

■ ■ Rainwater Harvesting Assessment Report ■

■ Generated for: **TestUser**
■ Date: October 02, 2025

■ Assessment Summary

Parameter	Value
■ Location	Erode, Kodivery
■ Roof Type	Concrete
■ Roof Area	46.4515 m²
■ Open Space	N/A m²
■ ■ Max Rainfall Year	2025 (20.0 mm)
■ Harvested Water	499 L
■ Runoff Coefficient	0.85
■ Feasibility	YES

■ Principal Aquifer Information

Property	Details
Type	Alluvial
Description	Based on regional geological patterns - alluvial formations are common in most Indian di
Recharge Potential	Moderate to High
Suitability	Good for standard recharge structures
Porosity	15-30% (estimated)
Permeability	Moderate
Recommended Structures	Percolation pits, Recharge trenches, Storage tanks

■ Open Space Feasibility Check

Parameter	Value
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Recommended Structure	Pit
Required Footprint	2.25 m ²
Available Space	0 m ²
Feasibility	YES
Recommendation	Standard Pit (fits available space)
Recharge Volume	1800 L

■ Recommended System

System Type: Percolation Pit

Description: Small household pit; recharges shallow groundwater.

■ **Estimated Cost:** ■15,000

■ **Typical Size:** 2m x 2m x 2m

Suggested Configuration:

- 1 x Small Pit (2m³)
- Volume: 2000 L each
- Dimensions: 1.13m diameter x 2.0m height
- Purpose: Groundwater recharge

■ Recommended System Structure

■ 3D visualization of the recommended system dimensions

■ Selected System

User Choice: Recommended System

■ **Estimated Cost:** ■15,000

■ Detailed Cost Breakdown

Component	Amount (■)	Description
Excavation Total	800	Site preparation and digging
Lining Total	10,000	PCC lining for structure walls
Media Total	2,500	Filter media (gravel, sand, charcoal)
Labour Total	3,500	Construction and installation work
Pipe Fittings	3,000	Inlet/outlet pipes and connections

First Flush Diverter	2,500	Initial rainwater diversion system
Filter Unit	4,500	Water filtration components
TOTAL COST	16,800	Complete system installation

Water Potential Analysis

Maximum Predicted Rainfall: 20.0 mm in 2025
Total Harvestable Water: 499 liters per year

- Groundwater Status:**
- Dominant depth category: 45048 - (46.2% of stations)
 - Estimated recharge fraction: **84.0%**
 - Estimated recharge to groundwater: **419.22 liters/year**

Rainfall Predictions (2025-2036)

Year	Rain (mm)	Year	Rain (mm)
2025 (MAX)	20.0	2031	12.8
2026	18.8	2032	11.6
2027	17.6	2033	10.4
2028	16.4	2034	9.2
2029	15.2	2035	8.0
2030	14.0	2036	6.8

Benefits & Environmental Impact

Benefit Category	Impact	Annual Savings/Value
■ Financial	Reduce water bills by harvesting free rainwater	■2,000 - ■5,000
■ Environmental	Contribute to groundwater recharge and sustainability	■119 L groundwater recharge
■ Property Value	Increase property value with modern water management	■2.5% property value increase
■ Flood Prevention	Reduce surface runoff during heavy rainfall	499 L flood mitigation
■ Water Security	Ensure water availability during drought periods	499 L emergency reserve
■ Agriculture	Support kitchen gardens and landscaping	Year-round water for plants

Implementation Guidelines

- Obtain necessary permits from local authorities
- Ensure proper site surveying and soil testing
- Plan for adequate drainage and overflow management

- Follow recommended dimensions and specifications
- Use quality materials as specified in cost breakdown
- Ensure proper waterproofing and filtration systems

- Regular maintenance every 6 months
- Clean filters and check for blockages
- Monitor water quality and system performance

Frequency	Activity	Estimated Cost
Monthly	Visual inspection of system components	Free
Quarterly	Clean gutters and first flush diverter	■200
Bi-annually	Filter media cleaning/replacement	■500-800
Annually	Professional system inspection	■1,000-1,500
As needed	Repair/replacement of components	Variable

Technical Support: Contact your local water management authority
Installation Assistance: Certified rainwater harvesting contractors
Permits & Approvals: Local municipal corporation/panchayat office
Maintenance Services: Local plumbing and water system specialists
Emergency Contact: 1800-XXX-XXXX (24/7 Water Crisis Helpline)
Online Resources: www.rainwaterharvesting.gov.in



This report is generated based on historical rainfall data and standard engineering practices. Actual results may vary based on local conditions, installation quality, and maintenance practices. Please consult with qualified professionals for detailed

site-specific design and implementation.

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Generated by: Advanced Rainwater Harvesting Assessment System v2.0

System Status: All calculations verified and validated