CITY of CALABASAS

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POOL AND FOUNTAIN MAINTENANCE

Description

The primary pollutant of concern in municipal swimming pool water is chlorine or chloramines used as a disinfectant. This water, if discharged to the storm drain system, can be toxic to aquatic life. In lakes, lagoons, and fountains, the pollutants of concern are chemical algaecides that are added to control algae mainly for aesthetic reasons (visual and odor). Following the procedures noted in this fact sheet will reduce the pollutants in this discharge.

Approach

1. Pollution Prevention: Prevent algae problems with regular cleaning, consistent adequate chlorine levels, and well-maintained water filtration and circulation systems. Manage pH and water hardness to minimize corrosion of copper pipes.

2. Suggested Protocols

2.A. Pools and Fountains: Do not use copper-based algaecides. Control algae with chlorine or other alternatives, such as sodium bromide. Do not discharge water to a street or storm drain when draining pools or fountains; discharge to the sanitary sewer if permitted to do so. If water is dechlorinated with a neutralizing chemical or by allowing chlorine to dissipate for a few days (do not use the facility during this time), the water may be recycled/reused by draining it gradually onto a landscaped area. Water must be tested prior to discharge to ensure that chlorine is not present.

Prevent backflow if draining a pool to the sanitary sewer by maintaining an “air gap” between the discharge line and the sewer line (do not seal the connection between the hose and sewer line). Be sure to call Las Virgenes Municipal Water District (LVMWD) for further guidance on flow rate restrictions, backflow prevention, and handling special cleaning waste (such as acid wash). Discharge flows should be kept to the low levels typically possible through a garden hose. Higher flow rates may be prohibited by local ordinance. Provide drip pans or buckets beneath drain pipe connections to catch leaks. This will be especially pertinent if pool or spa water that has not been dechlorinated is pumped through piping to a discharge location.

Objectives: Contain – Educate - Reduce/Minimize - Product Substitution

Targeted Constituents: Sediment, Nutrients, Trash, Metals, Bacteria, Oil and Grease, Organics, Oxygen Demanding.

Never clean a filter in the street or near a storm drain. Rinse cartridge filters onto a dirt area, and spade filter residue into soil. Backwash diatomaceous earth filters onto dirt. Dispose of spent diatomaceous earth in the garbage. Spent diatomaceous earth cannot be discharged to surface waters, storm drainage systems, septic systems, or on the ground.

If there is not a suitable dirt area, discharge filter backwash or rinse water to the sanitary sewer if permitted to do so by the LVMWD.

2.B. ***Lake:*** Reduce fertilizer use in areas around the lake. High nitrogen fertilizers can produce excess growth requiring more frequent mowing or trimming, and may contribute to excessive

algae growth. To control bacteria, discourage the public from feeding birds and fish (i.e. place signs that prohibit feeding of waterfowl). Consider introducing fish species that consume algae. Contact the California Department of Fish and Game for more information on this issue. Mechanically, remove pond scum (blue-green algae) using a 60 micron net. Educate the public on algae and that no controls are necessary for certain types of algae that are beneficial to the water body.

Control erosion by doing the following:

- Maintain vegetative cover on banks to prevent soil erosion. Apply mulch or leave clippings to serve as additional cover for soil stabilization and to reduce the velocity of stormwater runoff.
- Areas should be designed (sloped) to prevent runoff and erosion and to promote better irrigation practices.
- Provide energy dissipaters (e.g. riprap) along banks to minimize potential for erosion.
- Confine excavated materials to surfaces away from the lake. Material must be covered if rain is expected.
- Conduct inspections to detect illegal dumping of clippings/cuttings in or near the lake. Materials found should be picked up and properly disposed of.
- Avoid landscape wastes in and around the lake should be avoided by either using bagging equipment or by manually picking up the material. Collect trash and debris from within water body where feasible. Provide and maintain trash receptacles near recreational water body to hold refuse generated by the public. Increase trash collection during peak visitation months (generally June, July and August).

Training: Train maintenance personnel to test chlorine levels and to apply neutralizing chemicals. Train personnel regarding proper maintenance of pools, ponds and lakes.

Spill Response and Prevention: Have spill cleanup materials readily available and in a known location. Cleanup spills immediately and use dry methods if possible. Properly dispose of spill cleanup material.

Other Considerations: Managers of pools located in environmentally sensitive areas should check with the appropriate authorities to determine if code requirements apply. Cleanup activities at the lake may create a slight disturbance for local aquatic species. If the lake is recognized as a wetland, many activities, including maintenance, may be subject to regulation and permitting.

Costs: The maintenance of pools and the lake is already a consideration of Calabasas Public Works department. Therefore the cost associated with this BMP is minimal and only reflects an increase in employee training and public outreach.

Dredging: When dredging is conducted, adhere to the following: Dredge with shovels when laying/maintaining pipes. To determine amount to dredge, determine rate of volume loss due to sediments. For Calabasas Lake, dredge every 10 years. When dredging use vacuum equipment. After dredging test sediment piles for proper disposal. Dredged sediment can be used as fill, or may have to be land filled.