ATTACHMENT A

ACTIVITIES THAT CONSTITUTE ROUTINE MAINTENANCE IN WATERWAYS, PONDS AND LAKES IN THE MIDPENINSULA REGIONAL OPEN SPACE DISTRICT WATERSHEDS

- This document describes routine maintenance activities to be conducted by Midpeninsula Regional Open Space District, hereinafter the Discharger, within specified streams, creeks, channels, catchment basins, seeps, springs, ponds, and lakes under jurisdiction of California Regional Water Quality Control Board, San Francisco Bay Region, hereinafter the Board. Authorization to perform these activities is limited to Discharger lands in Santa Clara and San Mateo counties that also lie within Regional Board jurisdiction known as RB2. The total acreage of Discharger land within Santa Clara and San Mateo counties included under this Certification is 50,112 acres.

The following activities, with their associated waste discharge requirements, may be performed without further consultation with the Board unless specified under this Water Quality Certification:

General Conditional Requirements for Routine Maintenance Activities

1. Work will occur only when there is no surface flow or the channel has been de-watered during the construction period of April 15 to October 31 of any year, or until the immediate project area receives the first significant rainfall (defined as 0.5 inch of rain in a 24-hour period), whichever comes first. Work will occur beginning June 15 for streams that support anadromy, unless it fits under the winter criteria described in (4) below. Work started before October 15 shall be at least 50% complete by October 15 of any year, and shall be completed by October 31 or until the first significant rainfall as described above. Exceptions to this requirement include immediate emergency work and winter work activities as defined in (2), (3), and (4) below.
2. Immediate emergency work is allowed if necessary to protect life or property.
3. Accumulated sediment and debris at inboard ditches and stream crossings (including culvert inlets and outlets and rocked fords) will be removed immediately to prevent flooding at *any* time of the year, without need for stream flow diversion or further consultation, providing the feature is at least 30% blocked with debris and/or sediment and is expected to continue filling in immediate future, and one of the following apply:
    a) debris and/or sediment can be removed by hand shovels within one-half (0.5) hour, or
    b) debris and/or sediment to be removed does not exceed two (2) cubic yards, in which case, heavy equipment may be used.

If more than two (2) cubic yards of material is to be removed, site must be dewatered prior to disturbance (BMP 20, 21). In either case, site is not to be abandoned without applying immediate erosion control to disturbed material, and total disturbance shall not exceed 150 adjacent linear feet or 2,000 square feet (0.05 acres) per site, whichever is less. Mitigation for minor turbidity increases within the watercourse will be offset by the removal of unconsolidated perched road fill that could otherwise fail into a nearby watercourse (BMP 5). These activities are either exempt from (not subject to) regulation by the Army Corps of Engineers (ACOE) or may be covered by Nationwide Permits 3, 13, 19 and/or 37.

4. Winter work activities are separately defined from emergency activities and are allowed following consultation with the Board on a case by case basis. Winter work activities may occur during periods of dry weather outside the normal construction period of April 15 to October 31 when soil moisture conditions are favorable for compaction.

5. Activities may be conducted in perennial, intermittent, and ephemeral streams that are known not to contain anadromous fish. Under this Certification, routine maintenance activities will **not** be conducted in perennial or intermittent streams known to contain anadromous fish. For intermittent streams and tributaries connected to perennial streams with anadromous fish, where the presence of anadromous fish is unknown, MROSD will conduct surveys prior to any activity to determine the presence of any anadromous fish (see Sensitive Species Distribution Map). In the rare event that routine maintenance would occur within a channel that contains resident trout (above a known barrier to anadromy), appropriate fish passage will be provided by isolating the work site from the remaining stream channel, or by placing a temporary culvert through the job site to maintain continuous flow (BMP 20, 21, not including pumped diversion).

6. No equipment shall operate in standing or flowing water. Only an excavator or rubber-tired backhoe bucket may operate in water-covered portions of the stream channel.

7. The area footprint for any individual project shall not exceed 2,000 square feet (0.05 acres). Larger projects shall require consultation with the Board, who may accept the project as part of this Certification or may require a separateCertification.

8. Any projects over 150 feet in length, or adjacent projects implemented within three calendar years that total over 150 feet in length require separate notification with the Board, who may accept the project as part of this Certification or may require a separate Certification.

9. Culvert replacement may occur under this Certification without further consultation for replacement projects requiring removal and backfilling of up to twenty-five (25) cubic yards of total material per culvert, in order to place the culvert at natural stream channel grade. Culvert replacements in excess of this amount may be approved under this Certification following consultation on a case-by-case basis. These activities are either exempt from (not subject to) regulation by the ACOE or may be covered under Nationwide Permits 3, 18, 19, and/or 27.

10. Building materials or equipment will not be stored where they could be washed into the water or where they will cover aquatic or riparian vegetation. In addition, the Operator, contractors, and agents will not dump any litter or construction debris within the riparian/stream zone. All debris and waste will be picked up daily and properly disposed of at an appropriate site.
11. During performance of routine maintenance activities, silt control measures will be used during all phases of the project to prevent silt or earthen fill from entering the aquatic environment. In addition, exposed or disturbed areas within the project site will be stabilized to the greatest extent possible. (See Section 3.b for more detail about erosion control activities).
12. For all projects impacting watercourses that are known to support or have the potential to support threatened and/or endangered species, a qualified biologist shall conduct a pre-construction survey. If a threatened and/or endangered species are located during the pre-construction survey at the project site, MROSD will not conduct the project under this Certification (see Sensitive Species Descriptions and Distribution Map).
13. The cause of erosion is always investigated and treatments are always prioritized to address the cause (e.g. concentrated drainage, plugged culvert upslope) over treating the symptom alone (e.g. erosion gully). Projects will be analyzed for short-and long-term benefits and impacts. While most projects under this agreement are self mitigating, some may require mitigation consistent with the State's 'no net loss" wetland policy.

Routine Maintenance Activities

1. **Facility Maintenance** activities are generally allowed practices with conditional requirements as follows in Sections A through D below. These activities are either exempt from (not subject to) regulation by the ACOE or may be covered under Nationwide Permits 3,13,18,19, 27, and/or37) Facility Maintenance activities include the following:

    - repair and maintenance of existing facilities such as bridges, trails, culverts, staging areas, parking lots, roads, and water supply facilities (see below);
    - limited culvert replacement with in-kind structure to carry peak stream flows (with the exception of conditional requirement as stated in Section 1.c.vi);
    - trail brushing;
    - installation of fences and gates;
    - grading small areas up to 2,000 square feet (0.05 acres) to improve drainage and reduce erosion;
    - year-round inspection of facilities, and where necessary, removal of sediment, silt, and debris impacting water quality and/or impacting preserve facilities (e.g. culverts, culvert outlets, ditches, bridges);

- maintenance and removal of hazardous trees, or trimming trees for the purpose of weight reduction, that threaten public or employee safety and property; removal of associated debris to maintain channel flow and water quality;
- removal of trash and litter from the channel and disposal where it will not re-enter the channel;
- graffiti removal.

CONDITIONAL REQUIREMENTS FOR FACILITY MAINTENANCE

a. **Roads and Trails** – road and trail maintenance activities include repair, replacement and maintenance of existing road and trail structures such as fords, bridges, rolling dips, culverts, inboard ditches, subdrains, and other road drainage channels and outlets (BMP 1-11); installation of rocked/armored ford crossings at stream crossings, minor grading up to 150 adjacent linear feet, or 2,000 square feet (0.05 acres), or up to a volume of two (2) cubic yards per site, whichever is less, to improve water drainage and prevent erosion; removal of sedimentation and silt from existing road and trail structures that may cause water diversion potential, impact water quality, or negatively impact a trail or road; and removal of debris and flood-deposited vegetation that may impair water flow and trail tread and/or the integrity of its structure. Sediment that is removed shall be spread on upland areas outside the stream corridor at a stable location, or over unpaved roads and treated with erosion control materials to prevent erosion. Typical equipment used for this activity includes hand shovels, backhoes, mini excavators, dozers, and/or graders. With the exception of emergency work, live streams shall be routed such that streamflow bypasses the immediate construction area (BMP 20, 21). These activities are either exempt from (not subject to) regulation by the ACOE or may be covered by Nationwide Permits 3, 18, 19, 27, and/or 37.

b. **Bridges** – bridge maintenance activities include maintenance and repair of existing vehicular bridges, MROSD standard non-vehicular (pedestrian, bicyclist, and equestrian) clear-span footbridges, and low puncheons such as replacement of decking and handrails using electric power tools and adding rock materials to repair or fortify bridge abutments (BMP 12,13,14,15, 20, 21, 22, 28, 29, 34, 36, 37,); clearing away accumulated debris beneath bridge abutments (BMP 20); and adding surface material to low puncheons. Typically, this work is done on dry stream banks and upland areas to minimize stream disturbance and turbidity. Bridge maintenance activities are either exempt from (not subject to) regulation by the ACOE or may be covered under Nationwide Permits 3, 13, 18, 19, and/or 37.

c. **Culverts** – culvert maintenance activities within channels, streambeds and within their banks associated with trails and access roads shall include the following activities and parameters, and are either exempt from (not

subject to) regulation by the ACOE or may be covered by Nationwide Permits 3, 13, 18, 19, 27 and/or 37:

i. Use of equipment to clear sediment and silt from the immediate vicinity of culverts (BMP 1-10);

ii. Removal of woody debris, fallen trees, branches and associated vegetation in the immediate vicinity that may impede culvert function;

iii. Installation, maintenance and repair of culvert inlet and outlet protection including headwalls (BMP 1, 2, 3, 5, 7, 8, 12, 13, 14, 15, 16, 17, 18, 20, 21, 22, 26, 27, 28, 29, 31, 32, 33, 36, 37);

iv. Installation, maintenance and repair of rocked/armored ford crossings at stream crossings, gabion rock or cobble/boulder rip rap that serve as energy dissipation at critical dips, or where rolling dips and waterbar outlets may intersect a stream;

v. Repair, replacement, and maintenance of degraded culverts, including relocating the culvert up to twenty-five (25) feet in any direction, except for upstream and downstream, for improved alignment with natural drainage. Existing shallow culverts shall be replaced at or below natural channel grade without further consultation unless amount of fill to be excavated exceeds twenty-five (25) cubic yards. Replacement culverts will be adequately sized to carry peak 100-year storm flows where possible; if this is infeasible due to topography or other physical constraints, culverts will be sized down to accommodate the 50-year storm event, with planned overflow (rock armor, critical dip, overside drain etc.).

vi. Culverts and outlets will be properly aligned within the stream and otherwise installed and maintained to minimize interruption of stream flow and maximize resistance to washout and erosion of the streambed, stream banks or fill material. Water velocity and energy will be dissipated as much as possible.

vii. Adding rock material to reinforce or re-armor the crossing at or below the streambed level by hand in remote areas or using bobcat or tractor for accessible roads and wide trails. For larger projects, a tractor will bring in the materials and compact materials into the streambed or a mini excavator will be used. Most often, this work is done manually or with a backhoe.

viii. Culverts identified for removal will be inspected for wildlife prior to removal. Appropriate measures will be taken to ensure wildlife protection during replacement.

d. **Water supply facilities** – water supply facility maintenance includes routine removal of minimum vegetation necessary to maintain proper function of water supply facilities to existing ranger residences and a limited number of residential units on MROSD preserves. This work is

done by hand; no heavy equipment will be used in the streambed or spring at any time for this purpose. These activities are either exempt from (not subject to) regulation by the ACOE or may be covered by Nationwide Permits 3, 18, 19 and/or 37.

2. **Vegetation Management** activities are generally allowed practices with conditional requirements as follows in Sections (a) and (b) below. Vegetation Management activities are either exempt from (not subject to) regulation by the ACOE or may be covered under Nationwide Permits 3, 19 and/or 37:

   - removal of plant growth that blocks channels or reduces water flow to protect water supply facilities; meet local fire codes; provide visual clearance for recreation access; and provide recreational access to facilities. Vegetation removal is a necessary byproduct of removing accumulated sediment and silt in small water conveyance structures commonly associated with roads. Goal of sediment removal, and the vegetation growing in it, is to reduce potential for water diversion that may cause significant erosion. Vegetation to be removed is typically small with non-extensive root systems. Larger vegetation will be pruned back for clearance, if shrub or tree must be removed, the root shall be left intact;
   - control of invasive, non-native plants, including use of herbicides, prescribed fire, managed livestock grazing, mowing, and manual control;
   - right-of-way vegetation management, including developed portions of staging areas, parking lots, and trails;
   - native vegetation plantings to enhance riparian and aquatic habitats;

CONDITIONAL REQUIREMENTS FOR VEGETATION MANAGEMENT

a. **Non-native plant removal**. These activities include management of non-native species through mowing, manual removal, prescribed fire, herbicide use bio-control (i.e. livestock or natural predator insects), shading, removal of trees that may impact park facilities, natural resources and/or water quality, and the replanting of native vegetation. Herbicide application will be either by spot spraying with backpack sprayers, coating recently cut stumps, or use of wick applicators on steep slopes or where native vegetation forms a dense understory beneath tall invasive plants. The only location where herbicide application will be from spray truck is in developed areas. Vegetation removal will not exceed 2,000 square feet (0.05 acres) in size, 150 adjacent linear feet, or the minimum necessary to complete operations, whichever is less.

b. **Native vegetation plantings in habitat enhancement and restoration areas**. These activities include installation of temporary irrigation, planting of locally collected native vegetation, weed control (through manual, herbicide, prescribed fire or use of grazing animals) and the installation of vegetation protective structures; and the installation of

native vegetation and use of bioengineering techniques. Straw wattles, coir rolls, certified weed-free straw, erosion mats, etc. will be used to prevent erosion, minimize bank impacts, and prevent soil loss. Wildlife friendly netting such as "Nature Zone" TM or equivalent shall be utilized. (BMP 12, 13, 14, 15, 17, 18, 19, 23, 24, 25, 26, 27, 28, 29, 34, 36, 37).

3. **Natural Resource Protection** activities are generally allowed practices with conditional requirements as follows in Sections (a) through (e) below. These activities are either exempt from (not subject to) regulation by the ACOE or may be covered by Nationwide Permits 3, 13, 18, 19, and/or 37. Natural Resource Protection activities include the following:

   - removal of sediment, vegetation, and debris in and around existing structures that negatively impacts or reduces water conveyance or is a barrier or obstacle to water flow;
   - small bank or channel stabilization projects which improve water quality;.
   - use of bioengineering techniques and native vegetation over hardscape materials to reduce bank erosion and for sediment control;
   - removal of fallen trees, branches, and associated debris that significantly reduces water capacity, water quality and/or would accelerate erosion;
   - removal of sediment that negatively impacts existing structures or facilities;
   - weed control and irrigation of restored habitat areas;
   - use of approved aquatic herbicides to control invasive weeds;
   - installation of hardscape and softscape structures (or combination) to prevent and control erosion resulting from preserve facilities.

CONDITIONAL REQUIREMENTS FOR NATURAL RESOURCE PROTECTION ACTIVITIES

a. **Bank stabilization/protection** activities are defined as small bank and streambed erosion control projects that minimize water quality impacts and sedimentation. These activities are either exempt from (not subject to) regulation by the ACOE or may be covered under Nationwide Permits 3, 13, 18, 19, 27 and/or 37. Bank stabilization measures include:

   i. Replacement or repair of damaged or failed sections of rock riprap, geocell, concrete wall and/or rock, wooden or log cribwall bank revetments and retaining walls. Riprap of proper size and weight to withstand high water flows will be set below grade and keyed into the bank (BMP 5,12, 13, 14, 15, 17, 20, 21, 22, 25, 26, 27, 28, 29, 32, 34, 36, 37).

      Bank stabilization BMPs will be selected based upon a host of factors at individual project locations. The stream channel upstream and

downstream of the stabilization site will be assessed to determine the relative stability of the reach, and to determine if elements that can improve habitat complexity can be utilized (such as root wad revetments and brushlayering). Priority will be given to BMPs that utilize the most environmentally sensitive techniques using plant materials and large woody material to help restore and increase complexity of habitat at stabilization sites.

BMP selection will include the evaluations of the type of failure (plugged or concentrated road drainage, redirected stream flow, road fill failure, bank seepage, etc.) to address corrective remedies, and assess whether additional geotechnical, hydrogeology, or engineering help is warranted. BMPs will also be selected based upon a number of other criteria including: minimizing disturbance, access limitations, aesthetics (high priority for District), durability (based upon external forces such as stream flow, slope, etc., and also longevity of fix and low maintenance requirements), and availability of onsite or nearby material, such as large wood used as bank stabilization or channel habitat improvement, rock, willows, etc.

Products that incorporate monofilament mesh (such as on coir rolls and erosion blanket) will not be used within the active channel (where water may flow). Wildlife concerns with monofilament mesh are addressed in section 2b.

The Discharger will pre-consult with the Board on structural streambank restoration involving log cribbing or riprap. As a part of the pre-consultation, the Discharger will provide the Board with a generalized design template from the list of BMPs, a scaled drawing of the site, and site photographs. MROSD will utilize experienced employees to install structural streambank BMPs.

Selection of BMPs will also include the expertise of Planning and Operations staff. Staff has prior experience installing most of these BMPs with the goal to achieve proficiency with all. Criteria for BMP selection will include knowledge based upon prior project installation techniques, and experience with past project performance. Availability of materials and access to equipment will also inform BMP selection.

ii. Streambank areas receiving rock slope protection shall be back-filled with appropriate topsoil. The topsoil will fill some portions of the the voids in the rock slope protection above the normal high water mark and provide a substrate for revegetation efforts. This work will be done manually using hand tools and power tools such as a toter or mule for single-track trail environments or a mini excavator or dump truck when needed for multi-use trails or roads.

iii. Work will be confined to the damaged or failed sections and immediate adjacent bank area affected by the damage failure. No more than 50% of bank repairs in a given year will use “hard” or impervious structure design without prior consultation with the Board.

iv. Other bank stabilization measures that may be employed include broadcast and hydro-seeding, riparian vegetation planting, slopes armored with rocks or sandbags staked with live willow and other bioengineering techniques such as willow staking, live willow pole drains, vegetated crib walls, log or rock weirs (BMP 12, 13, 14, 15, 23, 24, 25, 26, 27, 29, 36, 37).

v. Riparian trees shall be protected from damage to the greatest extent possible during repair and replacement.

b. Erosion Control activities consist of maintaining, replacing, and installing erosion control materials such as straw wattles and straw bales, silt fencing, gravel or rock-lined ditches, water bars, broadcast straw, and fiber erosion blankets by hand and removing excess sediment. Soil accumulated behind erosion control features will be removed promptly to an erosionally safe location and controlled for erosion. Erosion control measures will be monitored following significant storm events and modifications, repairs, and improvements to erosion controls measures will be made whenever they are needed (BMP 14, 15, 16, 17, 18, 24, 30, 31, 32, 33).

c. **Large Woody Material management** and removal will be undertaken only as a last resort to mitigate ongoing or imminent damage. Large wood is defined as logs with a diameter of 6” or greater and a length of 10’ or longer, rootwads and stumps. Locations will be assessed for sensitive species prior to beginning any work at the site. Smaller pieces of large woody material shall be removed to above the high water mark of the channel, and shall be stacked or spread for terrestrial habitat (BMP 22). Large woody material management, as proposed, are either exempt from (not subject to) regulation by the ACOE or may be covered under Nationwide Permits 3, 13, 19, and/or 37.

d. **Native species enhancement** – see Section 2(a).

e. **Native vegetation plantings** – see Section 2(b).