



# Centre for Science and Environment

## Anoxic Bioremediation in Hauz Khaz Lake, New Delhi



**Location:** New Delhi  
**Scale:** Water body/lake  
**Implementing organisation:** JM Enviro  
technologies Pvt. Ltd and Delhi  
Development Authority

**Designed Capacity:** 128ML  
**Area:** 15 acres  
**Operational since:** 2007-2011  
**Capital cost:** Rs. 5,72,500  
**O&M:** Rs. 2.8 lakhs/ acre / year

## Project background

The lake receives treated sewage from near by Vasant Kunj Sewage Treatment Plant with a daily flow of 3MLD. The treated wastewater from the STP into the lake becomes a problem when sometimes untreated sewage of STP finds its way into the lake along with the treated one. This situation led to deterioration of lake and strong odour was emanated causing nuisance in the neighbourhood. In order to solve this problem by natural in-situ treatment, Anoxic Bioremediation Technology (ABR) was implemented using selected anaerobic and facultative microbes Persnickety® 713 developed by Syneco Systems, Inc.

## Treatment technology

Persnickety® 713 is a blend of naturally occurring strict and facultative anaerobic live bacterial strains in liquid form. These bacteria decompose the accumulated sludge flocs and large organic molecules into simpler ones that can be consumed by the bacteria itself. This consortium is effective in controlling odour, reducing TSS, BOD, oil/ grease accumulation in sewage/ polluted water and solids. Some of the strains of Persnickety® 713 also helps in increasing the DO level in wastewater. Dosing is done at specific points generally closer to the inlet/ starting point of sewage. The treatment is carried out in two phases: initially for few days, high shock doses are given to stabilise the system followed by low dosing once the bacterial strains enter the regeneration phase. 6-24 hours prior to dosing, the concentrate is mixed with activator and diluted in chlorine free water in the ratio of 1:40.

## Performance

The BOD level reduced from 50 mg/l to 14 mg/l and from 70 mg/l to 21 mg/l in two different dosing points after one month of the treatment. pH also reduced from 9 to 8. (*Source: JM Enviro Technologies Ltd., New Delhi*)

## Contact details

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