



4. OBJECTIVES

4.1. VISION

The vision for this Plan is to identify the highest priority issues related to water resources in the Central Orange County WMA and to articulate an agreed-upon set of goals and strategies for meeting the goals. The IRWM) Plan will serve to focus the combined efforts and resources of the stakeholders on the actions with the highest priority. The articulation of clear goals and a list of potentially preferred strategies in the IRWMP are intended to guide the stakeholders to develop and promote projects that are closely aligned with the agreements reflected in the IRWMP. In this way, future projects will be more likely to benefit from the support of the stakeholders while avoiding inefficiencies due to the dilution of community resources, confusion of purposes, or even disputes and opposition to projects.

During the Phase I and Phase II IRWM planning efforts for the Central Orange County WMA, goals, objectives, and strategies were identified for the region. The development of this Phase III Plan involved a review of this material. For the purposes of this Phase III planning effort, a *goal* is defined as the desired end result. An *objective* is defined as an attainable achievement that helps accomplish a goal. A *strategy* is defined as an action to be taken that will help accomplish an objective or objectives and the overall goal(s).

The goals and objectives stated in herein are based on the most current feedback from participating stakeholders in the WMA. However, the Phase III Central Orange County IRWMP is a living document that will continue to be updated. As the objectives are accomplished or the goals of the WMA are modified, the IRWMP will be revised accordingly.

4.2 METHODOLOGY FOR DETERMINING GOALS AND OBJECTIVES

Goals and objectives were the focus of a stakeholder workshop on January 21, 2009. At that workshop, information from both the Phase I and Phase II Plans was presented. The stakeholders then worked to refine the goals, objectives, and strategies from the Phase II Plan and develop consensus on in the contents of the Phase III Plan. It was agreed that the goals would be developed in each of three categories: water resources, balanced environmental sustainability, and collaboration. Objectives for water resources would be further refined in the areas of flood risk management, water quality, water supply, and habitat.

Another stakeholder workshop was held on February 11, 2009. The intended purpose of that workshop was a discussion of prioritization. However, as the workshop began, a different need was acknowledged. The stakeholders addressed the importance of first clarifying the major issues in the Central Orange County WMA because the goals, objectives, and strategies identify solutions to recognized issues. The information from the two workshops was open to comment by the stakeholders and was also vetted by staff of OCFCD, OC Watersheds OCWD, and the Orange County Coastkeeper

The major interests identified for the Central Orange County WMA are flood risk management, water quality, water supply, habitat, balanced environmental sustainability, and collaboration.

4.2.1 Flood Risk Management

The primary issues of interest related to flood risk management are the following:

1. There are areas within the Central Orange County WMA that are not protected from a 100-year flood. Some Orange County regional and subregional facilities cannot convey the 100-year storm discharge; therefore, they require improvements.
2. There are long delays for regulatory permits for maintenance or repair of flood control facilities. Regulatory permits are required for the County, Cities, and OCFCD to provide maintenance or repairs to its flood control facilities. Maintenance is needed to ensure that flood control facilities can continue to convey their designed discharges. Repairs are needed for frequently occurring problems such as bank erosion and invert aggradation or degradation.
3. Inordinate amounts of time are required to obtain regulatory permit approvals for regional and subregional facility improvements. Regulatory permits are required for flood control facility improvements. The improvements are designed to maintain the same right-of-way without purchasing residential property. Most permits require mitigation for soft bottom or earthen slopes, which require a wider right-of-way. The facilities are in urban or suburban settings where right-of-way is limited. Other regulatory requirements burden the design process, cause delays, and add to the cost of improvements.
4. Limited funding is available for flood control capital improvement projects. Property tax revenue is the main source of funding for flood control capital improvement

projects. A portion of the funding comes from agencies like the Federal Emergency Management Agency (FEMA), or state-sponsored grants. Current economic conditions may further reduce the rate at which flood control improvements can be made.

5. There are old facilities in the Central Orange County WMA that do not meet current standards. Several existing flood control facilities are approaching or have exceeded their expected useful life. The threat of flood damage from these facilities is imminent.

4.2.2 Water Quality

The primary issues of interest related to water quality are the following:

1. There are receiving waters in the Central Orange County WMA that do not meet the water quality objectives as defined by the Santa Ana Regional Water Board in the Basin Plan for the Santa Ana region. Currently, there are four TMDLs for the Newport Bay Watershed:

Sediment

Toxics, which are divided into five separate constituent-specific and geographically specific TMDLs:

- Organophosphate pesticides (diazinon and chlorpyrifos)
- Selenium
- Organochlorine compounds (chlordane, dieldrin, DDT, PCBs, and toxaphene)
- Metals (cadmium, copper, lead, zinc)
- Rhine Channel (copper, lead, selenium, zinc, chromium, and mercury)

Nutrients (nitrogen and phosphorus)

Fecal coliform bacteria

2. Nonpoint source pollution is a concern in the Central Orange County WMA.
3. There is trash in waterways.
4. Most existing drainage infrastructure was not designed for water quality control, and most existing development did not incorporate LID design principles.

5. Emerging contaminants, such as pyrethroid pesticides and polybrominated diphenyl ethers (PBDEs), pharmaceuticals, and personal care products, have become a greater concern that will need to be addressed.

4.2.3 Water Supply

The primary issues of interest related to water supply are the following:

1. The demand for potable water exceeds the local water supplies.
2. Although the area has made great strides in water conservation and management, there are opportunities to further reduce the gap between local demand for potable water and local supplies of potable waters by implementing water conservation, local potable water supply projects, and expanded use of the reclaimed water system.

4.2.4 Habitat

The primary issues of interest related to habitat are the following:

1. There has been temporary post-fire loss and increased development of upland habitat. Wildfires occasionally denude the foothills of vegetation resulting in increased erosion and the potential for an increase in invasive species. Current development in the watershed is occurring in the upland areas.
2. There continues to be a loss of estuarine habitat in Upper Newport Bay. Sedimentation of Upper Newport Bay has been reduced over the past 20 years by upstream sediment control improvements, facility maintenance, and the Upper Newport Bay Ecosystem Restoration Project. However, these efforts must be continued, and new sediment control efforts will be necessary in the future to prevent further losses of estuarine habitat in Upper Newport Bay.
3. There has been loss and degradation of riparian habitat. Riparian habitat is compromised in specific areas by channelized flood conveyance systems and heavy erosion of natural channels due to upstream hydromodification.
4. The Central Orange County WMA lacks a system for early exclusion and protection from invasive species. Issues related to invasive species that are specific to this region include (1) African clawed frogs, (2) zebra mussels, (3)

cowbirds, which threaten native song birds, and (4) commercially available invasive plants.

5. The Newport Bay watershed is heavily developed, with much of the older development not taking into consideration the habitat requirements of species or open-space linkages at the time when it was completed. Therefore, the habitat is fragmented, and there are poor linkages between open-space areas in some parts of the Central WMA. The lack of a master plan for designated open-space areas has allowed piecemeal development to fragment or isolate important habitat areas. Over-irrigation also occurs.
6. The marine habitat is degraded. There has been a loss of eelgrass in Upper Newport Bay, and there are contaminated fish and invertebrate stocks due to sediment and water pollution.

4.2.5 **Balanced Environmental Sustainability**

There is a need to emphasize integrated solutions to water resource issues that do not unnecessarily burden or restrict specific sectors or members of the community. Obtaining grants or developing private partnerships for projects can help achieve goals with equitable costs. Sustainability will ultimately require that the outcomes be valued by the public; therefore, planning should link the region's goals to widely supported activities such as recreation. Finally, outcomes can be sustainable only if goals that inherently compete with each other are balanced through the planning process.

4.2.6 **Collaboration**

There is a need for better public access to records and better data collaboration between the state, county, cities, and universities. There is a need to continue to promote inclusive watershed management both within the Central Orange County WMA and among regions.

4.3 **GOALS**

The stakeholders in the Central Orange County WMA identified three overarching areas of emphasis in the region: water resources, balanced environmental sustainability, and collaboration. As the name implies, water is at the core of IRWM planning, which recognizes the connection between water resources, land uses, and all other aspects of the environment. The stakeholders recognize the importance of coordinating water resource management and environmental protection in a cost-efficient manner that produces the greatest benefit for the greatest number of people.

They also acknowledge that collaborative partnerships make this coordination possible. The desired outcomes in the Central Orange County WMA for the three areas of emphasis are the following.

- **Water resources.** Coordinate, integrate, and balance flood risk management, water quality, water supply, and habitat, while recognizing the potential impacts of climate change such as storms of greater intensity that occur at less frequent intervals.
- **Balanced environmental sustainability.** Balance the competing interests of the community in a way that protects environmental resources while promoting a healthy economy.
- **Collaboration.** Continue to build and sustain effective, collaborative relationships among all watershed stakeholders to achieve the objectives of the Central Orange County IRWMP.

4.4 OBJECTIVES

Meeting the goals listed above requires specific achievements. The stakeholders defined the following objectives that, if met, will help achieve the three goals for the Central Orange County WMA.

4.4.1 Water Resources: Flood Risk Management

- **Subobjective FRM-1:** Provide appropriate public safety and property protection based on risk management standards.
- **Subobjective FRM-2:** Minimize the potential impact of stormwater on canyon and channel stability, water quality, and habitat.
- **Subobjective FRM-3:** Implement stream channel naturalization efforts to promote riparian habitat and natural water quality treatment in concert with stable sediment transport.

4.4.2 Water Resources: Water Quality

- **Subobjective WQ-1:** Address pollution issues in a holistic, integrated manner.
- **Subobjective WQ-2:** Meet TMDL, NPDES, and other requirements throughout the region.

4.4.3 Water Resources: Water Supply

- **Subobjective WS-1:** Manage groundwater resources to maintain a sustainable groundwater supply into the future.
- **Subobjective WS-2:** Maximize the use of recycled water.

- **Subobjective WS-3:** Maximize water conservation efforts.

4.4.4 Water Resources: Habitat

- **Subobjective H-1:** Provide functioning habitat that sustains viable populations of native species.
- **Subobjective H-2:** Minimize the occurrence of invasive species.
- **Subobjective H-3:** Promote the use of water quality treatment systems that also provide habitat.

4.4.5 Balanced Environmental Sustainability

- **Objective BES-1:** Promote sustainable principles within the watershed.
- **Objective BES-2:** Seek grants and encourage public-private financing partnerships.
- **Objective BES-3:** Support water quality improvement efforts that will enhance public recreation.

4.4.6 Collaboration

- **Objective C-1:** Promote inclusive and participatory watershed governance.
- **Objective C-2:** Encourage data collaboration between the state, county, cities, universities, and the public.
- **Objective C-3:** Promote intraregional agency collaboration and cooperation.
- **Objective C-4:** Promote interregional agency collaboration and cooperation.
- **Objective C-5:** Promote watershed public education and citizen involvement.

4.5 BENEFITS OF INTEGRATION TO MEET OBJECTIVES

The value of integrated regional planning is a direct result of the extent to which water management strategies are determined to be complementary within a given region and then further identified as a means to achieve regional objectives. The objectives of this IRWMP present a number of opportunities to combine strategies for greater benefits and improved cost-efficiency.

The use of multiple complementary strategies is necessary to achieve the objectives of the IRWMP discussed in the following sections.

4.5.1 Water Quality Subobjectives

One of the major issues related to watershed management in the Central WMA is that land use and other urban activities in the upper watershed areas affect water quality in the coastal ecosystem, particularly the CCAs and ASBSs. Projects and programs to address this issue must be implemented in both the upper watershed areas the coastal areas. While treatment strategies can address the symptoms of pollution, they require operation and maintenance. Sustained water quality improvements can be achieved through land use planning, flood control, nonpoint source pollution control, strategic placement of treatment wetlands, and water conservation. Given the level of urbanization in the region and the interrelationships of the issues, single-purpose strategies will not result in sustained water quality improvements. Treating the symptoms is not just inefficient; it could also be ineffective if the root causes of water quality problems are left alone or even exacerbated.

4.5.2 Habitat with Flood Risk Management Subobjectives

The level of urbanization within the Central Orange County WMA makes habitat and ecosystem restoration particularly challenging, due to competing needs for flood control, recreation, and other urban land uses. This region has important ecosystems in the coastal area as well as the upper watershed. Measurable progress toward achieving regional goals for habitat depends on the use of multipurpose strategies. Some drainage within the region can serve dual purposes for flood risk management and habitat when designed and managed with that purpose in mind. Achieving this balance may further benefit water quality if erosion and sedimentation are prevented from affecting the receiving waters. To be effective, these multiple-function drainage systems often require greater levels of stormwater management within developments to minimize the impact on the natural drainages during storm events. These strategies are integrally linked, and any stand-alone alternative would not fully achieve the objective or provide long-term regional benefit.

4.5.3 Water Supply Subobjectives

Developing local water supplies to a level that results in a long-term reduction in imported water demands is costly. Use of single-purpose strategies may ultimately increase total costs within a region because related impacts, such as habitat and flood risk, are not managed at the same time. For example, flood risk management and water supply are often directly in conflict. If the implementation of a local water supply strategy is not planned to prevent resultant flood risk management issues, the public within the region could end up paying for both the water project and additional

flood program expenses. When the project is planned with full regional integration, conflicts are minimized and benefits extend beyond the planning area. An increased supply of recycled water available in areas where it can be fully used reduces demand for imported water, reduces wastewater discharge into the ocean, and conserves water resources in the Bay-Delta and the Colorado River.