### Glossary

**Absorption:** The entrance of water into the soil or rocks by all natural processes. Alluvium material deposited by running water.

**Alterations of the hydro-regime:** Changes in the characteristic pattern of precipitation, runoff, infiltration, and evaporation affecting a water body.

**Amount of contiguous vegetation:** Areas that are homogenous with respect to the current condition of vegetation; that is, these are plant communities possessing sufficient uniformity in regard to composition and structure to be clearly different from adjacent areas.

**Annual flood:** The highest peak water discharge in a year.

**Aquifer:** One or more geologic formations containing sufficient saturated porous and permeable material to transmit water at a rate sufficient to feed a spring or for economic extraction by a well.

**Artificial recharge:** The deliberate act of adding water to a groundwater aquifer by means of a recharge project. Artificial recharge can be accomplished via injection wells, spreading basins, or in-stream projects.

**Bank:** The margins of a channel.

**Base flow:** Streamflow derived from groundwater seepage into the stream.

**Base runoff:** Sustained or fair weather runoff. In most streams, base runoff is composed largely of groundwater.

**Basin:** The total area of land that drains water to a central stream, river or other water body.

**Belvederes:** An architectural term adopted from Italian (literally "fair view"), which refers to any architectural structure sited to take advantage of such a view. A belvedere may be built in the upper part of a building, or on a bridge so as to command a fine view.

**Bioengineering:** An applied science that combines structural, biological, and ecological concepts to construct living structures for erosion, sediment, and flood control. It is always based on sound engineering practices integrated with ecological principles.

**Biogeochemical:** Of or relating to the partitioning and cycling of chemical elements and compounds between the living and nonliving parts of an ecosystem.

**Biotechnical:** In slope stability engineering, refers to the use of both live plant material and inert structures to stabilize and reinforce slopes.

**BMP’s (Best Management Practices):** Managerial techniques that are recognized to be the most effective and practical means to control pollutants yet are compatible with the productive use of the resource to which they are applied. BMP’s include: reducing paving areas and increasing plant cover, using gray water for irrigation, filter beds, subsurface infiltration basins, green trellises for shade, cisterns for roofs and playgrounds, permeable parking areas, green roofs, cistern walls, green planning, green screens, vegetated creeks/drainage channels, parking orchards, etc.

**Box Culvert:** A covered conduit of rectangular or square shape that passes stormwater runoff, typically under a roadway, bridge embankment, or a river channel.

**Braiding of river channels:** Successive division and rejoining of riverflow with accompanying islands.

**Brownfields:** Abandoned or underused land that was previously contaminated with hazardous waste or pollution from industrial or commercial use, and that has the potential to be reused once it is cleaned up.

**Bulb-outs:** Where the entrance to a street is narrowed at the intersection by extending the curb on either side. These make the pedestrian crossing shorter, force slower turns at corners, and also make the entire street look narrower - and therefore slower.

**Carrying capacity:** The number of mass of organisms of a species that can live in a given area.

**Channel:** An open conduit either naturally or artificially created which periodically or continuously contains moving water, or which forms a connecting link between two bodies of water.

**Channel storage:** The volume of water at a given time in the channel or over the flood plain of the streams in a drainage basin or river reach.

**Civil engineering:** The branch of engineering concerned with the design and construction of such public works as dams or bridges.

**Confluence:** Describes the meeting of two or more bodies of water; usually refers to the point where a tributary joins a more major river.
Contaminant plume: A zone of polluted ground water down-gradient from a point source of pollution.

Cover: Any object in the stream that provides protection to fish and other animals. Fish use cover to hide, rest, escape and feed.

Crossing Refuges: A physical treatment of a crosswalk to make it safer and more convenient for pedestrian travel; may include such elements as crosswalk markings, median refuges, or curb extensions.

Degradation: The process by which a stream bed is lowered in elevation by removal or scouring of sediment. This term is also used to refer to a damaged condition of habitat.

Depletion: The progressive withdrawal of water from surface or ground water reservoirs at a rate greater than that of replenishment.

Deposition: The process of sediment falling out of the water onto the stream bed in areas of lower flow and energy.

Detention ponds: Controls flooding by diverting water during peak flow times. Usually placed out of channel. Holds water temporarily, as opposed to Retention pond.

Direct runoff: The runoff entering stream channels promptly after rainfall. The terms Ground water runoff and Surface runoff are classifications according to source.

Discharge: In its simplest concept discharge means outflow; therefore, the use of this term is not restricted as to course or location, and it can be applied to describe the flow of water from a pipe or from a drainage basin.

Detrital biomass: Coarse woody debris

Dissolution: The taking of water from a stream or other body of water into a canal, pipe, or other conduit.

Dissolved oxygen: A measure of the amount of oxygen available for biochemical activity in a water body, and as indicator of the quality of that water.

Dynamic Surface Storage: Also referred to as live storage, this is a measure of the volume of above-ground water storage available during major rainfall events.

Ecosystem: A dynamic complex of plant, animal, and micro-organism communities and their non-living environment, linked together through nutrient cycling and energy flow and interacting as a functional unit.

Eddy: A circular current of water usually formed at a bend or obstruction in the stream.

Effluent: Treated wastewater discharged from sewage treatment plants.

Energy Dissipation: The loss of kinetic energy of moving water due to internal turbulence, boundary friction, change in flow direction, contraction, or expansion.

Environmental Justice: The pursuit of equal justice and equal protection under the law for all environmental statutes and regulations without discrimination based on race, ethnicity, and/or socioeconomic status.

Ephemeral Flows - Flows only in direct response to precipitation, and whose channel is at all times above the water table.

Erosion: The wearing away of rock or soil and the movement of the resulting particles by wind, water, ice, or gravity.

Estuary: The area where fresh and salt water mix at the mouth of a river. Estuaries are important areas that are used as rearing habitat by many fish species and other animals.

Evapotranspiration: water withdrawn from a land area by evaporation from water surfaces, moist soil, and plant transpiration.

Exotic Species: Non-native plants or animals that have been introduced into areas where they do not naturally occur, mostly by human actions.

Fish Ladder: A structure—typically with a series of “steps” or pools—designed to allow fish the opportunity to migrate upstream and continue their function as part of the river ecosystem.

Flood: An overflow or inundation that comes from a river or other body of water

Flood-control storage: Storage of water in reservoirs to abate flood damage.

Floodplain: The lowland that borders a river, usually dry but subject to flooding.

100 year floodplain: Those lands that are subject to a one percent or greater chance of flooding in any year.

Floodway: A part of the flood plain otherwise leveed, reserved for emergency diversion of water during floods.

Flow regime: Quantity, frequency and seasonal nature of water flows.
**Freshet:** A rapid rise in stream flow due to runoff from rain.

**Gabions:** Used in a variety of forms to stabilize slopes. May be in the form of wide mesh baskets containing rocks. May be used with plants.

**Gradient:** The amount that a stream drops in elevation over a distance.

**Green slope stabilizers:** Slope stabilizing methods that involve the use of grass and vegetation.

**Groundwater:** Water in the ground that is in the zone of saturation, from which wells, springs, and ground water runoff are supplied.

**Groundwater runoff:** That part of the runoff which has passed into the ground, has become ground water, and has been discharged into a stream channel as a spring or seepage water.

**Habitat value:** A reflection of habitat’s contribution to sustaining the wildlife communities and essential ecological processes of a wider ecosystem.

**Hydrograph:** A graph showing stage, flow, velocity, or other property of water with respect to time.

**Hydrologic budget:** An accounting of the inflow to, outflow from, and storage in, a hydrologic unit, such as a drainage basin, aquifer, soil zone, lake, reservoir, or irrigation project.

**Hydrologic, biogeochemical and Biological functional capacity:** Quantified or estimated index that indicates the level of alteration to the wetland hydrologic regime compared to an unaltered condition; typically used in an assessment method called the Hydrogeomorphic Method.

**Hydrology:** The science encompassing the behavior of water as it occurs in the atmosphere, on the surface of the ground, and underground.

**Improvement:** A change or addition that improves, or that makes the previous condition in some manner better.

**Indigenous Ecologies:** Pertaining to plants or animals that are native to a particular region or country.

**Infiltration:** The flow of a fluid into a substance through pores or small openings.

**Infiltration ponds:** Infiltration allows the water to seep into the ground and recharge the ground water. The infiltration rate or how quickly the water enters the ground depends on the type of soil. Sandy soils infiltrate more quickly than gravelly soils. The practicability of infiltration depends on ground water elevations, the depth to bedrock and the infiltration rate.

**Integrated Resources Plan:** A City of Los Angeles document, this plan incorporates a vision of water, wastewater, and runoff management in the City that analyzes and provides alternatives for the relationships that exist among the City’s wastewater and stormwater runoff resources and state water quality objectives.

**Integrated Regional Water Management Plan:** A Los Angeles County Department of Public Works document, this Plan addresses major water related objectives and challenges within Los Angeles County as they relate to statewide water resource priorities, including water supply, groundwater management, ecosystem restoration, and water quality.

**Intermittent or seasonal:** Flows only at certain times of the year when it receives water from springs or from some surface source such as melting snow in mountainous areas;

**Interspersion:** The spatial arrangement of biotic/abiotic vegetation clusters or patch types within the wetland, especially the degree to which patch types intermingle with each other (e.g. the amount of edge between patches).

**Landscape architecture:** The art of designing the built environment of neighborhoods, towns and cities while also protecting and managing the natural environment, from its forests and fields to rivers and coasts.

**Landscape based filtration techniques:** Methods to capture and treat stormwater from streets, vegetated areas, and other outdoor surfaces to prevent or reduce the impacts of urban runoff.

**Long-term Surface Storage:** This is a measure of the volume of above-ground water storage that exists well-beyond rainfall events, such as within lakes and reservoirs.

**Massing:** Urban planning and design description for integrating the bulk, size, and shape of buildings with their surrounding space, nearby structures, and natural features.
**Meander:** The winding of a stream channel.

**Mechanical Filtration Techniques:** The removal of particulate matter by separating water from solid material, by mechanical processes.

**Multiple benefits:** A term used in the Revitalization Master Plan to refer to projects that have benefits for a wide variety of issues including but not limited to; water quality, habitat, recreation and open space.

**Natural recharge:** Naturally occurring water added to an aquifer. Natural recharge generally comes from snowmelt and storm runoff.

**Off-channel habitat ponds:** Channels or wetlands that are connected to the main channel of a stream.

**Open Space:** An area of land that is valued for natural processes and wildlife, for agricultural and sylvan production, for active and passive recreation, and/or for providing other public benefits.

**Opportunity:** A favorable or advantageous circumstance or combination of circumstances.

**Outlets/Inlets:** Used to bring water into, or take water away from, the channel.

**Overland flow:** The flow of rainwater over the land surface toward stream channels. After it enters a stream, it becomes runoff.

**Percolation:** The movement, under hydrostatic pressure, of water through the interstices of a rock or soil, except the movement through large openings such as caves.

**Point source:** A source of water pollution that originates from a single point, such as an outflow pipe from a factory.

**Pool:** A deep reach of a stream. The reach of a stream between two riffles. Natural streams often consist of a succession of pools and riffles.

**Potable water:** Water quality that is suitable for drinking.

**Predominant substrate size:** The most common diameter of streambed particles such as clay, silt, sand, gravel, cobble and boulders.

**Primary treatment:** A physical process in which the sewage flow is slowed down in settling tanks or lagoons. The thicker part of the wastewater, the sludge, is then removed from the bottom and disposed of in a variety of ways. Floatable solids, oil and grease are usually skimmed off the surface before the remaining effluent is discharged into a water body.

**Recharge:** To add water to an aquifer; also, the water added to an aquifer.

**Reservoir:** A pond, lake, or basin, either natural or artificial, for the storage, regulation, and control of water.

**Restoration:** A return to a condition that represents or reconstructs an original form (such as with physical structures or facilities). In the case of natural systems and landscape features, this includes but is not limited to: the addition or modification of plant and wildlife habitat to create a more natural state. Restoration projects typically include the planning, design, implementation, monitoring, and reporting that is necessary to ensure that project objectives are successfully met.

**Retention ponds:** Retention facilities or wet ponds create permanent ponds of water. Wet ponds also provide water quality benefits by allowing pollutants to precipitate from the water before discharging into receiving streams.

**Revitalize:** To bring new life or vigor to; to restore to a better state; to refresh or renew -- whether a natural system or a neighborhood or community.

**Riffle:** A rapid in a stream.

**Riffle pool:** A portion of a river or stream that alternates between relatively shallow and deeper water. Riffles describe shallow water where the flow is rippling over gravel deposits or boulders, with pools being deeper and calmer water.

**Riparian:** Pertaining to the banks of a stream. Most often used to describe the vegetation along a stream.

**Riparian habitat:** Natural home for plants and animals occurring on the land bordering a stream or river.

**Rip-rap:** Used for lining banks and as an apron for outlet pipes.

**Run:** Swiftly flowing part of a stream with little surface agitation and no major obstructions.
Runoff: That part of the precipitation that appears in surface streams. The part of rain and snowmelt that runs over the ground and into a stream or other water body.

Scour (Scouring): Removal of sediment from the stream bed by flowing water.

Secondary treatment: Also known as biological treatment, further reduces the amount of solids by helping bacteria and other microorganisms consume the organic material in the sewage. Oxygen is critical to this treatment stage.

Sediment: Fragmental material that originates from weathering of rocks and is transported by, suspended in, or deposited by water or air or is accumulated by other natural agencies.

Sediment delivery: Contribution of transported sediment to a particular location or part of a landscape.

Storm: A disturbance of the ordinary average conditions of the atmosphere which, unless specifically qualified, may include any or all meteorological disturbances, such as wind, rain, snow, hail, or thunder.

Stream: A general term for a body of flowing water. In hydrology the term is generally applied to the water flowing in a natural channel as distinct from a canal. Stream gaging is applied to the water flowing in any channel, natural or artificial. Streams in natural channels may be classified as follows in relation to time: perennial (flows continuously), intermittent (flows seasonal)

Stream order: A method of numbering streams as part of a drainage basin network. The smallest unbranched mapped tributary is called first order, the stream receiving the tributary is called second order, and so on.

Subsurface flow: The flow of water beneath ground surface in hydrology.

Surface runoff: That part of the runoff which travels over the soil surface to the nearest stream channel.

Sustainability: To keep in existence; maintain; to supply with necessities or nourishment. In recent usage, the term refers to continued viability — whether from an economic or environmental standpoint — while minimizing consumption of resources.

Time of concentration: The time required for water to flow from the farthest point on the watershed to the gaging station.

TMDL Total Maximum Daily Load: A TMDL is an assessment of how much pollution “load” the stream can accept and still meet federal and state water quality standards.

Traffic calming devices: Methods used to reduce vehicular speed and volume, and increase the sharing of streets by pedestrians and other users. Generally refers to physical measures and roadway design changes, but enforcement and education can be components.

Transpiration: The quantity of water absorbed, evaporated, transpired and used directly in the plant tissue.

Treatment terraces: In-channel water quality terraces that treat low flow storm water from storm outfalls before the water is discharged further downstream.

Tree lawn: Also called a boulevard, or nature strip. It is a small area, often planted with trees and grass, between a street and the sidewalks of that street.

Tributary: A stream that feeds into a larger stream.

Urban design: Urban design is the art of making places for people. It includes the way places work, how safety is maintained, and how a place looks. It concerns the connections between people and places, movement and urban form, nature, the overall built environment, and the processes for ensuring successful villages, towns, and cities.

Watershed: The topographic divide separating one drainage basin from another. A watershed may be defined as the area within which natural drainage patterns convey surface water flows to a specific low-point destination. The Los Angeles River’s watershed encompasses 871 square miles — an area roughly twice the size of the state of Delaware.

Wetland: Land with a wet, spongy soil, where the water table is at or above the land surface for at least part of the year. There are a number of different wetlands indicators (soil type, plants, etc.) that determine whether a piece of land is legally considered a wetland.
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