

GARARDA MEDIUM IRRIGATION PROJECT

TEHSIL – BUNDI

DISTT. – BUNDI

1.0 GENERAL :

The dam of Gararda Irrigation Project is proposed on the river Mangli, doongri and Ganeshi Nallah near village Holaspura in Bundi Tehsil of Bundi district. Doongri Nallah is formed by diversion of main nallah of Ghora Pachhar river near village Gararda, which joins the river Mangli 2 km down stream. The Ganeshi Nallah also joins the river Mangli. The other part of Doongri Nallah after bifurcation forms Gunwar Nallah, joins the river Ghora Pachhar. The Mangli as well as Ghora Pachhar rivers are tributaries of Chambal river and meet the same at a distance of about 84 km. from the proposed dam site. The origin of these rivers and Nallah is in high plateau of Bijoliya from where they flow generally in North – East direction.

1.1 LOCATION :

The site of the proposed dam is located near village Holaspura 25 km. west of Bundi town. It can be traced on G.T. sheet at intersection of Latitude $25^{\circ} 17'$ and Longitude $75^{\circ} 31'$. The site is approachable from Bundi via Namana, Loicha. There is pucca road upto Loicha and after that pucca is constructed upto the dam site. The site of diversion bund is near village Gararda and can be located at intersection of Longitude $75^{\circ} 29' 30''$ & Latitude $25^{\circ} 13' 30''$.

1.2 HISTORY & SELECTION OF SITE :

Before 1947, the Bundi district was a small princely state. Unfortunately, despite having good water potential and land for irrigation, no irrigation works worth mentioning was undertaken during these periods. Only after the independence and formation of Rajasthan, different minor, major and medium projects were started during various five-year plans. In the year 1955-56, survey work of Gararda

Irrigation Project was started. A project report was finalised in the year 1962, however due to paucity of funds the project was kept in abeyance. Moreover, cost of the project was found to be higher than the normally required for medium Irrigation scheme. The scrutiny of the project further revealed that the system of irrigation proposed in the project was not based on optimal design of water resource system.

After further study, finally a site was selected further downstream near village Holaspura and the survey work was resumed in year 1979-80. The survey of submergence area command area etc. was completed and estimate of the dam was prepared. But in this proposal, the spillway was located on Ganeshi Nallah and the water of Mangli river was not proposed to be utilised. Therefore, the proposal was further reviewed and it was decided to take the Mangli river also in this proposal as there is no possibility of utilization of water of this river upstream/ downstream from the present site and hence valuable water resource of Mangli river would go waste. A close study of G.T. sheet revealed that there may be low area between Mangli river and Doongri Nallah downstream of village Parana which could facilitate diversion of Mangli river into the proposed dam near Holaspura. On site inspection and local inquiry it was known that during high floods the water from Mangli river flows into Doongri Nallah from that low area on the right Bank of Mangli River. Thus the water of Mangli River can also be tapped at this site. Finally, the present site for proposed dam was selected on this basis.

The present site which has good storage basin on upstream is perhaps the best and has following further advantages :-

- (1) Water of Doongri Nallah or Ghora Pachhar, Mangli and Ganeshi Nallah has been tapped with single dam.
- (2) Site for spillway of low height is available in bed of Mangli river with exposed hard rock at the surface.
- (3) Defined water way of Mangli river is available for surplus water from the dam.
- (4) Good soil for construction of earthen dam is available on U/s and D/s of dam within lead of 1.5 km.
- (5) The site is easily approachable.
- (6) The canal take off directly from the dam.

1.3 NECESSITY OF THE PROJECT :

About ½ km. downstream from the dam site land on both sides of Mangli river is very good and fertile but its full value cannot be derived without application of water for irrigation. The land at lower elevations is receiving irrigation facilities from Bhimlat canal and left canal of Chambal Project. Some more area is getting irrigation facilities now from Abheypura dam and Burdha dam canals. Even after this sizeable part of the good land will remain uncovered and can be irrigated only from canal at higher elevation from the proposed dam as it is at higher elevation and left over area can't be covered by any of the aforesaid systems. The growing demand of food production in the country can be met only when all irrigation projects financially viable are completed to provide irrigation facilities in maximum possible area. Inhabitants of the command area are eagerly awaiting the same from last 20 years or so. They feel neglected when they see the canal water from Bhimlat dam and Bundi Branch of Chambal Project flowing into the fields about 15 to 20 km. away from their area. The cultivators of the area are progressive hard working and keen for development irrigation facilities and obviously they will resort to intensive cultivation for optimum utilisation of the stored water. Therefore looking to all these direct and indirect benefits there is dire necessity for taking up this project as early as possible.

1.4 GENERAL DESCRIPTION OF PROJECT

The Gararda irrigation project is proposed to utilize the water flowing in river Mangli, Doongri, and Ganeshi Nallah near village Hollaspura in Bundi Tehsil of Bundi District for irrigation by constructing a storage reservoir near village Holaspura, a diversion bund near Gararda and suitable canal system. The revised estimated cost of the project is Rs. 14645 lacs which will provide irrigation facilities in a culturable command area of 9161 ha. (22628 Acres). The soil in the command area is fertile and suitable for growing all types of crops. The land of 44 Nos. village will get irrigation facilities from this project.

SALIENT FEATURE OF GARARDA MEDIUM IRRIGATION PROJECT

S.No.	Item	M.K.S.
1.	Location <ul style="list-style-type: none"> • Longitude • Latitude 	75°31'00" 25°17'00"
2.	Gross Catchment area	337.75 Sqm Km.
3.	Intercepted Catchment Area	59.60 Sqm Km.
4.	Free Catchment Area	278.15 Sqm Km.
5.	Gross Storage	44.38 M. Cum.
6.	Live Storage	41.94 M.Cum.
7.	Dead Storage	2.44 M.Cum.
8.	G.C.A.	10492 Ha.
9.	C.C.A.	9161 Ha.
10.	(i) Irrigation in Kharif	1655 Ha.
	(ii) Irrigation in Rabi	8678 Ha.
11.	T.B.L.	300.80 M.
12.	M.W.L.	297.80 M.
13.	F.T.L.	295.90 M.
14.	Length of earthen dam	3737 M.
15.	Length of spillway	600 M.
16.	Max flood Discharge	3372.80 Cumecs.
17.	Sluice Sill	LMC 277.00 M.
		RMC 277.00 M.
18.	Type of Dam	Earthen Dam
19.	Discharge at head of main canal	LMC 2.39 cumecs RMC 1.00 cumecs
20.	Designed flood lift	1.90 M.
21.	Re-Revised cost.	Rs. 24616 Lacs
22.	Tail water depth	0.223 Mtr.


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