
Central Coast Regional Water Quality Control Board

August 31, 2012

Larry Hampson
Monterey Peninsula Water Management District
P.O. Box 85
Monterey, CA 93942
Email: Larry@mpwmd.net

BY ELECTRONIC MAIL

Dear Mr. Hampson:

**WATER QUALITY CERTIFICATION NUMBER 32711WQ08 FOR CARMEL RIVER
MAINTENANCE AND RESTORATION, MONTEREY COUNTY**

Thank you for the opportunity to review your July 1, 2011 application for water quality certification of Carmel River Maintenance and Restoration.

Central Coast Regional Water Quality Control Board (Central Coast Water Board) staff finds that the proposed activities of the Monterey Peninsula Water Management District (MPWMD) described in your application, with the attached conditions, will be protective of beneficial uses of waters of the State. Therefore, the Central Coast Water Board is certifying the project in the enclosed Five-Year Programmatic Technically-Conditioned Letter of Certification.

Should the MPWMD propose actions beyond the scope of this Certification, or if new information comes to our attention that indicates a water quality problem, Central Coast Water Board staff may require additional monitoring and reporting, issue Waste Discharge Requirements, or take other action.

The MPWMD's Section 401 Water Quality Certification application and California Environmental Quality Act (CEQA) documents indicate that proposed activities have the potential to affect beneficial uses and water quality. The Central Coast Water Board issues this Certification to protect water quality and associated beneficial uses from project activities. We need reports to determine compliance with this Certification. All technical and monitoring reports requested in this Certification, or any time after, are required per Section 13267 of the California Water Code.

Your failure to submit reports required by this Certification, or your failure to submit a report of technical quality acceptable to the Executive Officer, may subject you to enforcement action per Section 13268 of the California Water Code. The Central Coast Water Board will base enforcement actions on the date of certification. Any person affected by this Central Coast Water Board action may petition the State Board to review this action in accordance with California Water Code Section 13320; and Title 23, California Code of Regulations, Sections 2050 and 3867-3869. The State Board, Office of Chief Counsel, PO Box 100, Sacramento, CA

95812, must receive the petition within 30 days of the date of this Certification. We will provide upon request copies of the law and regulations applicable to filing petitions.

If you have questions please contact **Kim Sanders** at (805) 542-4771 or via email at ksanders@waterboards.ca.gov, or Phil Hammer at (805) 549-3882. Please mention the above certification number in all future correspondence pertaining to this project.

Sincerely,

for
Kenneth A. Harris Jr.
Interim Acting Executive Officer
Central Coast Water Board

Enclosure: Action on Request for CWA Section 401 Water Quality Certification

cc: with Enclosures

Larry Hampson
Monterey Peninsula Water Management District
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Action on Request for
Clean Water Act Section 401 Water Quality Certification
for Discharge of Dredged and/or Fill Materials

PROJECT: Carmel River Maintenance and Restoration

APPLICANT: Larry Hampson
Monterey Peninsula Water Management District (MPWMD)
P.O. Box 85
Monterey, CA 93942

ACTION:

1. ☐ Order for Standard Certification
2. ☒ Order for Technically-conditioned Certification
3. ☐ Order for Denial of Certification

STANDARD CONDITIONS:

1. This Certification action is subject to modification or revocation upon administrative or judicial review, including review and amendment per section 13330 of the California Water Code and section 3867 of Title 23 of the California Code of Regulations (23 CCR).
2. This Certification action is not intended to apply to any discharge from any activity involving a hydroelectric facility requiring a Federal Energy Regulatory Commission (FERC) license or an amendment to a FERC license unless the pertinent certification application was filed per 23 CCR subsection 3855(b) and the application specifically identified that a FERC license or amendment to a FERC license was being sought.
3. The validity of any non-denial certification action (Actions 1 and 2) shall be conditioned upon annual payments based on proposed annual impacts. Fees are required under 23 CCR section 3833, unless otherwise stated in writing by the certifying agency.
4. This Certification is subject to the acquisition of all local, regional, state, and federal permits and approvals as required by law. Failure to meet any conditions contained herein, or any conditions contained in any other permit or approval issued by the State of California or any subdivision thereof may result in the revocation of this Certification and civil or criminal liability.
5. In the event of a violation or threatened violation of this Certification, the violation or threatened violation shall be subject to any remedies, penalties, process or sanctions as provided for under state law. For purposes of Section 401(d) of the Clean Water Act, the applicability of any state law authorizing remedies, penalties, process or sanctions for the violation or threatened violation constitutes a limitation necessary to assure compliance with the water quality standards and other pertinent requirements incorporated into this Certification.
6. In response to a suspected violation of any condition of this Certification, the Central Coast Water Board may require the holder of any permit or license subject to this Certification to furnish, under penalty of perjury, any technical or monitoring reports the Central Coast Water Board deems appropriate, provided that the burden, including costs, of the reports shall have a reasonable relationship to the need for the reports and the benefits obtained from the reports.

7. In response to any violation of the conditions of this Certification, the Water Board may add to or modify the conditions of this Certification as appropriate to ensure compliance.
8. The fee for this project shall be paid annually based on proposed annual impacts. The fee is due with submittal of the annual plan on June 1 of each year for which this Certification is valid. The MPWMD paid the \$640 application fee for this Certification. The MPWMD shall pay the fee of \$81 for 2012 maintenance activities by September 21, 2012.
9. The applicant shall implement the project as described in the application and abide by the requirements of the Final EIR, State Board Order 95-10, United States Army Corps of Engineers (Corps) Regional General Permit (RGP) 11, United States Fish and Wildlife Service Biological Opinion (August 18, 2010), National Oceanic and Atmospheric Administration National Marine Fisheries Service Biological Opinion (August 30, 2010), and California Department of Fish and Game (CDFG) Streambed Alteration Agreement (SAA) 1600-2002-0134-R3, extended until December 31, 2012, and subsequent SAAs.
10. This Certification expires five years from the date it is issued, however the MPWMD shall continue to submit annual monitoring reports until all achieves all applicable success criteria.

A. TECHNICAL CONDITIONS

General Conditions

1. The primary goals of the MPWMD shall be to maintain, repair, and restore river banks, aquatic habitat, and terrestrial habitat, and prevent erosion due to diversion of water into river banks along 18.6 miles of the Carmel River.
2. All MPWMD activities shall be designed to avoid impacts to water quality and beneficial uses as much as possible. Impacts that cannot be avoided shall be minimized as much as possible. The MPWMD shall mitigate all unavoidable impacts.
3. The MPWMD shall submit an annual plan and an annual report each year (see Monitoring and Reporting section).
4. The MPWMD shall not commence each year's maintenance activities until receiving approval of the annual plan by the Executive Officer.
5. All of the conditions in this Certification apply to all third party projects implemented by the MPWMD.
6. The MPWMD's actions to rectify an unpermitted third party activity shall comply with this Certification.
7. The MPWMD's activities shall not cause a violation of the Central Coast Water Board's Water Quality Control Plan (Basin Plan) or include discharges
 - a. Of any material (including silt, sediment or soil) in concentrations toxic to humans, plants, or wildlife;
 - b. Of oil, grease, wax, or fuel to receiving waters or to the substrate (where it may enter receiving waters);
 - c. Of any material that may cause a visible film or coating on the surface of or objects in receiving waters;
 - d. Of sediments, or biota so as to adversely affect beneficial uses of water or human health;
 - e. That contribute to excessive algae growth in the project area or downstream waters;
 - f. That discolor receiving waters so as to be harmful to beneficial uses;

- g. That contain floating materials including solids, liquids, foam, or scum that adversely affect beneficial uses; and
- 8. Increases in settleable solids or turbidity attributable to controllable water quality factors during or due to maintenance activities shall not exceed the following receiving water limits:
 - a. 3 ml/l for settleable solids; or
 - b. Where natural turbidity is between 0 and 50 NTU, increases shall not exceed 20 percent. Where natural turbidity is between 50 and 100 NTU, increases shall not exceed 10 NTU. Where natural turbidity is greater than 100 NTU, increases shall not exceed 10 percent.

The above turbidity limits will be eased during in-water setting and retrieving of pumps and cofferdams to allow temporary turbidity increases up to 15 NTU (or 15 percent, if natural turbidity is greater than 100 NTUs) over background turbidity as measured in surface waters 300 feet downstream from the working area.

- 9. Groundwater beneficial uses shall not be degraded as a result of the MPWMD's annual routine maintenance activities.
- 10. Maintenance activities within waters of the State shall take place only during the dry season, beginning no earlier than August 1 and ending no later than October 15, except as follows. If the MPWMD determines a need to conduct maintenance activities outside of the August 1 to October 15 time period, the MPWMD shall contact Central Coast Water Board staff, explain the need for maintenance, and obtain permission to proceed with activities. Condition 11 in the General Conditions section of this Certification shall apply to all activities that occur outside of August 1 to October 15.
- 11. After October 15, erosion control measures shall be kept on site and immediately available for installation. At any time, if the National Weather Service predicts a 30% or more chance of 0.5 inches of rain, all maintenance activities, except brushing and trimming, within State and Federal jurisdictional areas shall cease and the site manager must install effective erosion and sediment control measures. Maintenance activities may resume in State and Federal jurisdictional areas if site conditions are dry enough to continue work and erosion and sediment control measures prevent discharges to waters of the State. Work may occur when some surface water is present, but best management practices (BMPs) must be implemented to prevent discharges to waters of the State. The MPWMD shall divert water around the project area or dewater the project area as necessary, to avoid working in the water column and comply with this Certification.
- 12. If an emergency exists, particularly one that requires work outside of the dry season, the MPWMD shall immediately contact Central Coast Water Board staff prior to conducting emergency maintenance, and follow the requirements necessary to comply with Corps Regional General Permit 5 (RGP5) and the Central Coast Water Board's Certification for RGP5. The MPWMD shall describe all BMPs including a detailed description of water diversions (and removal of those diversions) that are necessary to keep the emergency project from impacting waters of the State. The MPWMD shall install diversions and/or silt controls during all operations in wetted areas of the River. Diversions shall discharge in an area in which material can settle. Materials shall be settled before removing diversions. Heavy equipment shall only be allowed on wet soil when flow-diversions are not feasible and proper control measures are implemented downstream to prevent turbid water from leaving the area of work.

B. Bank Stabilization

1. The MPWMD shall use soil bioengineering systems as presented in the Natural Resource Conservation Service (NRCS)¹ and California Department of Fish and Game² manuals, and the Corps technical note³ as the first and primary strategies for river bank stabilization projects.
2. The MPWMD shall take steps to reduce the potential for installation of hardscape to stabilize the riverbanks between Via Mallorca Road and Rancho San Carlos Road. Steps shall include
 - a. Determining the cause of bank instability, including investigating
 - i. Overland sheet flow and/or concentrated flow from public and private properties onto or through the bank, and
 - ii. Upstream, local and downstream river factors that contribute to bank instability;
 - b. Developing recommendations to address causes of bank instability, wherever possible; and
 - c. Stabilizing the bank with vegetation as soon as possible wherever possible.
3. Building concrete sack walls for erosion control protection or for any other reason is prohibited.
4. The MPWMD shall not impact more than 2,500 linear feet of river bank or bed for the combined purpose of stabilization and realignment each year.
5. Banks shall be recontoured to match the adjacent bank slope to the extent feasible. If site conditions allow, the bank slope may be stabilized at a less steep slope if work can be conducted within the confines of the original channel.
6. Erosion control fabric/mats shall be installed to maintain direct contact with the soil (i.e., rocks should not protrude through the fabric, and fabric must lay flat over substrate).
7. All exposed sites in which erosion control fabric will be installed shall be prepared to make sure erosion control fabric can be anchored in place with appropriately sized anchors. The MPWMD shall use appropriately sized anchors. Anchors can include U-shaped wire staples, metal geotextiles stake pins or triangular wooden stakes.
8. Erosion control measure materials, including geotextiles, shall be made of natural fibers that shall biodegrade over time. No plastic, petroleum-based or other non-porous material shall be used as part of a permanent erosion control approach. Irrigation tubing shall be removed once the restoration area meets success criteria.
9. Bank stabilization sites shall be revegetated with native riparian trees regardless of whether or not a riparian canopy existed at the site prior to the repair project, if a biologist determines that the project site can support trees.

¹ Bentrup, Gary, J. Chris Hoag (1998) *The Practical Streambank Bioengineering Guide, User's Guide for Natural Streambank Stabilization Techniques in the Arid and Semi-Arid Great basin and Intermountain West*, USDA NRCS, Was. D.C.

² Flosi, G. et al. (1998) *California Salmonid Stream Habitat Restoration Manual, Third Edition*, State of California, The Resources Agency, California Department of Fish and Game Inland Fisheries Division

³ Fischenich, J.C. (2001) *Stability Thresholds for Stream Restoration Materials, EMRRP Technical Notes Collection (ERDC TN-EMRRP-SR-29)*, U.S. Army Engineer Research and Development Center, U.S. Army Corps of Engineers, Vicksburg, MS

10. Native grasses appropriate for bank stabilization in the Carmel River Valley shall be seeded or planted in areas disturbed by bank stabilization activities wherever conditions are suitable, including between existing or newly planted trees and shrubs.
11. All regraded areas, areas disturbed by maintenance, or exposed soil (including access ramps, and surrounding container stock or shallow stake plantings) shall be stabilized by one of the following techniques as soon as feasible after maintenance activities are complete:
 - a. Hydroseeding and bonded fiber matrix application,
 - b. Natural fiber erosion control fabric application, or
 - c. Other equivalent measure that shall be sufficient to stabilize the soil and prevent the soil from eroding and entering surface waters.

The channel bed and other areas below the ordinary high water mark are exempt from this condition.

12. Access ramps shall be located on previously disturbed areas or shall be chosen to avoid as much impact to vegetation as possible.
13. If the bank stabilization treatment causes water quality problems (erosion, sedimentation, etc.), the MPWMD shall contact the Central Coast Water Board staff overseeing the project. The MPWMD will be responsible for obtaining necessary permits, and creating and implementing plans for restoration and prevention of further problems the following maintenance year.

C. Gravel or Sandbar Removal

1. In-channel features (e.g., bars and depositional features) shall be preserved in their location (preserving shape and dimensions, with the exception of height) wherever possible. MPWMD shall use minor shaping or grading in terms of height of in-channel features to reduce flow deflection by in-channel features where possible, versus moving the entire gravel/sandbar.
2. If gravels that have the potential to be utilized for spawning are removed to conduct maintenance activities, the gravels shall be carefully removed and stored where maintenance activities shall not impact the quality of the gravel. The gravel shall be replaced as close to original condition as possible upon completion of the maintenance activities.

D. Channel Realignment/Meander Alteration

1. For each proposed realignment action, the MPWMD shall conduct a fluvial geomorphology assessment that describes the potential impacts to water quality and beneficial uses. The assessment shall address all characteristics listed in condition 1.k. under Annual Plan, in the Monitoring and Reporting section of this Certification.
2. A two-stage low-flow channel shall be excavated to improve fine sediment transport wherever feasible.
3. In the event sediment/soil is removed from a project site (including due to bank stabilization activities), the MPWMD may temporarily stockpile project related sediment/soil prior to disposal or reuse, provided that appropriate State and Federal regulations are met and BMPs are implemented to protect water quality and beneficial uses.
4. Onsite stockpiled project materials shall be removed from the site within three working days. Project materials such as stockpiled sediment, soil, mulch, chipped vegetation or like

materials shall be fully contained to prevent any wind transport. During the wet season, no stockpiled materials shall remain exposed. Stockpiled materials shall be covered with plastic and surrounded by properly installed and maintained silt fencing or other means of erosion control. The materials may also be temporarily stockpiled at an offsite location so that runoff, sediment, or decant water from the materials shall not contact waters of the State.

5. All maintenance-related items including equipment, temporary erosion control treatments, and trash, shall be removed within three working days of project completion. Building materials, sediment and other maintenance-related materials, including chemicals, shall not be stockpiled or stored where they could spill into the river, a tributary or where they shall cover aquatic or riparian vegetation.

E. Vegetation Management

1. Vegetation management activities that could result in the destabilization of river banks or increase sediment input into waters of the State are prohibited.
2. Maintenance actions that include vegetation removal⁴ to allow for debris passage shall only occur if the actions are necessary according to the methodology in the Vegetation and Management Protocol and Scenarios section of the MPWMD's *Guidelines for Vegetation Management and Removal of Deleterious Materials for the Carmel River Riparian Corridor* (June 2012)
3. The MPWMD shall not remove more than a total of 0.5 linear mile of vegetation from the river corridor each year.
4. The MPWMD shall not leave more than 100 contiguous feet of surface waters without shade each year due to the MPWMD's activities.
5. Native vegetation with a predominantly vertical growth habit shall be retained wherever possible, and pruned or thinned rather than removed, to provide adequate channel capacity, to facilitate flow of debris and to facilitate the development of a riparian canopy. Vegetation shall be pruned to retain branches that align with direction of flow and remove branches that cross the direction of flow, wherever possible.
6. Native trees proposed for removal shall be evaluated for potential use in another location within the river.

F. Herbicide Application

1. All vegetation management activities that could result in the runoff of herbicides, which are not registered for aquatic use, into waters of the State are prohibited.
2. No individual herbicide shall reach concentrations that adversely affect beneficial uses (e.g., the Basin Plan drinking water standard for glyphosate of 0.7 mg/l). There shall be no increase in herbicide concentrations found in bottom sediments or aquatic life.
3. The MPWMD shall apply herbicide only to French broom (*Genista monspessulana*) and/or giant reed (*Arundo donax*).
4. Any herbicides shall be applied as sparingly as possible and in such a way as to be protective of water quality. If the MPWMD applies herbicide for the control of French broom, the MPWMD shall not apply more than 2.5 gallons annually. If the MPWMD

⁴ Vegetation removal is defined as removal of a plant by separating the above ground portion of the plant from its base (including roots), and/or removing the entire plant including all or a portion of the root system.

applies herbicide for the control of French broom and giant reed, the MPWMD shall not apply more than 5 gallons annually.

5. The MPWMD shall apply herbicide in accordance with local agency restrictions and according to the manufacturer label. Application shall be spot applied directly to vegetation using a hand-pumped squirt bottle, and far enough away from any waterbody to prevent discharge or migration to any waterbody. The MPWMD shall not use a back-pack with tank style application unit. Only herbicides that do not contain surfactants shall be used where there is any potential for migration into waters of the state.
6. Hand removal of invasive vegetation, rather than application of herbicides, shall be used whenever and wherever possible.
7. Herbicides and pesticides shall not be applied when winds exceed five miles per hour or within 96 hours of forecasted rain.

G. Mitigation

Impacts to the Carmel River that Require Mitigation

1. The MPWMD shall mitigate for the permanent and temporary loss of beneficial uses (impacts to water quality including habitat, and habitat function) due to
 - a. Removal of live vegetation, and
 - b. The following types of bank stabilization installed by the MPWMD (including for the benefit of a third party property):
 - i. Hardscape bank stabilization and grade stabilization installation or repair, including stabilization techniques that include hardscape or geotextiles combined with native vegetation, and
 - ii. Channel shaping (including channel realignment, alteration of meanders, or the movement in total of sandbars or islands).

Situations/Activities that Do Not Require Mitigation

1. Bank stabilization that is achieved through the use of native vegetation (i.e., no hardscape or geotextiles are used to stabilize slope).
2. Bank stabilization that includes hardscape or geotextiles, but also improves habitat function quality, and does not impact fluvial geomorphology. The MPWMD must consider the following to determine if a bank stabilization project that includes hardscape or geotextiles requires mitigation or not.
 - a. To determine if there will be an improvement in habitat function quality, the MPWMD shall rank the existing and anticipated habitat function quality. If the existing site rank is of lesser value than the rank will be when the bank is stabilized (in its final anticipated successful condition), the bank stabilization site will not require mitigation.

The MPWMD shall develop at least five ranks that each correspond to a range of habitat function scores. Determination of a habitat function score shall include but not be limited to an assessment of the following physical and biological characteristics: approximate percent cover, density, species diversity, and health of vegetation; approximate quantification or extent of current shade; microbes, algae, fungi, and animals present or that could use the site; and overall structural complexity of the site in terms of height and girth of plants, woody debris and bank morphology.

- b. To determine if fluvial geomorphology will be impacted, the MPWMD must assess at least the parameters listed in condition 1.k. under Annual Plan, in the Monitoring and Reporting section of this Certification. If the MPWMD finds that fluvial geomorphological processes will be impacted then mitigation is required. If the MPWMD finds that fluvial geomorphological processes were impacted (within five years of mitigation installation), then mitigation is required when the impact is discovered.

Mitigation Credit for Future Impacts

1. For any bank stabilization/restoration sites the MPWMD would like to use as mitigation credit, the MPWMD shall rank the habitat function quality of the stabilization/restoration site and the future impact site (prior to impact). The rank shall be used to compare the habitat function quality of the "credit" stabilization/restoration site to the future impact site.
2. Bank stabilization/restoration projects can only be used as mitigation credit for future impacts if the
 - a. Rank of the future impact site is of lesser value than the rank of the stabilization/restoration site (in its final successful condition), and
 - b. Fluvial geomorphology of the stabilization/restoration site was not impacted.
3. To determine the habitat function quality rank and assess fluvial geomorphological impacts, the MPWMD shall use the ranking approach and fluvial geomorphological assessment identified in conditions 2.a. and b. under Situations/Activities that Do Not Require Mitigation, in the Mitigation section of this Certification.

Required Mitigation for Impacts Due to Removal of Live Vegetation or Bank Stabilization (including for the benefit of a third party property)

Impacts to wetland or riparian habitat that occur as a result of MPWMD's maintenance activities as described in condition 1.a. and b. under Impacts to the Carmel River that Require Mitigation, in the Monitoring and Reporting section of this Certification, shall be mitigated at the ratios, or per the alternatives listed below. The ratios shall represent area.

1. Permanent wetland impacts shall be mitigated at a ratio of 3:1 (area created to area impacted). Temporary wetland impacts shall be mitigated at a ratio of 2:1 (area restored to preconstruction conditions, to area impacted, in addition to restoration or enhancement of additional area to bring the total mitigation to the 2:1 ratio).
2. Permanent riparian impacts shall be mitigated at a ratio of 2:1 (area created to area impacted). Temporary riparian impacts shall be mitigated at a ratio of 1:1 (area restored to preconstruction conditions, to area impacted).
3. Live tree removal (not including willow species (*Salix* spp.)): Removal of live trees with trunks measuring greater than three inches and up to ten inches diameter at breast height (dbh) shall be mitigated at a ratio of 2:1. Removal of trees with a dbh in excess of ten inches shall be mitigated at a ratio of 3:1. Mitigation shall be determined on the basis of species if dbh is in excess of two feet. If the required number of trees will not fit within a required wetland or riparian mitigation area, the MPWMD shall secure additional land to plant the additional trees.
4. Live willow tree removal: Removal of willow trees with a less than six inch dbh shall be mitigated via the wetland and riparian habitat ratios described in above conditions 1. and 2. under Required Mitigation for Impacts Due to Removal of Live Vegetation or Bank Stabilization in the Mitigation section of this Certification. Removal of willow species with a six to ten inch dbh shall be mitigated at a ratio of 2:1. Removal of willow trees with a dbh in excess of ten inches shall be mitigated at a ratio of 3:1. Mitigation shall be determined on

a case by case basis if a willow tree dbh is in excess of two feet. If the required number of trees will not fit within a required wetland or riparian mitigation area, the MPWMD shall secure additional land to plant the additional trees.

5. Mitigating for the loss of beneficial uses shall occur as close to the impact area as possible as the primary strategy. Mitigation shall occur elsewhere in the Carmel River as the secondary strategy, and within the Carmel River watershed as the third strategy. If obtaining land for the first three strategies is not feasible, the MPWMD may partner with other entities to participate in Carmel River and Carmel River watershed based restoration projects as these projects become permitted. As with other mitigation, the MPWMD shall propose this type of mitigation in their annual plan and must obtain Central Coast Water Board staff approval for the proposed mitigation. Watershed based mitigation projects are projects that provide restorative and mitigating watershed solutions by a local agency, municipality, creek/river protection group, school or the resource conservation district, and may include: headwater-area erosion control, invasive plant removal, lagoon enhancement, floodplain restoration and/or enhancement or fish passage projects. Post Construction Stormwater Treatment/Low Impact Development projects that are not required by the State Water Board's Phase II Municipal Stormwater Permit and that provide improvement to water quality may also be considered as mitigation projects. Participation may include, but is not limited to, assisting in planting, irrigation or construction/design, acting in an advisory role or contributing funds.
6. MPWMD involvement in the Carmel River Floodplain Restoration project on and near the Odello property can be substituted as mitigation for MPWMD impacts, if the specific MPWMD activities and level of involvement are first approved by Central Coast Water Board staff.
7. As stated in condition 5. under Required Mitigation for Impacts Due to Removal of Live Vegetation or Bank Stabilization, in the Mitigation section of this Certification, invasive plant removal may substitute for mitigation of impacts to riparian vegetation. When mitigating for permanent impacts to riparian vegetation with invasive plant removal, the MPWMD shall either
 - a. Remove invasive plants and replace them with native riparian vegetation at a 1:1 ratio (area of invasive plants removed and replanted, to area of riparian vegetation permanently impacted),
 - b. Remove invasive plants and actively suppress invasive plants for five years at a 2:1 ratio (area of invasive plants removed, to area of riparian vegetation permanently impacted). Invasive plant suppression shall occur in the same area in which invasive plants are removed. This option shall only apply if the invasive plants are removed from an area in which the MPWMD cannot install plants due to site restraints such as a gravel substrate, or
 - c. Propose alternative actions that include invasive plant removal for mitigation credit. The alternative actions and corresponding mitigation credit must be approved by the Central Coast Water Board Executive Officer.

Required Mitigation for Impacts Due to Channel Shaping

The MPWMD shall mitigate impacts to vegetation due to channel shaping as described above in conditions 1. through 7. under Required Mitigation for Impacts Due to Removal of Live Vegetation or Bank Stabilization, in the Mitigation section of this Certification.

Mitigation Timing

Mitigation need only occur once in the next ten years for repeat impacts (impacts in the same location as in a previous year). For example, the MPWMD shall mitigate for impacts that occur in 2012, but if impacts occur in the same location in 2018, the MPWMD does not need to complete additional mitigation for the 2018 impact. The MPWMD does not have to mitigate for impacts to the same location until 2022, ten years after this permit is issued.

Mitigation Success Criteria

1. Floodplain areas revegetated to fulfill mitigation requirements shall meet the following performance criteria:
 - a. 70% native species survival by the end of the first year with individuals planted on a minimum of 10-foot centers,
 - b. 50% native species cover or 70% native species survival by the end of the fifth year with individuals planted on a minimum of 10-foot centers, and
 - c. Native species density in the restoration areas shall be equal to or greater than native species density prior to disturbance and/or planting.
2. Bank stabilization areas revegetated to fulfill mitigation requirements shall meet the following performance criteria:
 - a. 30% native species cover and 70% native species survival by end of first year,
 - b. 85% native species cover, and 70% native species survival by end of fifth year, and
 - c. Native species density in the restoration areas shall be equal to or greater than native species density prior to disturbance.
3. In the event of poor plant survival or failure to meet performance criteria, corrective measures shall be implemented, including replanting to reach the original percent cover and survival goals. Such remedial measures shall continue for as long as is necessary to ensure that the project is successful. For example, if remedial activities were implemented during the fifth year after project implementation, monitoring of these remedial measures must continue until year ten, or until the site meets performance criteria. If performance criteria are not met at that time, additional measures are required, triggering another five-year monitoring period. As an alternative, mitigation can be provided elsewhere, should a project area not be capable of meeting success criteria.

General Mitigation Conditions

1. Mitigation shall compensate for the loss of habitat and habitat function due to the maintenance activity.
2. The MPWMD shall revegetate in a manner that reduces future maintenance, wherever possible. The MPWMD shall plant native species that have a predominantly vertical growth habit and less lateral growing plants wherever appropriate (i.e., banks or other areas where the slope allows this planting scheme). This planting scheme will facilitate canopy cover and discourage growth of plants with a lateral growth form that prevent establishment of native riparian canopy and increase roughness.
3. The MPWMD shall plant at least four different species at each bank stabilization or mitigation site.
4. If soil moisture is deficient, new vegetation shall be supplied with supplemental water until vegetation is established.
5. If mitigation or impacted areas are left unstable following maintenance activities, MPWMD must implement actions to address the instability.

H. Monitoring and Reporting

For each year during which this Certification is valid, the MPWMD shall

1. Identify all river maintenance activities within Waters of the State in an annual plan, and shall submit the annual plan to Central Coast Water Board staff by June 1 of each year, and
2. Submit an annual report for all maintenance activities that were implemented by May 1 of each year, beginning with May of 2013.
3. In the event that the MPWMD changes a proposed project description after the annual plan is submitted to the Central Coast Water Board, the MPWMD shall submit the change to the Central Coast Water Board and wait until receiving approval before proceeding.

Annual Plan

1. Each annual plan shall include
 - a. All information as specified in this Certification,
 - b. All proposed river maintenance activities,
 - c. A detailed project description of individual proposed erosion control/channel realignment activities, and vegetation management activities.
 - d. Locations, drawings (plan view and cross section), photos, and grading plans, and quantity of materials to be used in each erosion control activity/channel realignment (including volume, area and linear feet of fill and excavated material),
 - e. Locations, photos, and quantity of material to be removed and/or discharged for all vegetation management,
 - f. Total size of proposed impacts on the river, including total volume, area and linear feet of fill and excavated material,
 - g. Site conditions at all hardscape bank stabilization and grade stabilization sites (including approximate percentage of plant cover),
 - h. For each proposed bank stabilization or other project that uses hardscape materials,
 - i. The flows for which the project is designed, the return period of those flows, and the shear stress and velocity of those flows,
 - ii. The least invasive bank stabilization material that will withstand the shear stress based on Table 2, Permissible Shear and Velocity for Selected Lining Materials, in the Corps' technical note, cited in footnote 3 of this Certification),
 - iii. Quantitative demonstration of why non-hardscape means of stabilization are infeasible, and
 - iv. Images with aerial view (including immediately adjacent land use) and bank/water view of area to be stabilized,
 - i. The score, rank and the information used to score the habitat function quality and assign the rank for all proposed stabilization sites that the MPWMD concludes
 - Will provide an improvement in habitat function quality,
 - Do not impact fluvial geomorphology, and therefore
 - Do not require mitigation. The scoring information shall include, but not be limited to assessment of the following characteristics presented in table form: approximate percent cover, density, species diversity, and health of vegetation; approximate quantification or extent of current shade; microbes, fungi, and animals present or that could use the site;

and overall structural complexity of the site in terms of height and girth of plants, woody debris, and bank morphology,

- j. For all stabilization sites that the MPWMD wants to use as credit for impacts sustained in a future year, the score and rank, and the information used to score and rank both the stabilization site (identified in condition 1.i. under Annual Plan, in the Monitoring and Reporting section of this Certification), based on its final successful condition, and the future impact site,
- k. A fluvial geomorphology assessment that describes the potential impacts for each proposed hardscape stabilization or channel realignment including
 - i. The response of river flow to stabilization structures or channel shaping, including potential resultant undercutting or erosion to upstream, opposite, and/or downstream banks and bed,
 - ii. The response of river morphology to changes in flow velocity and channel capacity, cross section, length, or gradient,
 - iii. Impacts on vegetation and aquatic habitat resulting from changes in river flow and morphology, and
 - iv. Impacts at the hardscape site such as undercutting or erosion directly adjacent to the hardscape,
- l. Identification of potential impacts to beneficial uses, or functions (temporary and permanent) due to proposed maintenance activities,
- m. Alternatives for all hardscape installation/channel realignment activities and explanation of why alternatives are not feasible for achieving bank stabilization goals,
- n. Total number and species of trees proposed for removal during maintenance activities with trunks that measure three inches or greater dbh (excluding willow species of less than six inches dbh),
- o. A mitigation plan including but not limited to the mitigation site location, why the site was selected, description of hydrology of the site, information that indicates that the site is available for the MPWMD's use, implementation schedule, plant ratios, palette and layout, how MPWMD plans to protect the site until it is successful and how mitigation shall replace lost beneficial uses,
- p. All trees proposed for removal based on their rate of evapotranspiration, in addition to the rate of evapotranspiration and how and when it was measured,
- q. The functions and quantity of vegetation that the MPWMD proposes to remove and discharge each year for the purpose of debris passage,
- r. Details of dewatering and diversion techniques including a description of installation, operation and removal techniques that include turbidity reduction techniques, access ramp construction and temporary access ramp deconstruction, and a diagram in profile and plan view,
- s. Location of staging area,
- t. Details of all BMPs that will be implemented to prevent pollutants from draining, being washed, or otherwise discharged into waters of the State,
- u. The name and credentials of the
 - i. Registered civil engineer designing all bank stabilization projects, and
 - ii. Fluvial geomorphologist, hydrologist or equivalent, reviewing the design of all bank stabilization projects,

- v. Record of the use of the method developed per condition E.2. in the Vegetation Management section of this Certification to determine quantity of vegetation to be removed,
 - w. The proposed steps the MPWMD will take to reduce the potential for installation of hardscape to stabilize the river bank between Via Mallorca Road and Rancho San Carlos Road, and
 - x. A summary of the MPWMD's proposed responsibilities and actions in restoration/enhancement projects to be implemented as a result of a partnership with other agencies within the Carmel River watershed, if required as mitigation.
4. A qualified monitor (the MPWMD biologist or a like-credentialed person) shall be onsite during maintenance and/or construction activities ensuring implementation of best management practices and protection of water quality. The monitor shall halt work if necessary to ensure compliance with this Certification and protect resources.
5. All hardscape bank stabilization treatments installed under this Certification shall be monitored as follows in the first year after installation
- a. After completion of the hardscape installation,
 - b. After the first rain (of 0.5 inch or greater in 24 hour period), and
 - c. At the end of the rainy season.

Annual Report

1. Each annual report shall include
- a. Photos taken at bank stabilization sites prior to site preparation or disturbance and after installation of stabilization treatment and annually thereafter at consistent identified locations for a period of five years,
 - b. General as-built specifications for all bank stabilization projects or channel realignment if different from proposed specifications,
 - c. The status and the effectiveness of all hardscape bank stabilization treatments installed under this Certification, and the answers to the following questions:
 - i. Are the treatments working effectively?
 - ii. Is sediment actively eroding at the project site beyond and above expected natural rates?
 - iii. Is the bank stabilization treatment causing additional erosion or undesired impacts in the treatment area, or upstream or downstream of the project site?
 - iv. Did flow velocity and channel capacity, cross section, length, or gradient change as a result of the stabilization or realignment treatment?
 - v. Were there impacts on vegetation and aquatic habitat resulting from changes in waterbody flow and morphology?
 - vi. Are additional management or maintenance actions required?
 - d. Report of results of monitoring per conditions 4.a., b. and c. in the Monitoring and Reporting section of this Certification,
 - e. For each bank stabilization site, the number and type of species planted (an approximate number if plants are installed via fascines) and acres of area restored,
 - f. The functions and quantity of vegetation removed each year for the purpose of debris passage, if different from that proposed,

- g. Success of vegetation installed at all sites required via the Mitigation section of this Certification, including
 - i. Percent survival of native species in restoration areas,
 - ii. Percent cover of native species in restoration areas,
 - iii. Approximate plant density,
 - iv. Comparison of on-site conditions with success criteria,
 - v. A table that includes⁵
 - Each removed tree that has a greater than three inch dbh,
 - The number and species of trees planted for each tree removed that has a greater than three inch dbh,
 - Total number of trees installed as mitigation for trees removed with a greater than three inch dbh,
 - vi. Annual reference photos (as many as are necessary to communicate success) taken from consistent referenced location(s) each year in each mitigation site, and
 - vii. Identification of created or restored beneficial uses, or functions as a result of mitigation activities, and a general assessment of health of the mitigation site,
 - h. Report of mitigation success each year for five years after implementation including fifth year of growth (e.g., if plants are installed in October of 2012, success criteria would first be reported in the following May of 2013 annual report, and the MPWMD would continue to report on restoration until May of 2017, unless success is achieved prior to 2017, or if remedial mitigation measures are necessary (see remedial mitigation requirements, below)),
 - i. Record of in-progress or completed mitigation (location, date mitigation was implemented and if complete, deemed successful) if mitigation was not required for new impacts to the same area (impacted during a previous maintenance year under this Certification),
 - j. All trees removed due to their rate of evapotranspiration,
 - k. For all bank stabilization sites that did not require mitigation, identification of the current rank of each bank stabilization site, even if the final successful condition of the bank is proposed to be of greater rank,
 - l. Verification of “no net loss” of wetlands impacted via MPWMD maintenance activities at the end of the five-year (or longer if necessary) mitigation period for each impacted wetland site,
 - m. The steps taken each year to reduce the potential for installation of hardscape to stabilize the river bank between Via Mallorca Road and Rancho San Carlos Road, including efforts to address sources of destabilization, and
 - n. A summary of the MPWMD’s completed actions in restoration/enhancement projects implemented as a result of a partnership with other agencies within the Carmel River watershed, if required as mitigation, and an explanation of how their specific actions improved water quality and beneficial uses.
6. In the event remedial mitigation measures are necessary, remedial measures shall be monitored and reported each year for a five-year period following implementation (five years of growth), unless success criteria is achieved earlier, to ensure that the project is

⁵ All bulleted conditions under v. exclude willow species of less than six inches dbh,

successful. For example, if remedial activities are implemented during the fifth year after project implementation, monitoring and reporting of these remedial measures shall continue until year ten, or until success criteria are met. If performance criteria are not met at that time, additional measures shall be required, triggering another five-year monitoring and reporting period.

I. Notification, Inspections and Training

1. The MPWMD shall contact Central Coast Water Board staff each year prior to starting work to allow for a site visit. The MPWMD shall freely allow staff inspectors from the Central Coast Water Board to visit project sites. A knowledgeable project spokesperson shall be available during such visits to answer questions, and to discuss procedures pertaining to protection of water quality.
2. All MPWMD or MPWMD subcontracted personnel who will engage in maintenance activities shall first be educated on the terms of this Certification and the specific plans for the subject project site.
3. All MPWMD personnel shall apply herbicide in accordance with the manufacturer label and local agency restrictions. MPWMD personnel shall educate all MPWMD subcontracted personnel to follow the manufacturer label and local agency restrictions when applying herbicide. The applicator shall also be educated on the terms of this Certification, understand site management, best management practices, and water quality protection.
4. All MPWMD or MPWMD subcontracted personnel shall be trained in fluid (e.g., fuels or oil) spill cleanup procedures to ensure immediate and appropriate implementation of corrective actions.
5. The MPWMD shall maintain a copy of the Certification, project site-specific plans and BMPs on each project site at all times, so as to be available at all times to all personnel.

J. Accidental Discharge and Emergencies

The MPWMD shall immediately, and in no case no more than 24 hours, notify Central Coast Water Board staff by telephone or email whenever an adverse condition occurs as a result of work conducted under this Certification. An adverse condition includes, but is not limited to, a violation or threatened violation of the conditions of this Certification, a threat to human or environmental health, or a spill of petroleum products or toxic chemicals. A written notification of the adverse condition shall be submitted to the Central Coast Water Board within five days of occurrence. The written notification shall identify the adverse condition, describe the actions necessary to remedy the condition, and specify a timetable, subject to approval by the Central Coast Water Board Executive Officer, for the remedial actions. In the event of an accidental discharge or emergency affecting waters of the State, the MPWMD shall file an incident report with the Office of Emergency Services and inform the Central Coast Water Board staff within 24 hours.

CENTRAL COAST WATER BOARD CONTACT PERSON:

Kim Sanders
(805) 542-4771
ksanders@waterboards.ca.gov

Please refer to the Certification number at the top of this page when corresponding with the Central Coast Water Board concerning this project.

WATER QUALITY CERTIFICATION:

I hereby issue an order certifying that any discharge from Carmel River Maintenance and Restoration activities shall comply with the applicable provisions of sections 301 ("Effluent Limitations"), 302 ("Water Quality Related Effluent Limitations"), 303 ("Water Quality Standards and Implementation Plans"), 306 ("National Standards of Performance"), and 307 ("Toxic and Pretreatment Effluent Standards") of the Clean Water Act.

Except insofar as may be modified by any preceding conditions, all Certification actions are contingent on (a) the discharge being limited and all proposed mitigation being completed in strict compliance with the applicant's project description and the conditions herein, and (b) compliance with all applicable requirements of the Basin Plan.

for _____
Kenneth A. Harris Jr.
Interim Acting Executive Officer
Central Coast Water Board

August 31, 2012
Date

PROJECT INFORMATION AND CONDITIONS

Application Date	Received: July 1, 2011 Completed: July 1, 2011
Applicant	Monterey Peninsula Water Management District (MPWMD)
Applicant Representative	Larry Hampson
Project Name	Carmel River Maintenance and Restoration
Application Number	32711WQ08
Type of Project	Maintenance and Restoration
Project Location	Carmel Valley Latitude: various Longitude: various
County	Monterey
Receiving Water(s)	Carmel River
Waterbody Type	River
Designated Beneficial Uses	Municipal and Domestic Supply (MUN) Agricultural Supply (AGR) Industrial Service Supply (IND) Ground Water Recharge (GWR) Water Contact Recreation (REC-1) Non-Contact Recreation (REC-2) Wildlife Habitat (WILD) Cold Fresh Water Habitat (COLD) Warm Fresh Water Habitat (WARM) Migration of Aquatic Organisms (MIGR) Spawning, Reproduction, and/or Early Development (SPWN) Preservation of Biological Habitats of Special Significance (BIOL) Rare, Threatened or Endangered Species (RARE) Freshwater Replenishment (FRSH) Commercial and Sport Fishing (COMM)
Project Description (purpose/goal)	<p>The purpose of this project is to maintain, repair, and restore river banks, aquatic habitat, and terrestrial habitat along 18.6 miles of the Carmel River.</p> <p>The Central Coast Water Board understands that the project includes the following:</p> <ul style="list-style-type: none"> • Installing limited erosion protection in unstable, degraded areas, • Restoring the channel in unstable areas, • Conducting fisheries enhancement projects, • Conducting red-legged frog enhancement projects, • Removing limited vegetation and debris from the active channel, • Maintaining or repairing previously authorized restoration projects, and

	<ul style="list-style-type: none"> Lowering or removing levees.
Preliminary Water Quality Issues	<p>The Central Coast Water Board finds the project has the potential to adversely impact steelhead (<i>Oncorhynchus mykiss</i>) and California red-legged frog (<i>Rana aurora draytonii</i>) and their habitats.</p> <p>The project may also cause adverse impacts to riparian vegetation functions, including:</p> <ul style="list-style-type: none"> A decrease in shade of the water column, and the ability of the vegetation to filter pollutants, and A decrease in habitat in general, including refuge, food sources, and micro habitats. <p>The project also has the potential to cause:</p> <ul style="list-style-type: none"> Sedimentation and siltation due to erosion control projects and plant removal, and Pollutant release into the river from management equipment.
Additional Required Best Management Practices	<p><u>Required Best Management Practices in Addition to Those Within the Technical Condition Section of the Certification:</u></p> <ol style="list-style-type: none"> The MPWMD shall place a qualified monitor (the District biologist or a like-credentialed person) onsite during maintenance and/or construction activities to ensure implementation of best management practices and protection of water quality. The monitor shall halt work if necessary to ensure compliance and protect resources. MPWMD shall use adequate BMPs (e.g., revegetation, fiber rolls, erosion control blankets, hydromulching, compost, straw with tackifiers, temporary basins) in and around construction areas to intercept rain drop impacts, control the sources of erosion, and capture sedimentation. MPWMD shall implement washout, trackout, and dust control BMPs. All vegetation management and construction equipment used on site shall be well maintained and checked daily for fuel, oil, and hydraulic fluid leaks or other problems that could result in spills of toxic materials. To the extent practicable, all maintenance equipment and materials (e.g., road rock and project spoil) shall be contained within an existing service road, paved road, or other pre-determined pre-disturbed staging area that is at least 100 feet from the river. The staging area must be far enough away from the river so that fluids and wash water cannot flow into waterways. All maintenance, refueling and washing of equipment must occur in staging area. MPWMD must have a spill plan and appropriate spill control and clean up materials (e.g., oil absorbent pads) onsite in case spills occur. MPWMD shall confine all trash and debris in appropriate enclosed bins and dispose of the trash and debris at an

	<p>approved site at least weekly.</p> <p>7. Stream diversion dams shall be constructed of sand or gravel bags wrapped in heavy plastic sheeting.</p> <p>8. Sand and gravel bags, if used, shall be filled only with clean sand and gravel.</p> <p>9. The working area of a stabilization project shall be minimized to impact the least area of bank and river bed as is feasible, while still allowing for protection of the failing bank.</p> <p>10. The MPWMD shall conduct pre-construction sensitive species surveys by a qualified biologist in the areas of suitable habitat. Should any sensitive species be present, a qualified biological monitor shall be on site during maintenance activities to capture and relocate any species out of harms way. Should avoidance be infeasible, then measures determined by a qualified biologist to exclude the species from the work area shall be implemented to avoid direct take.</p> <p>11. Central Coast Water Board staff shall be notified if mitigations and other implementation measures as described in the 401 Water Quality Certification application for this project are altered by the imposition of subsequent permit conditions by any local, state or federal regulatory authority. MPWMD shall inform Central Coast Water Board staff of any modifications that interfere with compliance with this Certification.</p>
Area of Disturbance	Area varies year to year, but not to exceed 0.5 mile vegetation removal/disposal per year and 0.7 mile restoration projects (requiring heavy construction equipment (e.g., bulldozer, loader, backhoe, excavator) to restore channel geometry and repair river banks)
Fill/Excavation Area	Area varies year to year, but not to exceed 0.5 mile vegetation removal/disposal per year and 0.7 mile restoration projects (requiring heavy construction equipment (e.g., bulldozer, loader, backhoe, excavator) to restore channel geometry and repair river banks)
Dredge Volume	N/A
U.S. Army Corps of Engineers Permit No	RGP 11
Federal Public Notice	N/A
Dept. of Fish and Game Streambed Alteration Agreement	SAA extended through December 31, 2012. File No. 1600-2002-0134-3
Possible Listed Species	Steelhead (<i>Oncorhynchus mykiss</i>) and California red-legged frog (<i>Rana aurora draytonii</i>)
Status of CEQA Compliance	Final Environmental Impact Report, Water Allocation Program, Five-Year Mitigation Program for Option V 16,700 AF Cal-Am Production Lead Agency: MPWMD

Central Coast Water Board Compensatory Mitigation Requirements	<p><u>Impacts to Carmel River that Require Mitigation</u></p> <p>The MPWMD shall mitigate for the permanent and temporary loss of beneficial uses (impacts to water quality including habitat, and habitat function) due to</p> <ol style="list-style-type: none"> 1. Removal of live vegetation, 2. The following types of bank stabilization installed by the MPWMD (including for the benefit of a third party property): <ol style="list-style-type: none"> a. Hardscape bank stabilization and grade stabilization installation or repair, including stabilization techniques that include hardscape or geotextiles combined with native vegetation, and b. Channel shaping (including channel realignment, alteration of meanders, or the movement in total of sandbars or islands). <p>Bank stabilization that is achieved through use of native vegetation (i.e., no hardscape or geotextiles are used to stabilize slope) shall not require mitigation.</p> <p>Additional information regarding mitigation is listed under <u>Situations/Activities that Do Not Require Mitigation</u> in the Mitigation section of this Certification.</p> <p><u>Required Mitigation for Impacts Due to Removal of Live Vegetation or Bank Stabilization (including for the benefit of a third party property)</u></p> <p>Impacts to wetland or riparian habitat that occur as a result of MPWMD's maintenance activities as described in conditions 1. and 2., above in this cell, shall be mitigated at the ratios listed below. The ratios shall represent area.</p> <ol style="list-style-type: none"> 1. Permanent wetland impacts shall be mitigated at a ratio of 3:1 (area created to area impacted). Temporary wetland impacts shall be mitigated at a ratio of 2:1 (area restored to preconstruction conditions, to area impacted, in addition to restoration or enhancement of additional area to bring the total mitigation to the 2:1 ratio). 2. Permanent riparian impacts shall be mitigated at a ratio of 2:1 (area created to area impacted). Temporary riparian impacts shall be mitigated at a ratio of 1:1 (area restored to preconstruction conditions, to area impacted, in addition to restoration or enhancement of additional area to bring the total mitigation to the 1:1 ratio). 3. Live tree removal (not including willow species (<i>Salix</i> spp.)): Removal of live trees with trunks measuring greater than three inches and up to ten inches diameter at breast height (dbh) shall be mitigated at a ratio of 2:1. Removal of trees with a dbh in excess of ten inches shall be mitigated at a ratio of 3:1. Mitigation shall be determined on the basis of species if dbh is in excess of two feet. If the required number of trees will not fit within a required wetland or riparian mitigation area, the
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	<p>MPWMD shall secure additional land to plant the additional trees.</p> <p>4. Live willow tree removal: Removal of willow trees with a less than six inch dbh shall be mitigated via the wetland and riparian habitat ratios described in above conditions 1. and 2. under <u>Required Mitigation for Impacts Due to Removal of Live Vegetation or Bank Stabilization</u> in the Mitigation section of this Certification. Removal of willow species with a six to ten inch dbh shall be mitigated at a ratio of 2:1. Removal of willow trees with a dbh in excess of ten inches shall be mitigated at a ratio of 3:1. Mitigation shall be determined on a case by case basis if willow tree dbh is in excess of two feet. If the required number of trees will not fit within a required wetland or riparian mitigation area, the MPWMD shall secure additional land to plant the additional trees.</p> <p>Additional mitigation requirements are listed under <u>Required Mitigation for Impacts Due to Removal of Live Vegetation or Bank Stabilization (including for the benefit of a third party property)</u> in the Mitigation section of this Certification.</p> <p><u>Required Mitigation for Impacts Due to Channel Shaping</u></p> <p>The MPWMD shall mitigate impacts to vegetation due to channel shaping as described above in conditions 1 through 7 under <u>Required Mitigation for Impacts Due to Removal of Live Vegetation or Bank Stabilization</u>, in the Mitigation section of this Certification.</p> <p><u>Mitigation Timing</u></p> <p>Mitigation shall only occur once in the next ten years for repeat impacts (impacts in the same location as in a previous year). For example, the MPWMD shall mitigate for impacts that occur in 2012, but if impacts occur in the same location in 2018, the MPWMD shall not have to complete additional mitigation for this impact. The MPWMD shall not have to mitigate for impacts to the same location until 2022, ten years after this permit is issued.</p> <p><u>General Mitigation Conditions</u></p> <ol style="list-style-type: none"> 1. Mitigation shall compensate for the loss of habitat and habitat function due to the maintenance activity. 2. The MPWMD shall revegetate in a manner that reduces future maintenance, wherever possible. The MPWMD shall plant native species that have a predominantly vertical growth habit and less lateral growing plants wherever appropriate (i.e., banks or other areas where the slope allows this planting scheme). This planting scheme will facilitate canopy cover and discourage growth of plants with a lateral growth form that prevent establishment of native riparian canopy and increase roughness. 3. The MPWMD shall plant at least four different species at each bank restoration or mitigation site. 4. If soil moisture is deficient, new vegetation shall be supplied
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	<p>with supplemental water until vegetation is established.</p> <p>5. If mitigation or impacted areas are left unstable post maintenance activities, MPWMD must implement actions to address the instability.</p>
Total Certification Fee	<p>Fee to be determined annually. The MPWMD shall estimate excavation and fill impacts and provide this information in their annual plan. The fee is due June 1 of each year. The MPWMD paid the \$640 application fee for this Certification. The MPWMD shall pay the fee of \$81 for 2012 maintenance activities by September 21, 2012.</p>