LA COUNTY
WATER PLAN

LA County Water Plan – Supplemental Materials for Stakeholder Workshops

Preliminary Strategies and Actions

Introduction

The LA County Water Plan (CWP) will establish targets, strategies, and actions that will increase water resilience in LA County. Through stakeholder input received to date, a range of potential overarching strategies have been identified to make progress toward the CWP key issues. *The preliminary strategies and actions listed in this document are a compilation of ideas heard to date and are provided to guide continued stakeholder input in the ongoing CWP development.* The objective of upcoming stakeholder workshops, being held in April/early May 2022, is to collect feedback on preliminary strategies and actions and brainstorm near-term steps to accomplish these actions.

Thus far, 16 overarching strategies have risen to the top through previous collaborative plan development efforts. Each overarching **strategy** is supported by a subset of detailed potential **actions**. There are two broad categories of actions. "Support" actions (identified in blue) recognize and celebrate the existing/ongoing efforts of other organizations. These actions do not necessarily require additional efforts beyond continued implementation by the leading organizations. They are included in this list because they advance the CWP key issues and will contribute to countywide resilience. The remaining actions (identified in green) are new concepts that are yet to be implemented. Implementation of these strategies and actions would, in many cases, involve the formation of task forces to advance the initiatives through the next phase of the CWP.

There are countless water-related actions that would benefit LA County. The preliminary strategies and actions listed to date in this document are not comprehensive. Instead, they center around the key issues for the initial iteration of the CWP and build upon existing efforts, allowing the Plan to advance water resilience in LA County without being duplicative or spread thin.

How to Provide Input

A series of stakeholder workshops are being held in April and May to provide context for the preliminary CWP strategies and actions and seek input from participants. Each workshop is open to the public. If you are interested in participating in the CWP development, we encourage you to attend a workshop. You can also provide input on the CWP strategies and actions by e-mailing the CWP team at LACountyWaterPlan@pw.lacounty.gov. Input is requested by May 13, 2022. Input from all forums continues to be considered in applicable workshops and as we collaboratively work towards a draft document that is currently intended to be released for public review this fall.

Strategies and Actions

1. **Achieving the most efficient water use possible countywide:** The State's water use objectives are intended to establish a reasonable level of water use that will meet the unique demands within each of the County's 206 urban water supplier areas. While compliance is the responsibility of each individual water supplier, the ability to comply countywide could be greatly enhanced through regional collaboration that sets consistent expectations on water use efficiency

throughout the County, while accommodating the unique needs of the County's diverse communities.

- Provide universal access to Los Angeles Region Imagery Acquisition Consortium (LARIAC) data sets to help urban water suppliers accurately estimate irrigable area and reasonable water use for their service area.
- Coordinate outdoor landscaping ordinances between cities, County, wholesalers, and retail water agencies (e.g., non-functional turf ordinances, SB 1838 mulch and composting).
- Provide access to Model Water Efficient Landscape Ordinance (MWELO) compliance training for all water suppliers in LA County.
- Support and expand existing universally applicable water use efficiency programs (e.g., Metropolitan Water District (MWD), rate structures encouraging efficient use) to reach all areas of LA County.

2. **Collaborating on consistent drought response messaging:** Immediate public reduction in water use is the fastest way to respond to an existing drought, however the ability to further conserve supply in droughts will become more constrained as water use efficiency continues to improve countywide. Given that people often live, work, and travel within different areas of LA County, collaboration between water purveyors on messaging drought declarations and specific actions that the public can take to respond will be critical in effectively responding to future droughts.
   - Collaborate on countywide drought response messaging (using mechanisms like Water for LA and MWD's bewaterwise.com) that call out universally agreed upon measures that all water users in LA County can take and direct the public on how to find specifics about how drought is impacting their local water purveyor and steps being taken to respond.
   - Support ongoing efforts to create consistent messaging on the development of drought resilient supplies (e.g., Council for Watershed Health's initiative on recycled water).

3. **Coupling local supply development with regional conveyance:** The total amount of untapped local water supply potential in LA County is significant. However, without economies of scale, stormwater and recycled water supply projects are often cost-prohibitive for individual water agencies to implement. Partnerships between regional and local agencies on supply development and conveyance increase the volume of supply that can be generated, increase the overall cost-effectiveness, increase the potential for outside funding and decrease the overall cost to ratepayers. Using and potentially expanding existing water infrastructure networks in LA County as one interconnected system provides opportunities to connect areas of supply and demand and improve reliability of the region overall.
   - Support existing efforts between planned regional recycled programs (e.g., MWD/LA County Sanitation Districts (LACSD) Regional Recycled Water Program and LA Department of Water and Power (LADWP) Operation NEXT / LA Sanitation (LASAN) Hyperion 2035) to collaborate on regional conveyance alignments, recharge facility development and use, groundwater basin management, and water allocations/rights.
   - Explore options to improve feasibility (e.g., cost-effectiveness) of beneficial reuse of recycled water within Antelope Valley and Upper Santa Clara River areas of the County.
   - Support the use of LA County Flood Control District (LACFCD) facilities to convey water supplies across the County while mitigating known issues (e.g., Colorado River/quagga mussels).
   - Support ongoing research on the ability to control diversion of wet weather flows into controlled wastewater systems for consolidated treatment and reuse.
   - Promote use of smart technology to assess capacity and ability of wastewater systems to accept stormwater diversion flows in existing and planned infrastructure.

- Promote use of both regional local supply development and distributed local supply development (e.g., cisterns, graywater systems) and stormwater capture.

4. **Managing salt and concentrate regionally:** Salt is a natural element found in soil and water, but human practices have dramatically increased salinity in soil and water. Salty water damages the environment and municipal water systems. Salt degrades water quality, limits the way water can be used, and interferes with the operations of water and wastewater treatment plants. Salty water in LA County is discharged from industry, groundwater cleanups, desalters, and purified water concentrate. Concentrate, a byproduct of the advanced water treatment of wastewater, is a frequently overlooked project component that can be challenging to manage. Currently in LA County, Advanced Water Treatment (AWT) is either collected and co-conveyed with other wastewater streams to a wastewater treatment facility or conveyed for direct discharge into the Pacific Ocean through wastewater treatment outfalls (e.g., LA Basin). Further expansion of regional recycled water programs in LA County will require extensive planning, management, and regulatory frameworks that continue to provide feasible options for concentrate management.
   - Support existing efforts on salinity management, including Delta Conveyance project implementation to improve imported water quality, Colorado River salinity management efforts, salinity management plans for LA County groundwater basins where applicable, salinity source control, and research and testing of innovative treatment, minimization and management technologies.
   - Explore alternatives to restrictions on high total dissolved solids (TDS) discharges to County sewer systems and variable salinity water courses (e.g., Ballona Creek or Dominquez Channel), including measures to minimize high TDS discharges to allow for salt cleanup projects and recover treatment costs for unavoidable salinity discharges (e.g., a salt surcharge).
   - Explore development of regional conveyance for concentrates, including potential co-location of concentrate pipelines with planned purified recycled water conveyance pipelines, considering treatment, discharge permitting, and actual costs.
   - Collaborate across water supply, groundwater cleanup, and recycled water programs to work with LARWQCB, Lahontan RWQCB, and SWRCB on concentrate management permitting and regulations, including the LA Basin, Santa Clarita Valley, and the Antelope Valley.
   - Support regulatory frameworks that continue to allow ocean discharges of concentrates.

5. **Leveraging regional groundwater storage potential:** Meeting all of LA County's water demands depends upon the use of groundwater basins that can provide water year-round independent of precipitation events and surface flows. With climate change, a decrease in the frequency of precipitation events and snowpack storage as well as potential increases in the intensity of local precipitation events will necessitate enhancements in the collective ability to capture and store larger volumes of water for use over extended periods of time. In addition, new regional water recycling programs will produce a consistent large volume of supply that will need to be stored in groundwater basins for use when needed. Recharge and storage potential varies across groundwater basins throughout LA County. Since groundwater basins do not necessarily underly the communities with the greatest needs for dry year storage, consideration of groundwater storage on a regional scale is needed.
   - Encourage regional banking agreements that promote increased groundwater replenishment and production, as well as consider means for accessing groundwater by areas that don't have meaningful groundwater storage potential.
   - Support existing groundwater banking initiatives.
   - Support regional Antelope Valley groundwater banking potential through existing partnerships with Antelope Valley-East Kern Water Agency (AVEK), Santa Clarita Valley Water Agency (SCV Water), and MWD.

- Expand regional Antelope Valley groundwater banking partnerships by assessing alternatives to mitigate capacity constraints of using imported water aqueducts connecting to LA Basin suppliers.
- Develop a task force to discuss local water rights concerns and basin adjudication-based exporting restrictions.
- Facilitate improvements in infrastructure connectivity for improved regional distribution flexibility, including providing groundwater access to areas that don't overlie basins.
- Support conjunctive use programs that store wet year imported water supplies in groundwater basins for dry weather use.
- Form partnerships that facilitate regional in-lieu programs to fully leverage stored imported water resources within the County.

6. **Collaborating on water quality needs and treatment technologies:** The cost of treating and maintaining water quality for potable use is a significant portion of the overall water rate passed along to customers. As new constituents of concern are regulated, and water supply sources and systems become more integrated, new challenges and innovations in water quality treatment and management processes have emerged. In many areas within LA County, the treatment of locally generated, drought-resilient supplies, such as recycled water and groundwater, to a level of potable quality can drive the unit cost above importing water. This creates a barrier to local supply development. Therefore, improving the efficacy and cost-effectiveness of meeting water quality needs is a key strategy toward enhancing the beneficial use and reliability of regional water supplies.
    - Form LA County Treatment Collective to facilitate partnerships between agencies within LA County looking to improve water treatment efficiency and cost through piloting new technologies, working with drinking water regulators, sharing of information, lab sharing for emerging contaminant sample analysis (e.g., PFAS/PFOA), and leveraging of staff and funding resources.
    - Collaborate on negotiations with LA Regional Water Quality Control Board (LARWQCB) on National Pollutant Discharge Elimination System (NPDES) permitting and future water quality regulations.
    - Advocate for State PFAS/PFOA source control policy.
    - Share expertise on potable system operations and efficiencies to address common potable water quality issues (e.g., nitrification, taste/odor control, and algal blooms).
    - Enhance information, ideas, and data sharing between regional recycled water treatment programs within and outside of LA County including research on new and advanced treatment technologies, piloting, and potentially partnering on demonstration projects, public outreach messaging, and water and wastewater treatment plant operator training.
    - Facilitate partnerships on regional treatment funding and financing projects, prioritizing projects that can increase supply diversity and improve water quality and resilience of small at-risk systems.

7. **Enhancing cost-effectiveness of producing impaired groundwater:** Improving production, cost-effectiveness and accessibility to unused groundwater supplies (aka "stranded" or "extremely impaired" groundwater) will allow for increased groundwater production and supply reliability for many communities across LA County. The ability to access additional groundwater supplies could reduce demands on basins at risk for over pumping and provide operational flexibility.
    - Support Water Replenishment District (WRD)-led brackish groundwater desalination program.
    - Support LADWP's North Hollywood West Groundwater Treatment Project.

- Form LA County Treatment Collective to facilitate partnerships between agencies looking to improve water treatment efficiency and cost through piloting new technologies, working with drinking water regulators, studying emerging contaminants (e.g., PFAS), sharing information, and leveraging staff and funding resources.
- Identify poor water quality development zones within LA County basins without production enhancement plans.
- Advocate for funding for poor water quality development zones.
- Facilitate partnerships to create new regional treatment opportunities that can address emerging contaminants as well as existing shared and unmet treatment needs.
- Explore opportunities to use existing pump and treat remediation operations as potential groundwater supply.

8. **Protecting coastal groundwater basins from seawater intrusion:** Groundwater basins located along LA County's coastline will need continued protection to limit the continued pressure of seawater intrusion and sea levels rise is predicted to further increase intrusion potential.
    - Support existing LA County Public Works Alamitos, West Coast, and Dominguez Gap Barrier Projects.
    - Determine vulnerability of barrier programs to seawater intrusion as a result of future sea level rise and evaluate opportunities to optimize barrier system operations.
    - Explore partnership opportunities to create further investments and increase recharge potential at barriers to enhance protection and increase groundwater supply.

9. **Facilitating regional groundwater recharge understanding and initiatives:** Although LA County is home to several significant regional groundwater recharge facilities and programs, there is a significant amount of uncaptured stormwater, recycled water, and wet year imported water that is not yet recharged into local basins. Groundwater basins provide large-scale seasonal and annual storage that creates emergency resilience and enhances long-term reliability. This strategy focuses on working collectively to ease common barriers to maximizing groundwater recharge projects within LA County.
    - Develop countywide Groundwater Recharge Considerations and Guidelines.
    - Create consolidated groundwater basin geohydrologic interconnections, flows database, and information sharing system for use to develop regional storage and groundwater management partnerships.
    - Facilitate discussions with the Environmental Protection Agency (EPA) on limiting risk to recharge projects that interact with remediation operable units to maximize recharge and enhance regional groundwater supply and production.
    - Collaborate on a regular basis between jurisdictions to perform outreach, permitting, and access agreements for groundwater facilities (e.g., recharge and well sites) and coordinate on recycled water projects.
    - Streamline Section 404 and Section 408 permits in collaboration with US Army Corps of Engineers (USACE).
    - Standardize modeling groundwater recharge supply benefits estimation processes.
    - Conduct regional analysis and documentation of groundwater basin interconnectivity and flows across LA County on how water flows between artificial basin boundaries.
    - Facilitate regular coordination between groundwater basin managers to benefit from information sharing and Basin interconnectivity mapping.
    - Support efforts to remove invasive species to improve groundwater recharge.
    - Support LA County's Sediment Management Strategic Plan to maximize recharge facility capture and infiltration rates.
    - Support MWD and LACSDs Regional Recycled Water Program.

- Support City of LA's Hyperion 2035 and Operation NEXT recycled water programs.
- Support opportunities for MWD and City of LA recycled water program partnership, interconnections, and leveraging resources.

10. **Facilitating natural infiltration of precipitation:** Small-scale, local stormwater infiltration projects may not generate large volumes of supply individually. Collectively, they can work to increase the overall permeability in the County, potentially allowing for localized supply development while improving environmental water quality. Certain programmatic initiatives to increase decentralized stormwater recharge are managed locally and through the County's Safe Clean Water Program. Further regional collaboration between stormwater and groundwater managers will help to facilitate implementation and maximize benefits.
    - Support LA County's Safe Clean Water Program and utilize standardized groundwater recharge benefit calculations for stormwater capture and infiltration projects.
    - Support local Enhanced Watershed Management Plan (EWMP) / Watershed Management Plan (WMP) projects and stormwater capture master plans.
    - Create recharge practitioner network to facilitate recharge partnerships between stormwater and groundwater mangers by enhancing understanding of stormwater/ surface water rights and stormwater.
    - Conduct decentralized facility infiltration water quality impact analysis for groundwater basins to determine parameters for facility implementation and/or mitigation for changes to water quality.

11. **Providing regional support for small, at-risk water systems:** Although small, at-risk systems in LA County can be regulated by multiple entities, the State Water Resources Control Board (SWRCB) Division of Drinking Water is the only entity currently documenting underperforming systems through reporting of maximum contaminant level (MCL) exceedances (e.g., SAFER program). These types of datasets often represent temporary and incomplete water quality data and do not aid in identifying systems that are at-risk of providing poor water quality, unreliable supply, and excessive cost to rate payers. Conversely, there is little to no regulatory oversight to ensure that water systems are receiving enough revenue to adequately maintain their assets. Currently, the primary strategy employed by the State to mitigate underperforming water systems is consolidation into larger, adjacent agency systems. This strategy is not always possible given the isolated locations of some small water systems (e.g., those in the Antelope and Santa Clarita Valleys) nor necessary in-lieu of supportive strategies. A regional program to identify and support smaller at-risk systems within LA County, including independent systems and private wells, could allow for better understanding of each system's unique needs, leverage funding opportunities, and tailor strategies to create longer-term resilient and high-quality supplies.
    - Identify "at-risk" systems and technical, managerial, and financial (TMF) needs by culling data from County Department of Public Health's ongoing system inspection (i.e., annual sanitary surveys) and assessment program reports, drawing upon EPA TMF assessment guidance.
    - Develop program to map, monitor, address, and alert the public to drinking water quality issues that originate from on-site and systemic plumbing issues (OurCounty Action 19), including monitoring for color and odor post-distribution.
    - Support existing and new mutual aid agreements (e.g., California Water/Wastewater Agency Response Network [CalWARN]) and programs (e.g., WRD's technical assistance program), that help small water systems apply for and implement grant-funded projects.
    - Initiate program to promote small water system resiliency, not just near-term emergency needs, with participation on a voluntary basis.

- Encourage small water systems to take a range of resiliency actions (e.g., create Water Master Plan and asset management program, ensure workforce succession planning, establish and check interconnections, ensure emergency storage, enhance cybersecurity, acquire emergency generators, etc.).
- Incentivize collaboration between large and small agencies, retailers, and wholesalers to accelerate project readiness for near-term funding opportunities (e.g., federal Infrastructure Bill).
- Establish a mentoring/education program for small system Board members.

12. **Collaborating on wildfire prevention:** LA County has significant wildland-urban interface areas that regularly experience wildfires and associated impacts to water resources and infrastructure, headwaters, and ecosystems. Collaboration between water and land management entities on sharing information, planning ahead, and implementing measures can leverage regional resources to help prevent the frequency, intensity and spread of wildfires.
    - Organize a regional wildfire prevention collective that brings together land and water managers to develop, seek funding for, and implement mutually beneficial watershed management programs and projects (e.g., fuel reduction, invasive species removal) for both riparian and upper watershed areas.
    - Create a programmatic 404 permitting tool/process with the USACE for fuel reduction measures that applies to the entire County.
    - Collaborate on identifying and pursing funding opportunities to support regional wildfire prevention programs.
    - Enhance existing low water use landscaping education programs to include fire-scaping with information on species that contribute to wildfire spread (e.g., eucalyptus, palms, rosemary), fire starts, firesafe planting standards, landscaping choices, and water collection systems for use during fires.
    - Share information on protecting water resource systems from fire impacts.
    - Promote coordination between firefighting and water management agencies on the timing and location of fire retardant application as a potential for PFAS/PFOA runoff into streams and spreading grounds, and support existing firefighting efforts to minimize dispersal in riparian areas.
    - Support land and forestry management efforts on wildfire prevention in upper watershed areas as well as along transportation and utility corridors to remove ignition sources.

13. **Managing invasive species in riparian areas:** Invasive species (e.g., Arundo donax, tamarisk) within riparian areas of LA County contribute to wildfire ignitions and spreading in addition to water source depletion. Removal of invasives and replanting with native species is a time sensitive and cost intensive process that can greatly benefit from regional collaboration. Removal of invasive species can be facilitated by wildfires and flooding if additional removal measures can be taken immediately to fully remove and replant within damaged areas.
    - Enhance existing Weed Management Area for Greater Los Angeles to serve as an overall invasive management decision team with tiers of information sharing to support coordination among agencies (permitting, resource sharing, etc.) with state and federal involvement and an invasive land coordinator.
    - Share information on areas with invasive species of mutual concern across LA County as well as programs and measures being taken to reduce invasives in riparian areas.
    - Initiate an annual regional invasive species removal program and post-fire program to reduce repropagation and further spreading and create biomass fuels.
    - Employ a trained invasive species response force that can quickly mobilize to further invasive removal after wildfire and flooding events.

- Collaborate with USACE, U.S. Forest Service, State Parks, and National Parks in invasive species removal in watershed areas managed by water and flood control agencies.

14. **Facilitating sediment management and debris removal from flood control facilities:** Post-wildfire sediment and debris in LA County is currently captured and managed by LACFCD using a network of debris basins, reservoirs, and flood control channels – which also serve to recharge local surface flows into groundwater basins. Regular and enhanced post-wildfire maintenance (e.g., removal of debris and management of sediment) of these facilities is critical to their ability to maximize post-fire protection and regional water supplies but is often challenging given regulatory and community constraints.
    - Support implementation of the LACFCD Sediment Management Strategic Plan.
    - Advocate for regulatory policies that provide more flexibility for removal of vegetation and therefore sediment accumulating in debris and spreading basins.
    - Facilitate collaboration between LACFCD and communities along sediment removal transport routes to maximize sediment disposal.
    - Implement erosion control (e.g., application of mulch, native planting, other bioengineering techniques) in areas where invasives have been removed and/or native vegetation has been destroyed.
    - Improve modeling and weather forecasting to predict the risk of sediment-laden flows after wildfires.
    - Improve understanding of how debris flows and fires impact percolation rates.

15. **Enhancing resilience of water supplies and systems under emergency conditions:** Water systems in LA County can be impacted from a range of sudden emergency conditions such as infrastructure failure, source water quality changes, seismic events, cyber-attacks, and wildfires. While much of the ability to meet these challenges is highly localized and effectively managed by local water, wastewater, and flood control agencies, there are opportunities for agencies to benefit from regional collaboration in meeting shared challenges and conducting proactive planning to mitigate against impacts to facilities and services.
    - Facilitate partnerships on infrastructure interties to allow for access to alternate supplies.
    - Support local agency water infrastructure resilience investments and associated State funding.
    - Support and expand local agency participation in WaterISAC to access the latest cybersecurity strategies.
    - Create a regional document for wildfire prevention/management strategies for water agencies' properties (e.g., fire proofing, defensible space, brush clearance, distance from forest habitat, ember loading resilience, limiting overgrown vegetation, firefighting helicopter pads)
    - Encourage all LA County agencies to adopt and implement hazard mitigation plans, including shared, regional fire management strategies for agencies located within urban-wildland interfaces.
    - Support the development of a countywide climate vulnerability assessment that addresses physical infrastructure vulnerability and use it to guide priorities for investments in building upgrades, infrastructure improvements, and zoning and code changes (OurCounty Action 28B).
    - Support EPA study to analyze benefits of watershed health expenditures on water supply.
    - Create a regional map of repeated fire clusters to identify higher risk facilities in need of greater fire protection.
    - Advocate for modifications to existing air quality regulations that allow water agencies run emergency generators longer during fire events to maintain water supply.

16. **Coordinating with state and federal regulatory and funding agencies:** Local and regional water agencies are not able to allocate funds to initiatives that do not benefit the ratepayers within their respective service areas. As such, the funding necessary to maintain a regional support program and implement any critical capital or operations and maintenance (O&M) investments for at-risk systems will need to be funded by governmental entities with a larger mandate of enhancing drinking water equity. In addition, local agencies do not have the authority to mandate at-risk systems to participate in support programs and/or implement projects to enhance resilience. As such, regional coordination on advocacy support of state and federal regulatory and funding agency programs will be critical to helping smaller at-risk agencies provide clean, safe drinking water at affordable water rates.
    - Coordinate with the state regulatory agencies to identify at-risk systems (e.g., SAFER and Human Right to Water).
    - Support SWRCB consolidation mandates, when appropriate.
    - Advocate for SWRCB assistance in identification of systems with taste, color, and odor issues that may already be meeting secondary MCLs.
    - Partner with small at-risk systems on identifying and applying for outside funding programs to make investments in needed capital and O&M projects as well as to provide incentives for property owners to upgrade on-site plumbing to improve quality and efficiency (e.g., Integrated Regional Water Management Plan (IRWMP), DAC Involvement Program, SWRCB Countywide and Regional Funding Program).