edgemont Acres Mutual Water Company, El Dorado Mutual Water Company, Evergreen Mutual Water Company, Golden Valley Mutual Water, Land Projects Mutual Water, Little Baldy Water Company, Palm Ranch Irrigation District, Westside Park Mutual Water Company, and White Fence Farms Mutual Water Company.

Local Jurisdictions / Land-Use Planning Agencies: City of Palmdale, City of Lancaster, City of California City, City of Boron, Los Angeles County Department of Regional Planning, and Kern County Planning Department.

Other Agencies: Lahonton Regional Water Quality Control Board, California Department of Health Services, California State Parks, California State Department of Fish and Game, Los Angeles County Farm Bureau, Kern County Farm Bureau, and County Sanitation District Nos. 14 and 20 of Los Angeles County.

Others: Antelope Valley Resource Conservation District, Sierra Club, Building Industry Association, U.S. Borax, and Edwards Air Force Base.

More information on the Plan can be found at www.avwaterplan.org.

Budget:

No impact to the budget

Supporting Documents:

2019 Update Integrated Water Management Plan Executive Summary
Resolution PWRA 2020-003



Executive Summary

Antelope Valley Integrated Regional Water Management Plan Overview

This document is the 2019 Antelope Valley Integrated Regional Water Management (IRWM) Plan Update (2019 Plan Update). It includes new information as required by the California Department of Water Resources' (DWR) 2016 Integrated Regional Water Management Proposition 1 Guidelines as well as updates to previous information from the 2013 Antelope Valley IRWM Plan.

IRWM is a collaborative effort to manage all aspects of water resources in a region. The State recognizes that there is a need to consider a broader range of resource management issues, competing water demands, new approaches to ensuring water supply reliability, and new ways of financing. The State's IRWM program was developed beginning with Senate Bill 1672 which created the Integrated Regional Water Management Act to encourage local agencies to work cooperatively to manage local and imported water supplies to improve water quality, quantity and reliability.

Funding programs for IRWM planning were created when voters passed Proposition 50 in November 2002, Proposition 84 in November 2006, and Proposition 1 in 2014. These propositions set aside funds for IRWM planning and project implementation to be administered by the State. These grant programs state that IRWM Plans should include specific aspects, or "standards", as outlined in Table ES-1. This table also indicates where each standard may be located in the 2019 Plan Update. A more detailed cross-reference table showing IRWMP standards and their locations in both the 2007 IRWMP, the 2013 IRWMP Update, and the 2019 IRWMP Update may be found in Appendix L.

Table ES-1: IRWM Plan Standards and Locations in AV IRWM Plan

IRWM Plan Standard	Location in Antelope Valley IRWM Plan
Governance	Section 1, Section 8
Region Description	Section 2
Objectives	Section 4
Resource Management Strategies	Section 5
Integration	Section 6
Project Review Process	Section 7
Impact and Benefit	Section 8
Plan Performance and Monitoring	Section 8
Data Management	Section 8
Finance	Section 8
Technical Analysis	Section 3, Section 8
Relation to Local Water Planning	Section 8
Relation to Local Land Use Planning	Section 8
Stakeholder Involvement	Section 1, Section 8
Coordination	Section 1, Section 8
Climate Change	Sections 2, 3, 4, 5, 6, 7, 8

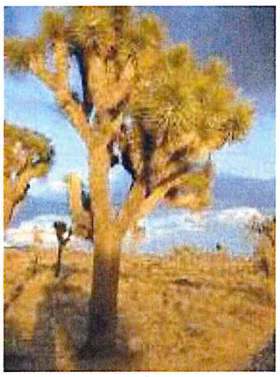
Introduction (Section 1)

Several years ago, leaders and agencies in the Antelope Valley Region recognized the need for regional cooperation and planning. In an effort to represent the broad interests within the Antelope Valley Region, a number of organizations joined to form a Regional Water Management Group (RWMG) to work together and create this IRWM Plan. Members of the RWMG include the Antelope Valley-East Kern Water Agency (AVEK), Antelope Valley State Water Contractors Association (AVSWCA), City of Lancaster, City of Palmdale, Littlerock Creek Irrigation District, Los Angeles County Sanitation District (LACSD) Nos. 14 and 20, Los Angeles County Waterworks District No. 40 (LACWD 40), Palmdale Water District (PWD), Quartz Hill Water District (QHWD), and Rosamond Community Services District (RCSD). These 11 public agencies signed a Memorandum of Understanding (MOU) to define what their roles and responsibilities are in developing and moving forward with implementation of the AV IRWM Plan. The decision-making structure of the MOU provides the RWMG with the responsibility to make formal decisions regarding the scope and content of the AV IRWM Plan. These agencies agreed to contribute funds to help develop the AV IRWM Plan, provide and share information, review and comment on drafts, adopt the final AV IRWM Plan, and assist in future grant applications for the priority projects identified in the Plan.

In January 2007, the RWMG and other community participants (the Stakeholders) set about developing a broadly supported water resource management plan that defines a meaningful course of action to meet the expected demands for water within the entire Antelope Valley Region through

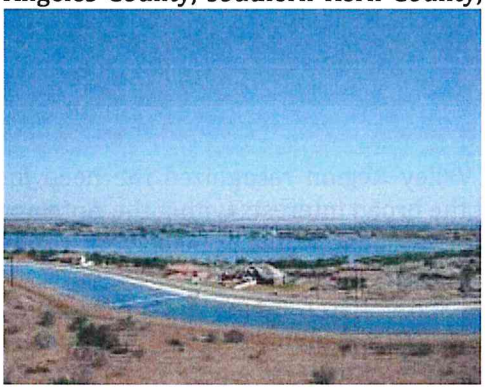
2035. They chose to create the AV IRWM Plan consistent with the State sponsored Integrated Regional Water Management Program that makes grant funds available to support sound regional water management. In 2012, the RWMG began development of an IRWM Plan Update to incorporate changes to the Region's water resources that occurred since 2007. The IRWM Plan was revisited in 2017 and updated once again in two phases. The first phase revised the Plan to comply with the 2016 IRWM Grant Program Guidelines. The second phase (referred herein as the "2019 IRWM Plan Update") conducted an extensive update of the IRWM Plan so that the Plan is reflective of the current conditions of the Region. The 2019 IRWM Plan Update extended the planning horizon through 2040. This IRWM Plan contains information to help take action to meet shared objectives for long-term water management for the entire Region.

Region Description (Section 2)



The Antelope Valley Region of California is home to approximately 461,000 people living in many different communities. Residents within this Region have experienced tremendous changes over the past generation due to rapid population growth in nearby large cities. Current forecasts of population growth suggest even larger changes will occur before 2040. Water plays a central role in the health and wellbeing of all residents within the Antelope Valley Region. People use water for drinking, bathing, household and outdoor activities, agriculture, business endeavors, recreation, and to sustain and enhance natural habitats. This common need for water links communities together in many ways. When anyone uses water, the ability of other people to use water within the Antelope Valley Region may be impacted.

The Antelope Valley Region encompasses approximately 2,400 square miles in northern Los Angeles County, southern Kern County, and western San Bernardino County. Major communities within the Antelope Valley Region include Boron, California City, Edwards Air Force Base, North Edwards, Lancaster, Mojave, Palmdale and Rosamond. All of the water currently used in the Antelope Valley Region comes from two sources: (1) naturally occurring water within the Antelope Valley Region (surface water and groundwater accumulated from rain and snow that falls in the Antelope Valley and surrounding mountains, and recycled water), and (2) State Water Project water (surface water that is collected in northern California and imported into the Antelope Valley and other areas around the state).



The number of residents within the Antelope Valley Region will expand by almost 350 percent between 1970 and 2020, growing from 103,000 people in 1970 to 461,000 people in 2020. Forecasters expect the population to continue to increase, potentially reaching 535,000 residents by the year 2040. As the number of people living and working in the Antelope Valley Region increases, the competition for water supply intensifies, and the challenge of maintaining good water quality and managing the interconnected water cycle becomes more challenging.

Creation of a proactive, "SMART[1]" approach for the fast-developing Antelope Valley Region makes this IRWM Plan essential to efficient and effective water management.

Issues and Needs (Section 3)

Water managers and local planners face many daunting challenges related to supporting the wellbeing of the Antelope Valley Region. Past activities have created problems that need to be addressed and expected increases in population growth make resolving these problems even more difficult. In order to help address the broad challenges, the AV IRWM Plan was organized to address issues and needs in the following categories. Section 3 of the Plan describes these issues and needs in detail.



Supplies are Variable and Uncertain

Determining the amount of water available for use at any given time (now or in the future) is challenging. All water supplies within the Antelope Valley Region come from two sources: (1) local rain and snowmelt that percolate into the groundwater aquifers or are captured in Littlerock Reservoir, or (2) imports of water from outside the Antelope Valley Region via the State Water Project. The amount of water supply available varies considerably due to changes in weather, rain and snow, and other conditions.

Demand is Greater than Supply in Average and Dry Years

One fundamental challenge in the Antelope Valley Region is that demand for water exceeds available supplies in future average and dry years. In average years beyond 2025, the mismatch between water supply and demand is currently approximated at 19,500 AFY, as shown in the figure below. In future single dry years, the supply demand mismatch is estimated to be 77,200 AFY, while in future multi-dry year periods the mismatch is estimated at 198,800 AF over four years. If communities do not implement projects to account for these mismatches, such as conservation, recycled water, stormwater capture, and water banking projects, the Region will not be able to meet its demands during future average years and dry periods. The Region also recognizes the need for other actions to reduce the mismatch, such as reducing reliance on imported water and improving conveyance facilities.

[1] A SMART approach includes objectives that are Specific, Measurable, Attainable, Relevant, and Time-Based.

Historically, water supplies within the Antelope Valley Region have been used primarily for agriculture; however, due to population growth, water demands from residential and business uses have increased significantly and this trend is expected to continue. The expected continuation of rapid growth in the Antelope Valley Region will affect water demand and increase the threat of water contamination from additional urban runoff. More residents will also lead to higher demand for water-based recreation.

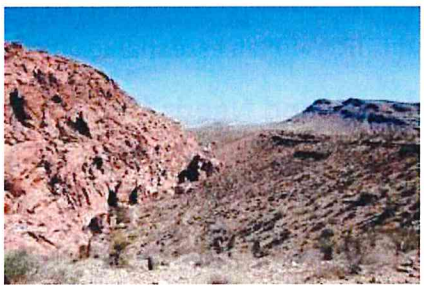
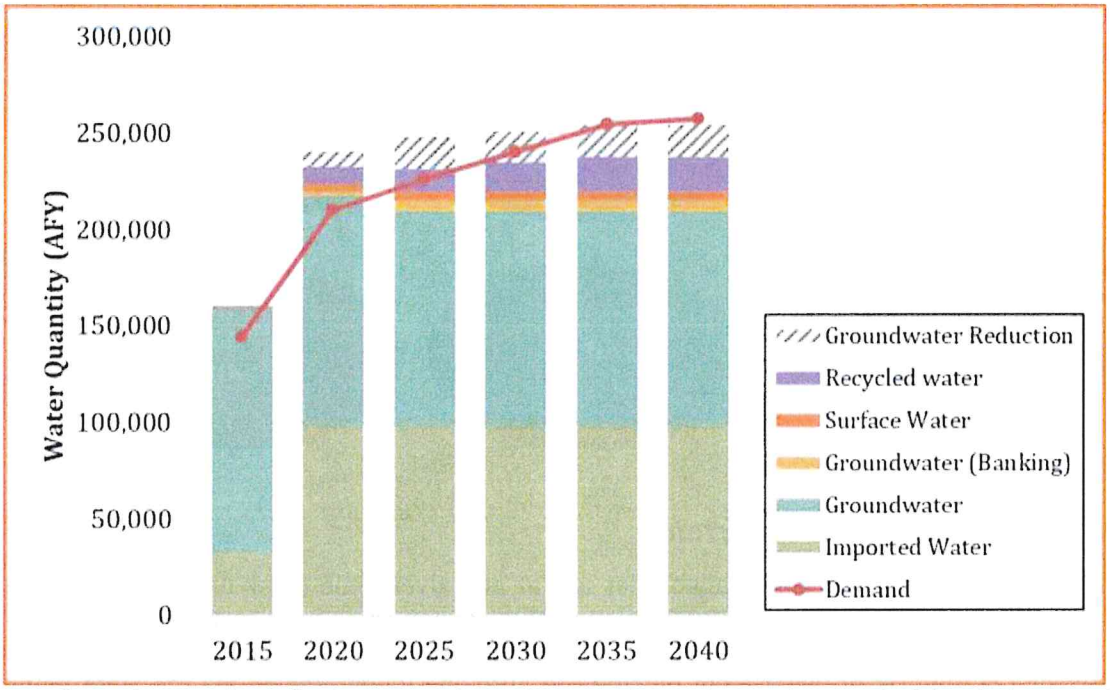


Figure ES-1: Water Supply Summary for an Average Water Year



Note: "Groundwater Reduction" is the amount of groundwater production decreased as a result of the adjudication Judgment and therefore does not represent an additional supply source.

Much of the water used within the Antelope Valley Region is extracted from groundwater aquifers. The amount of water pumped within the Antelope Valley Region has varied tremendously since the early 1900's. The United States Geological Survey estimated that groundwater pumping in 1919 was about 29,000 AFY and reached as high as 400,000 AFY in the 1950's. For many of those years, the amount of water being pumped was greater than the amount of water being replenished, creating an imbalance within the groundwater aquifers. Because the amounts pumped were greater than the amounts being replenished, groundwater levels have declined significantly throughout the Antelope Valley Region. The long-term depletion of aquifers cannot be continued indefinitely without serious consequences. The historical declines in groundwater levels within the Antelope Valley Region have caused permanent damage to aquifers in some areas through land subsidence.

In order to prevent further damage from declining groundwater levels, many water providers and managers within the Antelope Valley Region recognize the need to balance the water being pumped from the aquifers with the water being put back. In response to this need, a legal process called adjudication was finalized in 2015. The adjudication process defined the Basin boundaries,

quantified a safe yield, and established Production Rights in order to stabilize groundwater levels and prevent further damage that can result from declining groundwater levels. The Total Safe Yield of the Antelope Valley Groundwater Basin must be met by 2023 as defined in the adjudication Judgment.

Water Quality and Flood Management

The groundwater basin within the Antelope Valley Region is an un-drained, closed basin, meaning there is no outlet for water to flow to the ocean. When water enters a closed basin, any minerals or chemicals in the water typically accumulate in the basin. Currently, groundwater quality is excellent within the principal aquifer but is not as good toward the northern portion of the dry lake areas. Some portions of the basin contain groundwater with high fluoride, boron, total dissolved solids, and nitrate concentrations. Arsenic is another emerging contaminant of concern in the Antelope Valley Region and has been observed in the northern and eastern areas of the Region. Research conducted by the LACWD 40 and the United States Geological Survey has shown the problem to reside primarily in the deep aquifer, therefore it is not anticipated that the existing arsenic concentrations will lead to future loss of groundwater as a water supply resource for the Antelope Valley. In addition, a Salt and Nutrient Management Plan was developed in 2014 to monitor and maintain water quality conditions in the Antelope Valley groundwater basin.

Much of the Antelope Valley Region is subject to flooding from natural runoff through alluvial fans in the nearby foothills. Some of these flood waters eventually move into developed areas, many of which lack sufficient drainage capacity, causing impacts to infrastructure and other improvements. Runoff flowing across impervious surfaces can also become contaminated with constituents such as petroleum products. At the same time, the Region recognizes the downstream benefits of flood waters, including habitat preservation, dust control, and other uses. The need for regional coordination of flood control efforts with natural habitat protection and water supply is critical as urban development and the accompanying paved surfaces increase throughout the Region.

Environmental Resources

The Antelope Valley Region has many unique environmental features that are dependent on natural surface flows, such as the dry lakebeds (Rosamond, Buckhorn, Rogers), Piute Ponds, mesquite bosques, alkali mariposa lily, Joshua tree woodlands, desert tortoise, Le Contes thrasher, tricolored blackbirds, and others. Part of the Antelope Valley wash areas are incorporated into a Significant Ecological Area designated by Los Angeles County intended to provide added protection to sensitive natural resources. As the pressure for growth expands into undeveloped or agricultural lands, the need to balance industry and growth against the protection of endangered species and sensitive ecosystems requires a careful consideration of trade-offs, many involving water resources in the Region. The actions identified in the AV IRWM Plan can help to preserve open space and natural habitats in the Antelope Valley Region while maximizing the effective use of water resources.



Water Management and Land Use

What people do on the land of the Antelope Valley and how they do it directly impacts many aspects of life, including the water cycle, within the Antelope Valley Region. Historically throughout California, land use planning and water use planning have been done almost independently of one another. The challenges identified within the Plan clearly show a need for much closer collaboration between land use planning efforts and water management planning efforts.

Continued development within the Antelope Valley Region depends heavily on meeting the objectives presented in the Plan to balance the growing demand for development while preserving recreational opportunities and avoiding major impacts to natural resources, agriculture, and the loss of local culture and values.

Climate Change

The Antelope Valley Region's Stakeholders identified and prioritized a number of climate change vulnerability issues facing the Region's water resources based on the expected effects of climate change, including water demand, water supply, flooding, ecosystem and habitat, and water quality. The identified and prioritized vulnerabilities are discussed in Section 3.

Objectives (Section 4)

The Stakeholders worked together to identify clear objectives and planning targets they wish to accomplish by implementing the AV IRWM Plan (see Table ES-2). Although the AV IRWM Plan is intended to address the Antelope Valley Region's water resource management needs, this document also identifies several open space, recreation, and habitat targets as well. Refer to Section 4 of the AV IRWM Plan for details on how the objectives and targets were developed.

These objectives and planning targets represent the most important needs and issues the Stakeholders hope to address over the next several years. Everything done within the context of this IRWM Plan should contribute in some way to achieving these objectives. Also, because the planning targets are measurable, residents within the Antelope Valley Region can monitor how successfully the Plan is being implemented.

Table ES-2: Antelope Valley Region Objectives and Planning Targets

Objectives	Planning Targets
Water Supply Management	
Provide reliable water supply to meet the Antelope Valley Region's expected demand between now and 2040; and adapt to climate change.	Maintain adequate supply and demand in average years.
	Provide adequate reserves (77,200 AFY) to supplement average condition supply to meet demands during single-dry year conditions, starting 2009.
	Provide adequate reserves (198,800 AF/ 4-year period) to supplement average condition supply to meet demands during multi-dry year conditions, starting 2009.
	Adapt to additional 7-10% reduction in imported deliveries by 2050, and additional 21-25% reduction in imported water deliveries by 2100.
Establish a contingency plan to meet water supply needs of the Antelope Valley Region during a plausible disruption of SWP deliveries.	Demonstrate ability to meet regional water demands over an average year without receiving SWP water for 6 months over the summer by 2025
Stabilize groundwater levels.	Manage groundwater levels throughout the basin such that Production Rights defined in the adjudication Judgment are met by 2023.
Water Quality Management	
Provide drinking water that meets regulatory requirements and customer expectations.	Continue to meet Federal and State water quality standards as well as customer standards for taste and aesthetics throughout the planning period.

Objectives	Planning Targets
Protect and maintain aquifers.	Prevent unacceptable degradation of aquifer according to the Basin Plan throughout the planning period.
	Map contaminated sites and monitor contaminant movement, by 2017.
	Identify contaminated portions of aquifer and prevent migration of contaminants, by 2017.
Protect natural streams and recharge areas from contamination.	Prevent unacceptable degradation of natural streams and recharge areas according to the Basin Plan throughout the planning period.
Maximize beneficial use of recycled water.	Increase infrastructure and establish policies to use 33% of recycled water to help meet expected demand by 2015, 66% by 2025, and 100% by 2035.
Flood Management	
Reduce negative impacts of stormwater, urban runoff, and nuisance water, and adapt to climate change impacts in the future.	Coordinate a regional Stormwater Resources Plan and policy mechanism by the year 2025 and incorporate adaptive management strategies for climate change.
Optimize the balance between protecting existing beneficial uses of stormwater and capturing stormwater for new uses.	
Environmental Resource Management	
Preserve open space and natural habitats that protect and enhance water resources and species in the Antelope Valley Region.	Contribute to the preservation of an additional 2,000 acres of open space and natural habitat, to integrate and maximize surface water and groundwater management by 2025.
Land Use Planning/Management	
Maintain agricultural land use within the Antelope Valley Region.	Preserve 100,000 acres of farmland in rotation[2] through 2040.
Meet growing demand for recreational space.	Contribute to local and regional General Planning documents to provide 5,000 acres of recreational space by 2040.
Improve integrated land use planning to support water management.	Coordinate a regional land use management plan by the year 2025 and incorporate adaptive management strategies for climate change.
Climate Change Mitigation	
Mitigate against climate change	Implement "no regret" mitigation strategies,[3] when possible, that decrease greenhouse gases (GHGs) or are GHG neutral

Resource Management Strategies (Section 5)

The State of California, through the 2009 California Water Plan, has identified 37 different Resource Management Strategies (RMS) to improve regional water resource management. In order to determine what regional water management strategies should be included in the IRWM Plan, the Stakeholders considered the RMS listed and defined in Section 5 of the IRWM Plan. The relationship

[2] The phrase "in-rotation" means that not all 100,000 acres will be in agricultural production at one time rather the land will be rotated in cycles to make most efficient use of the land.
[3] No regret projects are projects that would still be considered beneficial even if climate change weren't happening.

of these strategies (Table ES-3) to the Region's objectives (Table ES-2) was discussed for those strategies included in the IRWM Plan.

Table ES-3: RMS included in the IRWM Plan

Reduce Water Demand	Improve Operational Efficiency and Transfers
• Agricultural Water Use Efficiency • Urban Water Use Efficiency	• Conveyance – Regional/Local • System Reoperation • Water Transfers
Increase Water Supply	**Flood Management**
• Conjunctive Management and Groundwater • Recycled Municipal Water • Surface Storage – Regional/Local	• Flood Risk Management
Water Quality Management	**Practice Resources Stewardship**
• Drinking Water Treatment and Distribution • Groundwater and Aquifer Remediation • Matching Water Quality to Use • Pollution Prevention • Salt and Salinity Management • Urban Runoff Management	• Agricultural Lands Stewardship • Ecosystem Restoration • Forest Management • Land Use Planning and Management • Recharge Areas Protection • Sediment Management • Watershed Management
People and Water	**Other Strategies**
• Economic Incentives • Outreach and Engagement • Water and Culture • Water-dependent Recreation	• Crop Idling for Water Transfers • Irrigated Land Retirement

IRWM Project Integration, Evaluation and Prioritization (Sections 6 and 7)

Many local agencies and other community participants have worked well together to create a Plan that identifies challenging issues and needs being faced by all Antelope Valley residents. Fortunately, this IRWM Plan also identifies actions that can help meet the objectives for the Antelope Valley Region and identifies methods for cooperative implementation of those actions.

Table ES-4 lists the projects and actions that the Stakeholders believe will help meet the Regional objectives. In total, over 80 projects were submitted for inclusion in the IRWM Plan, and include implementation projects, plans and studies, and conceptual projects. All projects included in the IRWM Plan will help the Region to meet its goals and objectives. Implementation projects are programs or construction projects that have had some planning completed, such as facilities planning or cost analyses, and could potentially be implemented in the near future. Plans and studies may also be considered "implementation projects" because they are eligible under certain grant funding opportunities. Finally, conceptual projects are those projects identified by stakeholders that *could* contribute to meeting the Region's IRWM objectives but may not yet be developed enough to include in the IRWM Plan as an implementation project.

Implementing the IRWM projects will require focused effort, broad community support, political resolve, and funding. The Stakeholders are actively pursuing financial assistance through several grant programs designed to help leverage local investments. The RWMG is also working to establish

a secure and long-lasting approach to coordinate resources to meet the growing needs of the entire Antelope Valley Region.

The projects proposed by Stakeholders are primarily expected to help the Region meet the water supply management objectives, some of the water quality management objectives, and the climate change objective described in Section 4. For the flood management, environmental resource management, land use planning/management, and climate change objectives, additional projects need to be developed and proposed to ensure progress in those management areas.

Table ES-4: Stakeholder Implementation Projects

Sponsor	Project Name	Project Type
Antelope Valley Resource Conservation District	Antelope Valley Regional Conservation Project	Implementation
AVEK	AVEK Strategic Plan	Study/Report
AVEK	South North Intertie Pipeline (SNIP) Phase II Project	Implementation
AVEK	South Antelope Valley Intertie Project	Implementation
AVEK	Water Supply Stabilization Project (WSSP) – Westside Expansion	Implementation
City of Lancaster	Antelope Valley Recycled Water Master Plan	Study/Report
City of Lancaster	Division Street and Avenue H-8 Recycled Water Tank	Implementation
City of Lancaster	Lancaster National Soccer Center Recycled Water Conversion	Implementation
City of Lancaster	Pierre Bain Park Recycled Water Conversion	Implementation
City of Lancaster	Whit Carter Park Recycled Water Conversion	Implementation
City of Palmdale	Palmdale Power Plant Project	Implementation
City of Palmdale	Upper Amargosa Creek Recharge and Channelization Project	Implementation
Palmdale Recycled Water Authority	Phase 2 Distribution System	Implementation
Palmdale Water District	Littlerock Dam Sediment Removal	Implementation
Palmdale Water District	Palmdale Regional Groundwater Recharge Project	Implementation
Rosamond CSD	Wastewater Treatment Plant Rehabilitation and Groundwater Project	Implementation
Willow Springs Water Bank	Willow Springs Water Bank	Implementation

In terms of supply, the implementation and conceptual projects proposed will allow the Region to maintain adequate supply and demand in average years. The IRWM projects identify approximately 24,400 AFY of new supply, while also identifying up to approximately 1,000,000 AFY of water bank storage capacity. These projects, if implemented, would help the Region to meet demands during single-dry years and multi-dry year periods, as well as during a plausible six month disruption of State Water Project deliveries.

A number of projects were proposed that would help the Region to meet its water quality targets, including improving drinking water quality, protecting and maintaining aquifers, protecting natural streams and recharge areas from contamination, and maximizing beneficial use of recycled water. As water quality issues are further studied and plans such as the Salt and Nutrient Management Plan are implemented, it is expected that additional projects will be identified to target specific water quality issues.

Additional projects may be necessary to help address the Region's flood management issues, particularly since a majority of the projects proposed to help improve flooding are conceptual and

require further development. Section 6 lists a number of suggestions for improving flood management in the Region, including beneficial use identification, existing flood hazard mapping, development of policy actions, and flood mitigation.

The environmental resource management objective will also require more projects. Proposed projects that would help the Region to meet its environmental resource management targets are mainly multi-benefit projects that would provide water supply, water quality and/or flood improvements in additional to providing open space and habitat. Section 6 suggests development of a habitat conservation plan for the Region, and promotion of land conservation projects that enhance flood control, aquifer recharge and watershed and open space preservation to further identify projects to meet this objective.

Similarly, additional projects may be necessary to meet the Region's targets that include preserving farmland, increasing recreational space and coordinating a regional land use plan. Many of the projects identified would indirectly support these targets by providing water to irrigate farm and recreational lands, but few projects would directly support these targets.

A majority of the projects proposed would support the Region's climate change objective. For example, projects that increase local supply production are expected to reduce the embedded energy required to supply imported water. Projects that would increase habitat would allow for the sequestration of carbon through the increase in vegetation. Further planning and study would be necessary to numerically assess GHG reductions in the Region.

Framework for Implementation (Section 8)

The AV IRWM Plan is a dynamic document that identifies monitoring guidelines and sets forth procedures for measuring the success, benefits, and impacts of the Plan. The Region will continue with its current governance structure and continue its efforts to encourage stakeholder involvement in the IRWM program. An ongoing management process is proposed for evaluating, updating and maintaining the Plan, and a funding and financing plan has been established to implement the Plan. The stakeholders decided to continue using the current approach of facilitated broad agreement to implement and update the AV IRWM Plan.

Implementation of the priority projects in the IRWM Plan is currently the responsibility of individual lead agencies with the jurisdictional authority to approve projects. The Stakeholders and RWMG have chosen these projects because they directly address the objectives and planning targets for the most pressing issues and constitute the most well-developed projects to improve management of water resources within the Region. Furthermore, implementing the projects in an integrated fashion is understood to achieve greater benefits to the Region.

The collection, management, distribution and use of data collected as part of this IRWM Planning effort, and through implementation of the Plan, are essential to making this a sustainable effort that will benefit the Antelope Valley Region for years to come. Data regarding water quantity and quality are currently collected and distributed by a number of different agencies. The Stakeholders have identified strategies in this IRWM Plan to ensure quick identification of data gaps, avoiding duplicative (and costly) studies that result in the same information/findings, and successful integration with other important regional, statewide, and federal programs.

This IRWM Plan also identifies performance measures that will be used to evaluate performance, monitoring systems that will be used to gather actual performance data, and mechanisms to change these strategies if the data collected shows the Antelope Valley Region's IRWM objectives and planning targets are not being met. The Stakeholders also recognized that additional technical detail is needed for several of the IRWM Plan's performance measures to be properly implemented

and measurable. The Stakeholder group has agreed to continue to refine these performance measures as the AV IRWM Plan is implemented.

Finally, the Region evaluated the funding and financing that would be necessary to implement this IRWM Plan. To meet the resource needs identified above, the Region will need to secure funding as both in-kind services and monetary resources. Given that local revenue sources will not be sufficient to fully fund all aspects of the IRWM Program's financing needs over the 20-year planning horizon, the Region intends to fund its activities using a combination of local, state and federal funds.

This IRWM Plan is a Stakeholder-driven planning process. The RWMG invites the public and interested Stakeholders to become active participants in the Region's ongoing efforts to:

- Identify, evaluate, prioritize, and implement solutions to the Region's complex water management issues, challenges, and conflicts; and
- Continue the development and evolution of this Plan.

For additional information on this IRWM Plan and the Antelope Valley Region, please visit www.avwaterplan.org.

PALMDALE RECYCLED WATER AUTHORITY
LOS ANGELES COUNTY, CALIFORNIA
RESOLUTION NO. PRWA 2020-003

A RESOLUTION OF THE BOARD OF DIRECTORS OF PALMDALE RECYCLED WATER AUTHORITY, PALMDALE, CALIFORNIA APPROVING THE ADOPTION OF THE 2019 UPDATE TO THE ANTELOPE VALLEY INTEGRATED REGIONAL WATER MANAGEMENT PLAN

WHEREAS, the Palmdale Recycled Water Authority, a joint power authority between the City of Palmdale and Palmdale Water District, and agencies in the Antelope Valley Region have long recognized the importance of regional collaboration and integration of single purpose efforts and now regularly work across jurisdictional boundaries to implement regional projects and programs that address multiple water resource management issues including local and imported water supplies, sanitation and recycled water, storm water management, groundwater management, water use efficiency, habitat and open space management, and many others; and

WHEREAS, the State of California Department of Water Resources (DWR) created the Integrated Regional Water Management (IRWM) Program to encourage integrated, regional strategies for managing water resources and to provide funding for both planning and implementation of projects that support management of water supply, water quality, environmental interests, drought protection, flood protection, and reduction of dependence on imported water and many other; and

WHEREAS, organizations participating in the IRWM Program join together to form IRWM Regions; and

PROPOSED

WHEREAS, the IRWM Region serving the Antelope Valley Region is known as the Antelope Valley IRWM Region; and

WHEREAS, the Antelope Valley IRWM Region engages in regional water resources planning for the Antelope Valley Region; and

WHEREAS, DWR recognizes the Antelope Valley IRWM Region as an official IRWM Region; and

WHEREAS, the IRWM Program requires that a Regional Water Management Group (RWMG) be formed to establish an IRWM Region; and

WHEREAS, both the City of Palmdale and Palmdale Water District are members of the RWMG for the Antelope Valley IRWM Region; and

WHEREAS, DWR and State Legislators have established program guidelines for the IRWM Program though Proposition 84 and Proposition 1E (2012 Guidelines); and

WHEREAS, the RWMG for the Antelope Valley IRWM Region is responsible for the preparation and adoption of an IRWM Plan; and

WHEREAS, the RWMG for the Antelope Valley IRWM Region has developed the 2019 Update to the Antelope Valley IRWM Plan to address the provisions of the 2013 Guidelines; and

WHEREAS, the PALMDALE RECYCLED WATER AUTHORITY actively participated in the development of the 2019 Update to the Antelope Valley IRWM Plan; and

WHEREAS, adopting the 2019 Update Antelope Valley IRWM Plan will enable participants in the Antelope Valley IRWM, including the PALMDALE RECYCLED WATER AUTHORITY, to apply for future grant funding under various grant programs including Proposition 84 and Proposition 1E; and

WHEREAS, the 2012 Guidelines require the governing bodies of member agencies of the RWMGs, the RWMG representatives of the governing bodies, as well as proponents of projects included in IRWM grant funding proposals to adopt an updated IRWM Plan.

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Palmdale Recycled Water Authority:

DRAFT COPY

SECTION 1: The Board of Directors adopts the 2019 Update to the Antelope Valley IRWM Plan as a project proponent.

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SECTION 2: The Authority Secretary shall certify to the adoption of this resolution and enter it into the official records of the Authority.

PASSED, APPROVED and ADOPTED this 18th day of May, 2020 by the following vote:

AYES: _____

NOES: _____

ABSTAIN: _____ ABSENT: _____

PROPOSED

_____
Helen Velador, Chair

ATTEST:

_____
Rebecca J. Smith
Authority Secretary

Approved as to form:

_____
Eric Dunn
Authority Counsel