

Mansagar Lake (Jaipur)

Mansagar Lake, located north of Jaipur was constructed by damming Darbhawati River around 1610 A.D. by Raja Man Singh I, the then ruler of Amer, for irrigation and recreation. A palace was built in the middle of the lake, and a temple on its northwestern end. The lake is flanked by hills on western, northern and eastern sides. After independence, the lake was no more used for recreation and the palace had been abandoned. In 1962, the sewage from the walled city of Jaipur was diverted into the lake. It resulted in rapid siltation, the water storage capacity decreased considerably and the palace got submerged to a depth of 3 m or more during the rainy season. The hills surrounding the lake have for decades been subjected to extensive deforestation rendering them almost bare. In August 1981, unprecedented rain caused heavy floods that brought enormous amounts of silt and sand from the south eastern side filling up large area of the lake.

The lake had a water surface area of about 139 ha (in 1970s) and has a catchment area of 23.5 sq. km. Approx. 40 % of the catchment falls inside dense urban area and the remaining area is covered by denuded hills. The average depth of the lake varies from 1.5 to 4.5 m. During last few decades, considerable area of the lake on its south has been reclaimed and encroached upon. Vegetables were cultivated over most of the shallow marginal areas of the remaining lake for past several decades.



The foremost problem of the lake is the inflow of wastewater through the Nagatalai and Brahampuri Nallas. Several household industries in the catchment also contribute their pollutant load. The north zone sewage treatment plant treats domestic wastewater only partially, leaving the effluent with primary treatment characteristics. The STP has limited capacity to treat the wastewater.

Erosion from the hills on the north bring considerable silt into the lake. There had also been a severe infestation of water hyacinth which had been completely removed manually.

The lake water is still used for irrigation in downstream areas. However, being close to the Amber Fort, a famous tourist place, and the only water body near Jaipur, the lake has a great potential for recreational tourism.

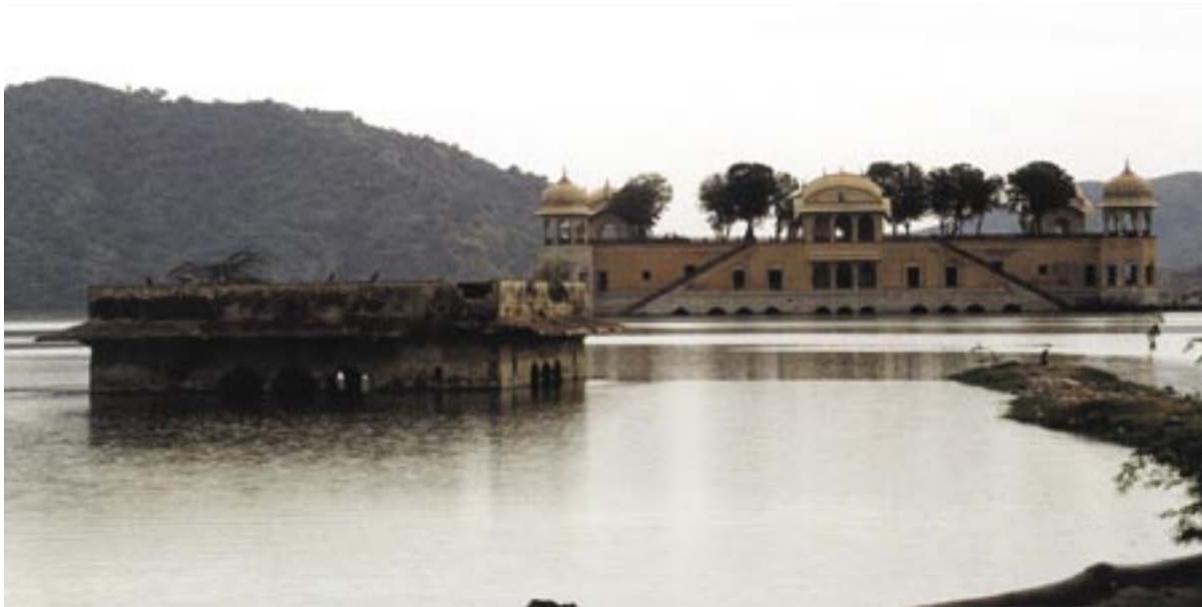
The lake conservation plan for the Mansagar Lake under the NLCP, stressed upon the diversion and treatment of wastewater, desiltation, bioremediation and catchment treatment

for improving water quality and ensuring a certain level of water in the lake. Extensive desiltation of lake was undertaken to remove about 4.10 lakh cu m silt from the lake bed. A Settling Tank was constructed on the northern side near Amber Road to trap the sediments from the hills. The existing Sewage Treatment Plant was redesigned and renovated to enhance its treatment capacity. The wastewater drains from the western side of the lake were realigned and the wastewater from Nagtalai Nallah and Brahmपुरi Nallah has been channelised to bypass the lake directly. A part of the effluents from the STP are planned to be passed through a system of constructed wetlands for tertiary treatment to remove excess nutrients before they are released into the lake for maintaining the desired water level.

The water quality in the lake is being improved further by aeration and in-situ bioremediation.

Water quality is regularly monitored against the baseline data gathered by the University of Rajasthan.

Afforestation of the hills in the catchment has been undertaken by the State Forest Department.



Lake Front has been improved with the development of a Promenade for the visitors, and extensive plantation of reeds and flowering trees along the shoreline. Some of the dredged sediments were used to create a few islands which were planted and provided nesting and resting sites for both resident and migratory birds. These have promoted biodiversity of birds, encouraged birdwatching and enhanced the aesthetic and educational value of the lake.

A public-private-partnership has been considered desirable to sustain the lake maintenance on a continuous basis. The private partner has been entrusted with the task of renovating the Jal Mahal monument in the lake and develop the lake precincts for tourism and recreation facilities by developing a sports and sailing club, traditional food restaurants, handicraft shopping complex, amusement park and children's park, and appropriate parking facilities for the visitors. The revenue generated from the activities managed by the private partner will be used for the maintenance of the lake, thereby ensuring sustainability.