

3.0 IRCWM OBJECTIVES

Integrated resource planning leverages the full range of public and private resources committed to planning and implementation, along with project outcomes and benefits, to achieve a greater result. The success of the IRCWM Plan will be measured by cost effectiveness, project performance, and, most importantly, measurable progress toward achieving regional goals. As discussed in *Chapter 1*, the IRCWM Plan builds off the extensive planning efforts that are complete or in process for the Newport Bay and Newport Coast Watersheds, establishing a framework for effective collaboration and providing a greater opportunity to leverage regional resources. The focus is on achieving regional goals for water quality improvements, ecosystem restoration, and enhancing local water supplies. With these overarching goals in mind, the objectives of the Central Orange County IRCWM Plan directly respond to the regional conditions and challenges discussed in *Chapters 1* and *2*. They reflect the regional priorities as established in adopted plans for land use and water resource management within this region, as well as regulatory orders and the recommendations of technical studies conducted in the watersheds.

As noted in *Chapter 2*, watershed management issues for the Central Orange County region are related to water quality impacts on the CCAs and ASBSs, flood control and loss of habitat, compliance with water quality regulations, enhancing local water supplies, and impacts on sensitive coastal habitats due to heavy recreational use. To address these issues, the seven objectives of the Central Orange County IRCWM Plan are listed below and detailed in *Section 3.2*:

Central Orange County IRCWM Plan Objectives

1. Improve water quality in streams and channels, particularly those that are listed as impaired, and those discharging to Upper and Lower Newport Bay, Newport Beach Marine Life Refuge, and Irvine Coast Marine Life Refuge in order to reduce impacts on these CCAs and ASBSs.
2. Provide for implementation of restoration projects, BMPs, and other control measures to support beneficial uses of creeks, streams, bays and estuaries, and to facilitate attainment of TMDL targets, receiving water quality objectives, the Santa Ana RWQCB's Watershed Management Initiative, and NPDES permit requirements.
3. Provide a comprehensive, regional, watershed-wide approach to address runoff and its related impacts from existing and future land uses, in accordance with the Non-point Source Pollution Plan.
4. Protect, restore, enhance, and connect wetland and wildlife habitats and support ecosystem processes in the coastal zone and upper watershed, while maintaining flood protection.

5. Enhance quantity and quality of local water supplies, including groundwater, to reduce reliance on imported water.
6. Provide a safe, reliable drinking water supply and recreational opportunities for disadvantaged communities within the region, consistent with other areas of the region.
7. Provide a framework for efficient intra-regional cooperation, planning, and implementation of this and other plans that have been developed for the region, which encourages integrated implementation of watershed improvement projects with multiple benefits.

3.1 Methodology to Determine Objectives

To ensure the IRCWM Plan's value as a local and regional planning tool, the objectives were developed to specifically address conflicts within the region and provide for progress toward achieving regional goals. In that regard, they are consistent with the goals of adopted plans of the agencies for land use, resource conservation, and water management. Furthermore, the objectives and strategies of the IRCWM Plan support the goals and objectives of the watershed management and ecosystem restoration plans that have been developed for the Newport Bay and Newport Coast Watersheds. The objectives also support the continued development of science-based studies to analyze impacts on coastal ecosystems and related pilot programs designed to address those issues. Lastly, the objectives represent advancement toward achieving the stated priorities of the Santa Ana RWQCB, as well as IRWM program preferences. Specifically, a major priority is to improve water quality in the CCAs and ASBSs.

As noted in *Chapter 1*, the IRCWM Plan provides a bridge between numerous planning efforts, both completed and ongoing, that have collectively established a common set of goals or priorities for the region. The objectives of the IRCWM Plan are derived from these planning efforts with stated regional priorities for water quality improvements, ecosystem restoration, sustainability, and water supply reliability. Each of those efforts incorporated a stakeholder process in which the goals and objectives for the Plan were developed through stakeholder input and reviewed through both informal and formal public review. The objectives of the IRCWM Plan support the stakeholders' long-term goals for this region, and provide an efficient means to implement the recommendations included in the plans.

3.2 Objectives and Rationale

- 1. Improve water quality in streams and channels, particularly those that are listed as impaired, and those discharging to Upper and Lower Newport Bay, Newport Beach Marine Life Refuge, and Irvine Coast Marine Life Refuge in order to reduce impacts on these CCAs and ASBSs.**

The Upper Newport Bay CCA (No. 69) receives freshwater drainages from the entire San Diego Creek Watershed, which contains a diverse mix of land uses. Non-point source problems are caused by urban development, and pollutants include nutrients, bacteria, sediment, and toxics, such as pesticides and metals. Land use contributes to dry weather runoff and increased stormwater runoff and erosion. Identified water quality impacts include possible threats to human health and wildlife, contamination in fish populations (both sport fish and forage fish), impaired recreational activities, and increased sedimentation in the estuary (CCC 2006).

The Newport Beach CCA (No. 70) watershed flows into the Newport Beach Marine Life Refuge (ASBS No. 32). This area has heavy recreational use with the adjacent Corona del Mar State Beach. *Exhibit 3.A* shows a severe loss of rockweed and mussel coverage in the tidepool areas over the past 40 years. Three natural streams flow into the ASBS. Recreational uses are adversely affected by 18 direct discharges and urban runoff from the Corona del Mar area of Newport Beach (see *Exhibit 3.B*). Urban runoff may be contributing toxic pollutants, such as pesticides and other organics. Some impacts are a result of hydromodification in the upstream portions of Buck Gully (CCC 2006).

Exhibit 3.A

Tidepool Degradation at Little Corona Beach at Buck Gully



1956



1999

Exhibit 3.B
Dry Weather Flows in Buck Gully Carrying Pollutants



The Irvine Coast CCA (No. 71) watershed flows into the Irvine Coast Marine Life Refuge (ASBS No. 33). Sixteen natural gullies or streams that mostly drain urban areas discharge directly to the ocean. Increasing human impacts threaten to adversely impact native marine habitats.

Current efforts seek to establish baseline data, study pollutant loading over time, characterize the loading, analyze pollutant impacts, identify and quantify those environmental impacts having the most deleterious effects on the ASBSs (public use, dry weather flows, storm flows, or cross contamination from Newport Bay) and prepare a plan to mitigate these deleterious effects. Initial findings show that public use can be a significant, and potentially dominant, impact at certain ASBS beach areas (see *Exhibit 3.C*). In addition, current studies are evaluating the fate and transport of pollutants from Newport Bay to the adjacent ASBSs. Newport Beach ASBS No. 32 lies only 0.25 miles south of the point where Newport Bay, including its harbor area, discharges to the ocean.

Exhibit 3.C Public Trampling and Scavenging



Improving water quality in the streams and channels discharging to Newport Bay and the ASBSs requires regional planning, with participation from agencies with land use authority as well as those responsible for flood control, water quality, and water supply programs. The IRCWM Plan provides the framework for understanding and prioritizing land use actions and water management actions in the context of achieving water quality improvements within specific areas. Possible mitigations are community training, water conservation measures, flood management and contaminant source control. One extremely important part of a potential mitigation plan is an intertidal ecosystem restoration component to identify actions that can be taken to stimulate the marine life area renovation through the introduction of key species. The first step to restoration of the rocky intertidal areas is currently underway where California State University, Fullerton is leading a pilot study to reintroduce rockweck back into the Little Corona Beach tide pools where Buck Gully drains to the ocean.

2. Provide for implementation of restoration projects, BMPs, and other control measures to support beneficial uses of creeks, streams, bays and estuaries, and to facilitate attainment of TMDL targets, receiving water quality objectives, the Santa Ana RWQCB's Watershed Management Initiative, and NPDES permit requirements.

San Diego Creek, Upper Newport Bay, Lower Newport Bay, Buck Gully Creek, and Los Trancos Creek have been declared as water quality limited with a number of pollutants of concern. Accordingly, TMDLs have been established for San Diego Creek and Upper Newport Bay; additional TMDLs are pending. TMDLs for Upper Newport Bay have been adopted by the Santa Ana RWQCB for sediment (RWQCB 1998a), nutrients (nitrogen and phosphorus) (RWQCB 1998b), and pathogens (fecal coliform indicators) (RWQCB 1999). The EPA and Santa Ana RWQCB have established TMDLs for toxic pollutants in San Diego Creek and Newport Bay, including TMDLs for pesticides, selenium, and heavy metals (EPA 2002).

The Santa Ana RWQCB issued Order No. R8-2002-0010/NPDES No. CAS618030 (RWQCB 2002), which is the NPDES permit that regulates the discharges from the Municipal Separate Storm Sewer System (MS4) for Central Orange County and Northern Orange County areas. The permit includes provisions for contributing to the compliance with TMDLs as well as for meeting the overall requirement of the Clean Water Act for such permits to reduce pollutants to the “maximum extent practicable.” This NPDES Permit specifically states, “The Regional Board recognizes the importance of an integrated watershed management approach ... and recognizes that a watershed management program should integrate all related programs, including the storm water program and TMDL processes.” The Clean Water Act also requires that existing structural flood control devices be evaluated to determine if retrofitting the device to provide additional pollutant removal from stormwater is feasible. This requirement is derived from regulations implementing the Clean Water Act. See 40 C.F.R. § 122.26(d)(2)(iv)(4).

The Santa Ana RWQCB NPDES permit recognizes these considerations in the following policies and requirements:

“Encourage the use of water quality wetlands, biofiltration swales, watershed-scale retrofits, etc. where such measures are likely to be effective and technically and economically feasible” (p. 28).

“By July 1, 2003, the permittees shall complete an assessment of their flood control facilities to evaluate opportunities to configure and/or reconfigure channel segments to function as pollution control devices and to optimize beneficial uses” (p. 33).

Consistent with adopted TMDL requirements and Santa Ana RWQCB MS4 policies, the IRCWM Plan is intended to contribute to implementation strategies directed toward attainment of TMDLs for San Diego Creek and Newport Bay, as well as to contribute to compliance with the NPDES permit. The watershed management approach of the IRCWM Plan uses flood control facilities to enhance and improve water quality.

Implementation of the TMDLs, the Santa Ana RWQCB’s Watershed Management Initiative, and the NPDES permit requires regional planning, with participation from agencies with land use authority, as well as those responsible for flood control, water quality, and water supply programs. The IRCWM Plan provides the framework for collaboration, leveraging the financial resources of the agencies through shared projects and programs to achieve cost-effective, timely implementation of studies, control measures and BMPs that reduce pollutant loadings to improve water quality, and achieve compliance with various TMDL targets, water quality objectives and NPDES Permit requirements.

3. Provide a comprehensive, regional, watershed-wide approach to address runoff and its related impacts from existing and future land uses, in accordance with the California Non-point Source Pollution Plan.

There is a regional need to address runoff water quality from both existing and future land uses using a comprehensive watershed-wide approach. In July 2000, the EPA approved the State of California Non-Point Source Program Strategy and Implementation Plan 1998-2013 (NPS Plan). The State NPS Plan uses a three-tiered system of BMPs as a means of implementing non-point source water quality management measures and strategies identified in the NPS Plan, beginning with voluntary measures under Tier 1 and extending to enforcement orders under Tier 3. One of the policy directives set forth in the State NPS Plan is to:

“Manage NPS pollution, where feasible at the watershed level – including pristine areas and watersheds that contain water bodies on the Clean Water Act (CWA) Section 303(d) list – where local stewardship and site-specific MPs [Management Practices] can be implemented through comprehensive watershed protection or restoration plans” (NPS 2000, p. 1).

In furtherance of the above policy, the State NPS Plan contains an implementation measure, Management Measure 3.1A – Watershed Protection, that emphasizes a watershed approach to water quality management and includes a reference to Clean Water Act Section 402 (the section governing NPDES stormwater programs) as a primary statutory element of the management measure. Equally significant, the State NPS Plan contains management measures that place an emphasis on the use of natural treatment systems to address non-point source pollution (Management Measures 6B and 6C).

Consistent with and in furtherance of the above policies of the State NPS Plan, the Santa Ana RWQCB’s issued order for the MS4 NPDES stormwater program strongly encourages watershed approaches to water quality management, as reflected in the following sections of the NPDES permit (RWQCB 2002):

“...the Regional Board recognizes the importance of an integrated watershed management approach...[and] also recognizes that a watershed management program should integrate all related programs, including the stormwater program and TMDL processes” (p. 10).

“The Regional Board and the permittees recognize the importance of watershed management initiatives and regional planning and coordination in the development and implementation of programs and policies related to water quality protection” (p. 13).

“Pollution prevention techniques, appropriate planning processes and early identification of potential stormwater impacts and mitigation measures can significantly reduce stormwater pollution problems. The permittees already require a Water Quality Management Plan, which addresses permanent post-construction BMPs, in addition to the Stormwater Pollution Prevention Plan, which is required by the statewide general permit for construction activity. The permittees are encouraged to propose and participate in watershed wide and/or regional water quality management programs” (pp. 10-11).

“By March 1, 2003, the permittees shall review their existing BMPs...and submit for review and approval...a revised Water Quality Management Plan (WQMP) for urban runoff...The permittees are encouraged to include in the WQMP the development and implementation of regional and/or watershed management programs that address runoff from new development and significant re-development...The goal of the WQMP is to develop and implement practicable programs and policies to minimize the effects of urbanization on site hydrology, urban runoff flow rates or velocities and pollutant loads. This goal may be achieved through watershed-based structural treatment controls, in combination with site-specific BMPs” (pp. 29-30).

“By July 1, 2004, the permittees shall review their watershed protection principles and policies in their General Plan or related documents” (p. 28).

The emphasis on an “integrated watershed management approach” pursuant to the State NPS Plan and the Santa Ana RWQCB NPDES permit is clear from the above policy statements and directives. Consistent with the State NPS emphasis on voluntary initiatives under Tier 1, the IRCWM Plan has been developed at the watershed level through a collective, multi-jurisdictional approach. In the context of the Newport Bay and Newport Coast Watersheds, such an approach is particularly important because a large portion of the watershed area is already urbanized, and a major “retrofit” approach can be realistically undertaken comprehensively only at a watershed level. Likewise, retrofit facilities addressing existing urbanization must be coordinated with future treatment facilities that will be constructed in conjunction with new development, again requiring a coordination effort that requires a watershed approach.

4. Protect, restore, enhance and connect wetland and wildlife habitats and support ecosystem processes in the coastal zone and upper watershed, while maintaining flood protection.

A number of studies have been undertaken for the Newport Bay Watershed, including the ACOE’s Newport Bay/San Diego Creek Watershed Management Study 905b Reconnaissance

Report; the Serrano Creek Corridor Ecosystem Restoration Project 905b Reconnaissance Report; the Upper Newport Bay Ecosystem Restoration Feasibility Study; and the draft SAMP for the San Diego Creek Watershed. The SAMP includes a planning-level delineation of aquatic resources and a landscape-level functional assessment to characterize the functional integrity of the watershed ecosystem. Other plans include the Serrano Creek Collaborative Use Plan, Draft (Willdan 1998), the Irvine Wildlife Corridor Plan, Draft (CBA 2003), and the Orange County Great Park Plan (City of Irvine 2002). In addition, the Central/Coastal NCCP/HCP, which incorporates area within the region, includes a 37,378-acre reserve system, special linkages, and existing use areas to enhance biological connectivity within the reserve system and subregion. For the Newport Coast Watershed, a watershed assessment has been prepared, including physical, hydrologic, and biological resources. These studies provide a framework for evaluating and implementing projects to achieve this objective.

On a regional scale, the Central Orange County region lies between the Cleveland National Forest to the northeast and coastal wilderness areas to the south, and linkages through the region are important for wildlife movement. Upper Newport Bay, a State Ecological Reserve, is one of only a few remaining estuaries in Southern California and is one of the only remaining coastal Mediterranean habitats. It is used as a stopover point on the Pacific flyway, and is the home to numerous species of mammals, fish, invertebrates, and native plants, including several endangered species. Urbanization, water quality issues, and the need for increased flood control capacity have impacted habitat areas; however they are critical to the health of the ecosystem and their condition is fundamental to the desired state of the watershed that will be developed in the second phase of this Plan.

5. Enhance quantity and quality of local water supplies, including groundwater, to reduce reliance on imported water.

Imported water currently comprises approximately 34 percent of the overall regional water supply. The agencies responsible for water service recognize that developing local water supplies is imperative given the water supply conditions within the western United States and the potential for drought. The agencies are providing regional leadership in developing local water supplies to reduce dependence on imported supplies. This includes groundwater management programs, recycled water, and water conservation.

Groundwater Protection and Management

The Orange County Groundwater Basin is the largest local water supply source for the region; therefore, collaborating with OCWD on addressing groundwater quality issues and actively managing groundwater production are essential to achieving this objective. Within the Irvine Subbasin of the Orange County Groundwater Basin (see *Figure 2.2*), there are a number of water

quality issues that require treatment and management in order to maximize the potential for the basin as a source of water supply. As noted in *Chapter 2*, these issues include underground storage tanks, VOCs, colored water, high TDS, and nitrates. OCWD and IRWD are implementing the Irvine Desalter Project, in which groundwater contaminated with VOCs is treated and used for irrigation and other non-drinking water uses. Groundwater that does not contain VOCs but has high dissolved solids concentrations is treated and used for potable uses. The City of Tustin is operating the Seventeenth Street Desalter to remove high nitrate and TDS concentrations from groundwater produced by three wells and the Main Street Treatment Plant to remove nitrates from two wells.

There are emerging chemicals of concern composed of consumer and health-related products, commonly referred to as pharmaceuticals and personal care products (PPCPs). Another class of emerging chemicals of concern include compounds that may affect the endocrine system. These compounds, commonly referred to as endocrine disrupting compounds (EDCs), may originate from the wide range of over-the-counter pharmaceuticals (e.g., cold remedies, diet supplements), pesticides, or other industrial compounds. Water quality concerns arise from the widespread use of PPCPs and EDCs. Due to the potential impact of EDCs on future water reclamation projects, it is imperative that the agencies with wastewater treatment and groundwater management responsibilities prioritize and track public awareness of these chemicals with regulatory agencies. Monitoring activities will be tailored, with guidance by California Department of Health Services, to meet the informational needs required for future reclamation projects.

The occurrence and significance of colored groundwater in the Basin is an important consideration for groundwater use. Mesa Consolidated Water District (MCWD) and IRWD both are actively involved in developing treatment facilities for use of colored water. MCWD completed construction and began operation of its Colored Water Treatment Facility in 2001. MCWD incorporated additional treatment for bromate control in late 2003. IRWD's Deep Aquifer Treatment System removes color from deep aquifer groundwater, producing at a rate of 7.4 million gallons of potable water per day. Additional colored groundwater utilization facilities could be developed at two sites in the Central Orange County region.

Future land use and development, even in a highly urbanized setting, provide opportunities at the planning and permitting stage to consider potential impacts to the region's water resources and to require pollution prevention in land use permit conditions, zoning, subdivision design, and related development components. These may include coordinating with local agencies having oversight responsibilities on the handling, use, storage of hazardous materials; underground tank permitting; well abandonment programs; septic tank upgrades; and drainage issues.

Recycled Water

Since 1967, IRWD has provided wastewater collection and tertiary treatment services with a defined purpose of delivering recycled water for non-potable uses. The District began serving recycled water to agricultural users and expanded to include landscape irrigation and eventually to front-yard and backyard irrigation for large estate-sized residential lots, toilet flushing for large commercial buildings, and other industrial processes. Master-planned communities within the IRWD service area are required to plan and design for recycled water use. Additionally, IRWD actively pursues existing opportunities for recycled water conversions wherever non-potable water can be used in lieu of potable water. The District continues to work closely with the state and county health departments on permitting for expanded uses of recycled water.

IRWD has identified several actions that result in increased use of recycled water. As shown in *Table 3.1, Methods to Encourage Recycled Water Use*, the greatest response is due to grants and low interest loans. Given the water supply conditions in the western United States and the long-term outlook, the potential use could be higher than estimated.

Table 3.1
Methods to Encourage Recycled Water Use
(acre-feet of use projected to result from the action)

Actions	2010	2015	2020	2025	2030
Rate discounts	5	5	5	5	5
Prohibit specific potable use	5	5	5	5	5
Grants/low interest loans	30	50	50	50	50
Dual plumbing standards	10	10	10	10	10
Total	50	70	70	70	70

Source: IRWD 2005 Urban Water Management Plan

IRWD's recycled system demands are expected to nearly double by 2025 due to expansion of the system into new areas and "infill" and retrofit demands in areas currently served. To meet increased demand, IRWD is considering increasing the Michelson Water Reclamation Plant (MWRP) treatment capacity. This would require sufficient influent wastewater flow into the plant and assurance that the expansion is economically, technologically, and environmentally feasible.

In 2003, IRWD completed a Wastewater Treatment Master Plan, which includes plans to add the Harvard Avenue Trunk Sewer wastewater flows to MWRP that are currently going to the Orange County Sanitation District (OCSD). These flows are expected to be 7.9 mgd at build-out. This diversion would greatly benefit the recycled water program to meet future demands; however it would require an increase in the MWRP treatment capacity.

Other potential recycled water supplies include recycled water produced by treatment of sewage flows originating in the former Los Alisos Water District service area (IRWD) and the El Toro Water District service area located adjacent to IRWD along the southeast border. There may also be an opportunity in the future for IRWD to receive recycled water from the El Toro Wastewater Treatment Plant, which could serve portions of IRWD's service area. Additionally, IRWD plans to continue to use degraded groundwater to augment supply to the non-potable water system.

One important component for the expansion of recycled water use is increased storage capacity. IRWD is planning to convert a reservoir from its current non-potable water storage use to recycled water storage. This reservoir is adjacent to an area where significant development will occur over the next 10 years.

In the northwest portion of the IRCWM planning area, recycled water is provided through OCWD's Green Acres Project, which delivers recycled water to major irrigation users within MCWD's service area, reducing potable water demand. The Green Acres Project accepts secondary-treated effluent from OCSD, treats it to a level approved by the State Department of Health Services, and then pumps it to MCWD's service area for resale. Most of the water is irrigation water for use on golf courses, greenbelts, cemeteries, and nurseries. The project was initiated in 1991 and produces approximately 7 mgd of recycled water. Currently there are 24 recycled water service connections within the MCWD service area, with customers including the City of Costa Mesa, County of Orange, Caltrans, Costa Mesa Country Club, and Orange Coast College. MCWD and OCWD have identified additional recycled water customers with an additional 840 irrigated acres should more recycled water become available in that portion of the planning area.

As noted in *Chapter 2*, the Groundwater Replenishment System is expected to begin operating in November 2007. This will take advance-treated wastewater from OCSD's treatment facility and use it for groundwater replenishment in the main Orange County Groundwater Basin. The first phase will provide approximately 70,000 acre-feet per year, with future capacity of 110,000 acre-feet per year. The limiting factor is the availability of sufficient secondary-treated wastewater flows from OCSD.

Demand Management/Water Use Efficiency

Demand management consists of water conservation programs and demand curtailment. It is a long-term means to extend the availability and reliability of existing water supply. Curtailment or rationing is a viable option for short-term supply shortages, which may include limiting potable landscape meters during emergencies. However, the more important issue for long-term regional water supply is water use efficiency.

As signatories to the Memorandum of Understanding containing 14 BMPs for urban water conservation in California, the Central Orange County water agencies are voluntarily committed to the implementation of all cost-effective BMPs. Examples of BMPs include home water surveys, low-flow showerhead and toilet retrofits, clothes washer retrofits, landscape irrigation budgets, education, public information, industrial process water improvements, and water waste prohibitions.

Water agencies throughout the county have provided incentives for the installation of more than 350,000 ultra-low-flush toilets, which are saving more than 11,700 acre-feet of water per year. In addition, more than 75 percent of the showerheads have been replaced with low-flow heads. As a result of these BMP implementation efforts, indoor residential water-saving opportunities are nearly exhausted. Public information, school education, conservation pricing, and metering with commodity rates are considered ongoing water use efficiency efforts but are non-quantifiable in terms of water savings. Outdoor landscape irrigation water savings and plumbing fixture retrofits in local businesses are the region's next major areas of focus to achieve quantifiable water savings. These savings will be achieved through incentives to install weather-based irrigation timers, irrigation system distribution uniformity improvements, and design changes, including plant palettes.

Orange County's Residential Runoff Reduction Study documented significant water savings, runoff reduction, and pollution prevention benefits from the installation of self-adjusting weather-based irrigation timers in single-family homes and commercial landscapes. This study was the basis for the first regional implementation program in the state offering rebate incentives to customers to install up to 5,000 weather-based irrigation timers.

6. Provide a safe, reliable drinking water supply and recreational opportunities for disadvantaged communities within the region, consistent with other areas of the region.

As shown in *Figure 2.9*, there are a number of communities within the Central Orange County region designated as disadvantaged, according to the definition provided by the State of California. One of the fundamental tenets of integrated resource planning is to include disadvantaged communities in the planning process so that these communities are afforded the same benefits as other areas within the region. Within the Central Orange County region, these communities receive water through the same systems as adjacent areas and their interests in reliable, safe water supply are represented through agency coordination for groundwater production, as well as for imported and recycled water, discussed under Objective No. 5.

Disadvantaged communities also have an interest in the quality and availability of recreational resources. Upper Newport Bay, Newport Harbor, Corona del Mar State Beach, and Crystal Cove State Park have important social value as recreational amenities within this region. Portions of

these areas have been determined to have REC-1 and REC-2 beneficial uses.¹ One of the objectives of the IRCWM Plan is to protect the water and habitat quality of these areas to ensure their continued recreational value. Corona del Mar State Beach and the nearby rocky tide pools receive heavy recreational use, which has impacted the quality of those habitats. The IRCWM Plan provides a means for regional participation in developing appropriate protection programs that support recreational use while providing for the long-term quality of these inter-tidal areas.

7. Provide a framework for efficient intra-regional cooperation, planning, and implementation of this and other plans that have been developed for the region, which encourages integrated implementation of watershed improvement projects with multiple benefits.

Essential to the success of the IRCWM Plan is a framework that provides for intra-regional cooperation, collaboration, information sharing, project and program planning, and implementation. As noted in *Chapter 1*, the IRCWM Group has broad representation that is further supported by the Newport Bay Watershed Executive Committee and the Newport Bay Watershed Stakeholders Group. This will be further enhanced with the formation of the Newport Bay Watershed Management Committee through a formal MOU with the agencies participating in the IRCWM Plan. The local agencies, resource agencies, environmental groups, and public members have demonstrated their support for this approach through their collaborative work on numerous initiatives, studies, programs, and projects completed thus far. This objective enhances this effort to address the critical regional planning and water management needs of this region. This includes identifying and refining planning and implementation priorities, providing for efficient and effective use of financial resources, and ensuring that an adaptive management approach is used for planning.

¹ Water Contact Recreation (**REC-1**) waters are used for recreational activities involving body contact with water where ingestion of water is reasonably possible. These uses may include, but are not limited to, swimming, wading, water-skiing, skin and SCUBA diving, surfing, whitewater activities, fishing, and use of natural hot springs.

Non-contact Water Recreation (**REC-2**) waters are used for recreational activities involving proximity to water but not normally involving body contact with water where ingestion of water would be reasonably possible. These uses may include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, tide pool and marine life study, hunting, sightseeing, and aesthetic enjoyment in conjunction with the above activities.

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