



Office Of The Special Commissioner, Forests, Environment, Climate Change Management

Proceedings of meeting held on 18-05-2024 under the Chairpersonship of Special Commissioner (Forest, Environment, Climate Change Management) regarding the implementation of "Recharge Structures and filter bore wells.

Date: 18.5.2024

Venue: BBMP Head Office

Participants:

1. Smt. Preeti Gehlot IAS, Special Commissioner (Forest, Environment, Climate Change Management) BBMP
2. Mr Vijay Kumar Haridas, Chief Engineer, Lakes, BBMP
3. Sri. B G L Swamy DCF, BBMP.
4. Sri. Chandrasekhar M R, Deputy Director, Horticulture, BBMP
5. Sri. Nagaraja H M, Senior Geologist, Ground Water Directorate
6. Smt. Jagadeshwari M, Senior Geologist, Ground Water Directorate
7. Sri. Sakthivel A, Scientist-D, Central Ground Water Board
8. Sri. Rahul Priyadarshi, Additional Chief Engineer, BWSSB
9. Sri. Vishwanth S, Advisor, M/s Biome,
10. Smt. Suma Rao, Advisor, M/s Biome,
11. Ms Shrimoyee Bhattacharya, Program Head, Urban Development, WRI India
12. Mr. Srinivas Alavilli, Fellow, Integrated Transport & Road Safety, WRI India
13. Ms. Praseeda Mukundan, Senior Program Research Associate- Urban Development, WRI India
14. Smt. Sahana Goswami, WRI India

Summary of the discussion:

Discussions:

1. Groundwater Monitoring Enhancements By State Groundwater Authority.

The State Groundwater Authority (SGWA) along with the support of the Central Ground Water Board (CGWB) discussed their plans to expand the existing network of observation wells across Bangalore. They also plan to include monitoring of Borewells in Industrial establishments. This comprehensive monitoring network aims to track water levels in relation to rainfall data provided by the Karnataka State Natural Disaster Monitoring Centre (KSNDMC).

Both authorities have committed to sharing necessary data on aquifers and rainfall to support this initiative. Currently, there are observation wells in 63 wards, showing static water levels ranging from 8m to over 15m in the Mahadevapura area. The plan is to extend monitoring to all 162 wards.

2. Rainwater Harvesting and Recharge Efforts by BWSSB

The Bangalore Water Supply and Sewerage Board (BWSSB) reported their progress on implementing 900 rainwater harvesting recharge wells (RWH) in public spaces.

Challenges were noted in older residential areas where space constraints hinder the installation of recharge wells, The newer areas have not fully understood the significance of recharge wells in their houses/apartments.

The current penalties on owning a private Open Well were discussed, with suggestions to reassess these fines to encourage more widespread adoption of use of Open wells and shallow aquifer and lesser dependency on Cauvery water or Deep borewells.

Borewell recharge methods with reference to the CGWB methods were discussed. Doing a simple slug test in defunct borewells or recharge wells will help to understand absorption/recharge rates. These findings will inform the design of effective recharge systems in those areas.

3. Insights from Biome:

Mr. Vishwanath from Biome emphasized the importance of understanding topography and establishing a detailed catchment map prior to constructing recharge wells. A minimum of 250 sq meter of catchment should be available for a single recharge well. He outlined an overview of various protocols for groundwater recharge that includes various urban features such as roads, parks, and metro areas to mitigate flooding and enhance groundwater replenishment. He also spoke about the importance of quality of the water that is used to recharge the groundwater and its monitoring.

4. Filter Borewell Implementation:

Discussion on filter borewells highlighted the need for preliminary studies of Open wells and Bore well data followed by a Vertical Electrical Resistivity survey and Auger test, to identify viable locations. It was also noted that one has to make sure that the area has a deep (40 to 80 feet) and saturated shallow aquifer. The significance of the Water quality test was also mentioned.

5. Focus on Shallow Aquifers:

A shift in focus towards shallow aquifers was spoken about, recognizing the limited studies on these water sources compared to deeper borewells.

It was also discussed that using water from shallow aquifers for non-potable and potentially potable uses, will involve identifying influence zones and integrating treated water to replenish lakes.

6. Documentation and Communication:

An orientation document for engineers is to be developed, detailing designs and specifications for these projects. Additionally, the establishment of an integrated command center for data sharing across all departments was proposed to enhance coordination and information flow.



7. Potential Engagement with BMRCL

Potential engagements with Bangalore Metro Rail Corporation Limited (BMRCL) to access the existing aquifer data were discussed, aiming to integrate this information into broader water management plans.

8. Visit Recommendations

Plan visits to model sites like the percolation pond in Satish Dhawan Park to understand integration of road runoff management.

9. Future Initiatives:

The plans going ahead would be conducting pilot studies at 5 Lakes and 5 parks within BBMP limits. Potential locations for filter borewells will be studied in the five selected lakes, and recharge wells in five selected parks. These studies aim to better pipeline the way in which recharge wells and filter borewells can be planned for.


Special Commissioner, 06/06
(Forests, Environment, Climate Change Management)
Bruhat Bengaluru Mahanagara Palike.
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Copy submitted to:-

1. Hon'ble Administrator, Bruhat Bengaluru Mahanagara Palike for kind information.
2. Chief Commissioner, Bruhat Bengaluru Mahanagara Palike for kind information.

Copy to:-

1. The Commissioner, Directorate of Urban Land Transport.
2. The Commissioner, Forest, Environment and Ecology.
3. The Police Commissioner, Bengaluru City.
4. The Managing Director, BMTCL
5. The Managing Director, BMRCL
6. The Chairman, BWSSB
7. The Managing Director, BESCOM
8. The Commissioner, BDA
9. The Commissioner, Mines and Geology
10. The Commissioner, Tourism department.
11. The Commissioner, Transport.
12. The Commissioner, Commerce and Industries.
13. The Commissioner, KSDMC.
14. The Director, Ground Water Directorate
15. The Regional Director, Central Ground Water Board, Bengaluru,
15. Chief General Manager BSWML, BBMP
16. Executive Engineer, BWSSB,
17. M/s.WRI India
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