

Section 4: Water and Land Use Planning

Water management and land use are inherently linked: activities and processes that occur on the land directly affect the use and movement of water within a watershed. These linkages between the hydrologic cycle and land use, and between water management and the ability to support particular land uses, are important to consider when making decisions about either land or water. The California Department of Water Resources (DWR) recognizes these linkages and requires that integrated regional water management (IRWM) plans describe the relationships between planning fostered by the regional water management group and local water and land use planning. This section describes how land use planning and decision-making are coordinated with water management planning and implementation within the Westside Sacramento Region (Region) and highlights opportunities for improved coordination.

As described in Section 2.1, much activity in the Region since the mid-1800s has altered the landscape significantly. These major changes in land use, including large conversions to agriculture and development of several towns and cities, were made possible by development of systems to manage water and redirect it toward the new uses. These changes have provided considerable human benefits, but they come with tradeoffs and in some cases have caused negative impacts to environmental health and other populations within the Region. As human activities within the Region have intensified, competition for available land and water supplies has also intensified.

More recently, several land and water management organizations have increased their collaboration and cooperation to try to support a growing economy within the Region in a way that is sustainable and preserves the values of the Region's citizens.

This *Integrated Regional Water Management Plan* (Plan) for the Region utilizes information from many other planning documents developed by various organizations throughout the Region. The Plan does not replace or supersede local planning; rather, it aggregates and synthesizes information from numerous local plans and perspectives. This Plan is consistent with and supports locally led planning and implementation of integrated water management. Appendix C provides additional detail about the

planning documents that informed Plan development.

4.1 Plan Relationship to Local Water Planning and Implementation

This Plan will support local water management organizations in making local decisions and taking local actions that help accomplish a shared vision for the whole Region. The Plan also will help local organizations cooperate more effectively on actions they can accomplish better together than alone.

In the Region are 109 local organizations and Tribes and six state and federal organizations who have authority and/or responsibility for managing water resources, including water supply, water quality, flood protection, and watershed management. A subset of these organizations joined together to form the Westside Regional Water Management Group (RWMG) (see Section 1). The RWMG members have presented their perspectives along with inviting participation by all other local water management organizations during development of the Plan. The governance approach developed for Plan implementation (see Section 11) will provide continuing opportunities for local water management organizations to discuss and coordinate planning and implementation actions within the context of the Plan and its updates.

In addition to the activities and forums of the Westside RWMG, the Water Resources Association of Yolo County (Yolo WRA), a member of the RWMG, provides a regional forum to coordinate and facilitate solutions to water challenges and opportunities in Yolo County. The Yolo WRA currently has 10 member agencies, which include agricultural water suppliers, urban water suppliers, groundwater managers, and flood protection providers.

Information and perspectives from local water planning are woven throughout the Westside IRWM Plan in several layers of detail. Plan development involved incorporating elements of local water resource management planning documents along with information gleaned from groundwater management (GWM) plans, county-level IRWM plans,

and general plans. For example, the larger cities/agencies that deliver more than 3,000 acre-feet per year (AFY) of potable water or have more than 3,000 connections are required by state law to prepare urban water management plans (UWMPs). The UWMPs must include 20-year water demand forecasts and descriptions of water conservation programs intended to meet statewide goals to reduce per capita urban water use 20% by the year 2020; these forecasts and conservation planning efforts have been incorporated into this Plan. In another example, several water plans focused on improving conditions in Lake County, such as the *Lake County Water Inventory and Analysis* and the *Clear Lake Integrated Watershed Management Plan*. These and dozens of other water resources planning documents provided the basis for understanding the complex water supply and demand conditions in the Region, developing the water quality assessment, and identifying flood management systems. In particular, the information developed in such local planning activities was invaluable to development of the content in Section 3, "Existing and Future Conditions."

Development of the water management challenges and opportunities (Section 5) and Plan goals and objectives (Section 6) involved careful consideration of information developed through local water planning. For example, goal 8, *promote reasonable use of water and watershed resources*, and goal 10, *provide reliable water supplies of suitable quality for multiple beneficial uses within the region*, emerged from the water management challenges and goals identified in local planning documents.

The Plan's sections on resource management strategies (Section 7) and project review and prioritization (Section 8) respond to the Plan's identified challenges and opportunities and the related goals and objectives. As the Plan was developed, each portion drew on information from local water management plans as well as current perspectives offered by local planners themselves. Furthermore, Section 10, which addresses coordination among involved entities, includes recommendations on regional coordination to address local water management challenges and climate change mitigation.

SBx7-7 also targets reduced urban water use, though in the Region, urban water use is a small portion of overall demand. SBx7-7 sets a goal of 20 percent reduction in per capita water use by year 2020.

Another opportunity for coordination of local water management planning activities with IRWM planning was created by passage of Senate Bill SBx7-7 in 2009. This legislation requires agricultural suppliers providing water to 25,000 irrigated acres or more to measure volumes of water delivered to customers, adopt pricing structures based on quantity delivered, implement efficient water management practices, and prepare agricultural water management plans. In the Westside Region, the water suppliers affected by SBx7-7 are the Yolo County Flood Control and Water Conservation District (YCFWCDC), Reclamation District 999, Knights Landing Ridge Drainage District, and the Solano County Water Agency (SCWA). As these agencies begin the agricultural water management planning process, local water managers can collaborate with each other and the RWMG in ways that will strengthen both local and regional planning. The RWMG encourages agricultural water managers to review this Plan and to coordinate with the RWMG during development of agricultural water management plans (AWMPs) to ensure their consistency with each other and Plan goals and objectives.

In addition to water management plans and objectives that have been incorporated into the development of the Plan, the Plan is updated periodically to include new water management plans and projects as they are developed.

4.1.1 Storm Water Resource Planning

Water Code 10562 (b)(7) requires the development of a stormwater resource plan to receive grants for stormwater and dry weather runoff capture projects. The 2017 Storm Water Resource Plan for Yolo County (SWRP) was developed by the Water Resources Association of Yolo County to inform future water management decisions and promote effective conjunctive use as well as alleviate flooding, groundwater and water quality issues through storm water management throughout Yolo County. Implementation of the SWRP includes submittal to the Westside Sacramento Regional Water Management Group (RWMG) for incorporation into the Plan. The SWRP was developed to be consistent with the current version of the Plan, incorporating all Plan objectives into the SWRP objectives, which were used to focus and evaluate projects submitted to the SWRP. Therefore, implementation of the SWRP and its projects will help to further the Plan's progress toward attaining its water management goals and

objectives. The SWRP was completed in March 2018 and submitted to the Westside Sacramento RWMG for incorporation into this IRWM Plan Update in May 2018. A more detailed discussion on how the Plan incorporates water management plans can be found in Section 11.

4.1.2 Groundwater Sustainability Planning

The Sustainable Groundwater Management Act (SGMA) passed by the Legislature on August 29, 2014 requires the designation of groundwater sustainability agencies and the adoption of groundwater sustainability plans for basins designated by the Department of Water Resources (DWR) as medium- or high-priority basins. The GSAs and GSPs are intended to provide planning and implementation for the sustainable management of groundwater in their respective groundwater basins. There are currently nine (9) GSAs within the Region:

- Upper Cache Creek Planning Area - City of Lakeport
- Upper Putah Creek Planning Area - None
- Valley Floor Planning Area
 - Reclamation District No. 150
 - Reclamation District No. 999
 - Solano Irrigation District
 - City of Vacaville GSA
 - Yolo Subbasin Groundwater Agency
 - Reclamation District No. 501
 - Solano Subbasin Groundwater Sustainability Agency
 - Reclamation District No. 307

All of the GSAs listed here are designated by DWR as medium- and high-priority basins. The deadline for medium- and high- priority basins to adopt a GSP is January 31, 2022. Implementation plans have not yet been completed by each of the GSAs; however, plan updates, and regional participation and cooperation will be a top priority. Data obtained from the implementation of the GSPs will be incorporated into the Plan.

Medium- and high-priority basins have been permitted to submit alternative groundwater management plans (Alternatives) in lieu of a GSP, if it

satisfies the objectives of Water Code §10733.6. Within the Upper Cache Creek Planning Area, the Lake County Watershed Protection District has submitted an Alternative for both the Big Valley Groundwater Basin and the Scotts Valley Groundwater Basin. The Alternative is required to be evaluated at least every five years. As with the GSPs, data obtained from the implementation of the Alternatives will be incorporated into the Plan.

4.1.3 Climate Change Adaptation

Climate change is a growing concern of water managers and could likely increase the variability of seasonal runoff and affect water quality, among other factors. The extent of planning related to climate change varies widely across the Region. Three of the five counties (Napa, Solano, and Yolo) in the Region have taken the first step to adapting to this significant concern by developing climate action plans (CAPs), which aim to mitigate climate change or reduce greenhouse gas emissions to reduce climate change as a result of human activities. Climate change adaptation is often included in other local planning efforts, such as water supply reliability planning in support of an UWMP. Climate action adaptation and mitigation strategies identified in local planning documents have been considered and incorporated into the Plan. For instance, they were considered during completion of the required *Climate Change Vulnerability Checklist* (Appendix C). Anticipated climate change factors also were woven into several of the challenges and opportunities listed in Section 5 (e.g., “Competing Need for Water Supplies Due to Environmental Regulations and Climate Change in the Future”) and were carried forward into the Plan goals and objectives (Section 6).

Since the 2013 IRWM Plan, plans documenting studies and models of climate change impacts of the Region have been produced, including:

- Yolo County’s Climate Action Plan;
- Documents and activities related to the Yolo County Climate Change Initiative;
- Climate change projections developed by the Stockholm Environment Institute, Inc (SEI) with contributions by Yolo County Flood Control & Water Conservation District;
- Documentation of climate models and projections including the Coupled Model Intercomparison Project phase 3 (CMIP3) and phase 5 (CMIP5)

provided by a collaboration of Bureau of Reclamation, Climate Analytics Group, Climate Central, Lawrence Livermore National Laboratory, Santa Clara University, Scripps Institution of Oceanography, U.S. Army Corps of Engineers, U.S. Geological Survey, National Center for Atmospheric Research, and Cooperative Institute for Research in Environmental Sciences.

- Climate data and models made available by the California Department of Water Resources (DWR) to GSAs to aid in the development of GSPs.
- Plans to address or mitigate climate change have also been developed or are in the process of being developed by several Tribes in the region, with support from federal and State funding.
 - The Big Valley Rancheria’s climate change statement identifies potential climate change impacts to the Clear Lake Basin and surrounding area based on community discussions and surveys over a period of 10 years. The Tribe has identified the following issues of concern: erosion, loss of native species, poor drainage from roads and houses, wetlands protection, leaking septic tanks, invasive species, and pesticide issues.

4.2 Plan Relationship to Local Land Use Planning

Land use planning within the Region is done by the nine cities, five counties, the Mendocino National Forest, Bureau of Land Management (BLM), U.S. Bureau of Reclamation (USBR), and the California Department of Fish and Wildlife (CDFW). As described above, land use planning and decision-making have a direct linkage to water management planning and implementation. Even with state policies that explicitly attempt to link land use decisions and water management decisions (such as Senate Bill 221 and Senate Bill 610, which formalize water supply planning requirements for developments over 500 dwelling units), collaboration among land use managers and water managers often remains a challenge. This section of the Plan describes the current land use management structure, characterizes the current relationship between land use planners and water managers, and identifies opportunities for more collaboration among the RWMG and land use planners.

Cities are the responsible agencies for land use planning in incorporated communities, while counties are the responsible agencies for land use planning in unincorporated areas. Public lands in the Region are managed by BLM, Mendocino National Forest, USBR, and CDFW. Cities make up a very small portion of land use in the Region, approximately 5%, but city governments represent the most people within the Region. The remaining 95% of lands in the Region are unincorporated and managed by the counties, federal agencies, and state agencies. Citizens within the Region have valued agricultural land uses and preservation of rural characteristics, as is reflected in the 530,000 acres in cultivation (28% of total land in the Region) and 1.2 million acres of native/open space (62% of total land in the Region). Appendix C gives detailed information on land use in the Region.

Land use planning agencies that have participated in the Plan include:

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| ■ Yolo County | ■ City of Davis |
| ■ Napa County | ■ City of Dixon |
| ■ Solano County | ■ City of Lakeport |
| ■ Lake County | ■ City of Rio Vista |
| ■ Colusa County | ■ City of Vacaville |
| ■ Mendocino National Forest | ■ City of West Sacramento |
| ■ City of Clearlake | ■ City of Winters |
| | ■ City of Woodland |

The agricultural sector in the Region has benefited widely from participation in the Williamson Act, which enables local governments to enter into restrictive contracts with private landowners of agricultural lands to preserve agriculture in exchange for reduced taxes. It is a non-mandated state program administered by counties and cities to preserve agricultural land and discourage the premature conversion of agricultural land to urban uses. As of 2010, approximately 415,000 acres in Yolo County, 270,000 acres in Solano County, and 50,000 acres in Lake County are under Williamson Act contracts (*California Land Conservation (Williamson) Act Status Report 2010*, California Department of Conservation). Although Colusa County and Napa County participate in the Williamson Act, most of their contracted lands are not located within the Region.

Until recently, the state offered financial support of the Williamson Act by providing subvention

payments to county governments to help offset the impact to county property tax losses. Recent state budget cuts have eliminated this state funding, requiring county governments to either fund the program at the county level or refrain from renewing Williamson Act contracts. Recent legislation (SB863 and AB1265) implemented a new provision to the Williamson Act to allow counties to recapture some portion of the lost revenue as a result of state budget cuts. Counties that choose to implement SB863/AB1265 are allowed to shorten the duration of Williamson Act contracts and, in return, reduce the landowners' property tax relief by 10%, thereby increasing county tax revenues at the expense of landowners (Department of Conservation AB1265 Advisory Statement).

All counties in the Region have opted to continue the Williamson Act program in some form, indicating an ongoing commitment to preserving agricultural resources. Solano County and Napa County continue to subsidize existing Williamson Act contracts without moratoriums on new contracts and without implementing SB863/AB1265. Lake County has opted to continue the Williamson Act program but has implemented a moratorium on new contracts. Yolo County and Lake County have implemented SB 863/AB1265, such that Williamson Act contracts in these counties will be amended to be shorter and require landowners to pay higher property tax rates.

Within the Westside Region, most land use planning efforts focus on changes from agricultural to urban land uses. Most urban development within the Region occurs through infill of existing incorporated communities or annexation of unincorporated county lands. Currently, coordination between land use planners and water managers primarily occurs during the entitlement phase of an urban development project, including zoning decisions, water availability decisions, and stormwater management to reduce the impacts of urbanization when building permits are issued.

The gap between land use planning and water resource management has been addressed to some extent by State legislation. In 2001, two water supply planning bills, SB221 and SB610, were enacted that require greater coordination and more extensive data sharing between water suppliers and local land use agencies for large development projects and plans:

- **SB221** requires projects including tentative tract maps for more than 500 dwelling units to obtain

verification from the water system operator that will supply the project that it has a sufficient supply to serve the proposed project and all other existing and planned future uses, including agricultural and industrial, in its service area over a 20-year period, in normal, single dry, and multiple dry years.

- **SB610**, codified as Water Code Sections 10910 and 10911, requires the public water system that may supply water to a proposed residential development project of more than 500 dwelling units (or a development project with similar water use) or a project that will increase residential service connections by 10% or more (applicable for developments in water systems with fewer than 5,000 connections) to prepare a water supply assessment (WSA) for use by the lead planning agency in its compliance with the California Environmental Quality Act (CEQA). Such a WSA is to be performed in conjunction with the project's land use approval process and must include an evaluation of the sufficiency of the water supplies available to the water supplier to meet existing and anticipated future demands.



Agriculture is vital to the Westside Region

It should be noted that WSAs, which are often based on UWMPs, are performed only for developments that meet certain size criteria or increase in service connections by 10% or more. For instance, a residential development of more than 500 dwelling units requires a WSA. There is therefore no assured process in place for understanding and addressing the cumulative impact of multiple smaller developments that do not require WSAs.

As growth in the Region increases and development projects are proposed, the preparation of WSAs or written verifications pursuant to these bills may

become increasingly common if large developments are proposed. In the absence of large developments, land use planning entities should require demonstration of water supply and infrastructure sufficiency by water purveyors for all projects, including an assessment of cumulative need for water by a range of small projects. This opportunity for better collaboration at the regional level is discussed further in Section 10.

A key limitation of relying on the requirements of SB221 and SB610 to mandate collaboration in water and land use planning is that this state legislation focuses on urban water use, whereas the majority of water used in the Region corresponds to agricultural demand.

This gap is partially addressed through general planning. Water resources plays an important role in the land use decisions that are made under the guidance of general plans. While water resources are typically not an “element” of a general plan, they are discussed within the context of the required general plan elements: land use, circulation, housing, conservation, open space, noise, and safety (one exception is the 2008 *Lake County General Plan*, which does include a focused water element). Therefore, general plan development, implementation, and updates provide a forum for coordination and collaboration between land use planning agencies and water managers. However, a challenge for land use planning is that general plan updates are not always prepared and can take a long time to complete.

Winters Doctrine – An additional guideline important to consider is the Winters Doctrine. Tribes are watchful of impacts and infringements on Tribal adjudicated water rights, those confirmed by negotiated agreement, and those water rights “perpetually” “reserved” as affirmed in *Winters v. U.S.* (1908. Winters Doctrine”). The Winters Doctrine affirmed that when an Indian reservation is created, the water necessary to fulfill the reservation’s purpose is reserved. Tribes retain rights to the amount of water necessary to fulfill the reservation’s purpose. Federally reserved water rights, including those reserved for Indian reservations, have priority over other water rights. This Doctrine was extended in 1976 in *Cappaert v. U.S.* to include groundwater use on or near reservation lands.

The extent of collaboration in water management and land use planning varies throughout the Region, as each county has different strategies for water management in relation to land use planning:

- **Colusa County** – The portion of Colusa County that lies within the Region has a very small population, and there are no water districts supplying water in this area. Land use planning is managed by Colusa County. No land use changes are anticipated, and the need for collaboration in land use and water supply planning is minimal because no water supply originates in this area.
- **Lake County** – Lake County requires close collaboration between planners of land use and water management. Water supply in Lake County is provided from more than 40 small water purveyors, including county-managed water utilities (special districts), City water departments, and about 10 small private water companies. Most of the purveyors are situated around Clear Lake. Water supply is either surface water, which is generally contracted for purchase from YCFCWCD’s storage in Clear Lake, or groundwater. Land use planning falls under the jurisdiction of the Lake County Community Development Department or the Cities of Lakeport or Clearlake. While some land use planning and water supply activities are both under the umbrella of county government, collaboration is not always built into the development process. Coordination between water purveyors and governmental agencies responsible for land use decisions could be improved to help ensure appropriate use of limited water sources. The County Special Districts Administration requires that any development of more than three units undergoes a water capacity analysis (*Lake County Special Districts Administration Capacity Analysis/Hydraulic Model Policy, 2007, and Water Connection Permit Checklist*). Furthermore, the County General Plan requires that adequate water supply must be identified before approval of new use permits (*Lake County General Plan, Policies PSF-2.6, PSF-2.8, and WR-3.2*). Several special districts and private water companies are operating under moratoriums against new service connections because of supply or system infrastructure and treatment limitations.
- **Napa County** – The portion of Napa County in the Region is unincorporated. Permits for development are routed through responsible departments to

ensure that adequate supplies are available. Small water supply and treatment districts are notified of new development requests. Notification and coordination of land use permitting/entitlements ensure adequate water supply before project/permit approval. Coordination is conducted by responsible agencies when a water utility is involved. However groundwater use is currently not measured or regulated. The Napa County process is on a project-by-project basis that does not capture small ministerial projects and does not address the cumulative effect of water use or consumption over time. Other land use managers in the Napa County area of the Region include state and federal agencies and departments.

- **Solano County** – In Solano County, all urban development must be annexed to incorporated cities, which function as the water utilities and land use managers. City councils in Solano County are the governing bodies and decision makers for land use planning and also are responsible for ensuring that water supply is available to support land use changes.
- **Yolo County** – Development within Yolo County is directed towards infill of existing urban areas and away from unincorporated county lands. Therefore, most water supply planning is handled on a case-by-case basis by the water supply agency that has jurisdiction over the development area. Although there is no formalized analysis of countywide water inventories for land use planning, Yolo County WRA is the primary forum for collaboration among water managers. Participation in the WRA is voluntary, and some agencies choose not to participate; however, the WRA has experienced increased participation in recent years, particularly since a recent initiative to centralize water management became politically controversial and faced practical challenges. One of the primary challenges faced by Yolo County with respect to collaboration for water management and land use planning is how to increase participation in the WRA and better utilize the WRA as a collaborative planning organization.
- **Public Lands** – Approximately 379,000 acres of land in the Region are managed by federal and state agencies. Each agency has a unique set of land use and resource management directives and objectives, but all are interested in balancing water

resources management with land use objectives. Currently, coordination among these public land use managers and the RWMG or local water managers is limited, as no formalized forums for collaboration are in place. The IRWM Plan can help by focusing on improving collaboration in land use management and water resources planning, as discussed further in Section 10.

Additional collaborative forums not specifically related to the IRWM have contributed to the IRWM program through meeting attendance, submitting projects and other collaborative efforts. Therefore, the common memberships provide opportunities for additional interaction and collaboration among land use planning entities and water managers in the Region:

- **The Clear Lake Cyanobacteria Task Force (CLCTF)** was created in 2014 and is led by Elem Indian Colony and Big Valley Rancheria coordinating with EPA, Central Valley Regional Water Quality Control Board (CVRWQB), Lake County, California Office of Environmental Health Hazard Assessment (OEHHA), California Department of Public Health (CDPH), Southern California Coastal Water Research Project (SCCWRP), and Surface Water Ambient Monitoring Program (SWAMP). This Task Force provides a forum to identify the major factors, water quality and land use trends that contribute to cyanobacterial blooms and cyanotoxin levels.
- **The Cache Creek Watershed Forum** comprises stakeholders who are committed to sustaining, protecting, and enhancing the natural, cultural, and economic vitality of the Cache Creek watershed through interest-based collaborative planning and stewardship.
- **The Lower Putah Creek Coordinating Committee (LPCCC)** is a watershed management group representing community interests in water resources and environmental protection.

Because much of the Region lies within the Sacramento River floodplain, flood management is a particularly important focus for the Region. Flood management is aimed at minimizing the threat of damage to property from flooding and improving preparedness for and response to floods. Flood management programs and projects impact water resources and land use management, thereby providing forums for additional collaboration. For

example, FloodSAFE Yolo is a program that emerged from the Yolo County IRWM Plan. Some of its objectives for flood control suggested include those in the Westside IRWM Plan, such as the Plan's objective 14, *Provide adequate flood protection for all urban and rural areas within the Region by December 31, 2050.*

Stormwater management in more urbanized areas has recently attracted particular attention, especially as it relates to water quality improvements. Regulations require preparation and implementation of stormwater management plans by cities and counties with emphasis on implementation of low-impact development and pollution prevention measures.

The Westside IRWM Plan goal development process resulted in two goals that relate to land use planning:

- **Goal 8**, *promote reasonable use of water and watershed resources.* This goal relates to land use planning because of the impact of land use decisions on water resources.
- **Goal 13**, *support sustainable economic activities consistent with local and state government planning efforts within the Region.* This goal involves land use because economic development intersects with how land is used and necessitates land use decisions.

The relationships among the Region's land use planning entities, other water management entities, and the RWMG are sturdy enough to serve as bases for increased collaboration. The RWMG and land use managers are considering ways to improve collaboration on a variety of topics and areas of focus through creation of subcommittees and other forums to track related issues such as: floodplain management, flood control planning, groundwater management, treatment and conveyance facilities, stormwater management, water conservation efforts, watershed management, recreational area management, land use changes, general plan updates, water supply for emergency planning, and habitat management.

As noted above, much of the collaboration and coordination on these issues in the past occurred through the development and implementation of formal documents, such as UWMPs, AWMPs, general plans, groundwater management plans, flood insurance studies, watershed assessments, watershed sanitary surveys, and stormwater management

programs. The IRWM Plan provides an opportunity to improve collaboration by increasing public participation and by increasing awareness of these plans in the land use and water planning decision making processes. Going forward, the RWMG is committed to collaborate with land use managers in the planning and development of projects that address water resources-related objectives.