

Section 12: Acronyms and Glossary

12.1 Acronyms and Abbreviations

<u>Acronym</u>	<u>Definition</u>
µg/L	Micrograms Per Liter
AF	Acre-Feet
AFY	Acre-Feet Per Year
ARB	American River Basin
AWM	Agricultural Water Management
ABAG	Association of Bay Area Governments
ARB	American River Basin
Basin Plan	Sacramento River and San Joaquin River Basins Basin Plan
BDCP	Bay-Delta Conservation Plan
BLM	Bureau of Land Management
BMO	Basin Management Objective
BMPs	Best Management Practices
BO	Biological Opinion
BRBNA	Blue Ridge Berryessa Natural Area
CAP	Climate Action Plan
CASGEM	California Statewide Groundwater Elevation Monitoring
CC	Coordinating Committee
CDFW	California Department of Fish and Wildlife
CDPH	California Department of Public Health
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
cfs	Cubic Feet Per Second
CIMIS	California Irrigation Management Information System
CSA	Community Service Area
CSD	Community Service Districts
CVP	Central Valley Project
CWA	Clean Water Act
CWC	California Water Code
CVFPP	Central Valley Flood Protection Plan
DAC	Disadvantaged Community
DBP	Disinfection Byproduct
Delta	Sacramento-San Joaquin River Delta

<u>Acronym</u>	<u>Definition</u>
DMS	Date Management System
DWR	Department of Water Resources
EC	Electrical Conductivity
EIR	Environmental Impact Report
EJ	Environmental Justice
ESA	Endangered Species Act
ESU	Evolutionary Significant Unit
ET	Evapotranspiration
ETAW	Evapotranspiration of Applied Water
ETo	Reference Evapotranspiration
EWMP	Efficient Water Management Practice
FC&WCD	Flood Control and Water Conservation District
FCSSR	Flood Control System Status Report
FEMA	Federal Emergency Management Agency
FESSRO	FloodSAFE Environmental Stewardship and Statewide Resource Office
FIRM	Flood Insurance Rate Map
FIS	Flood Insurance Study
GCM	General Circulation Model
GCM	Global Climate Model
GPCD	Gallon Per Capita Day
GHG	Greenhouse Gas Emissions
GIS	Geographic Information System
GWM	Groundwater Management Plan
HCP	Habitat Conservation Plan
HUC	Hydrologic Unit Code
IE	Irrigation Efficiency
IFM	Integrated Flood Management
IRWIS	Integrated Water Resources Information System
IRWM Plan	Integrated Regional Water Management Plan
IST	Implementation Support Team
IRWMPF	Integrated Resources Water Management Planning Framework
JPA	Joint Powers Agreement
LBRID	Lake Berryessa Resort Improvement District
LPCCC	Lower Putah Creek Coordinating Committee
MCL	Maximum Contaminant Level

<u>Acronym</u>	<u>Definition</u>
mg/L	Milligrams Per Liter
M&I	Municipal and Industrial
MHI	Median Household Income
MOU	Memorandum of Understanding
MPO	Metropolitan Planning Organization
NBA	North Bay Aqueduct
NBRID	Napa Berryessa Resort Improvement District
NCCP	Natural Communities Conservation Plan
NCFCWCD	Napa County Flood Control and Water Conservation District
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NGO	Non-Governmental Organization
NPDES	National Pollutant Discharge Elimination System
NPS	Non-Point Source
NQ	Not Qualified
NSV	Northern Sacramento Valley
NZMS	New Zealand Mud Snails
O&M	Operations and Management
OWTS	On-Site Wastewater Treatment System
PA	Planning Area
ppb	Part Per Billion
ppm	Part Per Million
PHG	Public Health Goal
POTWs	Publically-Owned Treatment Works
PSC	Putah South Canal
RAP	Region Acceptance Process
RCAC	Rural Community Assistance Corporation
RCD	Resource Conservation District
RD	Reclamation District
RFM	Regional Flood Management
RMS	Resource Management Strategies
RWA	Regional Water Authority
RWQCB	Central Valley Regional Water Quality Control Board
RWMG	Regional Water Management Group
SACOG	Sacramento Area Council of Governments
SBx7-7	Senate Bill x7-7

<u>Acronym</u>	<u>Definition</u>
SCADA	Supervisory Control and Data Acquisition
SCWA	Solano County Water Agency
SDWA	Safe Drinking Water Act
SOI	Sphere of Influence
SPFC	State Plan of Flood Control
SRCSD	Sacramento Regional County Sanitation District
SRF	State Revolving Fund
SRFCP	Sacramento River Flood Control Project
SWM	Stormwater Management
SWP	State Water Project
SWRCB	State Water Resources Control Board
TAFY	Thousand Acre-Feet Per Year
TDS	Total Dissolved Solids
TMDL	Total Maximum Daily Load
USACOE	U.S. Army Corps of Engineers
USBR	U.S. Bureau of Reclamation
USEPA	U.S. Environmental Protection Agency
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geologic Survey
USPS	U.S. Postal Service
UWM	Urban Water Management
VOC	Volatile Organic Compound
WDCWA	Woodland Davis Clean Water Agency
WDL	Water Data Library
WDRs	Waste Discharge Requirements
Westside Region, Region	Westside Sacramento Region
WPD	Watershed Protection District
WRA	Water Resources Association
WSA	Water Supply Assessment
WSAFCA	West Sacramento Area Flood Control Agency
WWTP	Wastewater Treatment Plant
YCFCWCD	Yolo County Flood Control and Water Conservation District
Yolo NHP	Yolo Natural Heritage Program

12.2 Glossary

100-year Flood Event – A 100-year flood is the flood event having a 1-percent (or 1/100) chance of being equaled or exceeded in any given year.¹

303(d) List – Refers to Section 303(d) of the Clean Water Act that requires each state to periodically submit to the United States Environmental Protection Agency, a list of impaired waters.²

500-year Flood Event – A 500-year flood is the flood event having a 0.2-percent (or 1/500) chance of being equaled or exceed in any given year.¹

Acre-Foot (AF) – The volume of water that would cover one acre to a depth of one foot; equal to 43,560 cubic feet or 325,851 gallons.¹

Adjudication – The act of judging or deciding by law. In the context of an adjudicated groundwater basin, landowners or other parties have turned to the courts to settle disputes over how much groundwater can be extracted by each party to the decision.³

Adopted IRWM Plan – An Integrated Regional Water Management (IRWM) Plan that has been formally accepted, as evidenced by a resolution or other written documentation by the governing bodies of each agency that is part of the regional water management group responsible for the development of the Plan and have responsibility for implementation of the Plan. At a minimum, each project proponent named in an IRWM grant application must also adopt the IRWM Plan. Adoption of an IRWM Plan must follow the notification process in California Water Code (CWC) §10543.²

Agency – A public entity, be it a special district, city, county or other governmental entity, responsible for providing one or more services in the areas of water supply, water quality, wastewater, recycled water, water conservation, storm water/flood control, watershed planning and aquatic habitat protection and restoration.⁴

Alluvial/Alluvium – A general term for clay, silt, sand, gravel, or similar unconsolidated detrital material, deposited during comparatively recent geologic time by a stream or other body of running water, as a sorted or semi-sorted sediment in the bed of the stream or on its floodplain or delta, as a cone or fan at the base of a mountain slope.¹

Anadromous Fish – Fish that live a majority of time in the ocean, and breed in fresh water.¹

Anthropogenic – Of human origin or resulting from human activity.^{2,5}

Applied Water – The total amount of water that is diverted from any source to meet the demands of water users without adjusting for the quantity of water that is consumed, returned to the developed supply, or irrecoverable. It is the quantity of water delivered to the intake for a city water system or factory, or a farm headgate, or direct or incidental flows to a marsh or wetland for wildlife areas. For existing instream use, applied water is the portion of the streamflow dedicated to instream use.²

Applied Water Factor – The quantity of water typically applied to a specific crop per unit area (sometimes expressed in inches of depth). The applied water factors for specific crops can vary by region.¹

Appropriative Right – The legal right to use water that is diverted or extracted by a non-riparian or non-overlying party for non-riparian or non-overlying beneficial uses. In California, surface water appropriative rights are subject to a statutory permitting process, while groundwater appropriation is not.¹

Aquifer – A body of rock or sediment that is sufficiently porous and permeable to store, transmit, and yield significant quantities of groundwater to wells and springs.¹

Artificial Recharge – The addition of water to an aquifer by human activity, such as irrigation or induced infiltration from streams, wells, or recharge/spreading basins. *See also* Groundwater Recharge.¹

Association of Bay Area Governments (ABAG) – Comprehensive planning agency for the 100 cities and 9 counties of the San Francisco Bay Area including Solano and Napa Counties; serves as the Metropolitan Planning Organization (MPO) for these counties; primarily addresses issues relating to land use, circulation, and air quality.⁶

Average Annual Runoff – The average value of total annual runoff volume calculated for a selected period of record, at a specified location, such as a dam or stream gage.¹

Average Year Water Demand – Demand for water under average hydrologic conditions for a specific level of development.¹

Basin Management Objectives (BMOs) – See also Management Objectives.¹

Basin Plan – Also referred to as a Water Quality Control Plan, identifies 1) beneficial uses to be protected; 2) water quality objectives for the reasonable protection of beneficial uses; and 3) a program of implementation for achieving the water quality objectives as established by the Regional Water Quality Control Boards or State Water Resources Control Board.²

Bedrock – Solid rock that underlies loose material, such as soil, sand, clay, or gravel.⁷

Beneficial Uses – The uses of streams, lakes, rivers, and other water bodies, have to humans and other life. Beneficial uses are outlined in a Water Quality Control Plan (Basin Plan). Each body of water in the State has a set of beneficial uses it supports.²

Best Management Practices (BMPs) – A set of actions widely recognized by a group of experts to be state-of-the-art technologies, techniques, etc. within a particular domain (such as water quality management, water conservation, agricultural practices, etc.).⁷

Bioaccumulation – The increase in concentration of a substance, such as the pesticide DDT, that occurs in a food chain.^{7,8}

Bulletin No. 118 – Department of Water Resources' (DWR's) report California's Groundwater Bulletin 118, updated in 2003.¹

California Environmental Quality Act (CEQA) – A state law requiring state and local agencies to regulate activities with consideration for environmental protection. If a proposed activity has the potential for a significant adverse environmental impact, an Environmental Impact Report (EIR) must be prepared and certified as to its adequacy before action can be taken on the proposed project.⁸

California Irrigation Management Information System (CIMIS) – CIMIS is a network of automated weather stations that are owned and operated cooperatively between the Department of Water Resources (DWR) and local agencies. The stations are installed in most of the agricultural and urban areas in the State and provide farm and large landscape irrigation managers and researchers with "real-time"

weather data to estimate crop and landscape evapotranspiration (ET) rates and make irrigation management decisions.¹

California Native American Tribe – All Indigenous Communities of California, which are on the contact list maintained by the Native American Heritage Commission, including those that are federally non-recognized and federally recognized, and those with allotment lands, regardless of whether they own those lands.²

Catchment – The area of land which catches and collects water above a reservoir or other storage structure.¹

Census – The official decennial enumeration of the population conducted by the federal government.⁵

Central Valley Project – Water storage and delivery system that is operated by United States Bureau of Reclamation to provide irrigation and municipal water to communities in and around California's Central Valley.¹

Channelization – The mechanical alteration of a stream which includes straightening or dredging of the existing channel, or creating a new channel to which the stream is diverted.⁷

Chaparral – A biological community characterized by hot dry summers and cool moist winters and dominated by a dense growth of mostly small-leaved evergreen shrubs.⁷

CIMIS – See also California Irrigation Management Information System (CIMIS).¹

Climate Change – Changes in average annual temperature and precipitation and their temporal patterns in the future compared to today.¹

Commercial – A land use classification that permits facilities for the buying and selling of commodities and services.⁵

Community Service Area (CSA)/Community Service Districts (CSD) – A geographic subarea of a city or county used for planning and delivery of parks, recreation, and other human services based on an assessment of the service needs of the population in that subarea.⁹

Confined Aquifer – An aquifer that is bounded above and below by formation of distinctly lower permeability than that of the aquifer itself.³

Conjunctive Use – The coordinated and planned management of both surface and groundwater resources in order to maximize the efficient use of the resource.⁷

Conservation (Water) – Urban water conservation or water use efficiency includes reductions realized from voluntary, more efficient, water use practices promoted through public education and from state-mandated requirements to install water-conserving fixtures in newly constructed and renovated buildings. Agricultural water conservation or agricultural water use efficiency means reducing the amount of water applied in irrigation through measures that increase irrigation efficiency.¹

Consumptive Use – A quantity of applied water that is not available for immediate or economical reuse. It includes water that evaporates, transpires, or is incorporated into products, plant tissue, or animal tissue. Consumptively used water is removed from available supplies without return to a water resource system.¹

Contaminant – Any substance or property preventing the use or reducing the usability of water for ordinary purposes such as drinking, preparing food, bathing, washing, recreation, and cooling. Any solute or cause of change in physical properties that renders water unfit for a given use. (Generally considered synonymous with pollutant.)¹

Conveyance Losses/Evaporative Losses – The quantity of water that becomes unavailable for use from major water supply conveyance systems due to irrecoverable leaks, evaporation and evapotranspiration by vegetation in and near canals.⁴

Conveyance Facilities – Canals, pipelines, pump lifts, ditches, etc. used to move water from one area to another.¹

Crop Coefficient – A numerical factor (normally identified as Kp or Kc) that relates the evapotranspiration (ET) of the individual crop (Etc) to reference evaporation or some other index.¹

Cubic Feet Per Second (CFS) – A unit of measurement describing the flow of water. A cubic foot is the amount of water needed to fill a cube that is one foot on all sides, about 7.5 gallons.¹

Cyanobacteria – A phylum of bacteria that obtain their energy through photosynthesis. Found in unicellular and colonial forms. Some Cyanobacteria produce toxins.⁷

Detention Dam/Basin/Pond – A basin that stores stormwater flows for a limited amount of time thereby reducing the rate of flow downstream of the basin while the detention basin is being filled.^{6,9}

Direct Deliveries – The amount of water diverted from streams and rivers directly that is not withdrawn from storage in reservoirs.⁷

Disadvantaged Community – A community with an annual median household income that is less than 80 percent of the statewide annual median household income.²

Dissolved Oxygen – The concentration of oxygen dissolved in water, expressed in milligrams per liter or as percent.⁷

Domestic Well – A water well used to supply groundwater for the domestic needs of an individual residence or systems of four or fewer service connections.¹

Downcutting – Downward erosion caused by a flowing stream. Can result in deepening and often steepening of the stream channel.

Drinking Water Standards – State and federal regulations regarding water delivered by water purveyors that is used as a potable supply.¹

Drinking Water Treatment and Distribution – Treatment is the physical, biological, and chemical processes that make water suitable for potable use. Distribution includes storage, pumping, and pipe systems to protect and deliver the treated water to customers.¹

Drought Condition – Hydrologic conditions during a defined period, greater than one year, when precipitation and runoff are much less than average.¹

Drought Preparedness – Long-term and short-term measures that are to be used to prepare for the effects of drought. These may include implementation of such measures as water conservation and conjunctive use.¹

Efficient Water Management Practices – Reasonable and economically justifiable programs to improve the delivery and use of water used for agricultural purposes.

Electrical Conductivity (EC) – The measure of the ability of water to conduct an electrical current, the magnitude of which depends on the dissolved mineral content of the water.¹

Elevation – The vertical reference of a site location above mean sea level, measured in feet or meters.⁷

Emerging Contaminants – See also Emerging Pollutants.¹

Emerging Pollutants – Some unregulated chemicals and pollutants are being discovered to have unexpected health and environmental effects. Chemicals found in pharmaceuticals and personal care products, by-products of fires and fire suppression, and discarded elements of nanotechnology are emerging as actual or potential water contaminants. Air deposition of a whole host of pollutants is now seen as a significant contributor to water pollution.¹

Endemic – Native species found only in a particular geographic area with comparatively restricted habitat and distribution.⁷

Environmental Justice – The fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies (California Government Code §65040.12[e]).²

Environmental Water – Minimum flow levels of a specific quality that is needed in order to assure the continued viability of fish and wildlife resources for a particular water body. This is water that is used to maintain and enhance the beneficial uses related to the preservation and enhancement of fish, wildlife, and other aquatic resources or preserves as specified in the Porter/Cologne Water Quality Control Act, 2008.¹

Ephemeral – An ephemeral water body is one that exists for only a short period of time following precipitation or snow-melt. This is not the same as an intermittent or seasonal water body which exists for a longer period of time.¹

Erosion – (1) The loosening and transportation of rock and soil debris by wind, rain, or running water. (2) The gradual wearing away of the upper layers of the earth.^{5,7}

ETAW – See also Evapotranspiration of Applied Water (ETAW).¹

ETo (Reference Evapotranspiration) – The evapotranspiration rate from an extended surface of 3- to 6-inch (8 to 15 cm) tall green grass cover of uniform height, actively growing, completely shading the ground, and not short on water (the reference

evapotranspiration [ET] reported by California Irrigation Management Information System [CIMIS]).¹

Eutrophication – The process of increasing nutrient and decreasing oxygen supply within a water body. Usually detrimental to aquatic life.⁷

Evaporation – The physical process by which a liquid or solid is transformed to a gaseous state.¹

Evapotranspiration (ET) – ET is the amount of water transpired by plants, retained in plant tissues, and evaporated from plant tissues and surrounding soil surfaces.¹

Evapotranspiration of Applied Water (ETAW) – ETAW is the amount of consumptive use by crops, landscapes, or other vegetation.¹

Firm Yield – The maximum annual supply of a given water development that is expected to be available on demand from year to year.¹

Flood Attenuation – When flood levels are lowered by water storage in floodplains and wetlands.⁷

Flood Fight – The emergency measures used to prevent levee failure from seepage, erosion or overtopping during high water.¹

Flood Insurance Rate Map (FIRM) – For each community, the official map on which the Federal Emergency Management Agency has delineated areas of special flood hazard, areas of moderate risk, and the risk premium zones applicable to that community.⁹

Flood Protection – A level of risk protection that is necessary to withstand flooding that may occur in any given year. Flood protection is most frequently used to refer to an urban level of flood protection which corresponds to the level protection that is necessary to withstand flooding that has a certain probability of occurring in any given year using criteria consistent with, or developed by the Department of Water Resources.

Flood Risk – The combination of the magnitude and probability of consequences that likely would occur as a result of flood-induced damages under a specific level of development.¹

Floodplain – The flat area adjoining a river channel constructed by the river in the presence of climate, and overflowed at times of high river flow.⁷

Floodway – The channel of a river or other watercourse and the adjacent land areas that must be

reserved in order to discharge the “base flood” without cumulatively increasing the water surface elevation more than one foot.⁹

Fluvial – The processes associated with rivers and streams comprising the motion of sediment and erosion of, or deposition on, the river bed.¹

Form and Function – A waterway’s form refers its morphology or structure and its function refers to the flood behavior and sediment transport characteristics. Alterations in the natural form and function of a waterway can, in some cases, degrade important habitats and water conveyance capacities of the channels.

Funding Match – Funds made available by the applicant to assist in financing a project. Funding match consists of non-State funds and can include in-kind services. In-kind services must relate directly to the scope of work funded in the grant proposal.^{2,3,7}

General Plan – The General Plan is a legal document, adopted by the legislative body of a City or County, setting forth policies regarding long-term development. California law requires the preparation of seven elements or chapters in the General Plan: Land Use, Housing, Circulation, Conservation, Open Space, Noise, and Safety. Additional elements are permitted, such as Economic Development, Urban Design and similar local concerns.^{5,9}

Geothermal – Of or related to the internal heat of the earth.⁷

Geographic Information System (GIS) – The combination of hardware and software used to store and analyze features located on the earth’s surface.⁷

Greenhouse Gas Emissions (GHG) – Also referred to as carbon intensity or carbon footprint.^{2,7}

Groundwater – Water that occurs beneath the land surface and fills the pore spaces of the alluvium, soil, or rock formation in which it is situated. It excludes soil moisture, which refers to water held by capillary action in the upper unsaturated zones of soil or rock.¹

Groundwater Basin – An alluvial aquifer or a stacked series of alluvial aquifers with reasonably well-defined boundaries in a lateral direction and having a definable bottom.¹

Groundwater Management – The planned and coordinated management of a groundwater basin or portion of a groundwater basin with a goal of long-term sustainability of the resource.¹

Groundwater Management Plan – A comprehensive written document developed for the purpose of groundwater management and adopted by an agency having appropriate legal or statutory authority.¹

Groundwater Overdraft – The condition of a groundwater basin in which the amount of water withdrawn by pumping exceeds the amount of water that recharges the basin over a period of years during which water supply conditions approximate average conditions.¹

Groundwater Recharge – Groundwater recharge is the mechanism by which surface water moves from the land surface, through the topsoil and subsurface, and into de-watered aquifer space, or through injection of water directly into the aquifer by wells. Groundwater recharge can be either natural or managed.¹

Groundwater Storage – Groundwater storage can be defined in three different ways depending on the context of its use: (a) the quantity of water that occurs beneath the land surface and fills the pore spaces of the alluvium, soil, or rock formation beneath the land surface; (b) the volume of usable physical space available to store water in the pore spaces of the alluvium, soil, or rock formation beneath the land surface; (c) the act of storing water in the pore spaces of the alluvium, soil, or rock formation beneath the land surface.¹

Groundwater Storage Capacity – Volume of void space that can be occupied by water in a given volume of a formation, aquifer, or groundwater basin.¹

Groundwater Subbasin – A subdivision of a groundwater basin created by dividing the basin using geologist and hydrologic conditions or institutional boundaries. *See also* Groundwater Basin.¹

Groundwater Subsurface Inflow – The amount of water that flows into a region underground.¹

Groundwater Subsurface Outflow – The amount of water that flows out of a region underground.¹

Groundwater Table – The upper surface of the zone of saturation in an unconfined aquifer.¹

Hazardous Waste – Waste that poses a present or potential danger to human beings or other organisms because it is toxic, flammable, radioactive, explosive, or has some other property that produces substantial risk to life.⁷

Headgate - a gate for controlling the water flowing into a channel (as an irrigation ditch)¹

Headwaters – Small streams and upland areas that are the source of larger streams and rivers.⁷

Hydrograph – A graph that shows some property of groundwater or surface water as a function of time at a given point.⁷

Hydrologic Cycle – The circulation of water from the ocean through the atmosphere to the land and ultimately back to the ocean.¹

Hydrologic Region – A geographical division of the state established by the California Department of Water Resources based on the local hydrologic basins.¹

Hydrologic Unit – The United States is divided and subdivided into successively smaller hydrologic units which are classified into four levels: regions, subregions, accounting units, and cataloging units. The hydrologic units are arranged within each other, from the smallest (cataloging units), to the largest (regions). Each hydrologic unit is identified by a unique hydrologic unit code (HUC) consisting of two to eight digits based on the four levels of classification in the hydrologic unit system. (See <http://water.usgs.gov/GIS/huc.html> for more information.)¹

Hydrology – The scientific study of the properties, distribution, and effects of water on the earth's surface, in the soil and underlying rocks, and in the atmosphere.⁷

Hydromodification – Channel modification (channelization), flow alterations, levees, and dams.¹

Impaired Water Body – A water body that does not attain water quality standards due to an individual pollutant, multiple pollutants, pollution, or an unknown cause of impairment. A list of impaired water bodies is compiled by the State Water Resources Control Board (SWRCB) pursuant to Section 303(d) of the Clean Water Act.^{2,7}

Imperiled Fish – Fish species that are on the Endangered Species List, are considered a special status species, as well as other species that are considered threatened or otherwise at risk of significant population decline.

Implementation Strategy – A coherent approach to implementing integrated and individual water

management actions, based upon priority, readiness, funding opportunities, and other considerations.³

Indirect Reuse – When a downstream entity withdraws water from a stream and a portion of that water is wastewater from an upstream discharge that has commingled with the ambient streamflow, the reuse is termed “indirect reuse”.²

Industrial – The manufacture, production, and processing of consumer goods. Industrial is often divided into “heavy industrial” uses, such as construction yards, quarrying, and factories; and “light industrial” uses, such as research and development and less intensive warehousing and manufacturing.^{3,5}

Infiltration – The flow of water downward from the land surface into and through the upper soil layers.¹

Infiltration Rate – The rate at which water penetrates the earth's surface.⁷

Infrastructure – The underlying foundation or basic framework of a system. For water systems, this includes the canals, pipelines, pumps, reservoirs, and treatment plants that make up the treatment and delivery system.¹

En-Lieu Recharge – The practice of providing surplus surface water to historical groundwater users, thereby leaving groundwater in storage for later use.²

Instream Uses – The beneficial uses of water within a stream for river without diversion from the stream.¹

Integrated Flood Management (IFM) – IFM is a comprehensive approach to flood management that considers land and water resources at a watershed scale within the context of integrated water management, employs both structural and non-structural measures to maximize the benefits of floodplains and minimize loss of life and damage to property from flooding, and recognizes the benefits to ecosystems from periodic flooding.³

Integrated Regional Water Management – A multi-objective approach to managing water and associated resources that encourages using a mix of resource management strategies to provide benefits to regions.¹

Integrated Regional Water Management Plan (IRWM Plan) – Defined in CWC§10534 as “a comprehensive plan for a defined geographic area, the specific development, content, and adoption of which shall satisfy requirements developed pursuant

to this part. At a minimum, an Integrated Regional Water Management Plan describes the major water-related objectives and conflicts within a region, considers a broad variety of resource management strategies, identifies the appropriate mix of water demand and supply management alternatives, water quality protections, and environmental stewardship actions to provide long-term, reliable, and high-quality water supply and protect the environment, and identifies disadvantaged communities in the region and takes the water-related needs of those communities into consideration." (CWC §10530 *et seq.*)

Integrated Water Resources Information System (IRWIS) – IRWIS, released by the Department of Water Resources (DWR) in 2008, is the first centralized groundwater data management system developed to help local and regional water management entities integrate and analyze existing data about their groundwater system and potential value of current groundwater management in their integrated planning processes. It serves as a centralized information system for accessing the data about groundwater, as well as groundwater management and some DWR grant program funding statewide.¹

Intermittent Stream – A stream that ceases to flow for periods of time.^{4,7}

Interties – An interconnection permitting passage of utility service (water, electricity) between two or more systems such as electric and water utility systems.⁹

Invasive Species – Non-indigenous plants or animals that adversely affect the habitats they invade economically, environmentally, or ecologically.¹

Irrigation Efficiency (IE) – The efficiency of water application and use, calculated by dividing a portion of applied water that is beneficially used by the total applied water, expressed as a percentage. The two main beneficial uses are crop water use (evapotranspiration, etc.) and leaching to maintain a salt balance.¹

Irrigation Return Flow – Applied water that is not transpired, evaporated, or deep percolated into a groundwater basin, but that returns to a surface water supply.¹

Irrigation Water Requirements – The quantity of water exclusive of precipitation that is required from various uses.¹

IRWM Plan – See Integrated Regional Water Management Plan.¹

Coordinating Committee – Serves as the governing and decision making body for the Westside Integrated Regional Water Management (IRWM) Plan Funding Region (on behalf of the Regional Water Management Group) during development and implementation of the Plan.⁴

Joint Powers Agreement (JPA) – An agreement entered into by two or more public agencies that allows them to jointly exercise any power common to the contracting parties. JPA is defined in Chapter 5 (commencing with Section 6500) of Division 7 of Title 1 of the California Government Code.³

Lacustrine – Natural lakes, ponds, and human-made reservoirs ecosystems.¹

Land Subsidence – The lowering of the natural land surface due to groundwater (or oil and gas) extraction.¹

Land Use – A group of similar on-the-ground human uses described as a single category.⁷

Life Cycle Habitat – An area that provides appropriate habitat to support the entire life cycle of a species. For some species such as anadromous fish this may span a large geographical area including both freshwater and the ocean.

Load Reduction (of Pollutant) – The decrease of a particular contaminant in the impaired waterbody resulting from the implementation of a project.⁷

Local Agency – Any city, county, city and county, special district, joint powers authority, or other political subdivision of the State, a public utility as defined in Sections 216 of the Public Utilities Code, or a mutual water company as defined in Section 2725 of the Public Utilities Code (California Water Code [CWC] §10535).²

Low Impact Development (LID) – LID is a stormwater management strategy aimed at maintaining or restoring the natural hydrologic functions of a site or project to achieve natural resource protection objectives and fulfill environmental regulatory requirements. LID employs a variety of natural and built features that reduce the rate of runoff, filter pollutants out of runoff, and facilitate the infiltration of water into the ground and/or onsite storage of water for reuse.²

M&I – Municipal and industrial water use; generally urban uses for human activities.¹

Management Objectives – Objectives that set forth the priorities and measurable criteria of water management. Examples include improve water quality, augment water supplies, improve use efficiency. This use of the term often refers to its use within a Water Quality Control Plan. Management Objectives are different than the IRWM Plan objectives.⁷

Maximum Contaminant Level (MCL) – The highest drinking water contaminant concentration allowed under federal and State Safe Drinking Water Act regulations.⁴

Median Household Income – The amount which divides the annual income for households within a region into two equal groups. Half of the households in the region have incomes above the median and half have incomes below the median.⁹

Memorandum of Understanding – An agreement that documents the mutual understanding between two or more parties with an intended common line of action. The Westside MOU documents the mutual understanding of the Lake County Watershed Protection District, Napa County Flood Control and Water Conservation District, Colusa County Resource Conservation District, Solano County Water Agency and Water Resources Association of Yolo County with respect to their joint efforts towards developing an IRWM Plan that will increase regional coordination, collaboration, communication and assist in obtaining funding for IRWM Plan development, flood management and water related projects.

Micrograms per Liter (µg/L) – A unit of measurement describing the concentration of a constituent in water. It is equivalent to one part per billion (ppb).⁷

Milligrams Per Liter (mg/L) – A unit of measurement describing the concentration of a constituent in water. It is equivalent to one part per million (ppm).¹

Municipal Wastewater – Primarily from domestic sources, but includes wastewater from commercial, industrial, and institutional sources that discharge to a common collection system where it mixes with domestic wastewater before treatment.⁷

National Environmental Policy Act (NEPA) – An act passed in 1974 establishing federal legislation for

national environmental policy, a council on environmental quality, and the requirements for environmental impact statements.⁹

National Flood Insurance Program – A federal program that authorizes the sale of federally subsidized flood insurance in communities where such flood insurance is not available privately.⁹

National Pollutant Discharge Elimination System (NPDES) Permit Program – Controls water pollution by regulating point sources that discharge pollutants into waters of the United States. Point sources are discrete conveyances such as pipes or man-made ditches. Since its introduction in 1972, the NPDES Permit Program has been responsible for significant improvements to our Nation's and State's water quality.⁷

Natural Channel – A waterway created by the erosive forces of water moving over land that has not been altered by human interference.

Natural Recharge – Replenishment of an aquifer generally from snowmelt and runoff; through seepage from the surface. Recharge of an aquifer that occurs without human interference. Also referred to as an unintentional recharge.¹

Non-Consumptive Environmental Water Use – Water dedicated to instream environmental benefit which does not reduce the available water supply downstream for other uses.¹

Non-Governmental Organization (NGO) – Private sector cause-based (and usually not-for-profit) organization.⁷

Non-Native Species – Plant or animal species brought into an area from another geographic region.⁷

Non-Point Source Pollution – Sources for pollution that are less definable and usually cover broad areas of land, such as agricultural land with fertilizers that are carried from the land by runoff, or automobiles.²

On-Site Wastewater Treatment System (OWTS) – System for wastewater disposal typically consisting of a septic tank and soil absorption field, commonly called a septic system.^{2,7}

Open Space – An area with few or no paved surfaces or buildings, which may be primarily in its natural state or improved for use as a park.⁶

Ordinance – A law set forth by a governmental authority.¹

Outflow – The amount of applied water and conveyance water leaving the service area. Also conveyance outflow.⁴

Overdraft – Also see Groundwater Overdraft.¹

Parts per Billion (ppb) – A ratio of two substances, usually by mass, expressing the number of units of the designated substance present in one billion parts of the mixture. For water solutions parts per billion is equivalent to micrograms per liter.³

Parts per Million (ppm) – A ratio of two substances, usually by mass, expressing the number of units of the designated substance present in one million parts of the mixture. For water solutions, parts per million is equivalent to the milligrams per liter.¹

Peak Flow – The maximum instantaneous rate of flow during a storm or other period of time.⁷

Per-Capita Water Use – The amount of water used by or introduced into the system of an urban water supplier divided by the total residential population; normally expressed in gallons per-capita-per-day (GCPD).¹

Percolation – The act of surface water infiltrating into and through the ground and into an aquifer.⁷

Perennial Stream – A stream that flows year-round.⁷

Pesticide – Any of a class of chemicals used for killing insects, weeds, or other undesirable entities most commonly associated with agricultural activities, but has significant domestic use in California.¹

Planning Area – A designated geographic subset of the Westside Region used for planning purposes. The Planning Areas (PA) for the Westside IRWM Plan consists of the Upper Cache Creek, Upper Putah Creek, and the Valley Floor. These PAs were developed based on hydrologic watersheds within the Region.

Planning Horizon – The period of 2013-2035 for which the IRWM Plan covers.

Plan Goal – A desired outcome or result of which effort will be made to accomplish. These goals describe a high-level perspective of what the IRWM Plan is intended to address and were developed to be relevant over the entire planning horizon and beyond.

Plan Objective – A specific and tangible outcome that is intended to be achieved by or during a designated time. The plan objectives were developed

using the “SMART” criteria, meaning that each objective should be specific, measurable, attainable, relevant and time-based.

Point Source – Source of pollution that involves discharge of wastes from an identifiable point, such as a sewage treatment plant.⁷

Pollution (of Water) – The alteration of the physical, chemical, or biological properties of water by the introduction of any substance into water that adversely affects any beneficial use of water.³

Pollution Prevention – Improving water quality for all beneficial uses by protecting water at its source, reducing the need and cost for other water management actions and treatment.¹

Population Density – The average number of people per square mile for a planning area.^{7,9}

Potable Water – Water suitable for human consumption without undesirable health consequences. Drinkable. Meets Department of Health Services drinking water requirements.¹

Precipitation – The liquid equivalent of rainfall or snow that falls on an area.⁷

Prioritization – A quantitative or qualitative method to compare the relative importance and urgency of desired actions.³

Privately Owned Water Systems – Include investor-owned utilities, mutual water companies, mobile home parks, and water associations, and may also include various commercial enterprises, such as restaurants, hotels, resorts, employee housing, etc. that have their own water supply.¹

Program Preferences – Components of an Integrated Regional Water Management (IRWM) plan that will be given preference by the Integrated Regional Water Management funding process.^{2,3}

Proposition 1E – The “Disaster Preparedness and Flood Prevention Bond Act of 2006” passed by California voters on November 7, 2006, and as set forth in Division 5 of the PRC.^{2,3,4}

Proposition 50 – “Water Security, Clean Drinking Water, Coastal and Beach Protection Act of 2002” passed by California voters in November 2002, and as set forth in Division 26.5 of the California Water Code (CWC).²

Proposition 84 – “Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal

Protection Bond Act of 2006" passed by California voters on November 7, 2006, and as set forth in Division 43 of the PRC.²

Public Water System – A system for the provision of water for human consumption through pipes or other constructed conveyances that has 15 or more service connections or regularly serves at least 25 individuals daily at least 60 days out of the year. See also Community Water System.⁴

Rare or Endangered Species – A species of animal or plant listed in: Sections 670.2 or 670.5, Title 14, California Administrative Code; or Title 50, Code of Federal Regulations, Section 17.11 or Section 17.2, pursuant to the Federal Endangered Species Act designating species as rare, threatened, or endangered.⁵

Rate Structure – Designates the rate basis for cost recovery (e.g., flat, uniform, tiered). Block/Tiered rates are assumed to provide cost signals to consumers. Costs can include capital, operation and maintenance, financing, environmental compliance (documentation, permitting and mitigation), etc.¹

Recharge (Groundwater) – A hydrologic process where water moves downward from surface water to groundwater.⁷

Recreation – Water-dependent recreation activities that are consumptive (e.g., parks), flat-water (e.g., boating), or flow-based (e.g., whitewater rafting) as well as non-consumptive uses such as hiking, biking etc.¹

Recycled Water – Water which, as a result of a high level of treatment of wastewater, is suitable for a direct beneficial use or a controlled use that would not otherwise occur and is, therefore, considered a valuable resource.¹

Region – Refers to the Westside Sacramento Subregion which encompasses all of Yolo County and portion of Lake, Napa, Solano and Colusa Counties.²

Regional Water Management Group (RWMG) – A group in which three or more agencies; at least two of which have a statutory authority over water supply or water management, as well as those persons who may be necessary for the development and implementation of an Integrated Regional Water Management (IRWM) Plan that meets the requirements in California Water Code (CWC) §10540 and §10541. The Westside RWMG responsible for preparing this Plan was composed of Lake County

Watershed Protection District, Napa County Flood Control and Water Conservation District, Colusa County Resource Conservation District, Solano County Water Agency and Water Resources Association of Yolo County.^{2,4}

Regulatory Agencies – Agencies with authority to control activities in the Region. These agencies include but are not limited to the Central Valley Regional Water Quality Control Board, State Water Resources Control Board, California Department of Public Health, National Marine Fisheries Service, Federal Emergency Management Agency, and the Department of Fish and Game.⁴

Required Instream Flow – The amount of water required for instream use by agreement, water rights permit, or State/federal Acts.^{2,7}

Residential – Land designated in the City or County General Plan and zoning ordinance for buildings consisting only of dwelling units. May be improved, vacant, or unimproved.⁵

Return Flow – The portion of water from agricultural or landscape irrigation that returns to surface flows or percolates into the aquifers and is later recoverable.¹

Riparian Area – Interface between land and streams or other water bodies.⁷

Riparian Right – A right to use surface water, such right derived from the fact that the land in question abuts the banks of streams or other water source (lake or pond). These rights are senior to most appropriative rights. See also Appropriate Rights.¹

Riparian Vegetation – Vegetation growing on or near the banks of a stream or other body of water in soils that are wet during some portion of the growing season.⁷

Riverine Habitat – Habitat characterized by intermittent or continually running freshwater.⁷

Runoff – Water that runs across the top of the land without infiltrating into the soil.⁷

Sacramento Area Council of Governments (SACOG) – An association of local governments in the six-county Sacramento Region including Yolo County.¹

Safe Yield – The maximum quantity of water that can be continuously withdrawn from a groundwater basin without adverse effect on groundwater levels.¹

Salinity – Generally, the concentration of mineral salts dissolved in water. Salinity may be expressed in terms of a concentration or as electrical conductivity.¹

Salts – Materials that originate from dissolution or weathering of the rocks and soil, including dissolution of lime, gypsum and other slowly dissolved soil minerals.¹

Saturated Zone – The zone within an aquifer in which all interconnected openings are filled with water, usually underlying the unsaturated zone.¹

Secondary Treatment – Secondary treatment refers to treatment of sewage at a wastewater treatment plant to substantially degrade the biological content. The majority of municipal plants use aerobic biological processes for secondary treatment.^{2,7}

Sedimentation – The deposition or accumulation of sediment.⁷

Seepage – The gradual movement of water into, through, or from a porous medium. Also, the infiltration of water into the soil from canals, ditches, laterals, watercourse, reservoir, storage facilities, or other body of water, or from a field.^{2,8}

Septic System – A sewage-treatment system that includes a settling tank through which liquid sewage flows and in which solid sewage settles and is decomposed by bacteria in the absence of oxygen. Septic systems are often used for individual-home waste disposal where an urban sewer system is not available. See On-Site Wastewater Treatment System (OWTS).^{7,9}

Service Area – The geographic area served by a water or other agency.

Special-Status Species – Plants and animals that are legally protected under the federal Endangered Species Act (ESA), the California Endangered Species Act (CESA), or other federal, state, or local regulations, or are considered sufficiently rare by the scientific community to deserve protection.^{6,7,8}

Specific Yield – The ratio of the volume of water a rock or soil will yield by gravity drainage to the total volume of the rock or soil.

Stakeholder – An individual, group, coalition, agency or others who are involved in, affected by, or have an interest in the goals, objectives, projects, or other implementation activities shown in this Plan.²

State Plan of Flood Control (SPFC) – State and Federal flood management works, lands, programs,

plans, conditions, and mode of maintenance and operation for the State-federal flood protection system in the Central Valley.^{2,4}

State Water Project (SWP) – Water storage and delivery system that is operated by the California Department of Water Resources and serves to urban and agricultural water suppliers throughout California.¹

State Waters – Also known as “Waters of the State”, means all surface water, groundwater, and saline waters within the boundaries of the State of California (California Water Code [CWC] §13050[e]).²

Stormwater – Water generated by runoff from land and impervious surfaces during rainfall and snow events.²

Stream Gage – The site on a stream where hydrologic data is collected.⁷

Stream Gradient – The change of a stream in vertical elevation per unit of horizontal distance.⁷

Streamflow – The active flow of water within a stream, river, or creek.⁷

Subsidence – See Land Subsidence.^{7,9}

Surface Storage – Use of above ground reservoirs to collect water for later release and use.¹

Surface Water – Water that is flowing across or contained on the surface of the earth, such as in rivers, streams, creeks, lakes, and reservoirs.⁷

Surplus Water – Water that is not being used directly or indirectly to benefit the environment, agricultural or urban use sectors.¹

Sustainable – Capable of being maintained over the long term without significant environmental, social or economic damage.⁷

Tailwater – Surface runoff water from irrigated agriculture.¹

Technical Reviewers – A group of agency representatives assembled to evaluate the technical competence of a proposed project and the feasibility of the project being successful if implemented.²

Tertiary Treatment – Tertiary treatment provides effluent polishing to further improve the water quality of the effluent discharged from a wastewater treatment plant.⁷

Threatened – A species likely to become endangered within the foreseeable future if certain conditions continue to deteriorate.⁷

Total Capital Cost – Total monetary cost of option required for “turnkey” implementation, including environmental and third party impact mitigation, storage, conveyance, energy, capitalized operations and maintenance, administrative, planning, legal and engineering costs.¹

Total Dissolved Solids (TDS) – A quantitative measure of the residual minerals dissolved in water that remain after evaporation of a solution.¹

Total Irrigated Crop Area – The total area of irrigated crops (by type) planted in a planning area during a given year. This number includes consideration of multiple cropping practices.¹

Total Maximum Daily Load (TMDL) – Identifies the maximum quantity of a particular pollutant that can be discharged into a water body without violating a water quality standard, and allocates allowable loading amounts among the identified pollutant sources.²

Transpiration – An essential physiological process in which plant tissues give off water vapor to the atmosphere.¹

Tributary – A smaller river or stream that joins a larger one and contributes to its water flow.⁷

Turbidity – A measure of cloudiness and suspended sediments in water. Water high in turbidity appears murky and contains sediments in suspension. Turbid water may also result in higher concentrations of contaminants and pathogens, that bond to the particles in the water.⁷

Unaccounted for Water – Deteriorated and aging infrastructure can play an important role in unaccounted for water (sometimes referred to as water losses), contributing to significant water leakage and a high rate of main breaks.¹

Unconfined Aquifer – An aquifer in which there are no confining beds between the top of the aquifer and land surface.⁷

Urban Sprawl – Haphazard growth or outward extension of a city resulting from uncontrolled or poorly arranged development.⁶

Urban Water Management Planning Act – Sections 10610 through 10657 of the California Water Code (CWC). The Act requires urban water

suppliers to prepare urban water management plans which describe and evaluate sources of water supplies, efficient uses of water, demand management measures, implementation strategies and schedules, and other relevant information and programs within their water service areas. Urban water suppliers (CWC §10617) are either publicly or privately owned and provide water for municipal purposes, either directly or indirectly, to more than 3,000 customers or supply more than 3,000 acre-feet of water annually.¹

Urban Water Supplier – Supplier, either public or privately owned, that provides water for municipal purposes, either directly or indirectly, to more than 3,000 customers, or supplying more than 3,000 acre-feet of water annually (California Water Code [CWC] §10617).²

Urban Water Use Efficiency – Methods or technologies resulting in the same beneficial, residential, commercial, industrial, and institutional uses with less water or increased beneficial uses from existing water quantities.¹

Usable Storage Capacity – The quantity of groundwater of acceptable quality that can be economically withdrawn from storage.¹

Vernal Pools – Subset of wetlands that occur in shallow foothill and valley depressions. Water usually remains in the pools and swales from only a few days to a few months. The presence of low permeability soils (e.g., clay, hardpan) generally limit water filtration.¹

Volatile Organic Compound (VOC) – A human-made organic compound that readily vaporizes in the atmosphere. These compounds are often highly mobile in the groundwater system and are generally associated with industrial activities.⁸

Waste Discharge Requirements (WDRs) – Requirements that are adopted by the Regional Water Quality Control Boards to protect the waters of the state for the use and enjoyment of the people of California.⁷

Waste Water Treatment Facility – Facilities that store and process municipal sewage before release.⁷

Water Balances – An analysis of the total developed/dedicated supplies, uses, and operational characteristics for a region; when there is sufficient information, the water balance shows what water was applied to actual uses so that the use equals supply.¹

Water Demand – The desired quantity of water that would be used if the water is available and a number of other factors, such as price, do not change. Demand is not static.¹

Water Quality – A term used to describe the chemical, physical, and biologic characteristics of water with respect to its suitability for a particular use.¹

Water Recycling – The process of treating wastewater for beneficial use, storing and distributing recycled water.¹

Water Reliability – Dry: A measure of a system’s ability to sustain the social, environmental, and economic systems that it serves during a dry year. Wet: A measure of a system’s ability to sustain the social, environmental, and economic systems which it serves during a wet year.¹

Water Reuse – The additional use of previously used water, with or without treatment.³

Water Rights – In water law, refers to the right of a user to use water from a water source, e.g., a river, stream, pond or source of groundwater.¹

Water Service Area – Geographic area in which a water agency is the designated water service provider.¹

Water Transfer – A voluntary change in the way water is usually distributed among water users in response to water scarcity. Compare to water exchanges, which are typically water delivered by one water user. The receiving water will return the water at a specified time or when the conditions of the parties to the agreement are met.¹

Water Year – A continuous 12-month period for which hydrologic records are compiled and summarized. Different agencies may use different calendar periods for their water years. The Department of Water Resources (DWR) water year is October 1 through September 30.¹

Watershed – The land area from which water drains into a stream, river, or reservoir.⁷

Watershed Management – The process of evaluating, planning, managing, restoring, and organizing land and other resource use within an area that has a single common drainage point.¹

Weir – A low dam placed across a stream or river to raise its level or divert its flow.⁷

Wet Season – The period of time on an annual cycle in which the majority of rainfall occurs.¹

Wild and Scenic River – State- and federal-designated river system based on 1968 Wild and Scenic Rivers Act, and the California Wild and Scenic Rivers Act of 1972.¹

Wildfire – A sweeping and destructive conflagration, especially in a wilderness or a rural area.⁷

Williamson Act – Known formally as the California Land Conservation Act of 1965, it was designed as an incentive to retain prime agricultural land and open space in agricultural use, thereby slowing its conversion to urban and suburban development. The program entails a 10-year contract between the City or County and an owner of land whereby the land is taxed on the basis of its agricultural use rather than the market value. The land becomes subject to certain enforceable restrictions and certain conditions need to be met prior to approval of an agreement.⁶

Windset – A phenomenon whereby high winds result in increased water levels to occur on downwind shores.

12.3 Glossary References

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- ² DWR. 2010. *Integrated Regional Water Management Guidelines for Proposition 84 and 1E*. August 2010.
- ³ Water Resources Associated of Yolo County. 2007. *Water Resources Association of Yolo County Integrated Regional Water Management Plan*. April 2007.
- ⁴ Westside Sacramento Regional Water Management Group. 2010. *Memorandum of Understanding Integrated Regional Water Management Plan for the Westside Subregion of the Proposition 84 Sacramento River Funding Area*. September 1, 2010.
- ⁵ City of Dixon. 1993. *Dixon 1993 General Plan*. December 1993, amended through April 2010.
- ⁶ City of Rio Vista Community Development Department. 2002. *City of Rio Vista General Plan 2001*. Adopted July 2002.
- ⁷ County of Lake Department of Public Works. 2010. *Clear Lake Integrated Watershed Management Plan*. Prepared for West Lake and East Lake Resource Conservation Districts. February 2010.
- ⁸ Napa County Department of Conservation, Development & Planning. 2008. *Napa County General Plan*. Adopted June 2008.
- ⁹ Quad Knopf, Inc. 2009. *General Plan 2025, City of Lakeport*. Prepared for City of Lakeport Community Development Department. August 2009.