Return to Agenda

Marina Coast Water District
Agenda Transmittal

Agenda Item: 10-E

Meeting Date: June 14, 2011

Submitted By: Gary Rogers
Reviewed By: Carl Niizawa

Presented By: Gary Rogers

Agenda Title: Consider Adoption of Resolution No. 2011-45 to Adopt an Updated Water Shortage Contingency Plan

Detailed Description: The Board of Directors is requested to approve the updated *Water Shortage Contingency Plan* (Attached as Exhibit A).

Section 10632 of the California Water Code requires the Marina Coast Water District to maintain a water shortage contingency analysis and plan within its Urban Water Management Plan (UWMP). The District's plan was last updated in May 2005. As part of the 2010 Urban Water Management Plan update, the District Staff and its consultant reviewed the District's Water Shortage Contingency Plan, updated the cost analysis and made proposed additions to the plan text. The proposed update adds specific restrictions on water use that may be implemented at the time of a water shortage, predominantly in outdoor water use categories. In the event of a minimal water shortage (less than 10%), the proposed updates would allow District Staff to immediately direct customers to reduce water use without first convening the Board to obtain direction. In the event of a more serious water shortage, District Staff action would require Board involvement.

Adopting the updated Water Shortage Contingency Plan (WSCP) by a separate resolution from the Urban Water Management Plan allows the Board to update the WSCP in the future, if needed, without formally amending the UWMP. Section 3.36.035 of the District's Code of Ordinances states: "The District maintains a water shortage contingency plan in conformance with the Water Code Section 10632. Provisions of that plan will be enforced through this chapter."

The draft Water Shortage Contingency Plan was made available for public review and comment as part of the draft 2010 Urban Water Management Plan. A public hearing on the UWMP was conducted on May 10, 2011.

If the Board elects not to adopt the updated WSCP, the 2005 WSCP shall remain in effect and be submitted with the 2010 Urban Water Management Plan.

Environmental Review Compliance: CEQA action is not required for this item.

Prior Committee or Board Action: On May 25, 2005, the Board approved Resolution No. 2005-31, adopting the current Water Shortage Contingency Plan. On February 4, 2011, the draft Water Shortage Contingency Plan was presented to the District's Water Conservation Committee. On May 10, 2011, the Board conducted a public hearing on the Draft 2010 UWMP that included the WSCP.

Return to Agenda

Board Goals/Objectives: *Strategic Plan - Goal No. 1: To manage and sustain the District's groundwater and desalinated water, recycled water and wastewater services, conservation activities, infrastructure and human resources at or above industry standards. Goal No. 2: To meet 100% of current and future customers' needs and make timely improvements and increase infrastructure and level of services and human resources to meet needs of expanding service areas in an environmentally sensitive way.*

Financial Impact: ___X___Yes _____No

Funding Source/Recap: Funding for the preparation of the revised WSCP is from the Ord Community and Marina cost centers under CIP# GW-0201 ("2010 Urban Water Management Update")

Material Included for Information/Consideration: Resolution No. 2011-45; and, the Draft Water Shortage Contingency Plan.

Staff Recommendation: The Board of Directors consider adoption of Resolution No. 2011-45 to adopt an Updated Water Shortage Contingency Plan.

Action Required: ___X____Resolution _____Motion _____Review
(Roll call vote is required.)

Board Action

_____Resolution No____ Motion By_____ Seconded By_____

Ayes_____ Abstained_____

Noes_____ Absent_____

Reagendized_____ Date_____ No Action Taken_____

Return to Agenda

June 14, 2011

Resolution No. 2011 - 45
Resolution of the Board of Directors
Marina Coast Water District
Adopting an Updated Water Shortage Contingency Plan

RESOLVED by the Board of Directors ("Directors") of the Marina Coast Water District ("District"), at a regular meeting duly called and held on June 14, 2011, at the business office of the District, 11 Reservation Road, Marina, California as follows:

WHEREAS, Section 10632 of the California Water Code requires the Marina Coast Water District to maintain a Water Shortage Contingency Plan within its Urban Water Management Plan; and,

WHEREAS, the District maintains a Water Shortage Contingency Plan and desires to update said plan in accordance with the Water Code and provide a guidance document for management of water shortages within the District; and,

WHEREAS, the District received public comments on the draft Water Shortage Contingency Plan.

NOW, THEREFORE, BE IT RESOLVED, that the Board of Directors of the Marina Coast Water District does hereby:

1. Approve and adopt the Water Shortage Contingency Plan, and,

2. Authorize the General Manager and/or Deputy General Manager/District Engineer to file the Water Shortage Contingency Plan with the California Department of Water Resources as part of the District's 2010 Urban Water Management Plan.

PASSED AND ADOPTED on June 14, 2011, by the Board of Directors of the Marina Coast Water District by the following roll call vote:

Ayes: Directors_____

Noes: Directors_____

Absent: Directors_____

Abstained: Directors_____

_____
William Y. Lee, President

Return to Agenda

ATTEST:

_____
Jim Heitzman, Secretary

CERTIFICATE OF SECRETARY

The undersigned Secretary of the Board of the Marina Coast Water District hereby certifies that the foregoing is a full, true and correct copy of Resolution No. 2011-45 adopted June 14, 2011.

_____
Jim Heitzman, Secretary

MARINA COAST WATER DISTRICT
WATER SHORTAGE CONTINGENCY PLAN

1.0 INTRODUCTION AND BACKGROUND

This Water Shortage Contingency Plan is developed in compliance with California Water Code Section 10632. Requirements of subsections (a)-(i) are identified below and are accompanied by the required elements and information.

The Marina Coast Water District (MCWD) obtains its water supply from the Salinas Valley Groundwater Basin (SVGB). The SVGB is not adjudicated and provides water for growers, municipalities and other municipal and industrial uses in the Salinas Valley. Due to cumulative basin pumping, coastal aquifers are experiencing seawater intrusion. MCWD continues to work with Monterey County Water Resources Agency (MCWRA) in developing plans to coordinate and encourage preservation of the SVGB aquifers by all municipal and agricultural users.

In 2005, MCWD interconnected its two service areas, Central Marina and the Ord Community. The interconnection has improved system-wide reliability, making maximum use of available water storage tanks in the Ord Community and allowing both areas to be served by any of the six District wells. In 2007, the District consolidated the two systems under a single Public Water System Permit.

MCWD is actively pursuing development of a Regional Water Supply Project, in partnership with the Monterey County Water Resources Agency (MCWRA) and California-American Water Company (CAWC). The Regional Project will develop desalinated water from the seawater-intruded portion of the SVGB. This supply will meet current water demands within the CAWC Monterey service area and future water demands within the MCWD Ord Community. The wells to be installed within the intruded portions of the SVGB are intended to capture seawater along the coast before it can migrate to inland portions of the aquifer. The project also includes a recycled water component that will provide non-potable water for landscape irrigation within the MCWD and CAWC service areas.

One other coordinated effort includes the Water Awareness Committee of Monterey County (WAC). Through the WAC, representatives from several agencies throughout Monterey County work together coordinating conservation and other water awareness efforts including education programs, information booths for special events and public understanding of Monterey County water challenges and opportunities.

California Water Code Section 10632(c) Actions to be undertaken by the urban water supplier to prepare for, and implement during, a catastrophic interruption of water supplies, including but not limited to, a regional power outage, an earthquake or other disaster.

The MCWD developed and adopted an Emergency Response Plan for emergency and disaster occurrences with guidelines and agreements for cooperative efforts with other State and local agencies, as required by the State Health Department. This Plan contains actions MCWD would initiate in the event of a catastrophic reduction in its water supply.

2.0 STAGES OF ACTION

California Water Code Section 10632(a) Stages of action to be undertaken by the urban water supplier in response to water supply shortages, including up to a 50 percent reduction in water supply and an outline of specific water supply conditions which are applicable to each stage.

The MCWD developed a five-stage Water Conservation Plan that includes two voluntary and three mandatory stages. Table 1 generally describes the various stages. Specific water supply conditions applicable to each stage, referred to as "triggering mechanisms" herein, are discussed in the next section.

Table 1: Water Conservation Stages and Reduction

Stage	Demand Reduction Goal	Type Program
Stage 1	10% reduction	Voluntary
Stage 2	15% reduction	Voluntary
Stage 3	25% reduction	Mandatory
Stage 4	35% reduction	Mandatory
Stage 5	50%+ reduction	Mandatory
Priorities for use of available water, based on California Water Code Chapter 3 are: 1. Health and Safety - interior residential and fire fighting 2. Commercial, Industrial, and Governmental - maintain jobs & economic base 3. Existing Landscaping - especially trees and shrubs 4. New Demand - projects without permits when shortage declared		

California Water Code Section 10632(b) An estimate of the minimum water supply available during each of the next three water years based on the driest three-year historic sequence for the agency's water supply.

This requirement is oriented toward water supply systems that are primarily supplied via surface waters and therefore can be directly affected by short-term fluctuations in hydrology i.e., drought conditions. MCWD's total current water supply is produced through groundwater pumping from the large SVGB. MCWD supply availability from this basin has not historically varied due to short-term hydrologic conditions. The minimum water supply available within the driest three-year sequence is expected to match demands as discussed in the Urban Water Management Plan.

3.0 TRIGGERING MECHANISMS

The SVGB is currently the most important source of water for MCWD. In 2004, the MCWD's groundwater withdrawals of about 4,600 acre-feet accounted for less than one percent (1%) of the estimated basin-wide annual extractions of roughly 550,000 acre-feet. Given this relatively small percentage, MCWD conservation and contingency management activities can play only a small part within the SVGB. The foremost concern in developing appropriate triggers is achieving the maximum practical protection of an adequate long-term water supply of acceptable quality for MCWD customers. To that end, triggering mechanisms should be tied to factors that, directly or indirectly, have the greatest potential effect on the quality and quantity of available groundwater.

Two general types of threats could cause MCWD to experience water shortages:

1. Unanticipated catastrophic system failure due to an earthquake, terrorist attack or sudden contamination of water supply, or
2. Chronic system shortage due to seawater intrusion reaching water supply wells in concentrations such that those wells would have to be removed from service.

In the case of a catastrophic failure, the MCWD would assess the nature and extent of the failure, and the General Manager would identify the appropriate Conservation Stage in accordance with the expected level of water supply shortage. Should shortages be anticipated in amounts beyond fifty percent of normal demands, emergency actions will be taken in accordance with the MCWD's Emergency Response Plan, including enacting emergency ordinances as may be required by MCWD Board of Directors.

The chronic system threat to MCWD's present water supplies is seawater intrusion, which has occurred along the coastal margin of the Salinas Valley in response to historic over-drafting of the basin. Contamination from volatile organic compounds (VOCs) has also affected MCWD wells and could pose additional problems. Although seawater intrusion has not yet affected the deep zone (400-Foot Aquifer) of the SVGB (which is the source of supply for Marina's Well No.10, No.11, and No.12), it is possible that continued extractions in the 400-Foot Aquifer could ultimately lead to contamination of these water supplies by seawater. MCWD monitors the rate of seawater intrusion and plans to construct a new well in the deep aquifer and develop alternative water resources that would be insulated from intrusion. However, it is possible for intrusion to appear in a relatively short time span and reduce overall supplies available. Consequently, the MCWD has structured this Water Shortage Contingency Plan with the primary goal of reducing water supply demands to allow time for alternative water supply measures, including the drilling of alternate wells in areas unaffected by intrusion and/or contamination. A specific triggering mechanism for various levels of conservation is tied to concentrations of chlorides in MCWD wells and possible concentrations of VOCs, such as trichloroethylene (TCE) which was previously observed at low levels in Well No. 9 in Central Marina and is occasionally detected at Well No. 29 in the Ord Community. Chloride concentration is directly related to the seawater intrusion problem, and both parameters (chloride and VOCs) are related to the overall basin viability as a secure source of water supply.

Chloride concentration, which is the trigger for the most advanced stages of conservation, is also a key indicator of water quality degradation due to seawater intrusion. Tests for statistically significant changes in chloride concentrations assist in the detection of the earliest stages of intrusion and are appropriate indicators of a water supply emergency. In addition, MCWD currently monitors its Ord Community wells for the presence of TCE and other organic compounds, and works with the U.S. Army regarding the Army's groundwater cleanup actions in the Ord Community.

TRIGGERING MECHANISMS FOR CONSERVATION STAGES

These Triggering mechanisms shall be interpreted as guidelines and are summarized in Table 2. The General Manager and/or Board of Directors may impose any of the following conservation

stages based upon facts and circumstances which may not have been otherwise anticipated in this plan.

Table 2 Conservation Level Triggering Mechanisms

Conservation Stage and Shortage Level	Triggering Mechanism
Stage One 0-10% Voluntary	1) system malfunction resulting in up to 10% shortage 2) increase in chlorides which do not threaten to exceed drinking water quality standard 3) increase in VOC concentrations which do not threaten to exceed standards with blending
Stage Two >10-25% Voluntary	1) system malfunction resulting in greater than10% shortage 2) increase in chlorides which may threaten to exceed drinking water quality standard 3) increase in VOC concentrations which do not threaten to exceed standards with blending
Stage Three >25-35% Mandatory	1) system malfunction resulting in greater than 25% shortage 2) increase in chlorides which are expected to exceed drinking water quality standard 3) increase in VOC concentrations which do not threaten to exceed standards with blending or when remaining capacity is reduced by up to 25%
Stage Four >35-50% Mandatory	1) system malfunction resulting in greater than 35% shortage 2) increase in chlorides which are expected to exceed drinking water quality standard 3) increase in VOC concentrations which do not threaten to exceed standards with blending or when remaining capacity is reduced more than 35%
Stage Five >50% Mandatory	1) system malfunction resulting in greater than 50% shortage 2) increase in chlorides which are expected to exceed drinking water quality standard 3) increase in VOC concentrations which do not threaten to exceed standards with blending or when remaining capacity is reduced more than 50%

STAGE 1: Up to 10% - Voluntary

Stage 1 conservation measures may be called for as a result of malfunction of all or portions of the water system that reduces supplies by up to 10% on a daily, peak seasonal or annual basis. It also may be called due to prolonged drought conditions and a need to focus public attention on water conservation.

Further triggering could also be based on:

1) detection of a statistically significant increase in chloride concentrations but where such concentrations do not threaten to exceed the CA DHS "Upper Level" secondary (aesthetics) drinking water standard currently set at 500 mg/l at the well(s) in question, or

2) detection of a statistically significant increase in VOC concentrations but where such concentrations do not threaten to exceed the primary drinking water maximum contaminant level (MCL) for each VOC at the well(s) in question and/or blending of this supply with other well supplies cannot maintain a distribution system concentration(s) below these standards.

STAGE 2: >10% to 25% -Voluntary

Stage 2 conservation measures may be called for due to malfunction or failure of all or portions of the water system that reduces supplies by greater than 10% on a daily, peak seasonal or annual basis.

Further triggering could also be based on:

1) detection of a statistically significant increase in chloride concentrations where such concentrations may threaten to exceed the CA DHS "Upper Level" secondary (aesthetics) drinking water standard currently set at 500 mg/l at the well(s) in question, or

2) detection of a statistically significant increase in VOC concentrations, but where such concentrations do not threaten to exceed the primary drinking water MCL for each VOC at the well(s) in question and/or blending of this supply with other well supplies cannot maintain a distribution system concentration(s) below these standards.

STAGE 3: >25% to 35% - Mandatory

Stage 3 conservation measures may be called for due to malfunction or failure of all or portions of the water system that reduces supplies by greater than 25% on a daily, peak seasonal or annual basis.

Further triggering could also be based on:

1) detection of an increase in chloride concentrations where such concentrations are expected to exceed the CA DHS "Upper Level" secondary (aesthetics) drinking water standard currently set at 500 mg/l at the well(s) in question, or

2) detection of VOC concentrations, but where such concentrations do not threaten to exceed the primary drinking water MCL for each VOC, and/or blending of this supply with other well supplies cannot maintain a distribution system concentration(s) below these standards, and/or when gross reduced well production of up to 25% is necessary to maintain adequate water quality.

STAGE 4: >35% to 50% - Mandatory

Stage 4 conservation measures may be called for due to malfunction or failure of all or portions

of the water system that reduces supplies by greater than 35% on a daily, peak seasonal or annual basis.

Further triggering could also be based on:

1) detection of an increase in chloride concentrations where such concentrations are expected to exceed the CA DHS "Upper Level" secondary (aesthetics) drinking water standard currently set at 500 mg/l at the well(s) in question, or

2) detection of VOC concentrations, but where such concentrations do not threaten to exceed the primary drinking water MCL for each VOC, and/or blending of this supply with other well supplies cannot maintain a distribution system concentration(s) below these standards, and/or gross reduced well production of up to 35% is necessary to maintain adequate water quality.

STAGE 5: >50% - Mandatory

Stage 5 conservation measures may be called for due to in malfunction or failure of all or portions of the water system that reduces supplies by 50 % or more on a daily, peak seasonal or annual basis.

Further triggering could also be based on:

1) detection of an increase in chloride concentrations where such concentrations are expected to exceed the short term primary drinking water standard of 600 mg/l at the well(s) in question, or

2) detection of VOC concentrations but where such concentrations do not threaten to exceed the primary drinking water MCL for each VOC, and /or blending of this supply with other well supplies cannot maintain a distribution system concentration(s) below these standards, and/or gross reduced well production of over 50% is necessary to maintain adequate water quality.

4.0 CONSERVATION REQUIREMENTS AND APPEAL PROCEDURES

The following are MCWD's conservation requirements by customer type and stage and the appeal procedures. These requirements and procedures are adopted as part of MCWD's Water Shortage Contingency Plan.

STAGE 1: Up to 10% - Voluntary – Minimal Conservation Requirement

MCWD shall:

- notify all customers of the water shortage
- mail information to every customer and reasonably available potential water user explaining the importance of significant water use reductions
- provide technical information to customers on ways to improve water use efficiency
- conduct media campaign to remind consumers of the need to save water
- publicize the showerhead, toilet rebate and other efficiency programs
- enforce mandatory restrictions on water waste as provided in MCWD Code, Chapter 3

STAGE 2: >10% to 25% -Voluntary – Moderate Conservation Requirement

In addition to the actions listed in Stage 1, MCWD shall call for voluntary reductions of up to 25% for each connection based on the average use during a base period proposed by the Water Conservation Commission and adopted by MCWD's Board of Directors.

STAGE 3: >25% to 35% - Mandatory – Severe Conservation Requirement

In addition to the actions listed in Stage 1 and 2, MCWD shall establish mandatory annual allotments for each connection based on the average use during a base period proposed by the Water Conservation Commission and adopted by MCWD's Board of Directors. When Stage 3 use reduction becomes necessary, administration and enforcement of water conservation rules becomes the major focus of MCWD. If necessary, additional temporary personnel may be hired and special meetings of the Water Conservation Commission and /or Board of Directors may be scheduled.

1. Each water service connection shall receive an allotted quantity of water, typically specified in hundred cubic feet (hcf) units per billing cycle, as calculated by the Water Conservation Coordinator.

2. The Board of Directors may pass an emergency ordinance increasing the usage rate for potable water in order to ensure stable revenues for operation and maintenance of MCWD.

3. As individual customers are notified of allotments, it is expected that many requests for special consideration will be received. These petitions must be processed rapidly, efficiently and fairly. Every application for waiver must be heard, evaluated and acted upon by the Water Conservation Commission as rapidly as possible. Every action by the Water Conservation Commission shall be referred to MCWD's Board of Directors for consideration. The procedures for appeal are defined, below.

4. No building permits will be issued or meters installed for new accounts that had not received building permits before the "Severe Shortage" was declared.

5. The following water use restrictions shall be imposed.

Stage	Type Use	Restriction
3	Landscape Irrigation for Existing Landscapes, including Public Parks	Landscape watering with recycled water may continue without restriction. Landscape watering with potable water shall be subject to the following limits: (1) Landscape watering using sprinkler or irrigation systems is permitted only two days per week. Addresses ending in even numbers (0,2,4,6,8) may water on Mondays and Thursdays. Addresses ending in odd numbers (1,3,5,7,9) may water on Tuesdays and Fridays. If there is no street address, or if more than one street address is associated with a contiguous property, the irrigation days are Wednesday and Saturday. (2) Manual landscape watering with a soaker hose, handheld hose or watering can/bucket is allowed on any day.
3	Landscape Irrigation for New Landscapes, including Public Parks	Landscape watering with recycled water may continue without restriction. Landscape watering with potable water shall be subject to the following limits: (1) Landscape watering is permitted to maintain adequate growth on newly installed landscapes, for a period generally up to five (5) weeks. Property owners must notify the District of the address where new landscape is installed and the date of installation. (2) Following the initial establishment period, landscape watering using a sprinkler or irrigation system is permitted only on the days associated with the current conservation stage in effect.
3	Golf Courses, Athletic Fields	Landscape watering with recycled water may continue without restriction. Landscape watering with potable water shall be subject to the following limits: (1) All landscape out-of-play areas such as may be found around a clubhouse or entryway shall follow the general landscape irrigation restrictions. (2) All in-play areas may be irrigated during the standard watering hours (before 10:00 a.m. or after 5:00 p.m.). (3) Course operators shall implement a ten (10) percent reduction in irrigation water use.
3	Hotels, motels and bed and breakfasts	Hotels, motels and B&B's must offer and clearly notify guests of a "limited linen/towel exchange" program.

Stage	Type Use	Restriction
3	Swimming pools, hot tubs	Initially filling new and existing swimming pools prohibited. Draining and refilling existing swimming pools permitted only if repairing a pool leak or repairing, maintaining or replacing a pool component that has become hazardous. All pools and tubs shall be covered when not in use to reduce evaporation.
3	Industrial and Commercial	Reduction of water use by any means is encouraged. Compliance with mandatory demand reduction measures is required for outdoor water uses including landscape irrigation, swimming pools, and vehicle washing.
3	Vehicle and Equipment Washing	Non-commercial washing of vehicles and mobile equipment (e.g., washing vehicle at a residence) is permitted only on assigned landscape watering days during landscape watering hours (before 10:00 a.m. or after 5:00 p.m.). Fleet managers are encouraged to only wash those vehicles as is necessary for health and safety.
3	Heavy Construction	The use of potable water for dust control shall be reduced to the greatest extent possible.

STAGE 4: >35% to 50% - Mandatory – Critical Conservation Requirement

In addition to the actions listed in the previous stages, MCWD shall establish allotments based upon a 35% -50% curtailment of water use. All new and previous appeals for waiver shall be evaluated by field audit and shall be reheard by the Water Conservation Commission, if necessary, upon recommendation of MCWD staff. Water rates may be increased by the Board of Directors.

The following water use restrictions shall be imposed.

Stage	Type Use	Restriction
4	Landscape Irrigation for Existing Landscapes, including Public Parks	Landscape watering with recycled water may continue without restriction. Landscape watering with potable water shall be subject to the following limits: (1) Landscape watering using sprinkler or irrigation systems is permitted only one day per week. Addresses ending in numbers 0 or 1 may water on Mondays. Addresses ending in numbers 2 or 3 may water on Tuesdays. Addresses ending in numbers 4 or 5 may water on Wednesdays. Addresses ending in numbers 6 or 7 may water on Thursdays. Addresses ending in numbers 8 or 9 may water on Fridays. If there is no street address, or if more than one street address is associated with a contiguous property, the irrigation day is Wednesday. Manual landscape watering with a soaker hose, handheld hose or

Stage	Type Use	Restriction
		watering can/bucket is allowed on any day.
4	Landscape Irrigation for New Landscapes, including Public Parks	Landscape watering with recycled water may continue without restriction. The installation of new landscapes irrigated with potable water is discouraged. Landscape watering with potable water shall be subject to the following limits: (1) Landscape watering is permitted three (3) days a week to maintain adequate growth on newly installed landscapes, for a period generally up to five (5) weeks. Watering days for new landscapes are Tuesday, Thursday and Saturday. Property owners must notify the District of the address where new landscape is installed and the date of installation. Following the initial establishment period, landscape watering using a sprinkler or irrigation system is permitted only on the days associated with the current conservation stage in effect.
4	Golf Courses / Athletic Fields	Landscape watering with recycled water may continue without restriction. Landscape watering with potable water shall be subject to the following limits: (1) All landscape out-of-play areas such as may be found around a clubhouse or entryway shall follow the general landscape irrigation restrictions. (2) All in-play areas may be irrigated during the standard watering hours (before 10:00 a.m. or after 5:00 p.m.). Course operators shall implement a twenty (20) percent reduction in irrigation water use.
4	Hotels, motels and bed and breakfasts	Hotels, motels and B&B's must limit linen/towel changes to once every two (2) nights or for the entire stay, whichever is shorter, except for health and safety.
4	Swimming pools, hot tubs	Initially filling new and existing swimming pools prohibited. Draining and refilling existing swimming pools permitted only if repairing a pool leak or repairing, maintaining or replacing a pool component that has become hazardous. All pools and tubs shall be covered when not in use to reduce evaporation.
4	Vehicle and Equipment Washing	Non-commercial washing of vehicles and mobile equipment (e.g., washing vehicle at a residence) is permitted only on assigned landscape watering days during landscape watering hours (before 10:00 a.m. or after 5:00 p.m.). Fleet managers are encouraged to only wash those vehicles as is necessary for health and safety.

Stage	Type Use	Restriction
4	Industrial and commercial	Reduction of water use by any means is encouraged. The Board of Directors may establish mandatory use reduction targets, if needed. Compliance with mandatory demand reduction measures is required for outdoor water uses including landscape irrigation, swimming pools, and vehicle washing.
4	Heavy Construction	The use of potable water for dust control shall be reduced to the greatest extent possible.

STAGE 5: >50% - Mandatory – Emergency Conservation Requirement

Appropriate 50% water shortage allotments shall be calculated and noticed to customers. Appropriate administration and enforcement of this stringent program shall be the highest priority of MCWD activity. All resources of MCWD will be directed toward improvement and increase of water supply to the system. Water rates may be further increased by the Board of Directors.

The following water use restrictions shall be imposed:

Stage	Type Use	Restriction
5	Landscape Irrigation for Existing Landscapes, including Public Parks	Landscape watering with recycled water may continue without restriction. Landscape watering with potable water is prohibited.
5	Landscape Irrigation for New Landscapes, including Public Parks	Landscape watering with recycled water may continue without restriction. The installation of new landscapes irrigated with potable water is prohibited during Conservation Stage 5. New landscapes installed prior to declaration of Conservation Stage 5 may water two (2) days a week to maintain adequate growth on newly installed landscapes, for the remainder of the initial five (5) week establishment period. Watering days for new landscapes are Tuesday and Friday. Property owners must notify the District of the address where new landscape is installed and the date of installation

Stage	Type Use	Restriction
5	Golf Courses / Athletic Fields	Landscape watering with recycled water may continue without restriction. Landscape watering with potable water shall be subject to the following limits: (3) All landscape out-of-play areas such as may be found around a clubhouse or entryway shall follow the general landscape irrigation restrictions. (4) All in-play areas may be irrigated during the standard watering hours (before 10:00 a.m. or after 5:00 p.m.). Course operators shall implement a thirty (30) percent reduction in irrigation water use.
5	Hotels, motels and bed and breakfasts	Hotels, motels and B&B's must limit linen/towel changes to once every three (3) nights or for the entire stay, whichever is shorter, except for health and safety.
5	Swimming pools, hot tubs	Filling new swimming pools and/or draining and refilling existing swimming pools is prohibited. All pools and tubs shall be covered when not in use to reduce evaporation. Contact District conservation staff if an existing swimming pool must be repaired and refilled during Conservation Stage 5.
5	Vehicle and Equipment Washing	Non-commercial washing of vehicles and mobile equipment is prohibited. Only commercial facilities with water recycling systems may be used.
5	Industrial and commercial	Reduction of water use by any means is encouraged. The Board of Directors may establish mandatory use reduction targets, if needed. Compliance with mandatory demand reduction measures is required for outdoor water uses including landscape irrigation, swimming pools, and vehicle washing.
5	Heavy Construction	The use of potable water for dust control shall be reduced to the greatest extent possible. The District may establish mandatory construction water budgets, if needed.

Appeals Procedure

1. Any person who wishes to appeal a customer classification or allotment shall do so in writing by using the forms provided by MCWD.

2. Appeals will be reviewed by the Water Conservation Coordinator and staff. Site visits may be scheduled if required.

3. A condition of granting an appeal shall be that all plumbing fixtures or irrigation systems be

replaced or modified for maximum water conservation.

4. Examples of appeals that may be considered are as follows:

a. Substantial medical requirements.

b. Commercial/Industrial/Institutional accounts where any additional water supply reductions will result in unemployment or inappropriate hardship, after confirmation by the MCWD staff that the account has instituted all applicable water efficiency improvements.

5. In the event an appeal is requested for irrigation of trees or vegetation, MCWD staff may use the services of a qualified consultant in determining the validity of the request. Costs for such consulting services shall be paid by the party or parties making the request.

6. The Water Conservation Coordinator shall refer all appeals to the Water Conservation Commission. The Water Conservation Commission may refer appeals to MCWD's Board of Directors.

7. If the Water Conservation Commission and the applicant are unable to reach accord, then the appeal shall be heard by the MCWD Board of Directors, who will make the final determination.

8. All appeals shall be reported monthly to the Board as a part of the Water Supply Report.

5.0 MANDATORY PROHIBITIONS ON WATER USE

California Water Code Section 10632(d). Additional, mandatory prohibitions against specific water use practices during water shortages, including, but not limited to, prohibiting the use of potable water for street cleaning. Section 10632(e) Consumption reduction methods in the most restrictive stages. Each urban water supplier may use any type of consumption reduction methods in its water shortage contingency analysis that would reduce water use, are appropriate for its area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply.

The MCWD adopted a "Water Waste/Water Conservation" Ordinance (Ordinance No. 20) in April of 1990, which prohibits water waste and promotes water conservation. Since the initial adoption, revisions were adopted by the Board of Directors on April 14, 1992 and October 4, 1993. The ordinance has most recently been revised on and now appears as Chapter 3.36 of MCWD Code. Section 3.36.030, Mandatory Restrictions on Water Waste, details the applicable prohibitions of use. These prohibitions are in force at all times. Additional water use reduction methods available to water users or MCWD to adopt in order to comply with use reductions during the more restrictive stages of water shortages (Stages 4 and 5) include, but are not limited to, the following:

a) elimination of turf irrigation with potable supplies;

b) restriction of landscape watering to shrubs and trees by hand or drip irrigation only;

c) elimination of vehicle washing except in car washes that have water recirculation systems;

d) prohibition on filling or topping off of swimming pools where damage to pumping equipment will not result;

e) elimination of water served in food service establishments unless requested;

f) elimination of the issuance of construction meters;

g) shut-off of dedicated landscape irrigation meters; and

h) moratorium on provision of new supply meters.

If water use reductions called for in Stages 3-5 are not achieved, the MCWD may amend this Water Shortage Contingency Plan to make any of the above available conservation tactics mandatory.

6.0 PENALTIES OR CHARGES FOR EXCESSIVE USE

California Water Code Section* 10632(f) *Penalties* or *charges for excessive use.

Section 3.36.050 of MCWD Code provides for a system of violations and notices. Violation of provisions of this Water Shortage Contingency Plan shall be enforced under Section 3.36.050 of MCWD Code.

7.0 REVENUE AND EXPENDITURE IMPACTS

California Water Code Section 10632(g) – An analysis of the impacts of each of the actions and conditions described in subdivisions (a) to (f), inclusive, on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts, such as the development of reserves and rate adjustments.

Enforcement of the Water Shortage Contingency Plan is assumed to be covered by enhanced revenues from application of excess use charges and penalties. MCWD reserves may be used temporarily should revenues remain below expectations. MCWD's rate structure is based upon adopted rate ranges and allows for modification of rates on short notice within those ranges. MCWD retains the ability to modify rates to meet all legitimate MCWD needs. Revenue impacts from water sales losses are estimated as follows, based upon Tier 2 rates of $2.35/hcf in Central Marina and $2.86/hcf in the Ord Community, and recognizing approximately 10% of MCWD's customers are not metered as of 2010.

Table 3: Potential Revenue Impacts of Implementation of WSCP

	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
Assumed Reduction	10 percent	20 percent	30 percent	40 percent	50 percent
Water Sales Loss	$ 454,664	$ 909,329	$1,363,993	$ 1,818,658	$ 2,273,322
Revenue Source: Pumping savings at $135/af	$ 53,569	$ 107,138	$ 160,707	$ 214,276	$ 267,845
Net Revenue Reduction	$ 401,095	$ 802,191	$1,203,286	$ 1,604,382	$ 2,005,477
Percent of Total Annual Water System Revenue	5%	11%	16%	21%	27%

* Table based on FY2009-2010 water sales, $7,501,854 for 3,970 acre-feet

8.0 WATER SHORTAGE CONTINGENCY PLAN IMPLEMENTATION

California Water Code Section 10632* (h) *A draft water shortage contingency resolution or ordinance.

MCWD Board of Directors adopt the Water Shortage Contingency Plan in Resolution No. 2005-31, which enables implementation of the Plan upon advice of staff based in part on the triggering mechanisms discussed herein. The resolution is attached as Appendix A to this Plan.

9.0 WATER USE MONITORING PROCEDURES

California Water Code Section 10632* (i) *A mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency plan.

Normal Monitoring Procedure:

In normal water supply conditions, production figures are recorded daily by MCWD O&M personnel. Totals are reported monthly to the Water Conservation Coordinator and Water Quality Manager. Production figures are reported in the Annual Report to the Drinking Water Program, which is submitted to the California Department of Health Services each year.

Stage 1 and 2 Water Shortages

During a Stage 1 or 2 water shortage, daily production figures will be reported to the O&M Superintendent and Water Conservation Coordinator. The Water Conservation Coordinator compares the weekly production to the target weekly production to verify that the reduction goal is being met. Monthly reports are forwarded to the General Manager, the Water Conservation Commission and the MCWD Board of Directors. If reduction goals are not met, the General Manager may notify the Board of Directors so that corrective action can be taken.

Stage 3 and 4 Water Shortages

During a Stage 3 or 4 water shortage, the procedure listed above will be followed, with the

addition of a daily production report to the General Manager and weekly reports to the Water Conservation Commission and Board of Directors. Special meetings may be called for administration of the Water Shortage Contingency Plan.

Stage 5 Water Shortage

During a Stage 5 shortage, production figures will be reported to the O&M Superintendent hourly, and to the General Manager and the Water Conservation Coordinator daily. Reports will also be provided to MCWD's Board of Directors, the Monterey County Office of Emergency Services, and land use jurisdictions located within MCWD's service territory.