ATTACHMENT J

BEST MANAGEMENT PRACTICES PLAN (GUIDANCE AND FORM FOR BMP PLAN)

GUIDANCE

The purpose of the Best Management Practices (BMP) Plan is to evaluate potential sources of sediment and other pollutants at the project site and put controls in place that will effectively prevent pollutant discharges to surface and ground waters. The following general pollution control requirements should be addressed in the BMP Plan, as applicable:

1. Control discharges to water to minimize impacts to water quality.
2. Retain soil and sediment on site.
3. Permanently stabilize disturbed soils.
4. Prevent the discharge of pollutants associated with construction or maintenance dredging activities to surface waters.

Specific guidance for completing the Best Management Practices (BMP) Plan is provided below. For projects that involve BMP construction and repair or maintenance dredging a BMP Plan must be submitted with the Notice of Intent (NOI) to obtain coverage under the Marina General Permit. Attachment G of the Marina General Permit suggests BMPs that may be implemented to control discharges of wastes associated with maintenance dredging.

Use the attached form for preparing the BMP Plan and submit this form with your application. Your application will be determined incomplete if a BMP Plan is not included.

1. CONTROLLING DISCHARGES (for BMP construction, and repair, and maintenance dredging projects)

This section of the BMP Plan addresses the measures taken to minimize or eliminate the impacts of the discharge to water quality and the environment.

Indicate on the BMP Plan what methods will be used to treat the discharge and prevent pollutants from impacting water quality and the environment. Options may include, but are not limited to:

- **Ponds, trenches or basins for settling and/or storing solids**
- **Physical filter for solids, dissolved solids or total petroleum hydrocarbons (e.g., dirt bag, filter canister, activated carbon filter, sand filter)**
- **Stabilized conveyance systems**
- **Energy dissipation (structures designed to prevent erosion and slow water velocity associated with conveyance systems)**

For maintenance dredging projects indicate where dredged material will be temporarily stored and dewatered. Include information about measures that will be implemented to contain water generated from the dewatering process. Include measures that will be implemented to stabilize spoil piles if they are left on site overnight or for extended periods.

2. SEDIMENT CONTROL AT CONSTRUCTION SITES (for BMP construction and repair, and maintenance dredging projects)

Where soils will be disturbed by clearing, grading, excavation or other processes sediment control BMPs are required at appropriate locations along the construction site perimeter and at all locations that discharge to surface waters, including internal inlets to the storm drain system. Effective filtration devices, barriers, and settling devices shall be selected, installed and maintained properly. The sediment control plan must also include provisions to temporarily stabilize construction access points such that soil, sediment, and other construction related materials are not tracked beyond the site perimeter by equipment or vehicles.

Indicate on the BMP Plan sediment controls that will be used at the site. Options may include, but are not limited to:

Filter barriers -
- **fiber rolls/logs, silt fence**
- **straw bale barriers**
- **gravel inlet filters**

Retention structures -
- **sediment traps**
- **settling basins**

Stabilized access points/good housekeeping –
- **crushed rock**
- **mulch**
- **landing mats**
- **frequent sweeping**

For maintenance dredging projects indicate the dredging method (clamshell, suction, vactor truck, etc.) and the type and thickness of the turbidity curtain if one is used during the operation. Include information about how the turbidity curtain will be anchored and how much freeboard will be maintained.

3. STABILIZATION AND EROSION PREVENTION (for BMP construction and repair, and maintenance dredging projects)

All disturbed areas of the construction site must be stabilized from erosion once construction is complete.

Indicate on the BMP Plan what stabilization measures will be used at the site. Options may include, but are not limited to:

- **Seeding and/or planting (including hydro mulching/seeding)**
- **Mulching (wood chips, gravel, other) in combination with seeding/planting**
- **Installing erosion blankets (typically used on steeper disturbed slopes or unlined drainage ditches in combination with permanent seeding/planting)**
- **Placing rip rap**
- **Other**

4. SPILL PREVENTION AND CONTROL (for BMP construction and repair, and maintenance dredging projects)

The BMP Plan must describe measures to prevent and control potential leaks/spills of petroleum products such as fuels and lubricating materials, and other potentially hazardous materials. Secured storage areas for fuels and chemicals should be established and sufficient spill cleanup materials should be at the site to respond to accidental spills.

Indicate on the BMP Plan what spill prevention and control measures will be used. Options include, but are not limited to:

- **Covered material storage**
- **Material storage containment (berms, lined surfaces, secondary containment devices etc.)**
- **Regular equipment leak inspections**
- **Drip pans**
- **Absorbents**

5. MAINTENANCE, INSPECTION, AND REPAIR (for BMP construction and repair projects, and maintenance dredging projects)

BMPs implemented at the site must be properly maintained to be effective. The BMP Plan shall include provisions to inspect and maintain all BMPs identified in the plan throughout the duration of the project. Sites that are inactive during inclement or winter weather should be checked periodically to ensure the controls continue to be effective.

Indicate on the BMP Plan how BMPs will be inspected and repaired in accordance with the following minimum program:

- **Cease soil disturbance activities between the October 15 and May 1 grading deadlines and winterize to prevent erosion and pollutant discharges. (Some maintenance dredging projects may be executed outside of the grading deadlines.)**
- **Inspect BMPs before and after storm events**
- **Inspect BMPs once each 24-hour period during extended storm events**

- **Implement repairs or design changes as soon as feasible depending upon worker safety and field conditions**
- **Postpone day-to-day construction or maintenance dredging activities if inclement weather is forecasted**
- **Have provisions to respond to failures and emergencies**

6. BMPS TO PROTECT TAHOE YELLOW CRESS (applicable for maintenance dredging projects only, where TYC habitat and species are present as verified from a site survey)

Indicate on the BMP Plan how TYC habitat and plants will be protected during maintenance dredging activities. Options include, but are not limited to:

- **Protective fencing and signing**
- **Prohibiting vehicle and foot traffic**
- **Prohibiting storage of dredged spoils in habitat area**

7. FINAL DISPOSAL SITE FOR DREDGED SPOILS (for maintenance dredging projects only)

Indicate on the BMP Plan where the dredged spoils will be disposed. It is the Discharger's responsibility to conduct the necessary sampling and analysis of the dredged materials if material characterization is required before placing at the final disposal site. If hauling material off site, include site access and hauling routes, hauling capacity (in cubic yards) of transport trucks, estimated truck trips, and methods that will be implemented to control off-site tracking.

References

For detailed information on developing BMPs, the EPA document *Storm Water Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices* (EPA 832-R-92-005) is a useful resource. This document may be purchased as item PB 922 359 51 from the National Technical Information Service (703-605-6000 or http://www.ntis.gov/) or may be downloaded as separate chapters from the following website location:

http://cfpub.epa.gov/npdes/pkeyword.cfm?keywords=EPA+832-R-92-005&program_id=0

A good source for overall BMP design criteria and modifications for cold climates *Stormwater BMP Design Supplement for Cold Climates* by Caraco and Claytor can be downloaded from the following website: http://www.cwp.org/cold-climates.htm

Additional information may also be obtained by contacting the Lahontan Regional Water Quality Control Board.

BEST MANAGEMENT PRACTICES PLAN-FORM

Discharger Name: _____

Site Name: _____

Street Address: _____

City: _____

County: _____

Use the template provided below to identify BMPs to be implemented at the project site. Check the boxes next to the BMPs that will be used. If other BMPs will be used, describe them in the space provided for "Other BMP." Attach additional sheets if needed.

CONTROLLING DISCHARGES

Potential discharges will be controlled by the following method(s): (For maintenance dredging projects, this section should apply to the temporary storage of dredged spoils and dewatering activities where applicable.)

- ❑ **Ponds, trenches or basins**
- ❑ **Vegetated filter strips and swales**
- ❑ **Physical filter for solids, dissolved solids or total petroleum hydrocarbons (e.g., dirt bag, filter canister, activated carbon filter, sand filters)**
- ❑ **Stabilized conveyance systems**
- ❑ **Energy dissipation / flow diversion / flow controls**
- ❑ **Other (describe below)**

BEST MANAGEMENT PRACTICES PLAN-FORM

SEDIMENT CONTROL

Sediment will be prevented from running off the site, or into storm drain inlets by the following method(s):

Filter barriers -

- ❑ **fiber rolls**
- ❑ **silt fence**
- ❑ **straw bale barriers**
- ❑ **gravel inlet filters**

Retention structures -

- ❑ **sediment traps**
- ❑ **settling basins**

Stabilized access points/good housekeeping –

- ❑ **crushed rock**
- ❑ **mulch**
- ❑ **landing mats**
- ❑ **frequent sweeping**

❑ **Other (describe below)**

For maintenance dredging projects, indicate what BMPs will be employed to minimize the resuspension of bottom sediments and turbidity. In the space provided below, include the dredging method (clamshell, suction, vactor truck, etc.) and the type and thickness of the turbidity curtain if one is used during the operation. Include information about how the turbidity curtain will be anchored and how much freeboard will be maintained.

BEST MANAGEMENT PRACTICES PLAN-FORM

STABILIZATION TO PREVENT EROSION

Disturbed soil areas not covered with impervious surfaces will be permanently stabilized at the completion of the project by the following method(s):

- ❑ **Seeding and/or planting (including hydro mulching/seeding)**
- ❑ **Mulching (wood chips, gravel, other) in combination with seeding/planting**
- ❑ **Installing erosion blankets (typically used on steeper disturbed slopes or unlined drainage ditches in combination with permanent seeding/planting)**
- ❑ **Placing rip rap (describe location)**
- ❑ **Other (describe below)**

SPILL PREVENTION AND CONTROL

The following BMPs will be implemented to prevent and control potential leaks/spills of petroleum products such as fuels and lubricating materials, and other potentially hazardous materials, as appropriate:

- ❑ **Material storage containment (covered storage, berms, lined surfaces, secondary containment devices, etc.)**
- ❑ **Regular equipment leak inspections**
- ❑ **Drip Pans**
- ❑ **Absorbents**
- ❑ **Other (describe below)**

BEST MANAGEMENT PRACTICES PLAN-FORM

MAINTENANCE, INSPECTION, AND REPAIR

BMPs will be inspected and repaired in accordance with the following minimum program:

<u>For inactive construction sites during wet season</u> (October 15 – May 1)

- ❑ **Cease soil disturbance activities through wet season and winterize to control pollutants**

<u>For active construction sites during wet season</u> (October 15 – May 1) (May include some maintenance dredging projects allowed during the October 15-May 1 period.)

- ❑ **Inspect BMPs, and repair if needed, before and after storm events**
- ❑ **Inspect BMPs once each 24-hour period during extended storm events**
- ❑ **Implement repairs or design changes as soon as feasible depending upon worker safety and field conditions**
- ❑ **Postpone daily construction activities or maintenance dredging if inclement weather is forecasted**
- ❑ **Have provisions to respond to failures and emergencies (describe below)**
- ❑ **Other (describe below)**

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PROTECTION OF TAHOE YELLOW CRESS

- ❑ **Protective Fencing and Signing**
- ❑ **Prohibiting vehicle and foot traffic**
- ❑ **Prohibiting storage of dredged material in habitat area**
- ❑ **Other (describe below)**

FINAL DISPOSAL OF DREDGED SPOILS

On a separate piece of paper, please provide the following information:

If dredged spoils will be used for beach replenishment, provide details regarding how the material will be placed and spread on the beach. Include what BMPs will be implemented to prevent the material from being discharged to surface water during initial placement on the beach.

Provide the name and address of the final disposal site. Include a contact name and phone number. (Include any written agreements or contracts.)

Include a site map that details site access and haul routes.

Provide the Hauling Capacity (in cubic yards) of Transport Trucks and the estimated truck trips.

Include BMPs that will be implemented to control off-site tracking.