POLICY MANUAL

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Classification : ~~ENGINEERING~~ Programs

Subject : Private Lakes

Approved by : Doug Davison

1. The preservation, conservation and recharge of the surface water entitlements of the Fresno-Clovis metropolitan area for recharge of the local groundwater aquifer is a long-term objective of the Fresno Metropolitan Flood Control District. The following represents suggestions to all involved entities to assist in securing this objective.

A. A private lake developer should demonstrate that the proposed lake(s): (1) will not have a substantial negative impact on water use when compared to the alternative of other open-space uses such as landscaping; (2) will not increase net water use or increase the risk of negative groundwater quality impacts; and (3) will not divert water from a more efficient or productive recharge facility resulting in increased evaporation losses and recharge efficiency losses.

B. The surface water entitlement used for private lake water level maintenance, or recharge within the private lake, should be the subject of an entitlement contract with the entitlement agency. Such contract should provide that the private lake shall be subordinate in water delivery priority to public recharge facilities also relying on surface water deliveries, and, that said agency will satisfy all delivery requirements to public facilities before delivery is made to private facilities.

C. A private lake developer who includes recharge in the lake's purpose should agree to forfeit receipt of surface waters when it is determined that the maintenance required to sustain such recharge is no longer performed or has become ineffective in maintaining the lake's recharge capacity.

2. The construction, filling,operation and maintenance of private lakes for aesthetic, recharge or storm water purposes creates direct impacts on the District through increased risk of flooding and system impact. The following are District policies concerning the design, construction, operation and maintenance of such facilities.

A. The private lake design, construction and operation must avoid the creation or maintenance of conditions conducive to mosquito breeding. Such design, construction and operations plan must be reviewed and approved by the appropriate mosquito abatement authority.

B. The private lake plan must provide for appropriate and regular maintenance. If groundwater recharge is a design purpose of the lake, the maintenance program must maintain the lake's recharge capacity.

2. (cont.)

C. The design of the private lake(s) must include sufficient free-board area and volume to safely control overfilling due to error, accident or rainfall. The following minimums apply:

(1) Such area and volume shall be sufficient to accept a thirty-six hour error in maximum FID delivery.

(2) Such area and volume shall be sufficient to accept one-half foot of rainfall on the area of the lake and any additional drainage area contributing runoff to the lake, this volume requirement in addition to 2.C(1).

D. The private lake design and operations plan shall include a plan of relief and dewatering. If the lake is directly connected to, or overflows to, FMFCD facilities then both of the following are required:

(1) an automatic valve to shut off deliveries into the lake when the design water surface elevation is reached;

(2) the granting of authority to FMFCD to enter the premises and manually shut off lake deliveries.

E. The private lake developer shall prepare a formal maintenance program which specifically identifies, among other details, the timing and method of lake draining for maintenance purposes. If drained to FMFCD facilities, a prior written agreement with FMFCD is required.

F. When the private lake is to include storm runoff management in its design, construction and operation, the following conditions must be met:

(1) The lake must have a method of direct relief to FMFCD facilities.

(2) The lake developer must provide engineering calculations to demonstrate the routing of a 100-year 10-day event through the lake, such design to provide a minimum free-board of 1' above the 100-year water surface elevation. If in-lake storage for the 100-year event is proposed, a means of after event dewatering the lake to restore the design capacity for the 100-year event is required.

2.F. (cont.)

(3) The lake developer must pay standard drainage fees on total area of development, provided:

(a) If the FMFCD facilities must be extended or increased due to the lake development proposal, any increase in FMFCD system costs or pro-rata costs per parcel within any drainage area must be paid in cash in addition to the standard drainage fees.

(b) If development and related storm drainage use of the lake does not have a negative impact on the FMFCD system and its costs, or costs per parcel, then fees will not be required on the area of the lake when such area is zoned open-space.

(c) All replanning, engineering and related costs to restructure the FMFCD system to accommodate a private lake as a component of the public drainage system must be paid by the developer, in addition to standard drainage fees, to the District.

(4) A public drainage easement encompassing the area of the lake and related free-board shall be granted at no cost to FMFCD.

(5) The private lake developer must develop and ensure full implementation and funding of an on-going lake maintenance program. The developer may contract with FMFCD for performance of maintenance work.

(6) The private lake developer shall provide liability insurance of the type and limits determined by FMFCD. Developer shall ensure continued coverage of FMFCD and the development by such insurance.

G. The District shall prohibit all non-storm drainage discharges into its systems, including those systems which drain into private lakes, District basins, District pumping plants, and the San Joaquin River. All discharges into the District's system shall comply with established storm water quality discharge standards as may be enacted by appropriate local State and Federal agencies.