



One Water
SANTA CLARA COUNTYWIDE FRAMEWORK

**EXECUTIVE
SUMMARY**

ONE WATER

Integrated Watershed Master Planning

Water is an essential resource, serving multiple critical purposes for the community. As droughts, floods, population growth, and other changing conditions all place increasing demands on California’s water resources, Valley Water recognizes the importance of an integrated and equitable approach to water resources management. This approach will enable the organization to efficiently fulfill its mission and Board policies.

Valley Water’s central challenges in the years ahead are to deliver reliable water supply, maintain and improve flood risk reduction, and preserve and enhance natural resources. To do this well, Valley Water needs a decision-making process that enables it to strategically allocate limited resources to those actions that achieve its mission and service to the community most efficiently. The One Water planning effort described in this report meets this need and provides an important new roadmap for integrated resource planning on a watershed scale.

Development of the One Water Countywide Framework engaged stakeholders at all levels and stages of a multi-year planning process. Stakeholders included local cities and county agencies; regional, state and federal resource management and regulatory agencies; scientists and academia; representatives of cultural and ethnic interests; as well as environmental advocacy groups, chambers of commerce, water retailers, and neighborhood and volunteer organizations.

Valley Water’s One Water planning effort consists of a Countywide Framework (this report) and individual watershed plans for the Coyote, Guadalupe, Pajaro, West Valley, and Lower Peninsula watersheds, which Valley Water hopes to complete as early as 2023. The framework will guide development of the watershed plans as it sets out goals, measurable objectives, and strategies for prioritizing actions that will improve watershed health. Improvements to watershed health will be based on the extent to which watershed objective metrics measure up against achievable targets.

VISION

One Water’s vision and goals were developed to support both Valley Water’s mission and Board governance policies, which in part call for integrated water resources services for the community. The vision is supported by integrated goals and measurable objectives to optimize Valley Water’s management of water resources for Santa Clara County.

One Water Vision

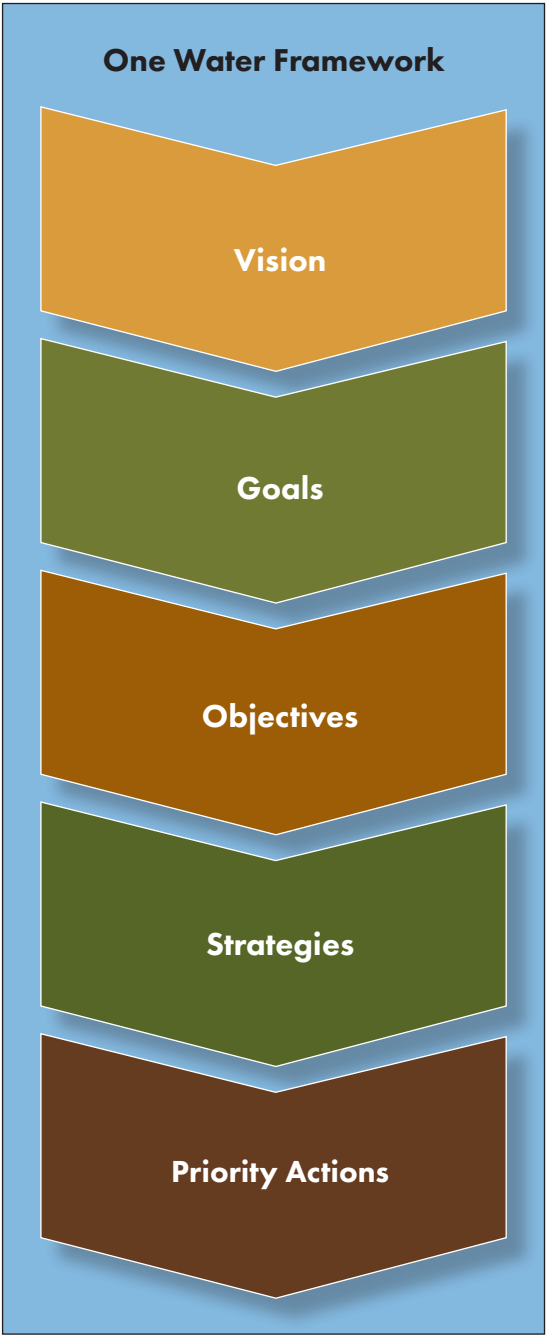
Manage Santa Clara County water resources holistically and sustainably to benefit people and the environment in a way that is informed by community values.

GOALS

To reach the long term One Water vision, Valley Water developed goals that go beyond individual management disciplines. The resulting goals address and integrate all aspects of water resources management:

1. RELIABLE WATER SUPPLY

This One Water reliable water supply goal aims to provide enough clean water for both people and the environment. Under this goal, Valley Water seeks to ensure that its supplies for people and the environment are reliable under uncertain conditions such as climate change, drought and changing laws. For Valley Water this means to efficiently manage the diverse supplies and substantial infrastructure already in place and continuing to aggressively implement and promote its water conservation program with the community to manage demand.



2. IMPROVED FLOOD PROTECTION

This One Water flood protection goal aims to reduce flood risk and protect the community from flooding by working with nature to the greatest extent possible. For Valley Water, this means enhancing stream corridors to support the conveyance of flood flows while at the same time providing benefits for natural communities and ecosystems. The goal of improving flood protection includes maintaining existing facilities, improving facilities that require additional risk reduction, and keeping the community prepared and informed of potential flood risks.

3. HEALTHY AND RESILIENT ECOSYSTEMS

This One Water goal underscores the importance of healthy and resilient watershed, riparian and tidal ecosystems, and the species that rely on these habitats to thrive. Making ecosystem health more relevant to every management decision is a key concept in One Water planning. For Valley Water to effectively manage ecosystems, it will be important to protect, enhance and sustain these important natural resources.

OBJECTIVES and METRICS

The One Water planning framework comprises five objectives, each with individual metrics and targets. Valley Water designed these objectives to meet the framework's three goals and achieve the One Water vision.

In developing the five One Water objectives, Valley Water provided meaningful opportunities for diverse Santa Clara County communities to engage in the planning process. Valley Water's commitment to community engagement is woven throughout the five One Water objectives. As such, it is not represented as an end in itself but rather as a means to gathering community support for future priorities that protect, enhance and sustain water resources.

Each of the five objectives includes specific attributes, which are the defining characteristics that describe the objective (see Chapter 3). Each attribute in turn contains a series of metrics, which are parameters that can be measured to track the status of the attributes. To assess progress, each metric will be assigned a target, which is an achievable end result to maintain or strive for within each metric.

One Water Plan Objectives



A: Protect and Maintain Water Supplies



B: Protect and Improve Surface and Ground Water Quality



C: Reduce Flood Risk

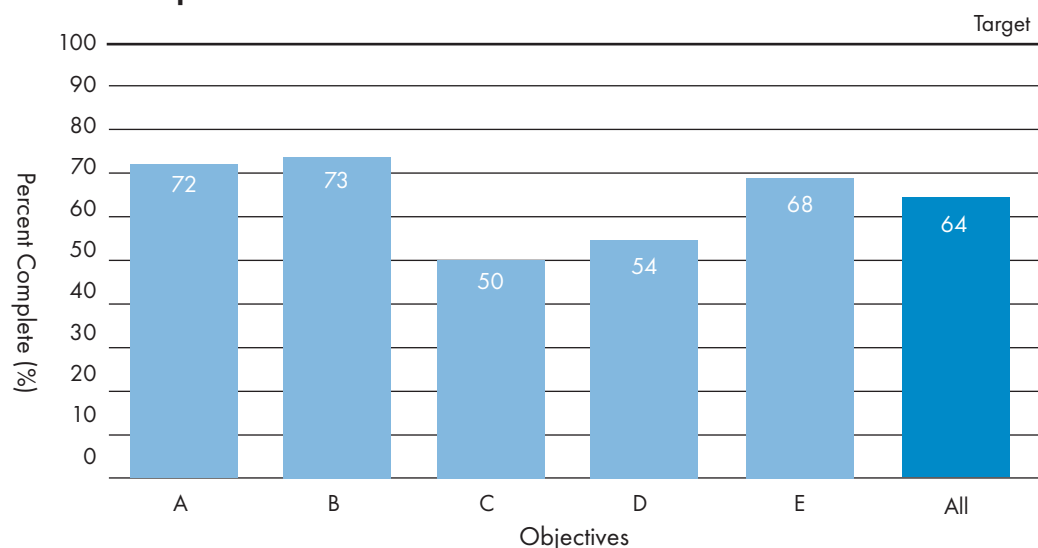


D: Protect, Enhance and Sustain Natural Ecosystems



E: Mitigate and Adapt to Climate Change

One Water Objective Results



Draft Data for One Water Objectives (Countywide and Coyote Watershed). Note: Some metrics are still being evaluated and are not included in the results. A (Water Supply), B (Water Quality), C (Flood Risk Reduction), D (Habitat), E (Climate Change)

METRIC EXAMPLES FOR FRAMEWORK

| | |
|--------------------|--|
| Objective A | Metric A.1.1 - Operational capacity at District reservoirs |
| Objective B | B.3.1 - Trends in concentrations of nitrate, chloride and total dissolved solids in index wells |
| Objective C | C.2.1 - Number of developed parcels, including critical facilities, subject to frequent flooding (25-year flood event) |
| Objective D | D.2.4 - Number of human-made in-channel barriers that hinder steelhead trout movement |
| Objective E | E.2.2 - Volume of water supply treated by green Infrastructure projects |

Complete metrics table in Chapter 4

APPROACHING MANAGEMENT CHALLENGES IN A MORE INTEGRATED WAY

The One Water approach identifies challenges to successful water resources management ranging from drought and pollution to the destruction of riparian habitats. Meeting the water resources needs of the community through management of these challenges and constraints is often considered by planning area (see table). For Valley Water, these have included water supply, water quality, flood protection, and ecological and landscape resources.

The One Water approach offers a decision-making process that helps address management challenges through multi-benefit projects or portfolios of coordinated activities. This approach offers a few key strengths in addition to meeting the outlined goals and objectives as it defines the process and prioritizes activities.

One strength of Valley Water's One Water approach is the opportunity to revisit how data is collected and utilized to prioritize activities. For flood risk, as an example, the new approach updates the Waterways Management Model criteria used in the past to include additional important factors that characterize the true risks of flooding for the community. Some of these factors are health and safety issues like flood depth and velocity, the varied social vulnerability of the flood prone communities, actual flood history, and business risk exposure.

Another strength of the One Water approach is a more comprehensive perspective on ecological resources. Efforts to protect threatened and endangered species have long created a management focus on specific species of flora and fauna. One Water expands from this focus to address habitats and natural communities, and to support the approach taken by the Santa Clara Valley Habitat Plan, which covers much of the county landscape. This broader area of management interest allows for improvements to overall habitat that will reduce invasive species and support threatened and endangered species, as well as other native species.

A third strength of One Water's coordinated planning framework is the strong guidance on integrated water management it will provide to each of its five supporting watershed plans. These more detailed action plans will then serve as Valley Water's flood management and stewardship plans at a watershed scale.

Taken as a whole, One Water planning provides an opportunity to address multiple management challenges in parallel, and within an integrated, watershed-based framework. That framework, with its vision, goals and objectives will therefore provide the guidance for future prioritized work.

DIVERSE CHALLENGES CALL FOR COORDINATED ACTION

PLANNING AREA

CHALLENGES

Water Supply



- Multi-year droughts
- Hydrologic variability
- Declining imported water reliability
- Increasing demand
- Complex operating environment
- Aging infrastructure
- Invasive species impacts

Water Quality



- Impervious surfaces
- Urban and agricultural runoff
- Homeless encampments
- Legacy mercury
- Climate change impacts

Flood Protection



- Continued risk of flooding
- Expense of future projects
- Aging infrastructure
- Changing climate
- Increasing development, decreasing buffer zones
- Impervious surfaces
- Erosion and sediment management for capacity
- Rising sea levels and permit acquisition

Ecological & Landscape Resources



- Limited and costly land for trails and open space
- Recreational impacts on habitat and water quality
- Maintenance impediments and costs
- Planning for future flood protection
- Ongoing land use changes
- Altered drainage network and hydrologic regime
- Destruction and disconnection of riparian habitats
- Non-native species
- Loss of sediment and woody debris
- Habitat fragmentation
- Ecological adaptation to climate change

Baylands



- Rising sea levels
- Weak and aging levees
- Sediment deficit
- Mercury mobilization
- Under-insured businesses

SETTING PRIORITIES AND TAKING ACTION

The One Water Framework provides overarching countywide guidance for five subsequent watershed plans in Coyote, Guadalupe, Pajaro, West Valley, and Lower Peninsula Watershed areas. The process for applying the framework includes the following steps (see diagram):

- Describe the landscape and its water resources history (Step 1).
- Establish the current baseline conditions for One Water objectives (Step 2).
- Identify which are the most challenging objectives to meet in terms of targets, and thus potential areas of improvement (Steps 3 and 4).
- Prioritize those actions that most efficiently and effectively improve conditions and meet the highest needs (Step 5).
- Select actions for programming and implementation through funding plans, grants, partnerships, and other means. Follow up with appropriate construction, maintenance, and management actions (Step 6).
- Carry out monitoring and reporting on progress of actions toward meeting targets (Step 7).

One Water watershed plans are not designed to be static, one time documents; rather, they are anticipated to be updated every 5 years. This important follow-up should include updates of metrics and targets information supporting each One Water objective. This will be done in part through the use of the San Francisco Estuary Institute data tool EcoAtlas, which now has a module designed to track One Water metrics and targets. Such updates would in turn help to demonstrate progress being made in improving watershed health, reducing flood risk, and ensuring reliable water supply.

Both the Framework and the individual plans will not only guide Valley Water but also serve as a resource for local government, NGOs, community groups, and other partner organizations.

Beyond the individual watershed plans, the Framework itself provides a list of potential projects, programs, policies and partnerships which are appropriate at a countywide scale. Examples include: Continue Coordinated Effort on the Shoreline Study, Expand Invasive Plant Removal Program, Implement Stormwater Resources Plan, and Proactive Right of Way Identification and Acquisition. These actions may be addressed countywide or implemented piece-by-piece at a watershed-scale.

WATERSHED PLANS SCHEDULE

2021
COYOTE

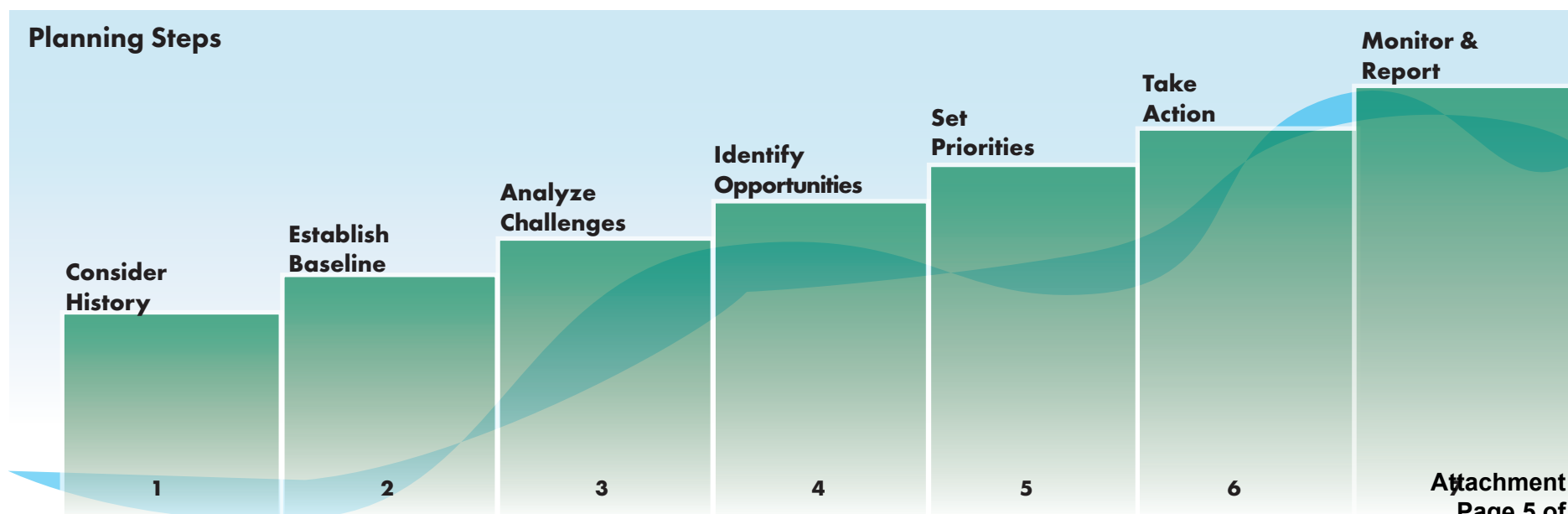
2022
GUADALUPE

2022
PAJARO

2023
WEST VALLEY

2023
LOWER PENINSULA

Planning Steps

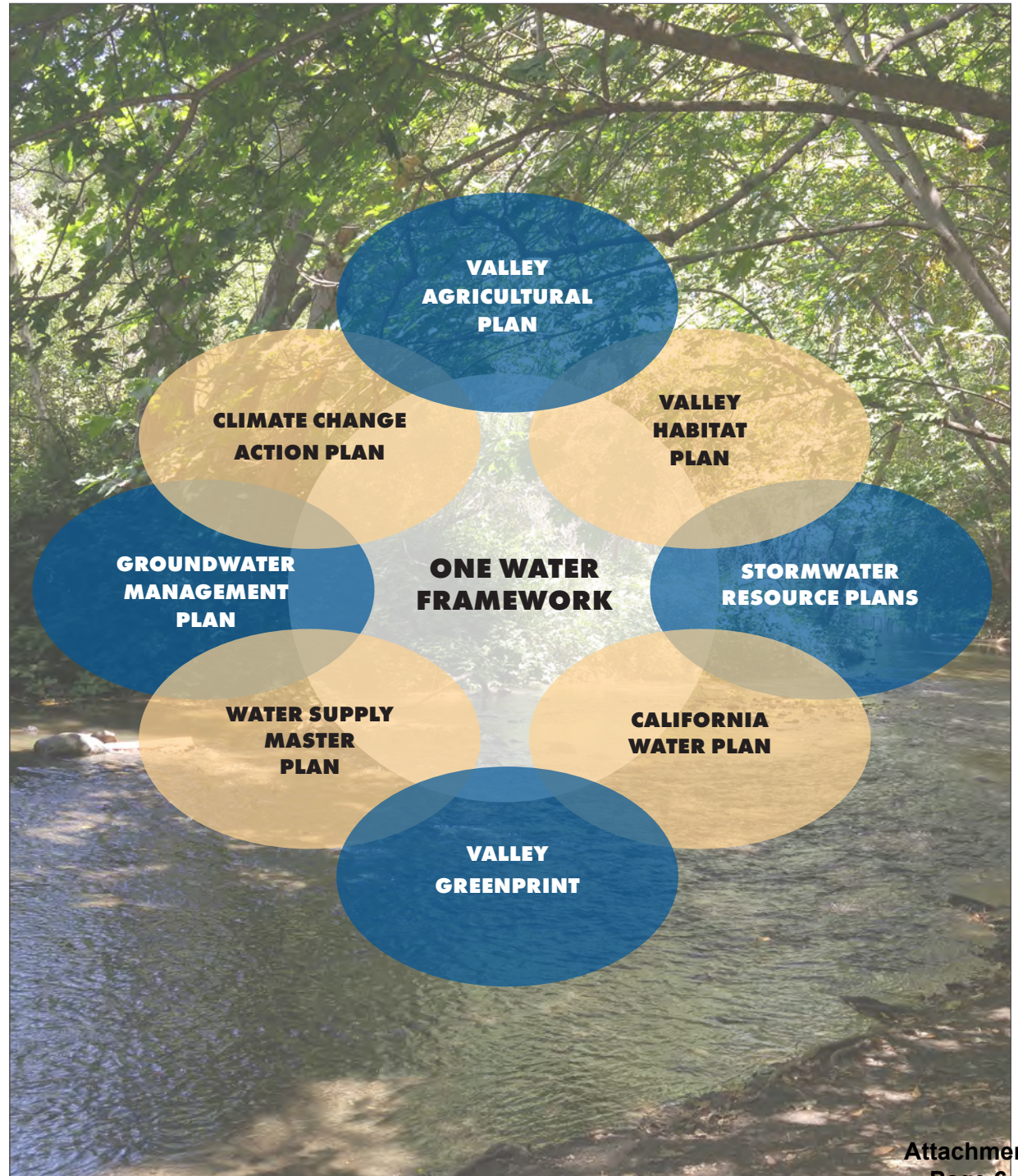


PLANNING THROUGH PARTNERSHIPS

The One Water Framework can be most successful through robust participation of Valley Water staff, as well as partner agencies and organizations. Close coordination with existing plans and programs allows One Water to build on successful endeavors and incorporate relevant expertise, and it also allows for One Water and its vision to become integrated into corresponding planning and implementation efforts.



Long range planning at the local, regional, and state level covers many of the same topics as One Water and gives Valley Water a path to addressing larger regional and statewide challenges at the local level, including climate resilience, reliable water supply, and stormwater resource management. As Valley Water rolls out the One Water Framework and subsequent watershed plans, it will strive to gain support for improved water resources management and watershed conditions.



WEAVING COMMUNITY AND EQUITY INTO WATERSHED PLANNING

Valley Water has remained committed to providing meaningful opportunities for community engagement in watershed planning throughout the development of the One Water Countywide Framework. This commitment will be further reflected and refined as watershed plans seek to address both one water objectives but also make them locally relevant to the people living in each watershed. By engaging stakeholders throughout the community, Valley Water can build on their strengths and expertise to create a plan that speaks to all of our water resource needs.

Equitable access to clean water and management of our shared water resources will be an ongoing challenge that One Water can help address. As new challenges such as climate change and income inequity mount in the years ahead, Valley Water will continue to deliver clean water, reduced flood risk, and resilient healthy landscapes to all the people of Santa Clara County.

One Water brings together Valley Water's mission, its policies, its priorities, and provides a long-term management plan to meet the needs of our community. Through this endeavor, Valley Water seeks to balance the management of all water and those that depend on it now and into the future.



Community meeting presenting proposed interim flood protection improvements along Coyote Creek. Photo: Valley Water

What's included in the One Water Framework?

- Overviews of past and present conditions including detailed maps of water supply infrastructure, flood control channels, descriptions of sensitive habitats and species, and discussion of management impacts on local communities, agriculture, groundwater, trails, conservation efforts, and other current topics.
- Framework goals, objectives and metrics spelled out.
- Examples of integrated projects already occurring on a countywide scale including the restoration of the South Bay salt ponds, the Shoreline Study for coastal flood protection levee on the bayshore, a plan to capture more stormwater as a resource, efforts to clean up homeless encampments, near-water recreation and hazardous tree abatement programs, and more.
- Clear guidance for more detailed watershed plans. By way of example, appropriate One Water actions may include projects such as expanded riparian habitat, offstream flood detention, and improved fish habitat and passage.
- Reference appendices on special status plant, animal and fish species, as well how One Water relates to other Valley Water and partner plans, regulations, and policies.

Watershed-Based Planning Structure



Executive Summary: One Water, Santa Clara Countywide Framework, Valley Water (186 pages)

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