Section: A3 DEFINITIONS AND RESOURCES

The following definitions and resources are intended to provided information to the general public to assist them with the compliance of the LA RIO Guidelines and do not constitute an endorsement nor are they intended to provide the definitive information on a subject.

American Institute of Architects (AIA)

The **AIA** is the voice of the architectural profession and the resource for its members in service to society. Since 1857, the AIA has represented the professional interests of America's architects. As AIA members, over 80,000 licensed architects, emerging professionals, and allied partners express their commitment to excellence in design and livability in our nation's buildings and communities. Members adhere to a code of ethics and professional conduct that assures the client, the public, and colleagues of an AIA-member architect's dedication to the highest standards in professional practice. Please go to http://www.aia.org to learn more

American Society of Landscape Architects (ASLA)

Founded in 1899, the **American Society of Landscape Architects** is the national professional association representing landscape architects. ASLA promotes the landscape architecture profession and advances the practice through advocacy, education, communication, and fellowship. More information, including a national database of accredited landscape professionals can be found at: www.asla.org..

Best Management Practices- (BMP's)

Best Management Practices (BMP's) are structural and nonstructural stormwater management control measures taken to mitigate changes to both quantity and quality of runoff caused through changes to land use. Generally BMPs focus on increased impervious surfaces from development. BMPs are designed to reduce volume, peak flows, and/ or non-point source pollution through evapotranspiration, infiltration, detention, and filtration or biological and chemical actions. Examples of Structural BMPS include bioinfiltration or bioretention rain gardens, pervious concrete and porous asphalt, infiltration trenches, and green roofs. These practices are generally used in Low Impact Development applications LID.

Be Water Wise

Be Water Wise is an education and resource program developed by the Metropolitan Water District and the Family of Southern California Water Agencies to provide the community with information about water conservation and low water plant communities. Information about classes, rebates, retailers, and events can be found at: www.bewaterwise.com

Bio-retention ponds

Bio-retention ponds are commonly referred to as rain gardens. A rain garden is a planted depression that is designed to absorb rainwater runoff from impervious urban areas like roofs, driveways, walkways, and compacted lawn areas. Rain gardens reduce rain runoff by allowing stormwater to soak into the ground (as opposed to flowing into storm drains and surface waters which causes erosion, water pollution, flooding, and diminished ground water).

Bioswales

Bioswales are landscape elements designed to remove silt and pollution from surface runoff water. They consist of a swaled drainage course with gently sloped sides (less than six percent) and filled with vegetation, compost and/or riprap. The water's flow path, along with the wide and shallow ditch, are designed to maximize the time water spends in the swale, which aids the trapping of pollutants and silt. Depending upon the geometry of land available, a bioswale may have a meandering or almost straight channel alignment. Biological factors also contribute to the breakdown of certain pollutants.

A common application is around parking lots, where substantial automotive pollution is collected by the paving and then flushed by rain. The bioswale, or other type of biofilter, wraps around the parking lot and treats the runoff before releasing it to the watershed or storm sewer.

Bureau of Sanitation-Watershed Division

Please visit http://www.lastormwater.org/ for detailed information about stormwater best management practices and the City's sewer system.

California Friendly

California Friendly is a term branded by the Metropolitan Water District to define plant communities that are compatible with the southern california mediterranean climate. For a complete list of California Friendly plants and information about where to find these plants please go to: www.bewaterwise.com

California Invasive Plant Council

Cal-IPC's mission is to protect California wildlands from invasive plants through restoration, research and education. For information about invasive plant species, management techniques and the mission of Cal-IPC please go to: www.cal-ipc.org/

California Native Plant Society

The California Native Plant Society (CNPS) is a non-profit organization dedicated to the understanding and appreciation of California's native plants and how to conserve them and their natural habitats through education, science, advocacy, horticulture and land stewardship. For more information please to to: www.cnps.org/

Cisterns

A **cistern** is a receptacle for holding liquids, usually water. Often cisterns are built to catch and store rainwater. They range in capacity from a few litres to thousands of cubic metres (effectively covered reservoirs).Cisterns are commonly used in areas where water is scarce, either because it is rare or because it has been depleted due to heavy use. Present day cisterns are often only used for irrigation due to concerns over water quality.

Complete Green Streets

The term "Complete" Green Streets blends two street design typologies; the Complete Street and the Green Street.

Complete Streets are designed and operated to enable safe access for all users. Pedestrians, bicyclists, motorists and bus riders of all ages and abilities are able to safely move along and across a complete street.

Green Streets are designed and maintained to treat and infiltrate stormwater, increase tree shade canopy and to support native habitat through increased areas of landscaping in the parkways and medians.

Conservation Movement

The **conservation movement** is a political and social movement that seeks to protect natural resources including plant and animal species as well as their habitat for the future. Conservation differs from environmentalism in that it aims to preserve natural resources expressly for their continued sustainable use by humans.

The early conservation movement included fisheries and wildlife management, water, soil conservation and sustainable forestry. The contemporary conservation movement has broadened from the early movement's emphasis on use of sustainable yield of natural resources and preservation of wilderness areas to include preservation of biodiversity.

Covenant

A covenant, in its most general sense, is a solemn promise to do or not do something specified. More specifically, a covenant, in contrast to a contract, is a one-way agreement whereby the covenantor is the only party bound by the promise. A covenant may have conditions and prerequisites that qualify the undertaking, including the actions of second or third parties, but there is no inherent agreement by such other parties to fulfil those requirements. Consequentially, the only party that can break a covenant is the covenantor.

Curb Extensions

A **curb extension** (or also **kerb extension**, **bulb-out**, **nib**, **elephant ear**, **curb bulge** and **blister**) is a traffic calming measure, intended to slow the speed of traffic and increase driver awareness, particularly in built-up and residential neighbourhoods. They also allow pedestrians and vehicle drivers to see each other when vehicles parked in a parking lane would otherwise block visibility

Daylight hours

Daylight or **the light of day** is the combination of all direct and indirect sunlight outdoors during the daytime (and perhaps twilight). This includes direct sunlight, diffuse sky radiation, and (often) both of these reflected from the Earth and terrestrial objects. *Daytime* is the period of time each day when daylight occurs.

Daylighting streams

In urban design and urban planning, **daylighting** is the redirection of a stream into an above-ground channel. Typically, the goal is to restore a stream of water to a more natural state. Daylighting is intended to improve the riparian environment for a stream which had been previously diverted into a culvert, pipe, or a drainage system.

Detention Basin

A **Detention basin** is an artificial flow control structure that is used to contain flood water for a limited period of a time, thereby providing protection for areas downstream. This is opposed to a retention basin that holds water for an extended period of time. These basins are generally a part of a larger engineered flood water management system

Dual Pipe

Dual piping is a system of plumbing installations used to supply both potable and reclaimed water to a home or business. Under this system, two completely separate water piping systems are used to deliver water to the user. This system prevents mixing of the two water supplies, which is undesirable, since reclaimed water is usually not intended for human consumption. In the United States, reclaimed water is distributed in lavender (light purple) pipes, to alert users that the pipes contain non-potable water.

Dual Pipe continued

The City of Los Angeles has a dual (purple) pipe infrastructure in place and in 2006 the City approved the Integrated Resources Plan (IRP) which included a strategy to expand the network of purple pipes. For current maps of the system and information about future infrastructure please visit: http://www.lacity.org/san/irp.

Ecology

Ecology is the scientific study of systems of living organisms and the interactions among organisms and between the organisms and their environment. The environment of an organism includes both physical properties, which can be described as the sum of local abiotic factors such as insolation (sunlight), climate, and geology, and biotic factors, which are other organisms that share its habitat.

Energy Conservation

Energy conservation is the practice of decreasing the quantity of energy used while achieving a similar outcome. Individuals and organizations that are direct consumers of energy may want to conserve energy in order to reduce energy costs and promote economic, political and environmental sustainability. Industrial and commercial users may want to increase efficiency and thus maximize profit.

By reducing emissions, energy conservation is an important part of lessening climate change. Energy conservation facilitates the replacement of non-renewable resources with renewable energy. Energy conservation is often the most economical solution to energy shortages, and is a more environmentally benign alternative to increased energy production

Energy Efficient

The energy efficiency of a consumer item is generally defined as the relative amount of power used (usually in the form of electricity) by an item in satisfying its purpose. For example, a washing machine is designed to wash clothes. The more energy efficient the washing machine, the less electricity that is consumed in performing this task.

To fully evaluate the energy efficiency of a consumer item however, running costs and expected life must be included in the calculation. Energy consumption can be measured per kilogram, for example, when comparing the efficiency of a full washing machine load to a smaller one. Energy Star and the European Union energy label are energy labels system that allow buyers to easily make comparisons between the power consumption statistics of similar electrical appliances.

Eyes on the Street- See Safe Streets

Floodplain

A floodplain, or flood plain, is flat or nearly flat land adjacent to a stream or river that experiences occasional or periodic flooding. It includes the floodway, which consists of the stream channel and adjacent areas that carry flood flows, and the flood fringe, which are areas covered by the flood, but which do not experience a strong current.

Forest Stewardship Council

In many forests around the world, logging still contributes to habitat destruction, water pollution, displacement of indigenous peoples, and violence against people who work in the forest and the wildlife that dwells there. Many consumers of wood and paper, and many forest products companies believe that the link between logging and these negative impacts can be broken, and that forests can be managed and protected at the same time. Forest Stewardship Council certification is one way to improve the practice of forestry. For more information please visit: http://www.fscus.org

French Drains

A French drain or land drain is a ditch filled with gravel and/or rock that redirects surface and ground water away from an area. French drains are common drainage systems, primarily used to prevent ground and surface water from penetrating or damaging building foundations. Alternatively, the French drain technique may be used to distribute water, such as that which flows from the outlet of a typical septic tank sewage treatment system. French drains are also used behind retaining walls to relieve ground water pressure

Gray Water

Greywater, sometimes spelled **graywater**, **grey water** or **gray water** and also known as **sullage**, is non-industrial wastewater generated from domestic processes such as washing dishes, laundry and bathing. Greywater comprises 50-80% of residential wastewater. Greywater is distinct from blackwater in the amount and composition of its chemical and biological contaminants (from feces or toxic chemicals). Greywater gets its name from its cloudy appearance and from its status as being neither fresh (white water from groundwater or potable water), nor heavily polluted (blackwater). According to this definition wastewater containing significant food residues or high concentrations of toxic chemicals from household cleaners etc. may be considered "dark grey" or blackwater.

Green Roof

A green roof is a roof of a building that is partially or completely covered with vegetation and soil, or a growing medium, planted over a waterproofing membrane. This does not refer to roofs which are merely colored green, as with green shingles. It may also include additional layers such as a root barrier and drainage and irrigation systems. Container gardens on roofs, where plants are maintained in pots, are not generally considered to be true green roofs, although this is an area of debate. Green roofs are also referred to as eco-roofs, vegetated roofs, living roofs, and greenroofs.

Habitat Conservation

To *conserve habitat* life for wild species and prevent their extinction or reduction in range is a priority of a great many groups that cannot be easily characterized in terms of any one ideology

Industrial wastewater treament

Industrial wastewater treatment covers the mechanisms and processes used to treat waters that have been contaminated in some way by man's industrial or commercial activities prior to its release into the environment or its re-use.

Infiltration

Infiltration is the process by which water on the ground surface enters the soil.

Infiltration rate

Infiltration rate in soil science is a measure of the rate at which a particular soil is able to absorb rainfall or irrigation. It is measured in inches per hour or millimeters per hour. The rate decreases as the soil becomes saturated. If the precipitation rate exceeds the infiltration rate, runoff will usually occur unless there is some physical barrier. It is related to the saturated hydraulic conductivity of the near-surface soil. The rate of infiltration can be measured using an infiltrometer.

Intermittent Streams

In the United States, an **intermittent** stream is one that only flows for part of the year and is marked on topographic maps with a line of blue dashes and dots.

Irrigation

Irrigation is the artificial application of water to the soil usually for assisting in growing plants and crops.

Drip irrigation, also known as *trickle irrigation* or *microirrigation* is an irrigation method that minimizes the use of water and fertilizer by allowing water to drip slowly to the roots of plants, either onto the soil surface or directly onto the root zone, through a network of valves, pipes, tubing, and emitters.

High Efficiency/Smart Irrigation Controllers An irrigation controller is a device to operate automatic irrigation systems such as lawn sprinkler systems and drip irrigation systems. Most controllers have a means of setting the frequency of irrigation, the start time, and the duration of watering. Some controllers have additional features such as multiple programs to allow different watering frequencies for different types of plants, rain delay settings, input terminals for sensors such as rain and freeze sensors, soil moisture sensors, weather data, remote operation, etc

Lawn

A **lawn** is an area of recreational or amenity land planted with grass, and sometimes clover and other plants, which are maintained at a low, even height

Los Angeles River Master Plan

Developed by the Los Angeles County Department of Public Works The Los Angeles River Master Plan provides for the optimization and enhancement of aesthetic, recreational, flood control and environmental values by creating a community resource, enriching the quality of life for residents, and recognizing the river's primary purpose for flood control. For more information please visit: http://ladpw.org/wmd/watershed/LA/LA_River_Plan.cfm

LARMP-Landscape Guidelines and Plant Palettes

http://ladpw.org/wmd/watershed/LA/Larmp/

LARMP-Maintenance Guidelines

http://ladpw.org/wmd/watershed/LA/Larmp/

Los Angeles River Revitalization Master Plan

Approved in May 2007 by the Los Angeles City Council the LARRMP identifes a vision for the revitalization of the Los Angeles River. For updates on the LARRMP please visit: http://www.adhocriver.org or www.lariver.org

Low Impact Design (LID)

LID is a land planning and engineering design approach with a goal of replicating the pre-development hydrologic regime of urban and developing watersheds. The primary goal of LID is to mimic a site's predevelopment hydrology, infiltrate, filter, store, evaporate, and detain runoff close to its source. Examples of LID site design include diverting runoff from impervious surfaces such as parking lots to bioretention areas, such as a rain garden or capturing rain water on a green roof.

Metropolitan Water District (MWD)

MWD is a consortium of cities and waetr districts that provides drinking water to nearly 10 million customers in parts of Los Angeles, Orange, San Diego, Riverside, San Bernadino and Ventura Counties.

The mission of the District is to provide its service area with adequate and reliable supplies of high quality water to meet present and future needs in an envioronmentally and economically responsible way. For more information please visit: www.mwdh2o.co

Native Plants

A **Native plant** is one that occurs naturally or has existed for many years in an area. These can be trees, flowers, grasses or any other plants. Some of them may have adapted to a very limited range. They may have adjusted to living in unusual environments or under very harsh climates or exceptional soil conditions. Although some types of plants for these reasons exist only within a very limited range, others can live in diverse areas or by adaptation to different surroundings.

Parkway

The area between the curb and the sidewalk that is landscaped

Pedestrian Oriented

Many communities have embraced pedestrian mobility as an alternative to past building practices that favor automobiles. Reasons for this shift include a recognition that dependency on automobiles leads to an unsustainable future or that automobile-oriented environments engender dangerous conditions to both motorists and pedestrians and are generally bereft of aesthetics.

In urban design, walkability is the measure of the overall walking conditions in an area. Factors which are commonly part of walkability indices include land use mix, street connectivity, residential density (residential units per area of residential use), and retail floor area ratio. Other factors which are also believed to affect walkability include access to mass transit, presence and quality of sidewalks and pedestrian crossings, aesthetics, nearby local destinations, air quality, street furniture, and traffic flow.

Perennial Stream

A **perennial** stream or **perennial** river is a stream or river that flows continuously all year round.

Permeable Paving

Permeable paving, also called *pervious paving* or "porous pavement", is a term used to describe paving methods for roads, parking lots and walkways that allow the movement of water and air through the paving material. Although some porous paving materials appear nearly indistinguishable from nonporous materials, their environmental effects are qualitatively different. Their effects are important because pavements are two-thirds of the potentially impervious surface cover in urban areas

Permeablity

In the earth sciences, permeability is a measure of the ability of a material (typically, a rock or unconsolidated material) to transmit fluids. It is of great importance in determining the flow characteristics of hydrocarbons in oil and gas reservoirs, and of groundwater in aquifers.

Point System

Projects within the boundaries of the LA RIO must demonstrate compliance with the point system as detailed in Appendix A1.

Purple Pipe

See dual pipe above

Raingarden

See bioretention above

Recycled StormWater

See Low Impact Design (LID) above

Retention basin

A retention basin, sometimes called a retention pond, is a type of constructed wetland that is used to contain stormwater or rain runoff. A retention basin provides an area to hold water from a small surrounding drainage area that would otherwise flow into other areas. The water remains in the local area that it was deposited in. This is opposed to a detention basin that holds water for a limited period of time from a larger basin area to prevent flooding and releases all the water contained in a short period of time.

Riparian

A riparian zone is the interface between land and a flowing surface water body. Plant communities along the river margins are called riparian vegetation, characterized by hydrophilic plants. Riparian zones are significant in ecology, environmental management, and civil engineering due to their role in soil conservation, their biodiversity, and the influence they have on aquatic ecosystems. Riparian zones occur in many forms including grassland, woodland, wetland or even non-vegetative. In some regions the terms riparian woodland, riparian forest, riparian buffer zone or riparian strip are used to characterize a riparian zone.

Riprap

Riprap is an interlocking structure of rocks of varying sizes that are intended to protect the bank or bottom of a river, stream, or ocean. Riprap is graded by size. A specified diameter will have fifty percent of the rock (by weight) larger and fifty percent smaller. The velocity of water flow is generally the determining factor for size of stone. Riprap varies in size from the multi-centimeter range to cast concrete shapes several meters across. Jetty stone is larger than riprap and can have individual pieces that are also several meters in diameter. The size and material will be specified by a civil engineer or local building code.

Robotic Lift Systems

For information on the variety of robotic vehicle lift systems please consult the internet by searching car, parking and/or storage lifts.

Safe Streets

Extracts from Jane Jacobs book Death and Life of Great American Cities:

"A well-used city street is apt to be a **safe street**. A deserted city street is apt to be unsafe. But how does this work, really? And what makes a city street well used or shunned? Streets of successful city neighborhoods always have three main qualities:

"First, there must be a clear demarcation between what is public space and what is private space. Public space and private spaces cannot ooze into each other as they do typically in suburban settings or in projects.

"Second, there must be **eyes upon the street**, eyes belonging to those we might call the natural proprietors of the street. The buildings on a street equipped to handle strangers and to insure the safety of both residents and strangers, must be oriented to the street. They cannot turn their back or blank sides on it and leave it blind.

"And third, the sidewalk must have users on it fairly continuously, both to add to the number of effective eyes on the street and to induce the people in buildings along the street to watch the sidewalks in sufficient numbers. Nobody enjoys sitting on a stoop or looking out a window at an empty street. ... Large numbers of people entertain themselves, off and on, by watching street activity.

Street Designations

Many terminologies are often used to discuss a variety of street types and therefore, for clarification purposes the street typologies referenced in the LARRMP are defined below. Depending upon local conditions the LA-RIO Guidelines for Complete Green Streets may be applied to the following street types.

Arterial Green Streets- see LARRMP page 5/12
Refers to streets designated as either a Major Highway Class I or II or a Secondary Highway.

Primary Local Green Streets- see LARRMP page 5/13
Refers to streets designated as either Collector Streets or Industrial Collector Streets.

Secondary Local Green Streets - see LARRMP page 5/14
Refers to streets designated as Local Streets. They are typically exclusively residential streets.

Industrial Green Streets - see LARRMP page 5/16
Refers to streets identified by the LARRMP as streets located within industrially zoned areas. The variety of streets that the LARRMP refers to include streets that are designated Industrial Local Streets, Industrial Collector Streets, Major Highway Class

Riverside Streets- see LARRMP page 5/4
Refers to streets, either new or existing, that run parallel to the River. The existing streets are typically designated as Collector Streets.

Soil Types

In terms of soil texture, **soil type** usually refers to the different sizes of mineral particles in a particular sample. Soil is made up in part of finely ground rock particles, grouped according to size as sand, silt, and clay. Each size plays a significantly different role.

For example, the largest particles, sand, determine aeration and drainage characteristics, while the tiniest, sub-microscopic clay particles, are chemically active, binding with water and plant nutrients. The ratio of these sizes determines soil type: clay, loam, clay-loam, silt-loam, and so on.

Stewardship

Environmental stewardship is the responsibility to take care of our natural resources to ensure that they are sustainably managed for current and future generations. Stewardship of the environment can include recycling, conservation, regeneration, and restoration. Stewardship is an ethic whereby citizens participate in the careful and responsible management of air, land, water and biodiversity to ensure healthy ecosystems for present and future generations

Stormwater

Stormwater is a term used to describe water that originates during precipitation events. It may also be used to apply to water that originates with snowmelt or runoff water from overwatering that enters the stormwater system. Stormwater that does not soak into the ground becomes surface runoff, which either flows into surface waterways or is channeled into storm sewers.

Stormwater is of concern for two main issues - one related to the volume and timing of runoff water (flood control and water supplies) and the other related to potential contaminants that the water is carrying (water pollution).

Stream

A **stream**, **brook**, **beck**, **burn**, **creek**, **crick**, **kill**, **rill**, **syke**, **bayou**, or **run** is a body of water with a current, confined within a bed and banks. Streams are important as conduits in the water cycle, instruments in aquifer recharge, and corridors for fish and wildlife migration. The biological habitat in the immediate vicinity of a stream is called a **riparian zone**. **Stream** is also an umbrella term used in the scientific community for all flowing natural waters, regardless of size. The study of streams and waterways in general is known as *surface hydrology* and is a core element of environmental geography.

Surface Run-off

Surface runoff is a term used to describe the flow of water, from rain, snowmelt, or other sources, over the land surface, and is a major component of the water cycle. Runoff that occurs on surfaces before reaching a channel is also called a nonpoint source. If a nonpoint source contains man-made contaminants, the runoff is called nonpoint source pollution. A land area which produces runoff draining to a common point is called a watershed. When runoff flows along the ground, it can pick up soil contaminants such as petroleum, pesticides (in particular herbicides and insecticides), or fertilizers that become discharge or nonpoint source pollution.

Sustainable

The term, in its environmental usage, refers to the potential longevity of vital human ecological support systems, such as the planet's climatic system, systems of agriculture, industry, forestry, and fisheries, and human communities in general and the various systems on which they depend

Sustainable Community

A sustainable community is one that can equitably meet the economic and social needs of its population while both protecting the resources of the natural environment and engaging the public in decision making processes.

SUSMP

On December 13, 2001, the Regional Water Quality Control Board issued a Municipal Storm Water National Pollutant Discharge Elimination System Permit (NPDES Permit No. CAS004001) that requires new development and redevelopment projects to incorporate storm water mitigation measures, effective September 2, 2002.

Depending on the type of project, either a **Standard Urban Stormwater Mitigation Plan (SUSMP)** or a Site Specific Mitigation Plan is required to reduce the quantity and improve the quality of rainfall runoff that leaves the site. Developers are encouraged to begin work on complying with these regulations by visiting the City's Bureau of Sanitation's Watershed Protection Division in the design phase of their projects. For additional information please visit: http://www.lacity.org/SAN/index.htm

Swales

A **swale** is a low tract of land, especially when moist or marshy. The term can refer to a natural landscape feature or a human-created one. When created by humans, this open drain system is designed to manage water runoff.

Theodore Payne Foundation

Founded and incorporated in 1960, the Theodore Payne Foundation (TPF) promotes the understanding and preservation of California native flora.

TPF is a nonprofit retail California native plant nursery north of Los Angeles offering plants, seeds, books and educational programs. The nursery includes 22 acres which includes displays of over 300 native species for sale, extensive propagation and growing areas, an office and bookstore, as well as demonstration garden areas, a picnic area, wildflower nature trail, and natural canyon areas. For more information go to: http://www.theodorepayne.org/, or call: (818) 768-1802

Tree Canopy

The **canopy** of an individual tree refers to the extent of the outer layer of a tree's leaves. Shade trees normally have a dense canopy blocking out the light from lower growing plants. The Leaf Area Index can be used to measure the density of the canopy.

Turf

Sod is turf and the part of the soil beneath it held together by the roots, or a piece of this material. Sod is grown on sod or turf farms. Most sod is grown locally to avoid long transport and drying out of the product. It is sold to landscapers or home owners who use it to establish a lawn quickly and avoid soil erosion.

Treatment System

Sewage treatment, or domestic wastewater treatment, is the process of removing contaminants from wastewater, both runoff and domestic. It includes physical, chemical and biological processes to remove physical, chemical and biological contaminants. Its objective is to produce a waste stream (or treated effluent) and a solid waste or sludge also suitable for discharge or reuse back into the environment. This material is often inadvertently contaminated with toxic organic and inorganic compounds

Urban Design

Urban design concerns the arrangement, appearance and functionality of towns and cities, and in particular the shaping and uses of urban public space. It has traditionally been regarded as a disciplinary subset of urban planning, landscape architecture, or architecture and more contemporary design linked to emergent disciplines such as Landscape Urbanism. However, with its increasing prominence in the activities of these disciplines, it is better conceptualised as a design practice that operates at the intersection of all three, and requires a good understanding of a range of others besides, such as urban economics, political economy and social theory.

Urban Ecosystems

Urban areas are part of a broader ecological system and scientists are beginning to investigate how urban landscapes function and how they effect other landscapes with which they interact. In this context, urban environments are effected by their surrounding environment but also impact on that environment. Knowing this may provide clues as to which alternative development options will lead to the best overall environmental outcome.

Vernal Pool

Vernal pools, also called ephemeral pools, are temporary pools of water. They are devoid of fish, and thus allow the safe development of natal amphibian and insect species

Water Conservation

Water conservation refers to reducing use of fresh water, through technological or social methods. The goals of water conservation efforts include:

Sustainability-To ensure availability for future generations, the withdrawal of fresh water from an ecosystem should not exceed its natural replacement rate.

Energy conservation - Water pumping, delivery and wastewater treatment facilities consume a significant amount of energy. In California over 15% of total electricity consumption is devoted to water management.

Habitat conservation - Minimizing human water use helps to preserve fresh water habitats for local wildlife and migrating waterfowl, as well as reducing the need to build new dams and other water diversion infrastructure.

Watershed

In North American usage, a drainage basin or river catchment, meaning the region of land whose water drains into a particular watercourse.

Wetlands

The United States Army Corps of Engineers and the United States Environmental Protection Agency jointly define wetlands as: Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.