

SEMALKHEDI TEERATH TANK PROJECT

Tehsil : Sironj

District : Vidisha

SALIENT FEATURES

I LEADING DETAILS :

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|----|-------------------------|------------------------------------|
| 1. | Name of Project | : SEMALKHEDI TEERATH TANK PROJECT. |
| 2 | Tehsil | : Sironj |
| 3. | Name of Reiver/Nallah | : Bishankudi Rever |
| 4. | Location of Dam | : Near Village Semalkhedi |
| 5. | Longitude &
Latitude | : 77°-39'-28"
: 24°-32'-0" |
| 6. | Basin | : C.B. Basin |

II HYDROLOGICAL DATA

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|---|--|----------------|
| 1 | Mean Rainfall | : 38.61" |
| 2 | Run off calculated by Binnie's Table for 2.43 Sq. Miles C.A. | |
| | (a) Average | : 454.73 Mcft. |
| | (b) Maximum | : Abnormal |

III FLOOD

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|-----|--|---------------|
| (a) | Maximum flood calculated by Dicken's formuls | : 314.660 Mcm |
| (b) | By Synthetic Unit Hydrograph Method | : 314.66 Mcm |

IV RESERVOIR DATA

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|---|--|--------------------------------|
| 1 | Catchment Area | : 15.837 Sq. mile/41.066 Sq.km |
| 2 | Average Manson Yield | : 751.39 Mcft (12.87 Mcum) |
| 3 | Gross Storage Capacity | : 277.79Mcft (7.866Mcum) |
| 4 | Live Storage Capacity | : 243.10Mcft (6.884Mcum) |
| 5 | Dead Storage Capacity | : 35.69 Mcft (.982 Mcum) |
| 6 | Percentage of Gross Storage to average monsoon yield | : 64.00 % |
| 7 | Percentage of dead storage to gross storage | : 12.56 % |

V PRINCIPAL LEVELS :

L.S.L.	: R.L. 476.52 M
F.T.L.	: R.L. 484.15 M
M.W.L.	: R.L. 486.15 M
T.B.L.	: R.L. 488.15 M
Lowest nalla level	: R.L. 465.09 M

VI DAM DETAILS :

1	Length of main dam	: 1148.00 M
2	Maximum height of bund	: 23.06 M
3	Length of Waste Weir	: 80 M ogee Fall
4	Quantity of earth work	: 683549 Cum
5	Water spread area at L.S.L.	: 0.357 Msqmts
6	Water spread area at F.T.L.	: 1.58 Msqmts

VII BENEFITS

Culturable command area	: 1380 Ha.
Area proposed for irrigation	:
(a) Hy. Wheat	: 200 Ha.
(b) Ord. Wheart	: 750 Ha.
(c) Gram	: 170 Ha.
(d) pulses	: 1250Ha.

Total : 1240 Ha.

X Name of Village benefited by this scheme	: Semalkhedi, Bhojpur, Aftabnagar, Samadpur, Dhanod and Barkheda Kaidar.
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SEMALKHEDI TEERATH TANK PROJECT

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District : Vidisha

REPORT

1- INTRODUCTION :

The proposed tank site is situated at longitude 77°-39'-27" and latitude 24°-09'-32" and can be located on toposheet No. 54H/12. The site is 12 KM. away from tehsil head quarter Sironj and approachable by fair weather road.

2- THE PROJECT COMPRISES

- (a) Construction of a homogeneous earthen bund.
- (b) The length of bund is 1148 m.
- (c) The Maximum height at the nalla portion is 23.06 M.
- (d) Surplusage arrangement is at left flank 60 M long waste weir (Flush Bar) is provided to pass the discharge of 314.66 Cumecs.
- (e) One well type sluice is provided at R.D. 1000 M of bund to irrigate 1240 Ha. of land.
- (f) The A.A. of Project sanction by Govt. of M.P. W.R.D. by letter No. F-22/2/2016-17/La.ci/31/1182 Date 01-10-2016.

3- HYDROLOGY :-

The catchment area of nalla at tank site is 41.00 sq km or 15.837 sq miles. The catchment area is partially hilly as such diminishing factor of 0.90 applied for calculating the yield. The rainfall figure of sironj rain gauge station (12 Kms from the tank site) for 34 years has been considered, 75% dependable yield with 0.90 diminishing factor works out to be 272.67 Mcft. (7.721 Mcum). Whereas the capacity at F.T.L. (RL 484.15 M) is kept 277.85 Mcft. (7.866 Mcum). The average yield from the catchment works out to 505.48 Mcft. (14.31 Mcum). Thus the tank percentage comes to 100%.

4- BASIN:-

The Basin is surrounded by semi hillocks. The total submergence area is 157.98 Ha. Included 57.10 Ha. Private culturable 70.88 Ha. Forest land and 30.00 Ha. Govt. land is coming under submergence.

5- RUN OFF :-

Run off from the catchment area is ascertained from bennie's yield table as per usual practice in M.P.

- (a) Average Annual Run off :- 505.48 Mcft. or 14.31 Mcum
- (b) Maximum Annual Run off :- Abnormal

6- PRINCIPAL LEVELS :-

Nalla bed level	R.L. 465.09 M
L.S.L.	R.L. 476.52 M
F.T.L.	R.L. 484.15 M
M.W.L.	R.L. 486.15 M
T.B.L.	R.L. 488.15 M

CAPACITY

Dead Storage	:-	35.69 Mcft (0.982 Mcum)
Live Storage	:-	243.10 Mcft (6.884 Mcum)
Gross Storage	:-	277.79 Mcft (7.866 Mcum)

The Percentage of gross storage to average annual yield 54.96% and the dead storage is 12.48% of gross storage.

7- EVAPORATION AND ABSORPTION LOSSES :

The principle levels have been fixed by taking losses as below:-

- (a) Losses during rainy season : 0.30 Mts.
(July to October)
- (b) Losses during winter season : 0.60 Mts.
(November to February)
- (c) Losses during summer season : 0.90 Mts.
(March to June)

8- TYPE OF DAM :

A homogeneous section in accordance with T.C. No. 42/BODHI/R&C/TC dated 17.01.2001 has been adopted for the dam, keeping in view the soil available for construction within the economical lead. While extracting earth from the basin care will be taken to locate quarry at a sufficient distance from the dam.

9- SALIENT FEATURES OF THE DAM :

- (a) Length of Bund : 1148 M
- (b) Maximum height of bund : 23.06 M
- (c) Top width of bund : 5.00 M
- (d) Flood lift : 2.00 M
- (e) Free board : 2.00 M

10- LOCATION OF NALLA :

The main nalla is crossing the dam axis at R.D. 350 M.

11- CUT OFF TRENCH :-

Cut off trench from R.D. 30 M to 980 M is provided with a depth of 1/2 (M.W.L - G.L.) with base width of 4.00 M and sloped 1/2:1 and minimum depth 2 M.

12- SLOP PROTECTION :-

22 cm. thick boulder pitching over 15 cm. thick quarry spalls has been provided up to T.B.L. to protect the U/S slopes from erosion due to wave action etc. the pitching is provided in the whole reach of dam and for retaining pitching is U/s slope a 60 cm × 60 cm. base toe of boulder is also provided. The D/s slope will be protected with turfing.

13- WASTE WEIR :-

A Waste weir of 60 m length ogee fall in left flank has been provided to pass the discharge of 314.66 cumecs. Design of Waste weir is as per technical circular.

13- IRRIGATION :-

The scheme will irrigate the area of the ordinary wheat 510 ha. Gram 120 ha. and hy. Wheat 485 ha pulses 125 ha. Total irrigation area will be 1240 ha. six village namely Semalkheddi, Bhojpur, Aftabnagar, Barkhedakedar, Samadpur and Dhanod will be benefited by this scheme.

14- RECOMMENDATION :-

This site is located in nearby area of Sironj town. Scheme is proposed to develop irrigation potential. People area in acute need of water for irrigating their fields and for drinking water for their animals. Villages have every year scarcity of water. The water table of near by area will be raised after construction of dam. Seepage water will be useful for D/S area. Local authority & politicians were demanding for the executing of scheme.