

**STEPS TAKEN BY HARYANA GOVERNMENT FOR WATER CONSERVATION AND RECHARGING**

Haryana Govt. is serious about the declining ground water levels and taking various steps for water conservation, recharging and its efficient use. The details of steps taken up by different departments in State of Haryana are as under:-

**I. IRRIGATION & WATER RESOURCE DEPARTMENT**

a) **Atal Bhujal Yojana**

The implementation of the Atal Bhujal Yojana in Haryana represents a significant stride towards sustainable groundwater management in the state. With a strategic emphasis on community participation and decentralized governance, the scheme is designed to address the critical issue of declining water levels in 1647 Gram Panchayats spread across 36 water stressed blocks within 14 districts of Haryana. The Department's commitment to water conservation is evident through its prioritization of various practices. This includes the promotion of conservation structures such as rooftop rainwater harvesting systems, percolation tanks, check dams, farm ponds, and traditional ponds. Additionally, the adoption of advanced micro-irrigation techniques like drip irrigation and sprinkler systems and underground pipeline is actively encouraged.

Moreover, the department is undertaking extensive efforts to replenish groundwater through the construction of recharge structures. These structures, such as canals to dry rivers recharge, pond recharge, injection wells, trenches, recharge pits, and shafts, play a crucial role in trapping rainwater and facilitating its seepage into the ground. This method, in turn, aids in replenishing aquifers, ensuring the sustained availability of groundwater, and fostering long-term water security for the region. The comprehensive approach of the Atal Bhujal Yojana in Haryana reflects a commitment to holistic water management practices and the preservation of this vital resource for future generations.

To conduct the above works under the Atal Bhujal Yojana in Haryana, the incentive fund has been allocated to various line departments which plays a crucial role in promoting water conservation and groundwater recharge initiatives. Department wise details of water conservation and recharge activities are given below:

Name of Line Departments	Brief of Activities
Irrigation & Water Resources Department	<ul style="list-style-type: none"> <li>149 works including 9 works of supply of canal water to storage tanks for irrigation purpose, 1 work of canal to drainage channel recharge, 113 works of ponds recharge/renovation/ construction of new ponds, 15 works of canal to river bed recharge, 1 work of construction of check dam, 2 works of construction of Injection Wells/ Recharge Bore wells and 2 works of construction of Roof Top Rain Water Harvesting Structures, 02 No. of works to Construction of Hump in Drain, 03 No of works is Construction of Spillway &amp; Construction of Injection well.</li> </ul>
Haryana Pond and Waste Water Management Authority	<ul style="list-style-type: none"> <li>Restoration &amp; Rejuvenation of 470 Ponds under Atal Bhujal Yojana, Haryana.</li> </ul>

Name of Line Departments	Brief of Activities
Micro Irrigation & Command Area Development Authority (MICADA)	<ul style="list-style-type: none"> <li>• Construction of 1086 nos. of On Farm Water Tank (OFWT).</li> <li>• Construction of 200 Nos. artificial recharge structures. for groundwater recharge from rain water harvesting structure.</li> <li>• Installation of micro irrigation (drip and sprinkler) system in approx. 65000 Ha.</li> <li>• Promotion of irrigation intelligence software for 20000 acres.</li> </ul>
Agriculture and Farmers Welfare Department	<ul style="list-style-type: none"> <li>• 2268 nos. of water conservation structures/recharge structures.</li> <li>• Installation of Under Ground Pipeline (UGPL) in 16000 Ha.</li> </ul>

- b) **Jal Shakti Abhiyan:** Irrigation and Water Resources Department, Haryana act as a Nodal Department for implementation of Jal Shakti Abhiyan throughout the State of Haryana. Efforts were taken up to encourage the community to make use of rain water instead of groundwater, thus decreasing the depleting level of groundwater in the dark zones of the State. ‘Jal Shakti Abhiyan: Catch the Rain- 2022’ was launched by Hon’ble President of India with the theme “Catch the rain- where it falls, when it falls” covering both urban and rural areas of all the blocks of all districts in the country. National Water Mission (NWM) was the nodal agency for this campaign to be taken up during the pre-monsoon and active monsoon periods i.e. from 29<sup>th</sup> March to 30<sup>th</sup> November 2022.

Water conservation is everyone’s responsibility. The JSA aims at making water conservation a jan andolan through asset creation and communication campaign, just like Swachh Bharat Abhiyan. During the campaign, efforts were done for rainwater conservation and rainwater harvesting by focusing on implementation of six target interventions and achievement is as under:-

Sr. No.	Interventions	Number of activities
1.	Water conservation and rainwater harvesting structures	10643
2.	Renovation of traditional water bodies/tanks	4343
3.	Creation of reuse and recharge structures	9514
4.	Watershed development related works	2290
5.	Plantation of trees	14926363
6.	IEC activities on rainwater conservation and harvesting	12000

- c) In Mahendergarh district an amount of Rs. 14.43 crore has been spent on activities of construction of Katchha drain in Krishnawati river bed, laying of RCC pipeline for recharging groundwater in bed of Krishnawati & Dohan river, renovation of drain and escape channel, recharging of groundwater from surplus water zones, construction of bund etc. by Mahendergarh canal water services division, Narnaul. The water level of the adjoining area/villages showing rising trend in water level where the recharging work has been completed.
- d) **Haryana Water Resources Authority:** The Haryana Govt. has enacted “The Haryana Water Resources (Conservation, Regulation and Management) Authority Act, 2020” vide dated 07.12.2020 through Irrigation & Water Resources Department under which State Water Resources Management and Regulation Authority has been formed which will address the issue

of Ground Water Regulation and its Management effectively & efficiently. The major objective of Haryana Water Resource Authority is to manage & regulate water resources of the State to ensure their judicious, equitable and sustainable utilization, management and regulation.

- a) The Haryana Water Resources Authority has categorized the state into 07 (seven) different categories on the basis of groundwater table/level. This classification is the first of its kind initiative of the state government towards water conservation and is based on the groundwater level as of June 2020 groundwater level/table. This will help the State government for ground level planning, strategies and remedial action with regard to groundwater management in villages and also help in achieving sustainability especially for water depleted and waterlogged areas.
- b) Haryana Water Resources Authority has been prepared Integrated Water Resources Plan (IWRP) with the help of District Water Resources Committee headed by concerned district Deputy Commissioner. The main aim of IWRP is to reduce gap between annual extractable ground water resources and existing groundwater draft in three years i.e. 2023-2026.

## II. HARYANA SHEHRI VIKAS PRADHIKARAN

- a) Roof Top Rain Water Harvesting Scheme: In view of the fact that the water level is lowering day by day, HSVP has taken initiative to make roof top rain water harvesting compulsory. Accordingly, vide notification dated 31.10.2001 roof rain water harvesting- Conversation & Artificial recharge of ground water has been made mandatory in Government buildings/HSVP buildings (including all the private houses/buildings to be constructed in Urban Estate of Haryana) having roof top surface area of 100 Sqm. or more. Notification has already been circulated vide no. 9945-46 dated 29.11.2001 and the areas/Urban Estates in Haryana, where this notification has been made applicable, have also been notified vide letter no. 10200 dated 10.12.2001.

Instructions in this regard were issued to all Zonal Administrators/Estate Officers of HSVP to ensure that no occupation certificate is issued unless the implementation of roof top rainwater harvesting is made in accordance with the above cited notification. The same are being followed meticulously. Further, rain water harvesting structures has also been constructed in various Urban Estates of HSVP as under:-

Sr. No.	Location	Numbers
i.	RWHS constructed in open spaces /commercial area /green belts/parks in various HSVP Sectors.	460
ii.	RWHS constructed in private buildings /Residential plotted area upto December, 2023.	192700
iii.	<b>Total</b>	<b>193160</b>

- b) Installation of Dual Button Flushing Cistern: Vide Haryana Govt. notification dated 13.08.2014, HSVP has made installation of dual button cisterns (capacity 10/5 Litre and 6/3 Litre) mandatory for all types of plot holders (new buildings) in HSVP areas in addition to

all Govt. Buildings and Buildings in licensed areas. Occupation certificate shall not be issued in the absence of dual button flushing cisterns in these buildings.

- c) Reuse of Tertiary/Recycled Water: To avoid exploitation of ground water, tertiary treated water is being used for irrigation/flushing purpose in some of Urban Estates Panchkula, Panchkula (Extension) Fatehabad & RGEC Sonipat of HSVP. Efforts are being made for its implementation in other Urban Estates also.

### III. AGRICULTURE & FARMERS WELFARE DEPARTMENT

The department of Agriculture & Farmers Welfare implements various Soil & Water Conservation schemes in which following interventions are being executed. The main objective of these activities is to recharge the ground water to conserve Soil & Water.

- |                                       |   |
|---------------------------------------|---|
| • Construction of Retaining wall      | • Retaining wall                            |
| • Recharge Well                       | • Earthen Dams                              |
| • Renovation of existing water bodies | • Drop Structures                           |
| • Gully Plug                          | • Roof Top Rain Water Harvesting Structures |
| • Check Dams                          | • Trenches                                  |
| • Crate Wire Structures               |   |

a) **Integrated Watershed Development & Management Project (IWDMP):**

The scheme was sanctioned for the 1<sup>st</sup> time during 2012-13 with a total cost of Rs. 395.00 lakh. Need based Soil Conservation activities are being taken up in rain-fed as well as flood prone areas of the State. Various Soil & Water Conservation structures like **Check Dam, Percolation Tank, Roof Top Rain Water Harvesting Structures, Injection Well, Gully Plug, Crate Wire Structures, Construction of Retaining wall, Recharge Well, etc.** are taken up under this scheme. A Budget provision of Rs. 5487.00 lakh has been made by the Govt. during the year 2023-24 for the said activities.

b) **Soil Conservation & Water Management (State non-plan):**

Soil & Water Conservation Structures are being constructed in the sub-mountainous areas of Shivalik & Arawali Hills under this scheme. A Budget provision of Rs. 200.00 lakh has been made by the Govt. during the year 2023-24 for the said purpose.

c) **Integrated Watershed Management Programme (IWMP)**

The scheme is looked after by Rural & Panchayat Department under the supervision of CEO, Zila Parishad. The Assistant Soil Conservation Officers of the Agriculture Department is the Project Implementing Agency (PIA). The watershed project is aimed at holistic development of the area by conserving natural resources and uplifting the livelihood of the people residing there. This involves entry point activities as desired by residents of watershed areas, Natural Resource Management, employment generation through self help group, crop production activities. The activities/interventions of Soil & Water Conservation structures like Check Dam, Percolation Tank, Roof Top Rain Water Harvesting Structures, Injection Well, Gully Plug, Crate Wire Structures, Ponds, Construction of Retaining wall, Recharge Well, etc. The targets of interventions are allocated by the Chief Executive Officer, State Level Nodal Agency (SLNA).

d) **Atal Bhujal Yojana**

Atal Bhujal Yojana is being implemented first time for construction of water efficient practices in 36 over exploited blocks (1656 GPs) during the year 2023-24. A target for construction of 2268 structures with a cost of Rs. 4075.00 lakh have been fixed, out of which 1047 structures have been constructed.

**e) Underground Pipe Line system (UGPL)**

The Underground Pipe Line project is one of the flagship projects of the department taken under RKVY and the programme has widely been accepted by the farmers in the entire State. By laying UGPL System, Rice-Wheat and Cotton-Wheat are two principal cropping sequences of the State covering an area of around 17.00 lakh hectare. The topography of the area is flat and the mode of irrigation essentially remains flood irrigation, it has been estimated that appreciable quantities of water are lost by way of evaporation and seepage from the irrigation channels. Intensive cropping sequence over a period of time has resulted in degradation of underground water resources. Therefore, on-farm water management through water saving devices (underground pipeline system) is need of the hour in the light of degradation of underground reserves. The pattern of assistance @ 50% cost of the system limited to **Rs. 25,000/-** per hectare with a maximum of **Rs. 60,000/-** per beneficiary shall be applicable.

**f) Mera Pani Meri Virasat (MPMV)**

During Kharif 2020, Govt. of Haryana had launched a unique initiative “Mera Pani Meri Virasat” to diversify the Paddy Crop (water guzzling crop) into alternative less water consuming crops like Maize, Cotton, Bajra, Pulses, Vegetables and Fruits. Under the “MPMV”, assistance @7000/acre is being provided to the farmers who have replaced their paddy crop with alternate crops.

**IV. MICRO IRRIGATION AND COMMAND AREA DEVELOPMENT AUTHORITY (MICADA)**

Command Area Development Authority has been restructured and renamed as Micro Irrigation & Command Area Development Authority during 2020-21. Micro Irrigation & Command Area Development Authority (MICADA) has been given the responsibility for promoting and developing water conservation infrastructure for optimum utilization of water beyond outlet.

To promote Micro Irrigation, Government has approved Watercourse Policy-2021 for giving appropriate weightage to the cases of Watercourses construction, in which WUA (Water User Association) opts for Micro Irrigation. Similarly, priority is given to cases opting pipeline watercourses instead of open watercourses, to save seepage and evaporation losses. Therefore, farmers opting Micro Irrigation and Pipeline watercourses will automatically come above in the priority and water to be used through watercourses will be used judiciously. An online portal ‘<https://micada.haryana.gov.in>’ is there for inviting applications from farmers for micro irrigation related projects. MICADA is mainly implementing the activity of Construction/Rehabilitation, Remodelling/ Extension of Watercourses and PDMC component under umbrella scheme of RKVY which includes Command Area Development, strengthening and creation of distribution network from source to farm. Accordingly, MICADA is functioning as multi-disciplinary body with additional mandates such as: enhanced micro-irrigation coverage; use of solar pumps for micro

irrigation; re-use of waste water irrigation with the objective to encourage farmers to participate in water conservation initiatives.

To increase water use efficiency in Agriculture sector MICADA is providing upto 85% subsidy on account of installation of Micro Irrigation Systems which includes Drip irrigation System, Mini Sprinkler system, Portable Sprinkle system, Integration of Canal water channels (piped and civil construction), Farm Pond, Solar Pumps and Micro Irrigation Systems

#### **V. Rural Development Department**

State Level Nodal Agency (SLNA) under the aegis of Rural Development Department is implementing Watershed Development Programme mainly in water stressed areas of the state. Watershed Programme is mandated to restore the ecological balance by harnessing conserving developing degraded natural resources such as soil, vegetative cover and water.

Water Conservation and Water Harvesting related works i.e. percolation tank, restoration/renovation of old water bodies, check dam, sub-surface dam, drop structures, roof top rain water harvesting structures, earthen dam, gully plug, crate wire structures and retaining wall etc. are mainly structured under Watershed Development Programme.

#### **VI. Haryana Pond and Waste Water Management Authority**

Presently, out of total 2642 ponds in 1655 villages in water stressed areas of the State, 1097 ponds in 619 villages have been taken for restoration. The remaining ponds will be taken up for restoration later in time phased manner.