Table Q-2. Groundwater Sources for Lake-Fringing Wetlands

Spring or Groundwater Type Ameleorating Factors	Water Source and Pathway	Water Quality	Seasonality of Discharge	Relationship to Lake Level	Effect of Increased Lake Level (Other than Inundation)	Effect of Decreased Lake Level (Other than Providing More Suitable Wetland Habitat)
Gravity water springs and seeps	Unconfined aquifers that are recharged by infiltrated channel losses and diffuse runoff in upslope catchments, including reinfiltrated water from the other spring types described below; may now include relict wastewater	Variable; generally good with low electrical conductivity except where flow paths intersect unleached alkali lakebed sediment (below 6,390 ft elevation)	Widely variable to somewhat constant; sensitive to seasonal variation in rainfall and local rainfall patterns	Shoreline water table (see below) is the hydraulic floor that forces gravity water to the surface at littoral springlines	Littoral springlines migrate upslope	Littoral springlines migrate downslope at wetlands without sufficient groundwater i to sustain discharge at multiple springline
Deltaic artesian springs	Confined aquifers deep under delta surfaces that are recharged by infiltrated channel losses and diffuse runoff in upslope portions of the delta and abutting alluvial fans; water reaches the surface via faults	Good; generally with low electrical conductivity comparable to water in creeks	Somewhat constant year round but pressure varies with runoff (LADWP 1987)	Hydrostatic pressure on underwater springs influences flow volume on terrestrial springs tapping the same aquifer	Can reactivate discharge from dormant terrestrial vents or increase flow rates on active vents	Can eliminate or reduce flows from terre spring vents
Deep-fracture artesian springs	Confined aquifers deep under Mono Basin that are recharged by infiltrated channel losses and diffuse runoff in distant areas; water reaches the surface via faults	Moderate to poor; elevated electrical conductivity; hot and warm water temperatures	Somewhat constant; some fluctuation related to wet and dry climate cycles	Not influenced by lake level	None	None
Fractured-rock gravity springs	Unconfined aquifers that are recharged by infiltrated channel losses and diffuse runoff in upslope catchments	Good; electrical conductivity comparable to water in creeks	Fluctuates seasonally with runoff cycle and annually due to climatic differences	Lakeshore water table determines the lower edge of discharge sites, but some aquifers are sufficiently pressurized to force discharge directly into Mono Lake	May or may not cause the upper edge of the zone of groundwater discharge to move upslope	May or may not cause the upper edge of zone of groundwater discharge to move downslope
Shoreline water table	Mono Lake; underlies shoreline and saturates soil at or near the surface	Poor; high electrical conductivity and pH, same as Mono Lake; unable to support vegetation	Year round	Location relative to shoreline dependent on lake level; extent of shoreline hydrologically affected by water table dependent on shoreline gradient and substrate permeability	Causes water table to move upslope	Causes water table to move downslope
Relict lake water	Mono Lake water that infiltrated basin sediments during prior highstands	Poor; high electrical conductivity and pH, same as Mono Lake when it stood at the higher level; unable to support vegetation	Year round, except if frozen during winter (high salinity inhibits freezing relative to pure water)	Location of discharge areas independent of lake level; determined by sediment permeability and shoreline gradient	None	None