

## **White Paper: The MPWMD Mitigation Program (April 2012)**

### **The Legal Mandate for the Mitigation Program**

When the Legislature created the MPWMD, the District was given the power, both express and implied, necessary to carry out the objects and purposes of its mandate (§ 118-301). This includes the power to enact ordinances and resolutions, adopt regulations to carry out its purposes, and fix charges (§ 118-308). The District's broadest power is provided in § 118-325, i.e., "The district shall have the power as limited in this law to do any and every lawful act necessary in order that sufficient water may be available for any present or future beneficial use or uses of the lands of inhabitants within the district ..."

The Water Management District established its Water Allocation Program in 1981 to manage the limited water supplies available to Monterey Peninsula water users. Under the Water Allocation Program, the District regulates the amount of water that can be produced and delivered by public and private water distribution systems within the District. The District established procedures for annually setting a limit on the total amount of water available to California American Water and a limit on how much water each local municipality could use in each subsequent year. Presently, all water delivered within the District is produced from sources within the District. These sources include surface water from the Carmel River and groundwater from the Carmel Valley Alluvial Aquifer and Seaside Groundwater Basin. Collectively, these sources are referred to as the Monterey Peninsula Water Resource System (MPWRS). In 1981, the annual production limit from the MPWRS for CAW's main distribution system was set at 20,000 acre-feet per year (afy) and a formula for distributing water among the jurisdictions within CAW's service area was specified.

Between 1981 and 1983, scientists retained by MPWMD concluded that CAW's diversions along the Carmel River had contributed to a large drop in the number of returning adult steelhead, substantial loss of streamside vegetation, and widespread channel instability during the late 1970s and early 1980s. In October 1984, the District began implementing the Carmel River Management Plan, which focused on restoring streamside vegetation and improving steelhead and wildlife habitat along the main stem of the river. The river restoration program was initially funded by a combination of a small assessment approved by riverfront property owners and a User Fee on connections to the Cal-Am system.

The District's steelhead rescue and rearing program and irrigation of riparian vegetation to offset impacts from water extraction efforts were begun as part of the "1988 Interim Relief Plan" (IRP), which was developed cooperatively by representatives from Cal-Am, MPWMD, the California Department of Fish and Game (CDFG), State Water Resources Control Board (SWRCB), Carmel River Steelhead Association (CRSA), and the Carmel Valley Property Owners Association (CVPOA). It was created to respond to the community's environmental concerns under the authority granted to MPWMD by the State Legislature, prior to the development of a permanent replacement water supply for the existing levels of Carmel River diversions. The IRP was also developed at the request of the SWRCB as part of a settlement for two water rights complaints filed by CRSA in 1987. The IRP initially included three general program elements directly related to steelhead and riparian vegetation as part of its initial Emergency Relief Plan: (1) Fish Rescues and Rearing, (2) Irrigation of Riparian Vegetation, and (3) Flow Releases from San Clemente Dam (SCD). The intent of the flow releases was to provide steelhead habitat that could

be sustained throughout the Low Flow Season with existing water supplies. This was to be achieved through two processes: a) the negotiation of an Annual Low Flow MOA between Cal-Am, CDFG, and MPWMD regarding the release of water from SCD; and b) the Quarterly Water Supply Budget process mandated by District Ordinance No. 19. At the time the IRP was adopted, Fish Rearing and Rescues were focused on moving fish upstream into year-round flowing waters with some short-term rearing in off-stream ponds, and capturing and moving smolts downstream to the ocean in drier years, when they otherwise would not have been able to reach the ocean. The IRP was subsequently replaced by the Mitigation Program resulting from the 1990 EIR, described below.

In 1990, the District revised the Water Allocation Program to reflect dry rainfall year conditions instead of average rainfall year conditions. As required by the California Environmental Quality Act (“CEQA”), the District prepared an Environmental Impact Report (“EIR”) to consider the environmental effects of the Water Allocation Program. This EIR evaluated the environmental effects assuming five different production volumes from the various sources of supply on the Monterey peninsula. Based on the revised analysis that was conducted, the annual production limit from the MPWRS for CAW’s main distribution system was reduced to 16,744 afy and a moratorium on new or expanded water uses was imposed.

The EIR concluded that the Water Allocation Program could have significant or potentially significant environmental effects unless mitigated. Therefore, in implementing the Water Allocation Program, the District was required under CEQA to mitigate, to the extent feasible, the significant impacts of the Water Allocation Program. On November 5, 1990, the Water Management District Board certified the Final EIR for the Water Allocation Program and adopted findings that included a Five-Year Mitigation Program for the selected production limits.

Five water supply options were analyzed in the EIR, along with associated impacts, and possible mitigations. Impacts to riparian vegetation, riparian wildlife, special-status wildlife, fisheries, and aesthetics without full mitigation measures were projected to be “significant adverse impacts” that could be reduced to “potentially significant” or “less than significant” adverse impacts with mitigation. To accomplish this, several programs enacted by the District in the 1980s to offset the impacts of pumping along the river were combined into a single, comprehensive program. The District’s Board adopted a Mitigation Program and authorized staff to carry out that program for five years, until June 30, 1996, and to report the results of the Mitigation Program to the Board. Following public hearings in May 1996, the District Board authorized continuation of the Five-Year Mitigation Program through 2001. Since 2001, the District Board has voted to continue the Comprehensive Mitigation Program as part of the District’s annual budget approval process.

Continuation of the Mitigation Program is necessary for implementation of the District’s Water Allocation Program. Implementation of the Water Allocation Program is necessary, in turn, to ensure that sufficient water is available to reliably serve Cal-Am’s customers.

In Order 95-10, the State Water Resources Control Board found that the Mitigation Program was alleviating the effects of Cal-Am’s diversions on the Carmel River. At the time the SWRCB was considering Order 95-10, the District’s Mitigation Program was initially intended to be reviewed in June 1996. To ensure that those mitigation measures continued to be implemented pending a long-term water supply solution, the State Water Resources Control Board ordered California American Water to implement those mitigation programs if the District ceased those activities after June 30, 1996, making the Mitigation Program a contingent obligation of Cal-Am. However, the District continued to implement the Mitigation Program, which was funded in part by the User Fee until 2009, when the California Public Utilities Commission (CPUC or Commission)

ordered Cal-Am to cease collecting and remitting the User Fee, which occurred in May 2011. Since 2011, Cal-Am and the District have worked cooperatively to ensure the Mitigation Program has continued uninterrupted.

The Commission has also concluded that the Mitigation Program is a contingent obligation of Cal-Am. Because the MPWMD has been implementing this program, ostensibly to the satisfaction of the State Water Resources Control Board, and the personnel and processes are in place, continued implementation by the Monterey Peninsula Water Management District is the most efficient and effective manner of meeting this responsibility. Further, most interested outside agencies such as the Sierra Club, the CRSA, and others have expressed a specific interest in the District maintaining responsibility for execution of mitigation activities.

### **Mitigation Required by the 2006 EIR for ASR Phase 1 Activities**

The 2006 EIR for Aquifer Storage and Recovery (ASR) Phase 1 required two mitigation measures related to Fisheries: AR-1 requires MPWMD to conduct an annual survey of the riffles below River Mile 5.5, and if feasible, modify any deemed impassible, then monitor the worst five during the diversion season to assure they remain passable, or cease diversions for ASR; AR-2 requires MPWMD to cooperate with Cal-Am to develop a program to maintain, recover, or increase storage at LPR, and continue the fish rescue program as needed.

The SWRCB issued Permit 20808A for ASR Phase 1 which added more requirements: Conditions #19 and #20 related to gages and monitoring, Condition #24 to continue the Annual Low Flow MOA process in an attempt to insure 5+ cubic-feet per second (CFS) of flow at the Sleepy Hollow Weir insofar as possible with existing LPR storage, Condition #25 to continue the fish rescues required by the 1990 Water Allocation EIR's Fisheries Mitigation #3, Condition #26 to conduct studies to determine the efficiency of annual fish rescues, Condition #27 to implement all aspects of the Carmel River Lagoon Mitigation Measures specified in the 1990 Water Allocation EIR, and Condition #29 related to riparian requirements of the Mitigation Program. These conditions are also currently included in the SWRCB's Permit 20808C for ASR Phase 2.

### **Other Mandates from State or Federal Permits**

The CDFG, National Marine Fisheries Service (NMFS), and USFWS require that all programs that affect or handle listed species, such as steelhead and red-legged frog, maintain trained and certified staff qualified for such work. Cal-Am has to contract for field biologists with such scientific qualifications, whereas MPWMD has them on staff at less than one-half the hourly rate of their consultants. All District Fisheries staff are certified in electrofishing by the USFWS, NMFS, and CDFG, and to handle red-legged frogs by the USFWS. In order to conduct our Monitoring Program, which is required by NMFS and CDFG to track and evaluate the effectiveness of the Mitigation Program, Fisheries staff must acquire and submit reporting for bi-annual State Scientific Collecting Permits through CDFG, which are in turn linked to separate annual Federal ESA Section 10 Permits from NMFS. The NMFS requires 5-Year Section 10 Permits to operate the Sleepy Hollow Steelhead Rearing Facility (SHSRF), and CDFG requires a congruent matching MOA. These agreements in turn require the District's Fisheries staff to be formally trained in aquaculture to run the SHSRF. The Section 10 Permit process requires MPWMD to develop a Rescue and Rearing Management Plan (RRMP). The RRMP currently requires (a) steelhead rescue efficiency studies, (b) adult and juvenile steelhead population surveys, (c) SHSRF operations improvement experiments to attempt to increase survival, and d) downstream migration survival study of reared versus wild juvenile steelhead with marked and recaptured fish. Sustaining the continuing education, re-certification, and re-permitting of the

Fisheries staff and their program consumes a significant amount of time each year, and must be funded as part of any modern mitigation program conducted by Cal-Am or MPWMD.

### **Mitigation Program is Related to the Provision of Water**

The legal mandates discussed above show a clear nexus between the requirements of the Mitigation Program and the provision of water supply from the Carmel River, as well as the provision of water supply from ASR. Mitigation is a component of the basic operating and maintenance (O&M) expense related to providing water from the Carmel River under existing conditions. Until such time as the need for the mitigation activities can be documented as no longer necessary and a supplemental EIR or other filing modifies or reverses the requirements of the 1990 Allocation EIR and the 2006 ASR EIR, the mitigation activities remain a required cost of operations related to provision of water.

### **Description of the Mitigation Program**

Key components of the Water Management District's Mitigation Program include general mitigations relating to water supply and demand management and specific measures relating to select environmental resources such as steelhead and riparian vegetation. General mitigation measures include hydrologic monitoring (precipitation, streamflow, groundwater levels, and water quality), water production management (operations agreements, quarterly water supply budgets, and well registration and reporting), water demand management (conservation, permitting, and monitoring), and water supply planning. Specific mitigation measures include steelhead protection (spring smolt rescues, fall/winter juvenile rescues, summer juvenile rescues and rearing, and adult and juvenile population monitoring), riparian habitat protection (vegetation monitoring, plantings and irrigation, erosion control, and channel clearing) and lagoon habitat protection (vegetation surveys, topographic measurements, and wildlife monitoring). Each of the components is described in the Annual Mitigation Program Reports that are required by CEQA. The 2011 Annual Report will be the twentieth report prepared by the District since the program began.

These activities are further summarized below and are detailed in Appendix A, attached.

#### **a. Fisheries Program.**

In summary, the Fisheries Program, among other things: (i) records data on the steelhead population in the Carmel River; (ii) rescues young steelhead from drying reaches of the Carmel River; (iii) operates the Sleepy Hollow Steelhead Rearing Facility, including steelhead stocking, physical plant maintenance and capital improvements, and preparation of the facility's Rescue and Rearing Management Plan in consultation with state and federal experts; (iv) conducts a California Stream Bio-assessment Procedure (benthic invertebrate sampling at 6 stations); (v) coordinates with California American Water regarding operations to maximize fish habitat, including monitoring the Carmel River Lagoon water levels and water quality to improve the lagoon as habitat for fish. Also included within this budget are activities to mitigate potentially significant impacts associated with the operation of the Aquifer Storage and Recovery project.

#### **b. Riparian Program**

The Riparian Habitat Program, among other things: (i) irrigates riparian vegetation that is impacted by groundwater extraction; (ii) restores streambanks and floodplains with native vegetation that has been degraded because of water extraction, and engages in other vegetation

management activities, including obtaining required State and federal permits for these activities; (iii) manages data collection regarding the channel profile and also cross section data from the Carmel River for use in maintaining a long-term record and comparing to the past and future data; (iv) monitors the physical and biological processes along the river to evaluate the District's river management activities; (v) inspects the Carmel River from the upstream end of the lagoon to Camp Steffani for violations and debris dams; (vi) maintains and updates records regarding erosion damage, conditions that could cause erosion, and the overall condition of the riparian corridor; (vii) enforces the District riparian ordinances; and, (viii) prepares Integrated Regional Water Management Plans.

### **c. Lagoon Program**

In summary, the Lagoon Habitat Program performs the following activities: (i) vegetation habitat monitoring; surveying and analyzing bathymetric transects; conducting topographic, hydrology and wildlife surveys; and (ii) providing technical expertise regarding management and improvement of the lagoon.

### **d. Hydrologic Monitoring Program.**

The Hydrologic Monitoring Program: (i) regularly tracks precipitation, streamflow, surface and groundwater levels and quality, and lagoon characteristics between Los Padres Dam and the Carmel River Lagoon, using real-time and computer monitoring methods at numerous data collection stations; (ii) maintains an extensive monitoring network, and continuous streamflow recorders along the Carmel River; (iii) implements a multi-agency Memorandum of Agreement and develops quarterly water supply strategies based on hydrologic conditions; (iv) works cooperatively with resource agencies implementing the federal Endangered Species Act; and, (v) implements ordinances that regulate wells and water distribution systems.

## **Modifications to the Mitigation Program**

The District has modified the Mitigation Program over time based on the results of the mitigation measures and to adapt to changing river conditions. Some steelhead mitigation efforts from the 1990 Allocation EIR have either been successfully concluded or deemed infeasible and abandoned.

For example, two additional holding/acclimation facilities for juvenile steelhead and kelts were envisioned by the 1990 Water Allocation EIR, in addition to the operation of the Sleepy Hollow Steelhead Rearing Facility. However, concurrent improvements in water resources management by Cal-Am, achieved through the Low Flow MOA and Quarterly Water Budget processes required by the 1990 Water Allocation EIR, negated the need for the additional facilities.

The Mitigation Program proposed various evaluation studies using Coded Wire Tagging to monitor and evaluate mitigations, however, several issues made such studies technically infeasible, thus, the studies have never been conducted, and are deemed infeasible at the current time.

The District engaged in steelhead spawning gravel augmentation projects from 1993 until 2003, as required by the 1990 Allocation EIR and its two succeeding five year plans. The program was deemed a success and concluded, but the District has continued to track and evaluate its beneficial effects by conducting annual surveys of steelhead redd (nest) abundance, channel

substrate, benthic macro-invertebrates (BMI)<sup>1</sup>, and juvenile abundance to see if spawning success continues to be stimulated by the program. The District's ongoing monitoring has indicated the need to reinitiate the spawning gravel augmentation program, now that most of the gravel has been dispersed or dissipated. The District feels there is a high probability of achieving State matching funds to reinitiate the program for 2012-2014.

Mitigation #4 from the 1990 Water Allocation Program EIR, the Experimental Smolt Transport Program, was eventually discontinued because it was deemed unnecessary after several modifications were made to the Los Padres Dam spillway that lowered the risk of fish injury. Despite formally abandoning this mitigation measure/objective in 1996, District staff are currently providing ongoing technical support of Cal-Am's efforts to develop a new facility designed for this purpose in the next few years, as required by CDFG and NMFS.

### **Mitigation Program is Distinct from Cal-Am's Other Mitigation Requirements**

The District's Mitigation Program activities are more comprehensive and quite distinct from other mitigation activities undertaken by Cal-Am. The focus of Cal-Am's water withdrawal mitigation activities center on meeting the terms of agreements with the National Oceanic and Atmospheric Administration (NOAA) regarding impacts to the South Central California Coast (SCCC) Steelhead, and with the United States Fish and Wildlife Service (USFWS) regarding impacts to the California Red-Legged Frog.

Regarding the SCCC Steelhead, the funds paid by Cal-Am to the California Department of Fish and Game are funding mitigation projects under the Department's Fisheries Restoration Grant Program. The activities selected by the Department to fund include Carmel River habitat improvements such as the removal of the Sleepy Hollow Ford, the removal of the Old Carmel River Dam, and studying the feasibility of a Carmel River Lagoon Barrier. These activities do not fall within the scope of activities undertaken by the District under the auspices of the Mitigation Program.

Regarding the California Red-Legged Frog, Cal-Am consultants monitor, rescue, and relocate California Red-Legged Frog tadpoles in the vicinity of large production wells when necessary, as well as part of certain mitigation measures associated with drawdown of San Clemente Dam. The District does not perform any rescue or relocation operations with respect to California Red-Legged Frog and only records incidental sightings when out in the field, but does work in conjunction with Cal-Am's consultants during rescue activities.

In its October 2006 Strategic Plan, the District Board requested that staff "merge and prioritize" lists of proposed restoration projects in the Carmel River Watershed so that the District would have a position on spending priorities. The Board also requested that the District's Carmel River Advisory Committee (CRAC) review the recommended spending priorities. The merged list of nine (9) proposed steelhead restoration projects was based on proposed projects developed by the National Marine Fisheries Service and the Carmel River Watershed Conservancy (CRWC) in November 2005 and October 2006, respectively. Generally, these projects were prioritized as interim measures to be funded from Cal-Am/CDFG Settlement Agreement funds to increase the survival of steelhead until a water supply was developed. Since then CDFG announced that no

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<sup>1</sup> BMI are animals without backbones, which are visible to the eye and which live on, under, and around rocks and sediment on the bottom of the river. These provide an essential portion of the steelhead food web.

more projects could be funded from the Settlement Agreement funds. That leaves several activities to improve the steelhead run unfunded while waiting for a long-term water supply. While these projects represent additional priorities with respect to mitigation, they are not all within the Mitigation Program, yet indicate additional actions that certain agencies believe are important to the mitigation effort.

### **What if District Ceases its Mitigation Program?**

In the short-term, if the Mitigation Program is discontinued by the District, most of the mitigation activities will be interrupted. In terms of data collection, this interruption will create gaps in the long-term records. In terms of more direct mitigation measures such as steelhead rescues and riparian vegetation irrigation, significant mortalities of steelhead juveniles and riparian vegetation may result. Loss of riparian vegetation could, in turn, result in increased bank erosion, sedimentation, and channel instability. Any interruption in the Mitigation Program would undermine the District's understanding of the Carmel River ecosystem and jeopardize ongoing efforts to protect and restore the environmental quality of the MPWRS.

#### Fisheries Activities Affected

The decision to discontinue the Mitigation Program would result in a cessation of field activities, so that staff could be diverted to decommissioning efforts at the Sleepy Hollow Steelhead Rearing Facility, San Clemente Dam Fish Ladder, and elsewhere. The Fish Rescue Program for Water Year 2012 and Fiscal Year 2012-2013 would abruptly cease. Cal-Am does not have the State and Federal Permits to conduct this effort, nor are its consultants currently authorized with the necessary permits to do so. Accordingly, Cal-Am likely would not be able to resurrect the program for at least a year. This would potentially result in the illegal take of at least 10,000 or more juvenile steelhead just in 2012 given conditions, and likely 13,000 or more in 2013, which would be in violation of the Endangered Species Act (ESA) and California State Fish & Game Code 5937. This situation could result in both the National Marine Fisheries Service (NMFS) and California Department of Fish and Game (CDFG) requesting the SWRCB to implement an immediate rationing plan for the Monterey Peninsula to minimize illegal take impacts, or to accelerate the schedule cutbacks in WRO 2009-0060. If State and Federal agencies didn't act in some manner during this coming dry season, it would potentially put the agencies at greater risk of citizen or advocacy lawsuits to force appropriate action to minimize steelhead losses.

Cal-Am may be incapable on its own of implementing a rationing plan on short notice without MPWMD's help and legal authority, and thus might not be able to comply with any ordered cutbacks, resulting in major fines and legal liabilities to be passed on eventually to its customers.

MPWMD staff would reduce or eliminate funds for testing and starting up the Sleepy Hollow Rearing Facility for the year, thus fish rescued in May and June would have to be placed in the upper river, likely increasing competition for food and space with resident wild fish above River Mile 9. In the past, with the Sleepy Hollow Steelhead Rearing Facility fully operational, NMFS and CDFG have opposed such releases as potentially harmful to the local steelhead population. If the SHSRF is formally abandoned without months of decommissioning effort, Cal-Am could place a claim for decommissioning and removal against MPWMD, under the terms of the existing lease, amounting to hundreds of thousands of dollars of liability exposure.

The fish counting station on San Clemente Dam that has existed since 1994 would have to be completely removed, if it wasn't going to be actively maintained, in order to avoid an ESA violation. Cal-Am does not have the Federal Permits to operate it and could not secure these until the application period opens in late 2012 to permit activities in 2013. No further adult run size data would be collected, interrupting a record dating back to 1954, which is the only source of steelhead abundance data within the South Central Coast Distinct Population Segment.

The MPWMD would be in default on its legally mandated aquatic monitoring and mitigation commitments made under the 1990 Allocation EIR and subsequent modifications, which could result in CEQA-related lawsuits to suspend a portion of the Monterey Peninsula communities' water allocations.

Cal-Am would likely not be able to hire consultants fast enough to effectively take over the hydrologic, groundwater, and aquatic monitoring program components necessary to comply with the Quarterly Water Budget process, and especially the Annual Low Flow Season MOA. Failure to continue implementation of the Quarterly Water Budget process would lead to an inability to balance and plan for seasonal demand versus constrained supplies, as well as to allocate outreach efforts encouraging conservation, thus potentially requiring MPWMD and Cal-Am to implement rationing during the Water Year. Poor water resource and water demand planning could also lead to sudden emergency increases in pumping from the Carmel River that could dry back miles of river, killing hundreds to thousands of Federally-listed steelhead and redlegged frog.

Failure to properly implement and execute the Low Flow MOA to CDFG's satisfaction is a direct violation of the court settlement between Cal-Am and CDFG of a 1983 Fish & Game Code 5937 violation case, and could result in Cal-Am's operation of Los Padres Dam and Reservoir being returned to the jurisdiction of Monterey County Superior Court for failure to comply with the court-ordered settlement process.

Many of Cal-Am's consultants likely have hourly rates that are double to triple the hourly rate of similarly qualified MPWMD staff. Because the Mitigation Program activities require a unique set of skills, consultants working in the Carmel River watershed are frequently from out of the area and may also require a per diem. These expenses would have to be passed on to Cal-Am's customers.

As a result of this suite of actions, Cal-Am would potentially find itself in clear violation of Water Rights Orders 95-10 and 2009-0060, and possibly in violation of its existing ESA Section 9 Settlement with NMFS, which assumed the continuation of almost all of the elements of the Fisheries Program that are being placed at risk of cancellation.

Even acting to the best of its ability, Cal-Am would incur months to as much as a year delay in resuming the legally-mandated portions of the Aquatic Programs that it is required to sustain under SWRCB Order 95-10, and the ASR EIR and permits, if MPWMD ceases to conduct them.

#### Riparian Activities Affected

It has been shown that riparian vegetation damaged by water extraction practices is unable to resist high winter flows. Without the MPWMD irrigation program in place for



2012, the health of the streamside vegetation would degrade. River reaches without healthy streambank vegetation are subject to erosion and persistent instability that eventually requires a significant investment of time and resources to restore streambank stability. In addition, instream work to reduce the potential for debris blockage and streambank erosion during the winter would not be carried out.

MPWMD's program to regulate and coordinate streamside activities along 15.5 miles of the river could also become an "unfunded mandate." This program prohibits actions such as driving in the Carmel River, dumping deleterious materials over the streambank, removing vegetation, and altering the channel or streambank without a permit. Whereas MPWMD has enforced its riparian corridor ordinances, over the past 30 years other entities with similar regulatory power along the river, such as the Corps, CDFG, NMFS, and Monterey County, have almost universally chosen not to take action against private property owners to enforce laws that prevent degradation. In addition, MPWMD has acted to coordinate property owner actions so as to minimize effects on other properties and maximize restoration of beneficial streamside activities. No other agency has a similar program.

#### Lagoon Activities Affected

MPWMD would need to curtail the District's efforts to identify and assist with implementation of projects to provide an adequate volume of water to sustain steelhead habitat. If Lagoon monitoring efforts were abandoned, it would be difficult to assess whether groundwater extraction in the lower valley is impacting the ecology of the lagoon. A long-term record is necessary to track subtle changes in lagoon vegetation that may be mitigated by revegetation and irrigation.

#### Hydrologic Monitoring Affected

Streamflow monitoring of the main stem, tributaries, and Carmel River Lagoon forms the basic data set used by MPWMD. Without it, the following activities would be affected:

- Annual water supply forecast
- Quarterly determination of District-wide water supply
- Determining if triggers are met for expanded water conservation/rationing
- Developing water supply alternatives (with the Carmel Valley Simulation Model)
- Meeting permit conditions for ASR Phase 1 and 2 water rights
- Determining if NOAA-Cal-Am Conservation Agreement requirements for instream flows are met

#### Groundwater Monitoring Affected

Groundwater monitoring is used in the following activities. Without it, the following activities would be affected:

- Maintenance of a well database
- Determining requirements for applicants for new water distribution system permits
- Annual water supply forecast
- Quarterly determination of District-wide water supply

- Determining if triggers are met for expanded water conservation/rationing
- Developing water supply alternatives (using the Carmel Valley Simulation Model)

### **What Legal Obligations of the District Would be Affected?**

*Integrated Regional Water Management Program* - In 2011, MPWMD entered into an agreement with the Department of Water Resources (DWR) to complete a \$1.63 million project to update water resources planning for the Monterey Peninsula. DWR will fund up to \$995,000 with the balance being in-kind services and cash in the amount of \$640,000. MPWMD's commitment of cash or in-kind services totals approximately \$380,000. Eliminating funding for the Mitigation Program may make it unlikely that MPWMD could meet its local match obligation and probably would have difficulty with administering the grant funds. MPWMD would need to explore the option of terminating the grant agreement and returning grant funds disbursed by DWR.

*Cal-Am Settlement Agreement Fund – Sleepy Hollow Ford Project.* Under a Settlement Agreement over impacts to steelhead, Cal-Am has agreed to fund approximately \$11 million toward steelhead habitat enhancement projects in the Carmel River over the next several years. The California Department of Fish and Game is administering these funds. MPWMD is currently managing a \$130,000 design project for removal of a fish passage barrier in the Carmel River that is jointly funded from Settlement Agreement funds (\$114,000) and MPWMD in-kind services (estimated at \$15,000). CDFG has proposed awarding an implementation grant to MPWMD of approximately \$750,000 to \$1 million to remove the barrier and install a bridge across the river in 2013. Without a funding to support project management, it is unclear how MPWMD would be able to complete this project.

*Cal-Am Settlement Agreement Fund – Sleepy Hollow Raw Water Intake Upgrade.* The absence of the MPWMD Fisheries Supervisor would mean that grant processes underway to spend approximately \$1,500,000 on the improvement of the SHSRF would have to be suspended, and the funds would likely be reallocated to other competing grant applicants, precluding the SHSRF upgrades from ever occurring in the future.

*CDFG Fisheries Restoration Program Grant* - The Fisheries Program would be in default on its CDFG grant to conduct adult fish monitoring, and CDFG might refuse to reimburse MPWMD for reimbursable expenses incurred to date.

Two agreements in which the District shares in the cost would also be affected: (i) Maintaining the USGS Near Carmel stream gage, which has recorded mean daily stream flow since 1962 and is now located at River Mile 3.2, and (ii) the Carmel River Basin streamflow monitoring program, the data from which is used to make Quarterly Water Budget decisions and is also required to administer the Low Flow Memorandum of Agreement between CDFG, MPWMD, and Cal-Am.

### **What are the Legal Consequences to Cal-Am's Ratepayers and MPWMD's Constituents if these Mitigations are not Conducted?**

Depending on the magnitude of seasonal river flows, Cal-Am's Carmel River diversions during most of the year, beyond the limited high-flow months of February through April, would immediately be in direct violation of: (a) the Federal ESA's Section 9 prohibitions on the direct take of steelhead and their habitat, subjecting Cal-Am to federal fines per fish deemed to have been lost on an annual basis [estimate based on prior Federal court cases]; (b) State Fish & Game Code 5937 likely resulting in immediate prosecution in Superior Court for damages; (c) and

unknown level of civil fines could be levied by the State Water Resources Control Board for violating the terms of Order 95-10 and WR 2009-0060, which could also result in emergency SWRCB action to implement additional severe rationing on the community.

Failure to complete the mitigations for ASR Phase 1 and 2 under Water Rights 20808a and 20808c could result in fines or an order to terminate diversions under those water rights by the SWRCB, thereby reducing community water supplies from ASR, and possibly triggering rationing.

Failure to implement the mitigations outlined in the 1990 Water Allocation EIR or the 2006 EIR for ASR Phase 1 would also be a direct violation of CEQA, leaving the MPWMD open to a Superior Court lawsuit seeking enforcement of the terms in either of the two EIRs.

Appendix A:  
Legally Mandated  
Mitigation Program Activities

HYDROLOGIC MONITORING PROGRAM

- 1 – Stream-flow Monitoring Program at 19 stream-flow gaging stations:
  - 1a – Gage maintenance and repair
  - 1b – Manual flow measurements at un-gaged stations
  - 1c – Computational data processing, database management, timely public release of key data on the internet, response to public information requests.
  - 1d – Continuous flow record computations
  - 1e – Hydrographic predictions for interagency decision-makers
  - 1f – Annual Carmel River basin surface water data report [in addition to Annual Mitigation & Monitoring Report]
- 2 – Monthly Surface Water Quality Monitoring Program, with continuous recording equipment at Sleepy Hollow Rearing Facility and six continuous recording temperature meters along the river;
- 3 - Monthly Ground Water Quantity Monitoring Program throughout the Carmel River alluvial aquifer and Seaside Basin.
- 4 - Municipal Pumping Rate Monitoring Program for diverters other than Cal-Am.

STEELHEAD RESOURCE PROGRAM

- 1 - Fish Rescues and Rearing
  - 1a - Rescue Fish Stranded Due to Annual Cal-Am Diversions in the Summer and Early Fall [June - August]
  - 1b -Rear Rescued Fish at the Sleepy Hollow Rearing Facility [June-February]
  - 1c - Rescue Downstream Migrant Smolts in Spring and Transport them to a Holding Facility or the Ocean [April-May]
  - 1d - Prevent Stranding of Early Fall and Winter Migrant Juvenile Steelhead in the Lower River When It Dries Back After Early Rains [October - January]
  - 1e - Rescue Steelhead Kelts [spawned out adults] from the River or Lagoon and Transport them to a Holding Facility or the Ocean [year round]
  - 1f - Continue to Evaluate the Feasibility of Improving Smolt and Kelt Ocean Release Procedures
  - 1g - Conduct Operational Experiments to Improve SHSRF Survival
  - 1h - Conduct Quantitative Evaluations of Fish Rescue Efficiency
  - 1i - Conduct Comparative Downstream Juvenile Emigrant Survival Experiments Comparing SHSRF-reared to Wild Steelhead
  - 1j - Conduct Kelt Reconditioning Experiments at the SHSRF
  - 1k - Support Any Future Interagency Captive Brood-stock Program for Landlocked Steelhead During Successive Years of Drought
  - 1l - Develop SHSRF Raw Water Intake Retrofit Design and Necessary Permitting [2012]
  - 1m - Oversee Bids and Construction Contracts for SHSRF Raw Water Intake Retrofit [2013]
- 2 - Managing Water Resources to Sustain and Optimize Flow in the Lower River
  - 2a - Develop the Annual Low Flow MOA for Releases from LPD and SCD
  - 2b - Develop the Quarterly Water Budget to Optimize Conjunctive Use of Ground and Surface Water Resources and to Minimize Environmental Impacts of Diversions
  - 2c - Summer Temperature Profile in LPR to Develop Release Protocol [June/July]
- 3 - Monitor the Status of the Steelhead Population and Its Habitat
  - 3a - Monitor and Report the Steelhead Counts at SCD and LPD [October - June]
  - 3b - Fall Juvenile Population Surveys [October]
  - 3c - Fall Spawning Substrate Surveys [September]
  - 3d - Fall Benthic Macro-Invertebrate Surveys of the Steelhead's Food Chain [November]
  - 3e - Bi-Annual Juvenile Steelhead Population Surveys in the Lagoon [June/July & November/December]

- 3f - Steelhead Redd and Spawner Survey from LPD to the Lagoon [January-April]
- 3g - Summer Temperature Profile in LPR also utilized for 2-c [June/July]
- 3h - Fall LPR Draw-down Minimum Pool Water Quality Profiles [September - December]
- 4 - Evaluate and Modify/Rehabilitate Critical Riffles
  - 4a - Critical Riffle Survey of Lower 5.5 River Miles [November - May]
  - 4b - Survey Fish Passage from LPD to the Lagoon [January-April]; same as effort for 3-f
- 5 - Lagoon Monitoring Program
  - 5a - Monthly Roving Water Quality Profiles [bi-monthly if needed by regulatory agencies]
  - 5b - YSI Continuous Vertical Water Quality Profiler at CAWD Outfall Pipe
  - 5c - 3-e also utilized for this purpose
  - 5d - Participate in Carmel River Lagoon TAC [~quarterly to bi-annual]
- 6 - Surface Water Quality Monitoring Program
  - 6a - Monthly 3-Station Survey from LPD to the Lagoon
  - 6b - Continuous Temperature Monitors at 6 Locations from LPD to the Lagoon
- 7 - Addressing Ongoing Steelhead Passage Problems in the Carmel River Watershed
  - 7a - Seek Grant Funding for Projects to Improve Steelhead Passage
  - 7b - Cooperate on Interagency Fish Passage Technical Teams for the Carmel River [e.g. SCD Re-route TRT and LPD Smolt Passage TRT]
- 8 - Mitigation & Monitoring Program Reporting
  - 8a - Contribute to the Weekly General Manager's Letter to the Board. [posted on the Internet]
  - 8b - Produce the Monthly Carmel River Fisheries Report [posted on Internet & circulated statewide]
  - 8c - Produce Periodic Technical Memo Reports on Significant Topics [December - April]
  - 8d - Produce Chapter II.F. Surface Water Quality, IX Fisheries, and XI Lagoon for the Annual Mitigation and Monitoring Program Report [December - April]

#### RIPARIAN VEGETATION AND WILDLIFE PROGRAM

- 1 - Irrigation System Operation and Maintenance
- 2 - Irrigation System Expansion During Drought
- 3 - Plant Propagation
- 4 - Revegetation of Exposed Banks
- 5 - Restoration Project Maintenance
- 6 - Canopy Rating Monitoring
- 7 - Soil Moisture Monitoring
- 6 - Public Outreach (brochures, public presentations)
- 7 - Report Review and Comments
- 8 - Permit Acquisition for Vegetation Management Activities
- 9 - Site Assessment for Vegetation Management Activities
- 10 - Property Owner Access Permission
- 11 - Vegetation Management
- 12 - General Equipment Maintenance
- 13 - Ordinance Enforcement (MPWMD Rules 120-127)
- 14 - Provide Staff Support for the Carmel River Advisory Committee
- 15 - Restoration Project Design and Implementation
- 16 - Provide technical assistance to riverfront property owners
- 17 - Monitor physical changes along the Carmel River
- 18 - GIS mapping of riparian cover
- 19 - Annual Riparian Corridor Monitoring Report and Data Analysis [in addition to Annual Mitigation & Monitoring Report]

#### LAGOON VEGETATION AND WILDLIFE PROGRAM

- 1 - Monitor lagoon habitats and their physical characteristics annually, using established methodologies;

- 1a – Surface and groundwater quality monitoring
- 1b – Depth to groundwater monitoring
- 1c - Lagoon vegetation surveys [not conducted in 2011]
- 2 - Avifauna monitoring [discontinued in 2011];
- 3 - Develop and monitor stage-volume relationship to estimate the adequate volume of water for existing vegetation and wildlife;
- 4 - Ensure that alternative sources of water development account for the need to maintain an adequate volume of water in the lagoon.

#### AESTHETICS PROGRAM

Sustain and improve the aesthetic quality of the Carmel River's alluvial watershed via activities in the ongoing Riparian Vegetation and Wildlife Program

#### ANNUAL MITIGATION & MONITORING REPORT

This report is produced annually and summarizes all activities and accomplishments of the five programs listed above, detailing any alterations, improvements, additions and deletions to the programs.