

Government of Rajasthan

Deptt. of Watershed Development & Soil
Conservation
**District Watershed Development Unit,
Sawai Madhopur**

Detailed Project Report



IWMP-VIII (2011-12)

Project Area :- 5287 ha.

Project Cost :- Rs. 634.44 Lacs

Macro/ Micro No.- 10/8, 11/1, 2, 3, 13/1, 2, 3

Block:-Sawai Madhopur District:-Sawai Madhopur

Assistant Engineer
WDSC
Panchayat Samiti,
Sawai Madhopur

Executive Engineer (L.R.)
cum
Project Manager, WCDC,
Sawai Madhopur

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- Watershed Committee Registration certificate
- MoU – PIA – DWMA, PIA – WC(in case of NGO as PIA)

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CHAPTER – I INTRODUCTION

Location.

IWMP-8/11-12 Sawai Madhopur Project is located in Sawai Madhopur Block, of Sawai Madhopur district. The project area is between the latitudes 26⁰-9¹ to 26⁰-12' & longitudes 76⁰-16' to 76⁰-27' It is at a distance of 25 km from its Block and district head quarters. There are 13 no. of villages habitations in the Project area and other details are given below.

• General features of watershed

S.No.	Name of Project(as per GOI)	IWMP- 8/11-12
(a)	Name of Catchment	
(b)	Name of watershed area(local name)	Dhundha
©	Project Area	5300 Ha.
(d)	Net treatable Area	5287
e)	Cost of Project	634.44
f)	Cost/hectare	0.12 lac. per ha.
g)	Year of Sanction	2011-12
h)	Watershed Code	
i)	No. of Gram Panchayats in project area	5
j)	No. of villages in project area	13
k)	Type of Project	Other
l)	Elevation (metres)	170M (398 to 228)
m)	Major streams	Banas River
n)	Slope range (%)	0-3%

Village Wise area Covered by Different Gram Panchayat

S. No.	Name of Gram Panchayat	Village	Village Area	Project Area for treatment
	Lorwada	Lorwada	968	442
		Banda	1326	198
		Dobada Khurd	479	273
		khedli khalsa	569	71
		Total	3342	984
	Jatwada Kalan	Jatwada kalan	1047	472
		Surang	217	109
		Dhundha	432	299
		Total	1696	880
	Ajnoti	Ajnoti	528	386
		Dubbi Bidarkha	1174	1034
		Total	1702	1420
	Jadawata	Jadawata	500	357
		Khat Khurd	314	248
		Total	814	605
	Padhana	Padhana	1227	574
		Khat Kalan	917	824
		Total	2144	1398
		G. Total	9698	5287

The watershed falls in Agro climatic Zone 3B. The soil texture is clay loam The average rainfall is 832mm. The temperatures in the area are in the range between 24⁰c–48⁰c centigrade during summer and 2.3⁰ 30.8⁰c centigrade during winter. The major crops in the area are Bajara, Musturd & Wheat. In project Area 88% land is under cultivation 1.32 % land fallow, 2.76% land is wasteland. 23% land is irrigated through cenals.

804 No of households are BPL(25% households) 413 are landless households (13 % households) and 2538 household are small and marginal farmers (75% household) .Average land holding in the area is 1.74 ha. 70% area is single cropped area and 30% is double cropped. The main source of irrigation is Tube wells. The average annual rainfall (5 years) in the area is 856mm. The Major streams in the Watershed are Banas Nadi. The major festivals in the village are Deepawali, Holi, Dharshara, Rakasha bandhan & At present this village is having 19707 population with Communities like Meena, Gurjar, Mali and others.

Climatic and Hydrological information

1 Average Annual Rainfall(mm)			
	Year	Average Annual Rainfall(mm)	
1	2002	334	
2	2003	888	
3	2004	985	
4	2005	1021	
5	2006	861	
6	2007	1120	
7	2008	962	
8	2009	426	
9	2010	1126	
10	2011	946	
11	2012	703	
2 Average Monthly rainfall (last ten years)			
	Month	Rainfall(mm)	
i)	June	120.70	
ii)	July	277.6	
iii)	August	242.60	
iv)	September	107.8	
3 Maximum rainfall intensity (mm)			
	Duration	rainfall intensity(mm)	
	i) 15 minute Duration	20	
	ii) 30 minute Duration	45	
	iii) 60 minute Duration	90	
4 Temperature (Degree C)			
	Season	Max	Min
	i) Summer	48 ⁰ c	24 ⁰ c
	ii) Winter	2.3 ⁰ c	8 ⁰ c
	iii) Rainy	21.5 ⁰ c	40.5 ⁰ c

5	Potential Evaporation Transpiration (PET) (mm/day)			
	Season	PET		
	i) Summer			
	ii) Winter			
	iii) Rainy			
6	Runoff			
	i) Peak Rate (cum/hr)	4001.40 cum/hr		
	ii) Total run off volume of rainy season (ha.m.)	571 Ha.m		
	iii) Time of return of maximum flood	5 Years	10 Years	in Years
	iv) Periodicity of Drought in village area			5 Years

Other Development Schemes in the project area

S.No	Scheme	Name of the department	Key interventions under the Scheme	Targeted Beneficiaries	Provisions under the Scheme
1	NREGA	P.S.	Apana khet Apana kam	BPL, SC, ST	
2					
3					
4					

Details of infrastructure in the project areas

Parameters		Status			
(i)	No. of villages connected to the main road by an all-weather road	13			
(ii)	No. of villages provided with electricity	13			
(iii)	No. of households without access to drinking water	-			
(iv)	No. of educational institutions :	(P)	(S)	(HS)	(VI)
	Primary(P)/ Secondary(S)/ Higher Secondary(HS)/ vocational institution(VI)	13	5	1	NIL
(v)	No. of villages with access to Primary Health Centre	5			
(vi)	No. of villages with access to Veterinary Dispensary	NIL			
(vii)	No. of villages with access to Post Office	3			
(viii)	No. of villages with access to Banks	2			
(ix)	No. of villages with access to Markets/ mandis	2			
(x)	No. of villages with access to Agro-industries	-			
(xi)	Total quantity of surplus milk				

(xii)	No. of milk collection centres (e.g. Union(U)/ Society(S)/ Private agency(PA)/ others (O))	(U)	(S)	(PA)	(O)
		0	0	0	0
(xiii)	No. of villages with access to Anganwadi Centre				
(xiv)	Any other facilities with no. of villages (please specify)				
(xv)	Nearest KVK		Karmoda		
(xvi)	cooperative society				
(xvii)	NGOs		-		
(xviii)	Credit institutions				
	(i) Bank	2			
	(ii) Cooperative Society		2		
(xix)	Agro Service Centre's		NIL		

Institutional arrangements (SLNA,DWDU,PIA,WDT,WC, Secretary)DWDU Details

1	2	3
S.No	Particulars	Details of DWDU
1.	PM ,DWDU	Exen (LR) Zila parisad Sawai Madhopur
2.	Address with contact no., website	-
3.	Telephone	07462-220486
4.	Fax	
5.	E-mail	

PIA particulars

1	2	3
S.No	Particulars	Details of PIA
6.	Name of PIA	AEN, (W/S) Panchayat Samiti Sawai Madhopur
7.	Designation	AEN, Water Shed
8.	Address with contact no., website	
9.	Telephone	07462 – 220217
10	Fax	
11	E-mail	

WDT Particulars:

1	2	3	4	5	6	7	8
S.No	Name of WDT member	M/F	Age	Qualification	Experience in watershed(Yrs)	Description of professional training	Role/ Function
1	Gopal Prasad Mathuriya	M	44	B.Sc. Ag.	4 years	4 years	Agriculture

2	Jyoti Nagar	F	42	M.A. Soc.	2 Years	-	Social Worker
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Base Line Survey Format for IWMP MIS website

Project Name :- Dhundha

Total Geographical Area of Project (Hectares) :- .05287

Treatable Area

Wasteland (Lakh Hectares)	.00279	Rainfed Agricultural Land (Lakh Hectares)	.03588
Total Cropped Area (Lakh Hectares)	.04688	Net Sown Area (Lakh Hactares)	.04070
Total no. of Water Storage Structure	6	Total no. of Water Extracting Units	2430
Total storage capacity of water storage structures (cubic meters)	36000		

No. of Household

SC	250	ST	1660
Others	1191		
Total Population of the project Area	20499	No. of Household of Landless people	413
Total no. of BPL Household	804		
No. of person-days of Seasonal Migration	2160	No. of Marginal Farmer's Household	1765

Depth of Ground Water (meters) below Ground level

Pre- monsoon	50	Post-monsoon	49
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Details of Watershed Committees (WC)

S. N.	Name of WCs	Date of Gram Sabha for WC	Date of Registration as a Society (dd/mm/yy)	Designation	Name	M/F	SC/ST/OBC/General	Landless/MF/SF/BF	Name of UG/SHG	Educational qualification
1	Jadawata	09.10.12		Chairman	Manraj meena	M	ST	SF		
				SEC.	Hardas meena	M	ST	SF		
				Member	Indra mahawar	F	SC	LL		
				Member	Fariyad Kha	M	OBC	SF		
				Member	Malati Sharma	F	Gen	SF		
				Member	Patasi Meena	F	ST	SF		
				Member	Battilal Meena	M	ST	SF		
				Member	Hansraj Meena	M	ST	SF		
				Member	Ganpat Meena	M	ST	SF		
				Member	Jairam Meena	M	ST	SF		

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2	Ajnoti	03.10.12		Chairman	Sriful Meena	M	ST	SF		
				SEC.	Jai kishan Meena	M	ST	SF		
				Member	Dendayal Meena	M	ST	SF		
				Member	Chiranjilal Meena	M	ST	SF		
				Member	Sitaram Beragi	M	OBC	SF		
				Member	Gopali Sharma	F	Gen	SF		
				Member	Manju Meena	F	ST	SF		
				Member	Kesanta Meena	F	ST	SF		
				Member	Ramlal Meena	M	ST	SF		
				Member	Hansraj Meena	M	ST	SF		
				Member	Hajarij Meena	M	ST	SF		

Details of Watershed Committees (WC)

S. N.	Name of WCs	Date of Gram Sabha for WC	Date of Registration as a Society (dd/mm/yy)	Designation	Name	M/F	SC/ST/OBC/General	Landless/MF/SF/BF	Name of UG/SHG	Educational qualification
3	Jatwada Kalan	10.10.12		Chairman	Ramprasad Gurjar	M	OBC	SF		
				SEC.	Ramswarup Meena	M	ST	SF		
				Member	Rameshi meena	F	ST	SF		
				Member	Shanti gupta	F	Gen	SF		
				Member	Hansa Gupta	F	Gen	SF		
				Member	Hansraj Gurjar	M	OBC	SF		
				Member	Damodar Mali	M	OBC	SF		
				Member	Ramdeva Dhobi	M	SC	SF		
				Member	Kanhaiya meena	M	ST	SF		
				Member	Harkesh meena	M	ST	SF		
				Member	Manti meena	M	ST	SF		
				Member	Premchand mali	M	OBC	SF		

Details of Watershed Committees (WC)

S. N.	Name of WCs	Date of Gram Sabha for WC	Date of Registration as a Society (dd/mm/yy)	Designation	Name	M/F	SC/ST/OBC/General	Landless/MF/SF/BF	Name of UG/SHG	Educational qualification
4	Lorwada	04-10-12		Chairman	Dharasingh meena	M	ST	SF		
				SEC.	Hukam meena	M	ST	SF		
				Member	Kanji meena	M	ST	SF		
				Member	Kanchan Devi	F	ST	SF		
				Member	Faltu Devi	F	ST	SF		
				Member	Ramdhan meena	M	ST	SF		
				Member	Dyarkya nath	M	OBC	SF		
				Member	Fumali devi meena	F	ST	SF		
				Member	Kedar meena	M	ST	SF		
				Member	Kajod Gurjar	M	OBC	SF		
				Member	Suresh pujari	M	Gen	SF		

Details of Watershed Committees (WC)

S. N.	Name of WCs	Date of Gram Sabha for WC	Date of Registration as a Society (dd/mm/yy)	Designation	Name	M/F	SC/ST/OBC/General	Landless/MF/SF/BF	Name of UG/SHG	Educational qualification
5	Padhana	08.10.12		Chairman	Chitar meena	M	ST	SF		
				SEC.	Jagdish Meena	M	ST	SF		
				Member	Prabhu Lal Meena	M	ST	SF		
				Member	Sheoji Ram Meena	M	ST	SF		
				Member	Barfi W/o Hari meena	F	ST	SF		
				Member	Pushpalata Jangid	F	OBC	SF		
				Member	Santosh Sain	F	OBC	SF		
				Member	Uchchhav Meena	M	ST	SF		
				Member	Kajod Meena	M	ST	SF		
				Member	Keshu Regar	M	SC	SF		
Member	Sanwal Ram Meena	M	ST	SF						

Problems and scope of improvement in the project area

The socio economic conditions of the area can be improved through increased production which can be achieved through expansion in cultivated area and productivity enhancement. 279 ha land is arable wasteland and 216 ha is fallow can be brought under cultivation.

110 ha is only irrigated and with efforts this can be increased to 1600. The productivity gap of major crops in the area as compared with district and with areas in the same agro climatic zones indicate potential to increase the productivity. The demonstration of improved package of practices, improved varieties, increased irrigation facilities and soil conservation measures under the project can bridge this gap. Due to small land holdings in the area focus of the project would be on diversification in agriculture (horticulture, vegetables, green houses, Agro forestry, fodder crops)and diversification in Livelihoods(Agriculture, Animal husbandry, self employment)

15125 MT. fodder scarcity can be met out through Pasture development .Improved animal Husbandry practices can increase the productivity of livestock. 1365 no of persons migrate due to unemployment this migration can be checked through creation of employment opportunities in the project area through increase in production and diversification in agriculture and Livelihoods as mentioned above.

Scope of Improvement-

- Bunding in fields and construction of check dams.
- waste weir for safe disposal of excessive water & to cheek the field erosion.
- To motivate the farmers for organic manunnring & Vermi compost.

Problem related to Crop

- Loss production due to improper cultivation.
- Loss moisture contain in soil.
- Non practice of improved variety of seed.
- Excessive use of chemical fertilizer.
- Unawareness of crop rotation practices.

Scope of Improvement-

- Trained the farmers for proper cultivation practices.
- Constructions of bunding in their fields.
- Crop demonstration through improved variety of seeds.
- To trained farmer for oraganic farming & agro forestry, kitchen gardening, along with agriculture.

➤ **Livestock**

- Indigenous breeding.
- lack of pasture development.
- Unawareness about health age.
- Uncontrolled Grazing.

Scope of Improvement-

- Improve breed by high breed program.
- To develop pasture land according to their demand.
- To organized animal camps regularly for health checkup.
- To provide them Gross Cutting Machine & Manger.
- To arrange the training for animal betlorment.

➤ **Water**

Average rainfall of this block 870 mm Rainfall in irregular insufficient. There is no management to store rain water, Due to black cotton soil has more water holding capacity. So runoff water drained out side the area through Nalles & rivers. Most of the state time water bodies such as Talav, Anicuts have been encroached by local people or it has been sited. Nobody can take care of there water bodies. There is no source of ground water table recharge in this area so water go down day by day.

Due to pressure of increasing population & increase agriculture products farmers used tube well drastically due to which water level go down and whole area comes under dark zone. Presently whole area from March to june every year faces the scarcity of drinking water. In entry point activities each gram sabha has proposed water related works.

- **Proposed for solving problem-**

To P.R.A. with villages and survey the area proposed the water harvesting structures at appropriate place consent with local farmers. To planning for rain harvesting at areable & non areable lands.

Main activites for water harvesting are as follows:-

- Areable land bunding with west weir farm ponds.
- Non areable land treatments .
- Drainage line treatments.

Project Objectives:-

The objectives of the watershed development project will be:

- Conservation, development and sustainable management of natural resources including their use.
- Enhancement of agriculture productivity and production in sustainable manner.
- Restoration of ecological balance in the degraded and fragile rained eco-system by greening these areas through appropriate mix of trees and shrubs and grasses.
- Reduction in regional disparity between irrigated and rainfall areas.
- Creation of sustained employment opportunities for the rural community including the landless.

CHAPTER – II Socio economic Features, Problems and Scope

Table 2.1 Population & Household Details:

Total Population				
Male	Female	Total	SC	ST
10856	9643	20499	1667	10950

Household Details						
BPL household	L. Less	Small Farmer	M. Farmer	Total household	SC household	ST household
804	445	773	1765	3101	250	1660

Table 2.2 Development indicators

S. No.	Development Indicators	State	Project Area
1	Per capita income (Rs.)	16260	1200
2	Poverty ratio	0.22	
3	Literacy (%)	60.40	40
4	Sex Ratio	921	855
5	infant mortality rate	63	70
6	maternal mortality ratio	383	400

The table indicates poor socio economic conditions.

Table 2.3 Land Use

Land Use	Total area in Ha.				
	Private	Panchayat	Government	Community	Total
Agriculture Land	4688				4688
Temporary fallow			70		
Permanent Fallow			146		
Cultivated Rainfed	3588				
Cultivated irrigated	1100				
Net Sown Area	4070				
Net Area sown more than once	1850				
Forest Land					
Waste Land			279		279
Pastures			320		320
Others					0
Total					5287

The project area has 279 ha of cultivable wasteland. 216 ha of fallow land (total 495 ha) can be brought under cultivation if some irrigation source can be provided through Construction of WHS like Khadin, Tanka, Farm ponds etc. and also through demonstration of rainfed varieties of crops. Construction of WHS can also increase in area under irrigation which is only 23%

279 ha. (5 % of the project area) is under wastelands and can be brought under vegetative cover, with reasonable effort. Activities like Earthen check dams, Vegetative filter strip, V-ditches, staggered trenches, WHS (Johad) Afforestation of wastelands and Pasture development will be taken up on these lands

Table 2.4 .a Agriculture and Horticulture status and fuel availability.

Cropping Status

S.No.	Season	Crop sown	Rain fed			Irrigated			Total	
			Area (ha)	Production (Ton)	Productivity (kg/ha)	Area (ha)	Production (Ton)	Productivity (kg/ha)	Area (ha)	Production (Ton)
1	Kharif	Bajara	1730	2424	1401				1730	2424
		Til	690	180	260				690	180
		URD	153	67	435				153	67
2	Rabi	Wheet				1100	2505	2756	1100	2505
		Masturd				4054	1190	4824	4054	1190
		Gram				16	780	12	16	780
3	Zaid									
	Total									

Table 2.4.b Abstract of cropped Area(ha)

Area under Single crop	3588
Area under Double crop	1100
Area under Multiple crop	

The farmers are using Pro Agro 9444, HB varieties of Bajra, whereas varieties as per following Table can increase the production.

Varieties of crops

S.No.	Name of Crops	Name of Varieties
1.	Bajra	Pro Agro – 9444, RHB-90
2.	Til	RD-46, 125, TC-25, C-50
3.	Urd	T-9, Krishna
4.	Wheat	Raj-1482, 3765, LoK-1
5.	Masturd	Varuna, Kalayani, Pua Boldm Bio – 902
6.	Gram	RSG-44, 888, GNG-469, 663

Crop Rotation** can increase productivity in the project area.

Bajra	-	Wheat
Bajra	-	Fallow
Moong	-	Mustered
Moong	-	Fallow
Fallow	-	Jeera
Fallow	-	Isabgoal
Fallow	-	Lucern
Cluster Bean	-	Fallow
Fallow	-	Taramera
Til	-	Fallow
Caster	-	Caster
Moth	-	Fallow

The table 2.4B shows that only 1100 ha is (23%) is double cropped area. Also the crop rotation shows that fallow lands are there. This indicates that there is scope for change in crop rotation in fields where there are fallow lands through Soil and Water conservation measures, crop demonstration and diversification in agriculture.

Soil and Water conservation measures besides putting fallow lands under cultivation can change the area under single cropping to double and multiple cropping.

Table 2.4.c Productivity Gap Analysis

Name of the crop	Productivity kg/ha				
	India	Highest Average in Rajasthan	Highest Average of Agro climatic zone	District	Project Area
Wheat	2619	2762	3500	3200	2505
Masturd	1177	1232	2200	1419	1190
Gram	808	443	900	800	780
Bajra	802	655	635	1608	1401
URD	317	159	400	450	435
Til	-	-	400	308	260

Analysis of the above table indicate that besides national gap there is wide gap in productivity within state and even within same agro climatic zones.

The productivity gap and reasons of it indicate potential to increase the productivity through crop demonstration .Crop demonstrations would be carried out on improved crops/ varieties, improved agronomic practices. INM, IPM, Mixed cropping, distribution of fodder seed mini kit. Demonstration of improved methods and economics of fodder crops cultivation and also distribution foundation seeds of Forage Crops for further multiplication, introduction of fodder crops in the existing crop rotations.

Activity	Area	Species	Varieties	Recommended varieties	Production
Horticulture	98 ha.	Guava	L 49	L 49	
Vegetables					
Floriculture					
Medicinal Plants					

Table 2.6 Land holding Pattern in project area

Type of Farmer	Total Households	Land holding (ha) irrigation source wise			Land holding (ha) Social group wise				
		Irrigated (source)	Rainfed	Total	General	SC	ST	OBC	BPL
(i) Large farmer	150	300	900	1200	120	0	720	360	
(ii) Small farmer	773	450	710	1160	116	0	696	348	
(iii) Marginal farmer	1765	350	1978	2328	131	103	1396	698	
(iv) Landless person	413								
(V) No. of BPL households	804								
Total	3101	1100	3588	4688	367	103	2812	1406	

82% land holdings belong to small and marginal farmers who own 74% of total cultivated area. Horticulture/vegetables could be more economical to Small and marginal farmers with irrigation source. For large farmers with no irrigation facility Horticulture/vegetables will be promoted in a part of land with farm pond/Tanka construction.

The following activities will be more beneficial for small land holdings and for diversification and income for large farmers

Horticulture plantation, Medicinal and Aromatic Crops, floriculture: As discussed earlier . Horticulture/vegetables could be more economical to Small and marginal farmers with irrigation source. Also the project area has good potential for medicinal & aromatic crops like Sonamukhi, Isabgol, Ashwagandha, Khus, Mehandi etc.

Agro forestry plantation: To increase the income of farmers and also for shelter belt plantation as wind velocity is high in the project area.

Setting of Vermi Compost Units - Keeping in view the side effect of residues of chemicals and fertilizers on human health the emphasis would be on cultivation of organic produce through motivating farmers and providing assistance for production of organic input, vermi compost.

Production and distribution of quality seed – There is need to ensure that good quality seed is available for cultivators for which adequate seed production would be initiated in watershed areas with the assistance of private sector and agriculture department technologies

Sprinklers and pipelines for efficient water management practices emphasis on demonstration of sprinklers with adequate financial support and convergence/private partnership.

Establishment of Green House - For growing off season vegetables seedlings and other horticultural crops under controlled atmospheric conditions of green house.

Establishment of nurseries: Most of the planting material is procured from other parts of the State/ country. The procurement of planting material from distant places causes damage to the planting material and often results in untimely supply. Hence nursery development activity in area.

Innovative hi-tech/ export oriented activities: innovative hi-tech/ export oriented projects like mushroom cultivation, floriculture, etc which are in negligible existence at present, can be implemented by individual farmers / private companies.

Drip irrigation Drip irrigation will be promoted in all horticulture plantations, vegetables, green houses and in nurseries for rational use of irrigation higher yields and quality produce.

Table 2.7 Livestock Status - animals/milk production / average yield.

S.No	Description of animals	Population in No.	Yield(milk/mutton/Wool)	Equ. cow units	Dry matter requirement per year (7Kg per animal.)	Total requirement in M.T.
1	COW					
	Indigenous					
	Hybrid					
2	Buffaloes	8648	4 kg / day		60536	22095
3	Goat	5789	0.8 kg / day		4631	1690
4	Sheep	2312	0.4 kg / day		925	340
5	Camel					
6	Poultry					
7	Piggery					
	Total	16749				24125

In spite of the large number of livestock, production is less hence increase in productivity across all species, is a major challenge. To reduce production of unproductive cattle and improve the productivity by improving the breeds by breeding management following activities will be taken up

- Castration
- Artificial insemination
- Distribution of superior Breeding bulls for use in Cattle and Buffalo
- Breeding distribution crossbred rams

Besides breed improvement other animal husbandry practices like better health, hygiene and feeding practices can increase productivity of livestock. Hence Activities like Animal health camps ,Urea-Molasses treatment demonstration ,demonstration of improved methods of conservation and utilization of Forage crops are proposed.

Table 2.8 Existing area under fodder (ha)

S.No	Item	Unit	Area/Quantity
1	Existing Cultivable area under Fodder	Ha	150
2	Production of Green fodder	Tonns/year	4000
3	Production of Dry fodder	Tonns/ Year	5000
4	Area under Pastures	Ha	320
5	Production of fodder	Tonns/year	
6	Existing area under Fuel wood	Ha	
7	Supplementary feed	Kgs/ day	
8	Silage Pits	No	
9	Availability of fodder	MT	9000
10	Deficiency of fodder	MT	15125

The table above shows there is fodder deficiency (Requirement is 24000 and availability 9000 MT)

To minimize the large and expanding gap between feed and fodder resource availability and demand there is need for

- Increase in area under fodder crops
- Increase in productivity of fodder crops

- Development of pastures
- And reduction in large number of livestock production through replacement by few but productive animals

Table 2.9 Agriculture implements

1	2	3
S. No	Implements	Nos.
1	Tractor	460
2	Sprayers-manual/ power	52
3	Cultivators/Harrows	460
4	Seed drill	306
5	Any Other	121

Farm mechanization and seed banks: As discussed earlier 75% land holdings belong to small and marginal farmers who own only 41% of total cultivated area so owning of big farm implements by individual farmers is not economical so SHG would be promoted to buy farm implements and rent to farmer

Table 2.10 NREGA Status - No. of Card Holder, activities taken so far, employment status.

Sr. no.	Name of village	Total No .of job cards	Activity taken up 2012-13		
			Category 4	Nadi	Anicut
1.	Lorwada	500			
2.	Banda	525			
3.	Dobada Khurd	150			
4.	Jatwada kalan	742			
5.	Surang	55			
6.	Dhundha	130			
7.	Ajnoti	382			
8.	Dubbi Bidarkha	525			
9.	Jadawata	850			
10.	Khat Khurd	300			
11.	Padhana	500			
12.	Khat Kalan	540			
13					
14					
15					
16					
Total		4296			

Table 2.11 Migration Details

Name of village	No. of persons migrating	No. of days per year of migration	Major reason(s) for migrating	Distance of destination of migration from the village (km)	Occupation during migration	Income from such occupation
Lorwada	30	180	Livelihood	300	Labour	60000-70000
Banda	15	180	Livelihood	300	Labour	60000-70000
Dobada Khurd	20	180	Livelihood	300	Labour	60000-70000
Jatwada kalan	20	180	Livelihood	300	Labour	60000-70000
Surang	10	180	Livelihood	300	Labour	60000-70000
Dhundha	10	180	Livelihood	300	Labour	60000-70000
Ajnoti	10	180	Livelihood	300	Labour	60000-70000
Dubbi Bidarkha	20	180	Livelihood	300	Labour	60000-70000
Jadawata	10	180	Livelihood	300	Labour	60000-70000
Khat Khurd	40	180	Livelihood	300	Labour	60000-70000
Padhana	20	180	Livelihood	300	Labour	60000-70000
Khat Kalan	30	180	Livelihood	300	Labour	60000-70000
Total	235	2160A				

The existing livelihoods Village are given below

Table 2.12 (a)Major activities (On Farm)		
Name of activity	No of House holds	Average annual income from the
cultivators	2688	50000-100000
Dairying		
Poultry		
Piggery		
Landless Agri. Labourers	413	20000-40000

Table 2.12(b)Major activities (Off Farm)		
Name of activity	Households/individuals	Average annual income from the
Artisans		
Carpenter	3	50000
Barbar	6	35000
Leather Craft		40000
Porter	51	45000
Mason	30	48000
Others specify (Cycle Repair ,STD,Craft etc)		40000

The efforts for increase in income through off farm activities will be made under livelihood component through assistance to SHG or individuals

Table 2.13(a) Status of Existing SHG

S.No	Name of SHG	Members	Activity involved	Monthly income	Fund available	Assistance available	Source of assistance	Training received
1.	krishana, Ajnoti	10		500				
2.	Archana , Dubbi	10		500				
3.	Nidhi , Dubbi	10		1000				
4.	Tanisha , Dubbi	10		1000				
5.	Ganesh, Dubbi	10		1000				
6.	Laxmi , Dubbi	10		1000				
7.	Suraj, Padhana	10		0				
8.	Ambar, Padhana	10		0				
9.	Ganesh, Padhana	10		1000				
10	Mayank , Padhana	10						
11	Subham, Padhana	10						
12	Aman, Padhana	10						
13	Gori, Lorwada	10						
14	Sonu ,Jatwada Kalan	12		600				
15	Vikas, Jatwada Kalan	10		500				
16	Jyoti ,Jatwada Kalan	10		500				
17	Rekha , Jatwada Kalan	10		500				
18	Ankit , Jadawata	10		500				
19	Hanuman ,Jadawata	10		500				

The table indicates existence of number of groups in the area also these need to be strengthened through trainings and financial assistance

II. Technical Features

Table 2.14 Ground Water

S.No	Source	No.	Functional depth	Dry	Area irrigated	Water availability(days)
i)	Dug wells	1035	550 No.	425 No.		
ii)	Shallow tube wells					
iii)	Pumping sets					
iv)	Deep Tube Wells	1395	120-150 Mtr	Running		300 days
	Total	2430				

- The tables above indicate need for judicious use of available Water.

Encouraging optimum use of water through installation of sprinklers on every operational wells

Table 2.15 Availability of Drinkingwater

S.No.	Name of the village	Drinking water requirement Ltrs/ day	Present availability of drinking water Ltr/ day	No. of drinking water sources available (HP)	No. functional	No. requires repairs	No. defunct
	Lorwada	150000	as per requirement	15			
	Banda	140000	as per requirement	4			
	Dobada Khurd	50000	as per requirement	5			
	Jatwada kalan	140000	as per requirement	10			
	Surang	15000	as per requirement	4			
	Dhundha	30000	as per requirement	6			
	Ajnoti	100000	as per requirement	15			
	Dubbi Bidarkha	120000	as per requirement	20			
	Jadawata	1000000	as per requirement	50			
	Khat Khurd	35000	as per requirement	4			
	Padhana	1250000	as per requirement	10			
	Khat Kalan	130000	as per requirement	25			

Table 2.17 Slope details.

Slope of Watershed		
S.No.	Slope percentage	Area in hectares
1	0 to 3%	5395
2	3 to 5%	585
3	5 to 10%	187
4	> 10%	75

As most of the area has slope less than 3% construction of contour bunds can solve the problem of water erosion in agriculture fields and protect washing of top soil and manures/fertilisers

Table 2.18 Water Budgeting

S.NO.	ITEM	DETAILS
1	Name of Watershed	IWMP-8/11-12
2	Name of Panchayat samiti	SWM
3	Macro No.	
4	Micro No.	
5	Topographical area, Ha	5300 ha.
6	Area not available for treatment, pal, habitation, rasta etc.	
7	Effective area	5287 ha
8	Average annual rainfall, mm	800 mm
9	From strange table proposition of estimated runoff by given rainfall	
	% of runoff to rainfall	
	In good catchment	28.50
	In average catchment	21.30
	In bad catchment	14.20

Type of catchment	Area of watershed, Ha	Factor in cum per ha	Expected yield, cum
Good	599	2218.5	1328881.50
Average	1100	1704	1874400.00
Bad	3588	1136	4075968.50
Total	5287		7279250.00

Present storage of water by existing structure

	Name of structure	No/Area	Storage capacity in cum
1	Tanks/Talab/Nadi	30	45000
2	WHS		
	Total	30	45000

Runoff stored in Proposed structures

Name of structures	No/ Area	Storage Capacity
Earthen Check dam with west weir	155 No.	11625
Small masonry check dam	25	6250
Gully plug	70	3500
Mesonary structures / WHS/ ground water recharge str.	6 no.	36000
Total (B)		102375

% Run of trapped = 1.406 %

Table 2.19 Soil details

Soil Profile		
S.No.	Major Soil Classes	Area in hectares
1	Sandy loam to loam	2000 ha.
2	Sandy clay loam to loam	3600
Soil Depth :		
B	Depth (Cms.)	Area in hectares
1	0.00 to 7.50	1000
2	7.50 to 45.00	3000
3	> 45.00	1287

C	Soil fertility Status	Kg/ha	Recommended
	N	30	80
	P	15	40
	K	2000	340
D	Micro Nutrient	PPM	Recommended
	Fe	.4-6.0	4.5
	Mn	2.0	2
	Zn	.4	.6
	Cu	.15	.2

The analysis of table shows need to improve and maintain soil fertility. Soil health card to every farmer every crop season will be provided, which will include the recommendation for Application micro nutrient and fertilizers

Table 2.20 Erosion details

Erosion status in project Area					
Cause	Type of erosion	Area affected (ha)	Run off(mm/ year)	Average soil loss (Tonnes/ ha/ year)	
Water erosion					
	a	Sheet	1787	120	22
	b	Rill	1500	120	26
	c	Gully	2000	120	28
Sub-Total			5287		26
Wind erosion					
Total for project					

The need is:

- To check land degradation
- To reduce excessive biotic pressure by containing the number and increase of livestock
- To check cultivation on sloping lands without adequate precautions of soil and water conservation measures
- To discourage cultivation along susceptible nallah beds
- To check Faulty agriculture techniques
- To check Uncontrolled grazing and developed cattle tracks
- To check Deforestation of steep slopes
- To check erosive velocity of runoff, store Runoff, to arrest silt carried by runoff and to recharge Ground Water structures life Earthen check dams, gully plugs, Bank Stabilisation, Loose stone check Dams, Gabions, Earthen embankment (Nadi) and Anicuts would be taken up.

CHAPTER - III Proposed Development Plan

A) Preparatory phase activities Capacity Building Trainings and EPA

The IEC activities like Kalajathas, Group meetings, door to door campaign, slogans and wall writings etc. were carried out in all the habitations of IWMP VIII/11-12 Sawai madhopur Micro Watershed. A series of meetings were conducted with GP members, community and discussed about the implementation of IWMP programme. User groups were also formed.

Grama Sabhas were conducted for approval of EPA (Village), for selecting the watershed committee and approval of DPR.

S.no	Name of the Gram Panchayat	Date on which Grama Sabha approved EPA
1	Lorwada	4.10.12
2	Jatwada kalan	10.10.12
3	Ajnoti	3.10.12
4	Jadawata	9.10.12
5	Padhana	8.10.12

The PRA exercise was carried out in all the villages on the dates shown below:

S.No.	Name of the Village/Habitation	Date on which PRA conducted
1.	Lorwada	7.1.13
2.	Banda	7.1.13
3.	Dobada Khurd	7.1.13
4.	Jatwada kalan	8.1.13
5.	Surang	8.1.13
6.	Dhundha	8.1.13
7.	Ajnoti	9.1.13
8.	Dubbi Bidarkha	9.1.13
9.	Jadawata	10.1.13
10.	Khat Khurd	10.1.13
11.	Padhana	11.1.13
12.	Khat Kalan	11.1.13

Transact walk were carried out involving the community for Social mapping, Resource mapping. Detailed discussions and deliberations with all the primary stakeholders were carried out.

Socio-economic survey was carried out during during March-April 2012 period covering all the households and primary data on demography, Land holdings, Employment status, Community activities etc. was collected as mentioned in chapter 2.

State remote sensing department was assigned the work of preparing various thematic layers **using** Cartosat-1 and LISS-3 imageries for **Creation**, development and management of geo-spatial database depicting present conditions of land (terrain), water and vegetation with respect to watershed under different ownerships at village level

Various thematic layers provided by WAPCOS are :

- Delineation of Macro/Micro watershed boundaries.
- Digitised Khasara maps of the villages falling in project area.
- Network of Drainage lines, existing water bodies, falling in the project area.
- Base maps (transport network, village/boundaries, and settlements).
- Land Use / Land cover map.
- Contours at 1 meter interval, slope map

Based on GIS thematic layers, Field visits , PRA and analysis of benchmark data (as discussed in chapter 2) final Treatment plan on revenue map for implementation has been framed. Thus each intervention identified has been marked on revenue map (map enclosed in DPR as annexure-----).The GIS based intervention map, PRA based intervention map are annexed as -----.

PRA IWMP-8/11-12







CAPACITY BUILDING

Table- List of approved Training Institutes[@] for Capacity Building in the project area

1	2	3	4	5	6	7	8
S. No.	Name of Stakeholders	Name of the Training Institute	Full Address with contact no., website & e-mail	Name & Designation of the Head of Institute	Type of Institute #	Area(s) of speciali-zation ^{\$}	Accredita-tion details
1	PIAs	IGPRS, NIRD	Jaipur	Director	Govt.	Remote Sensing, Water conservation	State / Central Govt.
2	WDTs						
3	UGs	KVK, CSWCR&TI	SWM Kota	Director	Govt	Capacity building & Agriculture, Water conservation, Animal Husbandry	----do---
4	SHGs	KVK, NGO	SWM	Director	Govt. / Private	Capacity building, livelihoods, entrepreneurship development	State Govt./ Reg. NGO for Kota
5	WCs	IMTI, NGO CSWCR&TI	Kota SWM	Director	Govt. / Private	Agriculture, Water conservation, Ground water, Capacity Building/Horticulture/ Animal Husbandry	----do---
6	GPs	NGO, CSWCR&TI	SWM Kota	Director	Govt. / Private	-----do-----	Central Govt. Reg. NGO for Kota
7	Community	NGO	swm	Director	Private	-----do-----	Reg. NGO for Kota
8	PM/SLNA	IGPRS, NIRD	Jaipur	Director	Govt.	Remote Sensing, Water conservation	State / Central Govt.

Table- Capacity Building activities in the project (PHYSICAL & FINANCIAL) *4% OF TOTAL PROJECT COST.

1	2	3	5						6						7					
S. No.	Project Stakeholders	Total no. of persons	No. of persons to be trained during project period						No. of Training to be organized during project period						No. of person days to be trained during project period					
			I yr	II year	III year	IV year	V Yr	Total	I yr	II year	III year	IV year	V yr	Total	I yr	II year	III year	IV year	V yr	Total
1	PIAs	1	-		-	-	-	-	-	1	1	1	-	3	-	5	5	5	-	15
2	WDTs	4	-	3	4	-	-	7	-	1	1	1	-	3	-	9	9	9	-	27
3	UGs	200	-	40	160	-	-	200	-	1	2	2	-	5	-	40	160	-	-	200
4	SHGs	150	-	30	60	30	-	120	-	1	4	4	-	9	-	90	120	90	-	300
5	WCs	60	-	10	50	-	-	60	-	1	1	1	-	3	-	30	180	-	-	210
6	GPs	40	-	-	40	40	-	80	-	1	1	1	-	3	-	-	120	120	-	240
7	Community	960	-	300	300	360	-	960	-	1	3	2	-	6	-	300	300	360	-	960
8	EXPOSURE TOUR INTER STATE	35	-	-	35	-	-	35	-	-	1	-	-	1	-	-	221	-	-	221
9	EXPOSURE TOUR INTRA STATE	35	-	-	35	-	-	35	-	-	1	-	-	1	-	-	105	-	-	105
10	PM/SLNA	1	-	-	1	-	-	1	-		5	-	-	5	-	-	5	-	-	5
11	TOTAL PHYSICAL	1486	-	383	685	430	-	1498	-	7	20	12	-	39	-	481	1225	584	-	2283

Table- Capacity Building Activities Plan at different Levels – (District, Block & Village Level)

District Level Training Plan for WDT												
Sr. No	Trg. Level	Name of Activity	No. of day	No. of Person	Total Person	Name of Institute					Rate per day per Trainee	Total Amt.
						IMTI	KVK	CSWRI	NGO	Dept.		
1	District Level	Basic WS	6	4	24	1					1050	25200
2	District Level	Tech. Trg. For Animal Hus.	5	1	5	1					1050	5250
3	District Level	SHG Management IGA& Credit Linkages	5	2	10		1				850	8500
4	District Level	Spl. Trg. Bench Marking, PRA, DPR Preparation	5	4	20	1					1050	21000
5	District Level	Tech, Trg. For WS Treatment including water budgeting	4	1	4	1					1050	4200
6	District Level	Tech. Trg. On Agriculture	5	1	5	1					1050	5250
7	District Level	Spl. Trg. On book accounts & record keeping	3	4	12			1			850	10200
8	District Level	Spl. Trg. Facilitation for peoples Inst.	3	4	12			1			850	10200
9	District Level	Planing, Monitoring & Learning MIS+CB and Quality Control	3	4	12	1					1050	12600
10	District Level	Gender Sensitization & Conflict Management	3	4	12	1					1050	12600
11	District Level	Spl. Trg. On Documentation Skill	2	4	8	1					1050	8400
12	District Level	TOT for WC / SHG / UG & Community	5	4	20	1					1050	21000
13	District Level	Spl. Trg. On GIS / RS	3	1	3	1					1050	3150
14	District Level	Production Techniques for crops & horticulture	3	1	3	1					1050	3150
15	District Level	Exposer Visit Out side State	7	35	245	1					2050	502250
16	District Level	Collective marketing / Processing	3	40	120		1				450	54000
17	District Level	Micro Enterprises Development	3	15	45		1				450	20250
18	District Level	Credit Linkages	2	15	30		1				450	13500
19	District Level	Micro Enterprises Development	3	15	45		1				450	20250
20	District Level	Credit Linkages	2	15	30		1				450	13500
21	District Level	State Level Training Plan PM/SLNA (0.05%)										32000
		Total Amt.										806450

Block Level Training Plan

Sr. No	Trg. Level	Name of Activity	No. of day	No. of Person	Total Person	Name of Institute					Rate per day per Trainee	Total Amt.
						IMTI	KVK	CSWRI	NGO	Dept.		
1	Block Level	SHG's Trg. 1 day expo. & two day trg	3	300	900				1		375	337500
2	Block Level	Panchayat Trg Particpentry planning, role & responceibilities, shared vision	2	30	60				1		200	12000
3	Block Level	SHG Trg	2	30	60				1		200	12000
4	Block Level	SHG Management	1	50	50				1		200	10000
5	Block Level	Fincial Record keeping for Accountant for SHG	2	30	60				1		200	12000
6	Block Level	Income generating Activity	2	30	60				1		200	12000
7	Block Level	Fed of SHG's at Block Level	3	30	90				1		375	33750
8	Block Level	Income generating Activity	2	30	60				1		200	12000
9	Block Level	Income generating Activity	2	30	60				1		200	12000
10	Block Level	Fincial Management	2	60	120				1		200	24000
11	Block Level	Fincial Management	2	60	120				1		200	24000
12	Block Level	Exposer Visit with in a State	3	74	221	1					1050	231950
		Total Amt.										733200

Village Level Training Plan

Sr. No	Trg. Level	Name of Activity	No. of day	No. of Person	Total Person	Name of Institute					Rate per day per Trainee	Total Amt.
						IMTI	KVK	CSWRI	NGO	Dept		
1	Village Level	1 day trg. Of 30 SHG members 50 at a time (2*15 SHG)	1	300	300				1		200	60000
2	Village Level	1 day trg. Of 30 SHG members 50 at a time (2*15 SHG)	1	300	300				1		200	60000
Training Plan for UGs												
3	Village Level	Gram Shbha Trg.-village community of land owners 6 training (5 Gram Panchayat)	6	310	1860				1		200	372000
4	Village Level	Farm produce Management Training (5 Gram Panchayat)	3	145	435				1		200	87000
5	Village Level	Specific Skill Building and Development training for individuals in a common grup (5 Gram Panchayat)	15	45	675				1		200	135000
6	Village Level	Income generating Activity (5 Gram Panchayat)	2	90	180				1		200	36000
7	Village Level	Post Project Management (5 Gram Panchayat)	5	90	450				1		200	90000
8	Village Level	Training of Watershed Activity for Community	1	200	200				1		200	40000
Training Plan for WC												
9	Village Level	Bench marking orientation	2	145	290				1		200	58000
10	Village Level	DPR Trg. For WC and Panchayat members 50 person each	2	150	300				1		200	60000
		Total Amt.										998000
		Grand Total										2537650

Table:- Education and Communication (IEC) activities in Project area (1% of total project cost)

S.No.	Activity	Executing agency	Allocation out 1%of Total Project Cost	Allocation in lacs						Expected Outcome
				1st year	IInd year	IIIrd Year	IVth Year	Vth Year	Total	
1	POP/CLAY/WOOD/PLASTIC made Model which show Watershed Activities	PIA	0.952	0	0	0	0	0	0	Information about watershed
2	Display board/Plaxy board	PIA		0.35	0.35	0.252	0	0	0.952	----- do ----
3	Wall Panting which show Watershed activities, Target and Gain	PIA	1.903	0.3	0.3	0	0	0	0.6	----- do ----
4	Watershed Development related printed Pumplet/Leaflets/Chart/Poster	PIA		0.1	0.1	0.1	0	0	0.3	----- do ----
5	Slogan writing	PIA		0.60	0.403	0	0	0	1.003	----- do ----
6	Vedeography/Photography/Short film and Interview of Cultivators/Meetings of Successful Story	PIA	1.269	0.20	0.20	0.18	0.103	0	0.683	----- do ----
7	Competetion of Debate and Essay writing	PIA		0.05	0.05	0.1	0	0	0.2	----- do ----
8	Interview and Advetisment on Radeo/TV	PIA		0.05	0.07	0.266	0	0	0.386	----- do ----
9	Showing stall on the occcation of cultural festivals/Fairs	PIA	0.952	0	0.10	0.10	0.028	0	0.228	----- do ----
10	Nukkad Natak	PIA		0	0.32	0.304	0	0	0.624	----- do ----
11	katputali Pradarshan	PIA		0	0.10	0	0	0	0.1	----- do ----
12	Night Meeting	PIA	1.268	0	0.04	0.02	0.02	0.02	0.1	----- do ----
13	Soil Conservation week	PIA		0	0.2	0.2	0.1		0.5	----- do ----
14	Chetna raily	PIA		0	0.05	0.04	0	0	0.09	----- do ----
15	Cultural program which focus on watershed Development	PIA		0	0.3	0	0	0	0.3	----- do ----
16	Conduct cultivators Day and Field visit Day	PIA		0	0.10	0.10	0.078	0	0.278	----- do ----
	Total		6.344	1.65	2.683	1.662	0.329	0.02	6.344	

B) Livelihood Action Plan (LAP) :

An awareness programme has been undertaken at Gram Sabha for communication & sensitization of the target beneficiaries. Livelihood Action Plan is a pre requisite for availing the funds under the livelihood component. LAP has been prepared by the PIA in consultation with WDT, WC & the members of SHG,SC/ST, women, landless/ assetless households. Details of funds available & their utilisation is as under :

- (i) Total project cost **Rs.634.44 Lacs.**
- (ii)** Funds available under livelihood component is 9% of total project cost= **Rs.57.099 Lacs.**
 - (a) Seed money for SHGs as revolving fund = **Rs.38.50 Lacs.**
(minimum 60% of livelihood component)
No. Of SHG to be formed **154 Nos.**
No of persons (members) in SHGs **1540 Nos.**
 - (b) Seed money for enterprising individuals = **Rs.- 5.40 Lacs**
(minimum 10% of livelihood component)
No of persons identified as enterprising individuals **22 Nos.**

- (c) Funds for Enterprising SHG/Federations of SHG
(Maximum 30 % of livelihood activities)= **Rs.13.199 Lacs**

The funding for major livelihood activities will enable the enterprising SHGs/SHG federation to avail a composite loan for undertaking major livelihood activities or to upscale activities as recommended by the WC & approved by WCDC in consultation with line departments.

Details of enterprising SHG/federation is given below :

S.No.	Name of SHG/ SHG federation	Project Name	Project Cost in lacs	Grant in aid 50% of project cost or 2 lacs whichever is less	Bank loan
1	Federation to be formed as per requirement of SHG				

* Details of project activities can be prepared in coming years after formation of SHG federation or as the case may be.

C) Production Plan:

An awareness programme has been undertaken at Gram Sabha for communication & sensitization of the target beneficiaries. Production System & micro enterprises Action Plan is pre-requisite for availing the funds under the Production System & micro enterprises component. Production plan has been prepared by the PIA in consultation with WDT, WC & the members of Users Group. Details of funds available & their utilisation is as under :

- (i) Total project cost **Rs.634.44 Lacs.**
(ii) Funds available under Production System & Micro enterprises component is 10% of total project cost= **Rs.63.444 Lacs.**

Funds for Animal Husbandry activities **Rs. 13.714 lacs.**

Details of is Animal Husbandry activities given below :

S.No.	Name of Activity	Quantity	Unit cost	Cost of Activity in lacs
1	Awareness Programme			
2	Creation Of Disease Free Zone: Livestock's health coverage	46	-	2.314
3	Construction of Portable Manger With accessories			
4	Infertility Management: To ensure Livestock's Productivity			
(i)	Breed Improvement	12	0.20	2.40
(ii)	Distribution of Chaff Cutter	32	.20	6.40
(iii)	Fodder production enhancement.	520	0.005	2.60
Total				13.714

Awareness Programme

-Slogan Wall Painting,

Scientific Animal Husbandry Practices ; Seminars / Debates / Pamphlet distribution/ Stickers/ Chetana Rally Broadcasting / Telecasting Film Show Visit- intra/ inter/ out of State/ Abroad

Fortnightly Meetings with Livestock keeper to discuss and decide all breedable females to be covered.

Creation Of Disease Free Zone: Livestock's health coverage

Establishment of Pashudhan Seva Kendra (PSK) (Convergence with peer department)

Deworming to reduce worm load and enhance disease resistance. (Convergence with peer department)

Distribution of mineral mixture. (Convergence with peer department)

Free of Cost Vaccination in IWMP area Livestock for H.S., B.Q., F.M.D., PPR, ETV and Sheep Pox.

Ensure Hygenic measures to check Zonosis.(DAH/ IWMP)

Construction of Animal Sheds with Manger and Portable Manger With accessories

Provision of Cattle Water Troughs.

Infertility Management: To ensure Livestock's Productivity

Expansion of AI Coverage/ reduction in no.of infertile females.

PCPD+ COMBAT INFERTILITY+ CAMPS INFERTILITY RLDB+ CAMPS INFERTILITY SC COMPONENT

Breed Improvement: To ensure Livestock's Productivity enhancement

A.I. (Convergence with peer department)

Incentive based Mass Castration at Door Step of Scrub Bulls to Check ND Recycling.

Registration of bulls (Convergence with peer department)

Bull / Buck Distribution for NS-.Gir, Murrah And Sirohi /Jamunapari Breed Bulls/ Bucks Should Be Distributed For 3yrs 6 (3 In Each Iwmp Area, Where Ever A.I. Facility Is Not Available Round's O Clock. On 100% Subsidized Rate To WC.

Financial Incentive to the Inseminator for Calf Borns.

Convergence with peer Department/DAH/Agriculture/ATMA/ Board/ Trust/ Goseva

An Assistance to control Malnutrition: Protein Supplementation
Feed & fodder production enhancement.

Chapter IV

Proposed Development plan and Activity wise Total Abstract of Cost

Activity	(A) Preparatory phase activities capacity building trainings & EPA								
	Unit	Qty	Unit Cost in Rs	Total Cost (Lakhs)	Cost from project fund (Lakhs)	Labour & Material		Convergence Fund (Lakhs)	Beneficiary Contribution (Lakhs)
						Lab.	Met.		
Admn. (10%)				63.444	63.444				
Monitoring (1%)				6.345	6.345				
Evaluation (1%)				6.345	6.345				
EPA (4%)				25.377	25.377	5.077	20.30		
I & CB (5%)				31.722	31.722				
DPR (1%)				6.345	6.345				
Total A				139.58	139.578	5.077	20.30		
(B) NATURAL RESOURCE MANAGEMENT (56%)									
Conservation measures for arable land									
Vegetative Contour Bund	M	74171	0.00167	223.87	123.866	117.680	6.186	100.00	6.193
Masonry Str. (W. Weir)	Nos.	210	0.25	52.5	52.5	10.50	42.00		2.625
Earthen check Dam	Nos.	155	0.32	49.6	49.6	19.84	29.76		2.48
Bank Stabilization on Peripheral Bund	Mtr	17535	0.002	85.07	35.07	33.32	1.75	50	1.753
Total (b1)				411.04	261.036	181.34	79.696	150	13.051
Conservation measures for Non arable land									
Pasture Development	Ha	25	0.27	6.75	4.35	3.25	1.10	2.4	
Total (b2)		25	0.27	6.75	4.35	3.25	1.10	2.4	
Drainage line treatment									
Small Masonry Check dam	Nos	25	0.4	10	10	3.70	6.30		
Gully Plug str.	Nos.	70	0.32	22.4	22.4	8.96	13.44		
A. Repair / Deepening of existing Water Body	Nos					0	0		
B. Newly construction	Nos.					0	0		
Repair of old WHS (Masonry Structures)	Nos					0	0		
Ground water Recharge Structures/ Masonry Structures	Nos	6	-	57.5	57.5	11.50	46.00		
Total (b3)				89.9	89.9	24.16	65.74		
Total (B)				507.69	355.286	208.75	146.53		

(C) Production measures for Arable land									
Horticultural Plantation	Ha.	108	0.24	25.92	25.92		25.92		5.184
Sprinklers and Drip irrigation	Ha.	86	0.35	30.1	0		0	30.1	0
Vegetables	Nos.	593	0.01	5.93	5.93		5.93		1.186
Medicinal Plants	Nos.			0	0		0		0
Vermi Compost	Nos.	37	0.24	8.88	8.88		8.88		1.776
Crop Demonstration	Nos.	180	0.05	9.0	9.0		9.0		1.8
Storage Seed Bin	Nos			0	0		0		0
Nursery	Nos			0	0		0		0
Breed Improvement	Nos.	12	0.2	2.4	2.4		2.40		0.48
Distribution of Chaff cutter	Nos	32	0.2	6.4	6.4		6.40		1.28
Distribution of Mangers	Nos.			0	0		0		0
Fodder Demonstration	Nos.	520	0.005	2.6	2.6		2.60		0.52
Animal health Camps	Nos.	46	0.05	2.314	2.314		2.314		0.4628
Total (C)				93.544	63.444		63.444		12.689
(D) Micro Enterprise (Livelihood) (9%)									
Revolving Fund to SHG (60 % minimum)	Nos	154	0.25	38.5	38.5				
Revolving Fund to enterprising individual (10 % maximum)	Nos	22	0.25	5.4	5.4				
Grant in aid to enterprising SHG or Federation of SHGs individual (30% max.)	Nos	7	2	13.199	13.199				
Total (D)				57.099	57.099				
(E) Consolidation Phase				19.033	19.033				
Grand Total (A+B+C+D+E)				816.94	634.44	213.827	289.67	182.5	

Activity wise Total Abstract of Cost

S.NO	ACTIVITY	COST
A	Preparatory phase activities capacity building trainings & EPA	139.577
B	Natural resource management	355.287
C	Production measures for Arable land pasture	63.444
D	Livelihood	57.099
E	Consolidation Phase	19.033
	TOTAL	634.44
F	Convergence with NREGA & Agriculture ext.department	182.50
	TOTAL	816.94

Chept Vth

Convergence Fund Plan

Convergence with NREGA & Agriculture ext. & Horticulture Department

Activity	No	Unit cost	Total cost	Yearwise											
				1st year		2nd year		3rd year		4th year		5th year		6th year	
				Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
(A) Horticulture department Drip Irrigation	86	0.35	30.10					26	9.10	20	7.0	20	7.0	20	7.0
(B) MG NREGA								0		0		0			0
Cat. 4	100	1.5	150.00					25	37.5	25	37.5	25	37.5	25	37.5
Pasture development	10	0.27	2.40					3	.81	3	.71	2	.44	2	.44
Total (A + B)			182.50						47.41		45.21		44.94		44.94

Chept Vth

Consolidated Annual Action Plan

Activity	(A) Preparatory phase activities capacity building trainings & EPA																	
	Unit	Qty	Unit Cost (Rs.)	Total Cost (lakhs)	1st Year 11-12		2nd Year 12-13		3rd Year 13-14		4th Year 14-15		5th Year 15-16		6th Year 16-17		Total Cost From Project Fund (Lakhs)	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
Admin. (10%)				63.444		0		9.517		12.689		15.861		12.689		12.689		63.444
Monitoring (1%)				6.345		0		1.269		1.586		1.586		1.269		0.634		6.345
Evaluation (1%)				6.345		0		0.000		0.634		2.538		0.000		3.172		6.345
EPA (4%)				25.377		0		0.000		25.377		0.000		0.000		0.000		25.377
I & CB (5%)				31.722		0		12.689		6.344		6.344		6.344		0.000		31.722
DPR (1%)				6.345		0		6.345		0.000		0.000		0.000		0.000		6.345
Total A				139.578		0		29.819		46.631		26.330		20.302		16.496		139.578
(B)	NATURAL RESOURCE MANAGEMENT (56%)																	
Conservation measures for arable land																		
Vegetative Contour Bund	M	74171	0.00167	123.866		0		0	25954	43.343	33385	55.753	14832	24.77	0	0	74171	123.866
Masonry Str. (W. Weir)		210	0.25	52.5		0		0	72	18	94	23.5	44	11	0	0	210	52.500
Earthen check Dam	Nos	155	0.32	49.6		0		0	52	16.64	70	22.4	33	10.56	0	0	155	49.600
Bank Stabilization on Peripheral Bund	M	17535	0.002	35.07		0		0	6125	12.25	7895	15.79	3515	7.03	0	0	17535	35.070
Total b1				261.036		0		0		90.233		117.443		53.36	0	0		261.036
Conservation measures for Non arable land																		
Pasture Development	Ha	25	0.27	4.35		0		0	25	4.35	0	0	0	0	0	0	25	4.350
Total b2				4.35		0		0		4.35		0		0		0		4.350

Drainage line treatment																		
Small Masonry Check dam	Nos	25	0.4	10.00	0	0	0	0	9	3.6	12	4.8	4	1.6	0	0	25	10
Gully Plug str.	Nos	70	0.32	22.4	0	0	0	0	26	8.32	31	9.92	13	4.16	0	0	70	22.4
Ground water Recharge Structures /Masonry Structures Anicut	Nos	6		57.5	0	0	0	0	2	18.5	3	31	1	8	0	0	6	57.5
Total b3				89.90	0.00	0.00	0.00	0.00	37.00	30.42	46.00	45.72	18.00	13.76	0.00	0.00	101.00	89.90
Total B				355.286		0		0		125.003		163.163		67.12	0	0	101	355.286
(C)	PRODUCTION SYSTEM AND MICRO ENTERPRISES (19%)																	
(I) Production measures for Arable land (10 %)																		
Horticultural Plantation	Ha	108	0.24	25.92	0	0	0	0	20	4.8	39	9.36	39	9.36	10	2.4	108	25.920
Sprinklers and Drip irrigation	Ha			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000
Vegetables	Nos	593	0.01	5.93	0	0	0	0	118	1.18	208	2.08	208	2.08	59	0.59	593	5.930
Medicinal Plants	Nos			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000
Vermi Compost	Nos	37	0.24	8.88	0	0	0	0	7	1.68	12	2.88	12	2.88	6	1.44	37	8.880
Crop Demonstration	Nos	180	0.05	9.00	0	0	0	0	36	1.8	63	3.15	63	3.15	18	0.9	180	9.000
Storage Seed Bin	Nos			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000
Nursery	Nos			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000
Breed Improvement	Nos	12	0.2	2.4	0	0	0	0	5	1	5	1	2	0.4	0	0	12	2.400
Distribution of Chaff cutter	Nos	32	0.2	6.4	0	0	0	0	6	1.2	11	2.2	11	2.2	4	0.8	32	6.400
Distribution of Mangers	Nos			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000
Fodder Demonstration	Nos	520	0.005	2.6	0	0	0	0	104	0.52	182	0.91	182	0.91	52	0.26	520	2.600
Animal health Camps	Nos	46	0.05	2.314	0	0	0	0	9	0.45	15	0.75	13	0.65	9	0.464	46	2.314
Total C				63.444	0	0	0	0	0	12.6300		22.3300		21.6300		6.8540		63.444

(D) Micro Enterprise (9 %)																		
Revolving Fund to SHG (60 % minimum)	Nos	154	0.25	38.5	0	0	0	0	23	5.75	62	15.5	62	15.5	7	1.75	154	38.500
Revolving Fund to enterprising individual (10 % maximum)	Nos	22	0.25	5.4	0	0	0	0	5	1.25	8	2	6	1.4	3	0.75	22	5.400
Grant in aid to enterprising SHG or Federation of SHGs individual (30 % maximum)	Nos	7	2.00	13.199	0	0	0	0	0	0	1	2.127	4	7.638	2	3.434	7	13.199
Total D				57.099	0	0	0	0	0	7.000	0	19.627	0	24.538	0	5.934	0	57.099
(E) Consolidation Phase				19.033	0	0	0	0	0	0	0	0	0	0	0	19.033	0	19.033
Grand Total A+B+C+D+E				634.440	0	0	0	29.819	0	191.264		231.450		133.590		48.317	0	634.440

Gram Panchayat Lorwada

Activity	(A) Preparatory phase activities capacity building trainings & EPA																	
	Unit	Qty	Unit Cost (Rs.)	Total Cost (lakhs)	1st Year 11-12		2nd Year 12-13		3rd Year 13-14		4th Year 14-15		5th Year 15-16		6th Year 16-17		Total Cost From Project Fund (Lakhs)	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
Admin. (10%)				11.808				1.771		2.362		2.952		2.362		2.362		11.808
Monitoring (1%)				1.181				0.236		0.295		0.295		0.236		0.118		1.181
Evaluation (1%)				1.181				0.000		0.118		0.472		0.000		0.590		1.181
EPA (4%)				4.723				0.000		4.723		0.000		0.000		0.000		4.723
I & CB (5%)				5.904				2.362		1.181		1.181		1.181		0.000		5.904
DPR (1%)				1.181				1.181		0.000		0.000		0.000		0.000		1.181
Total A				25.978				5.550		8.679		4.900		3.779		3.070		25.978
(B)	NATURAL RESOURCE MANAGEMENT (56%)																	
Conservation measures for arable land																		
Vegetative Contour Bund	Mtr.	13177	0.00167	22.005					4612	7.702	5930	9.903	2635	4.400			13177	22.005
Masonry Str. (W. Weir)		50	0.25	12.500					17	4.250	23	5.750	10	2.500			50	12.500
Earthen check Dam	Nos	30	0.32	9.6					10	3.2	14	4.48	6	1.92			30	9.600
Bank Stabilization on Peripheral Bund	Mtr.	5010	0.002	10.020					1750	3.50	2255	4.51	1200	2.004			6000	10.020
Total b1				54.125						18.652		24.643		10.830			0	54.125
Conservation measures for Non arable land																		
Pasture Development	Ha	10	0.03	0.300					10	0.3	0	0	0	0			10	0.300
Total b2				0.300						0.3							0	0.300

Drainage line treatment

Small Masonry Check dam	Nos																	
Gully Plug	Nos	10	0.32	3.20				4	1.28	4	1.28	2	0.64	0	0	10	3.200	
Ground water Recharge Structures /Masonry Structures Anicut	Nos	1	8.50	8.500				1	8.5	0	0	0	0			1	8.500	
Total b3				11.700												0	11.700	
Total B				66.125			0.000		9.780		1.280		0.640		0.000	0	66.125	
(C)																		
(C) Production measures for Arable land (6 %)																		
Horticultural Plantation	Ha.	20	0.24	4.800				4	0.96	7	1.68	7	1.68	2	0.48	20	4.800	
Sprinklers and Drip irrigation	Ha.															0	0.000	
Vegetables	Nos	110	0.01	1.100				22	0.22	39	0.39	39	0.39	10	0.1	110	1.100	
Medicinal Plants	Nos	-	-													0	0.000	
Vermi Compost	Nos	10	0.24	2.400				2	0.48	3	0.72	3	0.72	2	0.48	10	2.400	
Crop Demonstration	Nos	30	0.05	1.500				6	0.3	10	0.5	10	0.5	4	0.2	30	1.500	
Storage Seed Bin	Nos	-	-													0	0.000	
Nursery	Nos	-	-													0	0.000	
Breed Improvement	Nos	3	0.2	0.600				1	0.2	1	0.2	1	0.2			3	0.600	
Distribution of Chaff cutter	Nos	5	0.2	1.000				1	0.2	2	0.4	2	0.4			5	1.000	
Distribution of Mangers	Nos															0	0.000	
Fodder Demonstration	Nos	20	0.005	0.100				4	0.02	7	0.035	7	0.035	2	0.01	20	0.100	
Animal health Camps	Nos	6	0.05	0.308				1	0.05	2	0.1	2	0.1	1	0.058	6	0.308	
Total C				11.808			0.000		2.362		4.133		4.133		1.181	0	11.808	

(D) Micro Enterprise (9 %)																		
Revolving Fund to SHG (60 % minimum)	Nos	30	0.25	7.500					4	1.00	12	3.00	12	3.00	2	0.5	30	7.500
Revolving Fund to enterprising individual (10 % maximum)	Nos	4	0.25	1.000					1	0.25	1	0.25	1	0.25	1	0.25	4	1.000
Grant in aid to enterprising SHG or Federation of SHGs individual (30 % maximum)	Nos	1	2.00	2.127							1	2.127					1	2.127
Total D				10.627						1.771		4.133		4.133		0.590	0	10.627
(E) Consolidation Phase				3.542												3.542	0	3.542
Grand Total A+B+C+D+E				118.080				5.550	0.000	22.592	0.000	14.446	0.000	12.684	0.000	8.384	0	118.080

**Chapt Vth Annual Action Plan
Gram Panchayat Jadawata**

Activity	(A) Preparatory phase activities capacity building trainings & EPA																	
	(B)																	
	Unit	Qty	Unit Cost (Rs.)	Total Cost (lakhs)	1st Year 11-12		2nd Year 12-13		3rd Year 13-14		4th Year 14-15		5th Year 15-16		6th Year 16-17		Total Cost From Project Fund (Lakhs)	
				Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	
Admin. (10%)			7.260				1.089		1.452		1.815		1.452		1.452		7.260	
Monitoring (1%)			0.726				0.145		0.182		0.182		0.145		0.073		0.726	
Evaluation (1%)			0.726				0.000		0.073		0.290		0.000		0.363		0.726	
EPA (4%)			2.904				0.000		2.904		0.000		0.000		0.000		2.904	
I & CB (5%)			3.630				1.452		0.726		0.726		0.726		0.000		3.630	
DPR (1%)			0.726				0.726		0.000		0.000		0.000		0.000		0.726	
Total A			15.972				3.412		5.336		3.013		2.323		1.888		15.972	
(B)	NATURAL RESOURCE MANAGEMENT (56%)																	
Conservation measures for arable land																		
Vegetative Contour Bund	M	16477	0.00167	27.516					5767	9.630	7415	12.383	3295	5.503			16477	27.516
Masonry Str. (W. Weir)		20	0.25	5.000					7	1.750	9	2.250	4	1.00			20	5.000
Earthen check Dame	Nos	-															0	0
Bank Stabilization on Peripheral Bund	Mtr	1670	0.002	3.340					580	1.16	750	1.50	340	0.68			1670	3.34
Total b1				35.856					12.54		16.133		7.183			0	35.856	
Conservation measures for Non arable land																		
Pasture Development	Ha																	
Total b2																		

Drainage line treatment																		
Small Masonry Check dam	Nos	8	0.4	3.20					3	1.2	4	1.6	1	0.4			8	3.2
Gully Plug	Nos	5	0.32	1.6					2	0.64	2	0.64	1	0.32			5	1.6
Retaining Wall	Nos																0	0
Ground water Recharge Structures /Masonry Structures Anicut	Nos																0	0
Total b3				4.8						1.84	6	2.24	2	0.72			8	4.8
Total B				40.656						14.389		18.376		7.891			0	40.656
(C)	PRODUCTION SYSTEM AND MICRO ENTERPRISES (19%)																	
	(C) Production measures for Arable land (6 %)																	
Horticultural Plantation	Ha.	13	0.24	3.120					2	0.48	5	1.2	5	1.2	1	0.24	13	3.120
Sprinklers and Drip irrigation	Ha.																0	0.000
Vegetables	Nos	54	0.01	0.540					11	0.11	19	0.19	19	0.19	5	0.05	54	0.540
Medicinal Plants	Nos																0	0.000
Vermi Compost	Nos																0	0.000
Crop Demonstration	Nos	20	0.05	1.000					4	0.2	7	0.35	7	0.35	2	0.1	20	1.000
Storage Seed Bin	Nos																0	0.000
Nursery	Nos																0	0.000
Breed Improvement	Nos	2	0.2	0.400					1	0.2	1	0.2					2	0.400
Distribution of Chaff cutter	Nos	6	0.2	1.200					1	0.2	2	0.4	2	0.4	1	0.2	6	1.200
Distribution of Mangers	Nos																0	0.000
Fodder Demonstration	Nos	100	0.005	0.500					20	0.1	35	0.175	35	0.175	10	0.050	100	0.500
Animal health Camps	Nos	10	0.05	0.500					2	0.1	3	0.15	3	0.15	2	0.1	10	0.500
Total C				7.260				0.000		1.390		2.665		2.465		0.740	0	7.26

(D) Micro Enterprise (9 %)																		
Revolving Fund to SHG (60 % minimum)	Nos	20	0.25	5.000					3	0.75	8	2	8	2	1	0.25	20	5.000
Revolving Fund to enterprising individual (10 % maximum)	Nos	2	0.25	0.500					1	0.25	1	0.25					2	0.500
Grant in aid to enterprising SHG or Federation of SHGs individual (30 % maximum)	Nos	1	1.00	1.034									1	1.034			1	1.034
Total D				6.534				0.000		1.089		2.541		2.541		0.363		6.534
(E) Consolidation Phase				2.178												2.178		2.178
Grand Total A+B+C+D+E				72.600				3.412	0.000	22.195	0.000	26.592	0.000	15.232	0.000	5.169	0.000	72.600

Chept Vth Annual Action Plan
Gram Panchayat Padhana

Activity	(A) Preparatory phase activities capacity building trainings & EPA																		
	Unit	Qty	Unit Cost (Rs.)	Total Cost (lakhs)	1st Year 11-12		2nd Year 12-13		3rd Year 13-14		4th Year 14-15		5th Year 15-16		6th Year 16-17		Total Cost From Project Fund (Lakhs)		
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	
Admin. (10%)				16.776				2.516		3.355		4.194		3.355		3.355		16.776	
Monitoring (1%)				1.678				0.336		0.420		0.420		0.336		0.168		1.678	
Evaluation (1%)				1.678				0.000		0.168		0.671		0.000		0.839		1.678	
EPA (4%)				6.710				0.000		6.710		0.000		0.000		0.000		6.710	
I & CB (5%)				8.388				3.355		1.678		1.678		1.678		0.000		8.388	
DPR (1%)				1.678				1.678		0.000		0.000		0.000		0.000		1.678	
Total A				36.908				7.885		12.330		6.962		5.368		4.362		36.908	
(B)	NATURAL RESOURCE MANAGEMENT (56%)																		
Conservation measures for arable land																			
Vegetative Contour Bund	M	12871	0.00167	21.495					4500	7.515	5800	9.686	2571	4.294				12871	21.495
Masonry Str. (W. Weir)		50	0.25	12.500					17	4.25	22	5.5	11	2.75				50	12.500
Earthen check Dame	Nos	50	0.32	16.000					17	5.44	22	7.04	11	3.52				50	16.000
Bank Stabilization on Peripheral Bund	M	4175	0.002	8.350					1460	2.92	1880	3.76	835	1.67				4175	8.350
Total b1				58.345						20.125		25.986		12.234				0	58.345
Conservation measures for Non arable land																			
Pasture Development	Ha																		
Total b2				0															

Drainage line treatment																		
Small Masonry Check dam	Nos	5	0.4	2.000					1	0.4	2	0.8	2	0.8			5	2.000
Gully Plug	Nos	30	0.32	9.600					10	3.2	13	4.16	7	2.24			30	9.600
Ground water Recharge Structures /Masonry Structures Anicut	Nos	3	8.00	24.000							2	16	1	8			3	24.000
Total b3				35.600						3.6		20.96		11.04			0	35.600
Total B				93.945				0.000		23.725		46.946		23.274		0.000	0	93.945
(C)	PRODUCTION SYSTEM AND MICRO ENTERPRISES (19%)																	
(I) Production measures for Arable land (10 %)																		
Horticultural Plantation	Ha	25	0.24	6.000					5	1.2	9	2.16	9	2.16	2	0.48	25	6.000
Sprinklers and Drip irrigation	Ha																0	0.000
Vegetables	Nos	221	0.01	2.210					44	0.44	77	0.77	77	0.77	23	0.23	221	2.210
Medicinal Plants	Nos																0	0.000
Vermi Compost	Nos	9	0.24	2.160					2	0.48	3	0.72	3	0.72	1	0.24	9	2.160
Crop Demonstration	Nos	50	0.05	2.500					10	0.5	18	0.9	18	0.9	4	0.2	50	2.500
Storage Seed Bin	Nos																0	0.000
Nursery	Nos																0	0.000
Breed Improvement	Nos	2	0.2	0.400					1	0.2	1	0.2					2	0.400
Distribution of Chaff cutter	Nos	10	0.2	2.000					2	0.4	3	0.6	3	0.6	2	0.4	10	2.000
Distribution of Mangers	Nos																0	0.000
Fodder Demonstration	Nos	200	0.005	1.000					40	0.2	70	0.35	70	0.35	20	0.1	200	1.000
Animal health Camps	Nos	10	0.05	0.506					2	0.1	4	0.2	2	0.1	2	0.106	10	0.506
Total C				16.776				0.000		3.520		5.900		5.600		1.756		16.776

(III) Micro Enterprise (9 %)

Revolving Fund to SHG (60 % minimum)	Nos	40	0.25	10.000					6	1.5	16	4	16	4	2	0.5	40	10.000
Revolving Fund to enterprising individual (10 % maximum)	Nos	6	0.25	1.500					1	0.25	2	0.5	2	0.5	1	0.25	6	1.500
Grant in aid to enterprising SHG or Federation of SHGs individual (30 % maximum)	Nos	2	2.00	3.598									1	2.00	1	1.598	2	3.598
Total D				15.098				0.000		1.750		4.500		6.500		2.348		15.098
(E) Consolidation Phase				5.033												5.033		5.033
Grand Total A+B+C+D+E				167.760				7.885		41.325		64.308		40.742		13.499		167.760

**Chept Vth Annual Action Plan
Gram Panchayat Jatwada Kalan**

Activity	(A) Preparatory phase activities capacity building trainings & EPA																	
	Unit	Qty	Unit Cost (Rs.)	Total Cost (lakhs)	1st Year 11-12		2nd Year 12-13		3rd Year 13-14		4th Year 14-15		5th Year 15-16		6th Year 16-17		Total Cost From Project Fund (Lakhs)	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
Admin. (10%)				10.560				1.584		2.112		2.640		2.112		2.112		10.560
Monitoring (1%)				1.056				0.211		0.264		0.264		0.211		0.106		1.056
Evaluation (1%)				1.056				0.000		0.106		0.422		0.000		0.528		1.056
EPA (4%)				4.224				0.000		4.224		0.000		0.000		0.000		4.224
I & CB (5%)				5.280				2.112		1.056		1.056		1.056		0.000		5.280
DPR (1%)				1.056				1.056		0.000		0.000		0.000		0.000		1.056
Total A				23.232				4.963		7.762		4.382		3.379		2.746		23.232
(B)	NATURAL RESOURCE MANAGEMENT (56%)																	
Conservation measures for arable land																		
Vegetative Contour Bund	M	12087	0.00167	20.186					4230	7.064	5440	9.085	2417	4.037			12087	20.186
Masonry Str. (W. Weir)		30	0.25	7.500					10	2.5	13	3.25	7	1.75			30	7.500
Earthen check Dame	Nos	25	0.32	8.000					8	2.56	11	3.52	6	1.92			25	8.000
Bank Stabilization on Peripheral Bund	M	4175	0.002	8.350					1460	2.92	1880	3.76	835	1.67			4175	8.350
Total b1				44.036						15.044		19.615		9.377	0	0		44.036
Conservation measures for Non arable land																		
Pasture Development	Ha	10	0.27	2.7					10	2.7							10	2.700
Total b2				2.7				0.000	10	2.7		0.000		0.000		0.000	10	2.700

sDrainage line treatment

Small Masonry Check dam	Nos	2	0.4	0.800					1	0.4	1	0.4					2	0.800
Gully Plug	Nos	5	0.32	1.6					2	0.64	2	0.64	1	0.32			5	1.600
Ground water Recharge Structures /Masonry Structures Anicut	Nos	1	10.00	10.000					1	10							1	10.000
Total b3				12.400													0	12.400
Total B				59.136			0.000		11.040		1.040		0.320		0.000		0	59.136
(C)	PRODUCTION SYSTEM AND MICRO ENTERPRISES (19%)																	
(C) Production measures for Arable land (10 %)																		
Horticultural Plantation	Ha	12	0.24	2.880					2	0.48	5	1.2	5	1.2			12	2.880
Sprinklers and Drip irrigation	Ha																0	0.000
Vegetables	Nos	94	0.01	0.940					19	0.19	33	0.33	33	0.33	9	0.09	94	0.940
Medicinal Plants	Nos																0	0.000
Vermi Compost	Nos	11	0.24	2.640					2	0.48	4	0.96	4	0.96	1	0.24	11	2.640
Crop Demonstration	Nos	30	0.05	1.500					6	0.3	10	0.5	10	0.5	4	0.2	30	1.500
Storage Seed Bin	Nos																0	0.000
Nursery	Nos																0	0.000
Breed Improvement	Nos	3	0.2	0.600					1	0.2	1	0.2	1	0.2			3	0.600
Distribution of Chaff cutter	Nos	5	0.2	1.000					1	0.2	2	0.4	2	0.4			5	1.000
Distribution of Mangers	Nos																0	0.000
Fodder Demonstration	Nos	100	0.005	0.500					20	0.1	35	0.175	35	0.175	10	0.05	100	0.500
Animal health Camps	Nos	10	0.05	0.500					2	0.1	3	0.15	3	0.15	2	0.1	10	0.500
Total C				10.560			0.000		2.050		3.915		3.915		0.680			10.560

(D) Micro Enterprise (9 %)																		
Revolving Fund to SHG (60 % minimum)	Nos	24	0.25	6.000					4	1	10	2.5	10	2.5			24	6.000
Revolving Fund to enterprising individual (10 % maximum)	Nos	4	0.25	0.900					1	0.25	2	0.5	1	0.15			4	0.900
Grant in aid to enterprising SHG or Federation of SHGs individual (30 % maximum)	Nos	1	2.00	2.604									1	2.604			1	2.604
Total D				9.504				0.000		1.584		3.696		3.696		0.528		9.504
(E) Consolidation Phase				3.168												3.168		3.168
Grand Total A+B+C+D+E				105.600				4.963	0.000	22.436	0.000	13.033	0.000	11.310	0.000	7.122	0.000	105.600

**Chept Vth Annual Action Plan
Gram Panchayat Ajnoti**

Activity	(A) Preparatory phase activities capacity building trainings & EPA																	
	Unit	Qty	Unit Cost (Rs.)	Total Cost (lakhs)	1st Year 11-12		2nd Year 12-13		3rd Year 13-14		4th Year 14-15		5th Year 15-16		6th Year 16-17		Total Cost From Project Fund (Lakhs)	
					Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
Admin. (10%)				17.040				2.556		3.408		4.260		3.408		3.408		17.040
Monitoring (1%)				1.704				0.341		0.426		0.426		0.341		0.170		1.704
Evaluation (1%)				1.704				0.000		0.170		0.682		0.000		0.852		1.704
EPA (4%)				6.816				0.000		6.816		0.000		0.000		0.000		6.816
I & CB (5%)				8.520				3.408		1.704		1.704		1.704		0.000		8.520
DPR (1%)				1.704				1.704		0.000		0.000		0.000		0.000		1.704
Total A				37.488				8.009		12.524		7.072		5.453		4.430		37.488
(B)	NATURAL RESOURCE MANAGEMENT (56%)																	
Conservation measures for arable land																		
Vegetative Contour Bund	M	19559	0.00167	32.664					6845	11.432	8800	14.696	3914	6.536			19559	32.664
Masonry Str. (W. Weir)		60	0.25	15.000					21	5.25	27	6.75	12	3			60	15
Earthen check Dame	Nos	50	0.32	16.000					17	5.44	23	7.36	10	3.2			50	16
Bank Stabilization on Peripheral Bund	M	2505	0.002	5.010					875	1.75	1130	2.26	500	1.00			2505	5.01
Total b1				68.674					23.872		31.066		13.736					68.674
Conservation measures for Non arable land																		
Pasture Development	Ha	5	0.27	1.350					5	1.35							5	1.35
Total b2				1.350					5	1.35							5	1.35

Drainage line treatment

Small Masonry Check dam	Nos	10	0.40	4.000					4	1.6	5	2	1	0.4			10	4
Gully Plug	Nos	20	0.32	6.400					8	2.56	10	3.2	2	0.64			20	6.4
Ground water Recharge Structures /Masonry Structures Anicut	Nos	1	15.00	15.000							1	15					1	15
Total b3				25.400													0	25.400
Total B				95.424				0.000		34.080		42.600		18.744		0.000		95.424
(C)	PRODUCTION SYSTEM AND MICRO ENTERPRISES (19%)																	
	(C) Production measures for Arable land (6 %)																	
Horticultural Plantation	Ha.	38	0.24	9.120					7	1.68	13	3.12	13	3.12	5	1.2	38	9.12
Sprinklers and Drip irrigation	Ha.																0	0
Vegetables	Nos	114	0.01	1.140					22	0.22	40	0.4	40	0.4	12	0.12	114	1.14
Medicinal Plants	Nos	-	-														0	0
Vermi Compost	Nos	7	0.24	1.680					1	0.24	2	0.48	2	0.48	2	0.48	7	1.68
Crop Demonstration	Nos	50	0.05	2.500					10	0.5	18	0.9	18	0.9	4	0.2	50	2.5
Storage Seed Bin	Nos	-	-														0	0
Nursery	Nos	-	-														0	0
Breed Improvement	Nos	2	0.2	0.400					1	0.2	1	0.2					2	0.4
Distribution of Chaff cutter	Nos	6	0.2	1.200					1	0.2	2	0.4	2	0.4	1	0.2	6	1.2
Distribution of Mangers	Nos	-	-														0	0
Fodder Demonstration	Nos	100	0.005	0.500					20	0.1	35	0.175	35	0.175	10	0.05	100	0.5
Animal health Camps	Nos	10	0.05	0.500					2	0.1	3	0.15	3	0.15	2	0.1	10	0.5
Total C				17.040				0.000		3.240		5.825		5.625		2.350		17.04

(D) Micro Enterprise (9 %)

Revolving Fund to SHG (60 % minimum)	Nos	40	0.25	10.000					6	1.5	16	4	16	4	2	0.5	40	10
Revolving Fund to enterprising individual (10 % maximum)	Nos	6	0.25	1.500					1	0.25	2	0.5	2	0.5	1	0.25	6	1.5
	2	2.00	3.836								1	2.00	1	1.836	2	3.836		
		15.336				0.000		2.556		5.964		5.964		0.852		15.336		
		5.112												5.112		5.112		
		170.400				8.009	0.000	52.400	0.000	61.461	0.000	35.786	0.000	12.744	0.000	170.400		

CHAPTER – VI EXPECTED OUT COMES

S. No.	Item	Unit of measurement	Pre-project Status	Expected Post-project Status	Remarks
1	2	3	4	5	6
1	Status of water table (Depth to Ground water level)	Meters	50 m	45 m	
2	Ground water structures repaired/ rejuvenated	No.	-	-	
3	Quality of drinking water	Description	Good	Very Good	
4	Availability of drinking water	Description	11 month	12 month	
5	Change in irrigated Area	Ha	1100	1500	
6	Change in cropping/ land use pattern	Description	Traditional	Mixed Cropping	
7	Area under agricultural crop	Ha			
	I	Ha Area under Single Crop	3588	2000	
	ii	Ha Area under Double Crop	1100	1500	
	iii	Ha Area under Multiple Crop			
8	Change in cultivated Area	Ha			
9 yield of major crops of area	Yield of Bajra	q/ha	14	16	
	Yield of Wheat	q/ha	22-26	30-32	
	Yield of Gram	q/ha	10-11	15-16	
	Yield of Mustard	q/ha	11-50	15-16	
S. No.	Item	Unit of	Pre-project	Expected Post-	Remarks

		measurement	Status	project Status	
10 production of major crops of area	Production of Bajra	ton	2424	2700	
	Production of Wheat	ton	2756	3000	
	Production of Gram	ton	12	15	
	Production of Mustard	ton	4824	5000	
11	Area under vegetation	Ha	NIL	50	
12	Area under horticulture	Ha	98	184	
13	Area under fuel	Ha	NIL		
14	Area under Fodder	Ha	150	250	
15	Fodder production	Mt	9000	10000	
16	Milk production	Litres/day	000		
17	SHGs Active	No.	0	150	
18	No. of livelihoods	No.	NIL	22	
19	Income	Rs.in la	0.15	0.20	
20	Migration	No.	235	100	
21	SHG Federations formed	No.	-	23	

CHAPTER VII TECHNICAL DESIGNS AND ESTIMATES

1. Technical designs and estimates for proposed activities has been attached.

2. For Proposed activities Estimates has been prepared as per GKN Sawai

Madhopur District 2013

3. For production system activities Agriculture/Horticulture/Animal Husbandry

department rates has been used.

Model Estimate

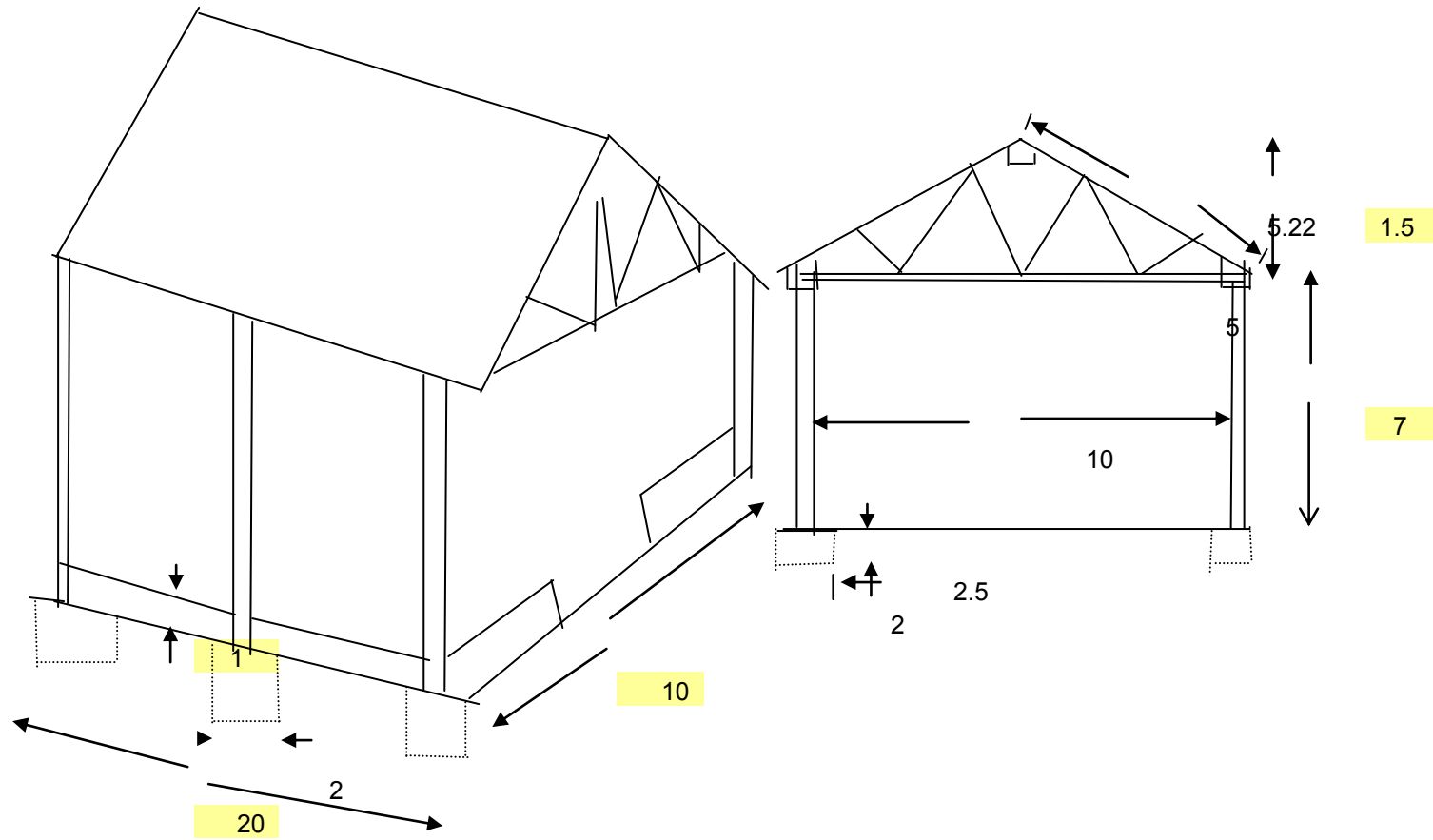
Vermi Compost

So.No	Name of work	Item no.	No	Length	width	Hight	Qty	Unit	Rate	Amount	
1	Excavation Hard soil	2B	6	2	2	2.5	60				
								1.70	Cum	92	156.40
2	C/C (1:5:10)	11 a	6	2	2	1	24		2033	1382.44	
								0.68	Cum		
3	Stone mesonary (1:6)	24C	6	2	2	1.5	36				
			2	16.25	1	1	32.5				
			2	10	1	1	20				
							88.5	cuf			
							2.51	Cum	1882	4723.82	
		26	6	1.25	1.25	7	65.625				
					1.86	Cum	1882	3500.52			
4	Pillor mesonary	27					1.86	Cum	440	818.40	
5	Plaster (1:4) 25 mm	67	6	5		7	210				
			2	16.25		3	97.5				
			2	10		3	60				
								367.5	Sqf		
								34.15	Sqm	166	5668.90
6	Chenal 3" * 1.5" Angle(1.5"*1.5") Angle (1"*1")				Length	Kg/feet	Kg				
			3	20	60	1.25	75	Kg	55	4125	
			6	5.22	31.32	0.9	28.19	Kg	55	1550	
			3	10	30	0.9	27.00	Kg	55	1485	
			3	8	24	0.35	8.40	Kg	55	462	
7	Cement sheets		14	6	3		252				
								23.42	Sqm	250	5855
8	color and finising									500	
9	Warmi						2	Kg		1000	

31227.48

Say

31000



MODEL ESTIMATE OF HORTICULTURE PLANTATION

S.No.	Details of work	Qty	Rate	Unit	Amount
1	Excavation of earth work in hard soil for digging of pits, $0.75 \times 0.75 \times 0.90 = 0.5062$ cum	0.51	81.20	cum	41.41
2	Treatment of pits				
a	Through chemicals	1.00	0.41	Per plant	0.41
b	Through manure	1.00	0.20	Per plant	0.20
3	Planting of plant with rehandling upto 100m, refilling of soil & compaction	1.00	2.60	Per plant	2.60
4	Cost of plant including transportation	1.00	20.00	Per plant	20.00
5	Making of thanwala, of 50 cm radius	1.00	1.90	Per plant	1.90
6	Watering of plant, 15 lit per plant five times in the year	5.00	1.90	Per plant	9.50
7	Weeding & hoeing three times in the year	3.00	1.30	Per plant	3.90
8	Cost of Mannure including transportation	1.00	5.00	Per kg	5.00
	Total				84.92
	Contengency 3%				2.55
	Grand Total				87.47

Per plant 88.00

Cost per Ha of Guava Plant

277 Plant per Ha

S.No.	Details of work	Qty	Rate	Unit	Amount
1	Plant spacing c/c 6mx6m	277	88	No	24376
2	20% Plant Gap filling in second Year	55.4	88	No	4875.20
3	Thor fencing work on field Boundary				
4	20% Plant Gap filling in second Year				
	Total Amount				29251

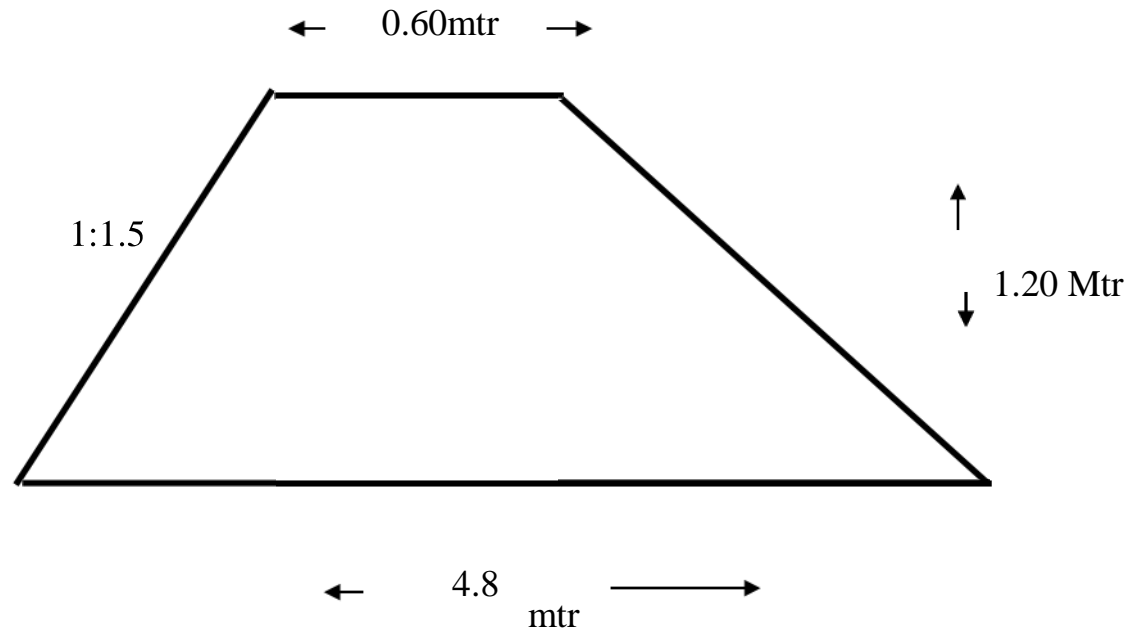
Say Rs 30000

Estimate

Name of Work - Construction of Earthen Checkdame Cost per 30 mtr length

S. No	Particulars	No	Length	Width, m	Height, m	Quantity M3	Rate * Rs. Per M3	Amount Rs
1	Dag Belling 5 Cm to 7.5 Cm	2	30.00			60.00	0.33	19.80
2	Eathwork for bund/ embankbund in dry mostsoil including lyning layers 1.5 cm braking of clods sorting of grass pabbles its and dressing in require profile when compacted manualy or by plain rolar with initial lead of 30 mtr and lift 1.5 mtr	1	30	2.4	1.2	86.4	92	7948.80
3	Seeding of Ratan Jot on the Bund	3	30.00	0.00	0.00	90.00	0.65	58.50
4	Overseding of Grass stylo Ameta	3	30.00	0.00	0.00	90.00	0.65	58.50
5	Cost of Ratan Jot Seed (0.2 Kg/100 Mtr.)	0	0.00	0.00	0.00	0.60	26.00	15.60
6	Cost of Stylo Ameta Seed	0	0.00	0.00	0.00	0.60	50.00	30.00
						Sub Total		8131.20
						Say		8000.00
						Cost of Westweir (3mtr. Length)		24000.00
						Grand Total		32000.00

Name of Work - Construction of Earthen Checkdame



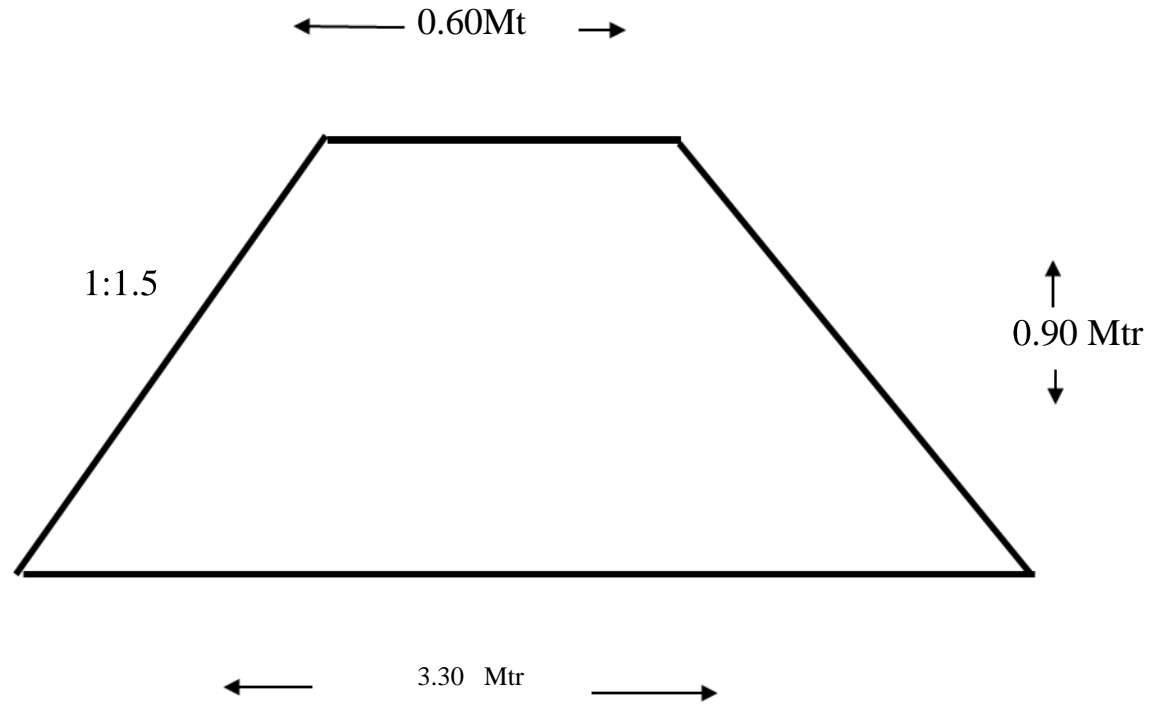
X Sectional Digram

Estimate

Name of Work - Construction of Madebandi on Arable Land

S.No	Particulars	No	Length	Width, m	Height, m	Quantity M3	Rate * Rs. Per M3	Amount Rs
1	Dag Belling 5 Cm to 7.5 Cm	2	100.00			200.00	0.33	66.00
2	Eathwork for bund/ embankbund in dry mostsoil including lyning layers 1.5 cm braking of clods sorting of grass pabbles its and dressing in require profile when compacted manually or by plain rolar with initial lead of 30 mtr and lift 1.5 mtr	1	100.00	1.95	0.90	175.50	92	16146.00
3	Seeding of Cster on the Bund	3	100.00	0.00	0.00	300.00	0.65	195
4	Overseding of Grass stylo Ameta	3	100.00	0.00		300.00	0.65	195
5	Cost of Cster Seed (0.2 Kg/100 Mtr.)	0	0.00	0.00	0.00	0.60	26.00	15.60
6	Cost of Stylo Ameta Seed	0	0.00	0.00	0.00	0.60	50.00	30.00
						Sub Total		16647.60
						Say		16700.00

Name of Work - Construction of Madebandi on Arable Land



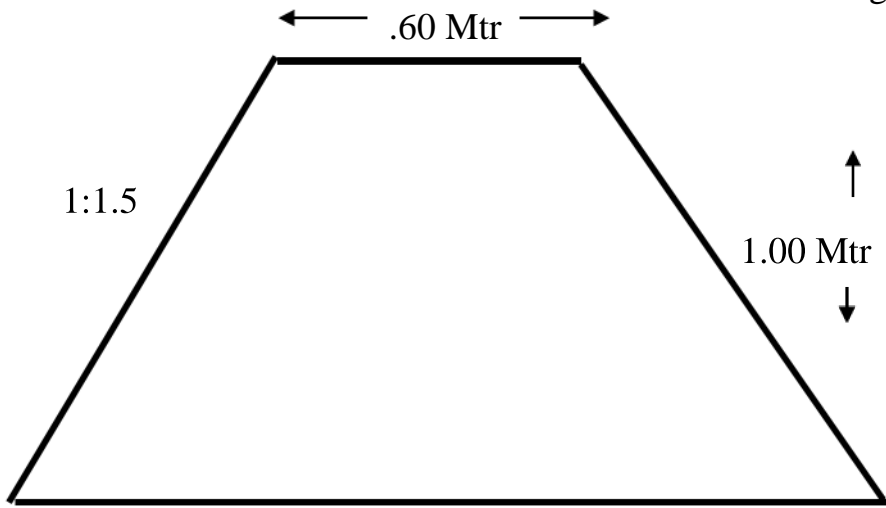
X Sectional Digram

Estimate

Name of Work - Construction of Bank Stabilization of Existing Nala

S.No	Particulars	No	Length	Width, m	Height, m	Quantity M3	Rate * Rs. Per M3	Amount Rs
1	Dag Belling 5 Cm to 7.5 Cm	2	100.00			200.00	0.33	66.00
2	Eathwork for bund/ embankbund in dry mostsoil including lyning layers 1.5 cm braking of clods sorting of grass pabbles its and dressing in require profile when compacted manually or by plain rolar with initial lead of 30 mtr and lift 1.5 mtr	1	100.00	2.10	1.00	2.10	92	19320
3	Seeding of Cster Seed on the Bund	3	100.00	0.00	0.00	300.00	0.65	195
4	Overseding of Grass stylo Ameta	3	100.00	0.00	0.00	300.00	0.65	195
5	Cost of Cster Seed (0.2 Kg/100 Mtr.)	0	0.00	0.00	0.00	0.60	26.00	15.60
6	Cost of Stylo Ameta Seed	0	0.00	0.00	0.00	0.60	50.00	30.00
						Sub Total		19821.00
						Say		20000.00

Name of Work - Construction of Bank Stabilization of Existing Nala



← 3.60 Mtr →
X Sectional Digram

विस्तृत तकमीना

कार्य का नाम- कृषि भूमि में वेस्टवीयर का निर्माण

3 मी. हैडवाल की लम्बाई

क्र. सं.		संख्या	लम्बाई	चौड़ाई	ऊंचाई	मात्रा	मूल्य	इकाई	रूपये
1.	नींव, खाई,परनाला में 1.5 गहराई तक मिट्टी की खुदाई करना, मल को कूटना, पानी डालना, बगल को संवारना, खुदी मिट्टी को बाहर निकालना, नींव भरने के बाद खाली स्थानों को पुनः मिट्टी से भरना तथा बची हुई मिट्टी को 50 मीटर की दूरी तक निस्तारण करना। (C) सख्त, चिकनी, कंकर मिट्टी में। (BSR आईटम सं.2B)								
	हेड वाल	1	3.00	0.90	0.90	2.43			
	हेड वाल एक्सटेन्सन	2	1.50	0.75	0.90	2.03			
	साइड वाल	2	1.00	0.60	0.90	1.08			
	एग्रान	1	3.00	1.00	0.45	1.35			
	टॉय वाल	1	3.00	0.45	0.60	1.21			
						8.10	100.00	प्रति घन मी.	810.00
2.	सीमेन्ट, कंक्रीट, नींव या फाँ में 40 मिमी. नामीय माप की पत्थर मिट्टी ईट गिट्टी, सीमेन्ट-रेत मसाला में 1 सीमेन्ट: 4 रेत: 8 गिट्टी अनुपात में मिलाकर डालना तथा कुटाई करना, तराई समेत। (c) ईट की गिट्टी के साथ। (BSR आईटम सं.11B)	1	3.00	0.90	0.30	0.81			
		2	1.50	0.75	0.30	0.68			
		2	1.00	0.60	0.30	0.36			
		1	3.00	1.00	0.15	0.45			
		1	3.00	0.45	0.15	0.20			
						2.50	2259.00	प्रति घन मी.	5647.50
3.	50मिमी. मोटाई में सीमेन्ट कंक्रीट 1:2:4 मिश्रण जिसमें 1 सीमेन्ट 2 बजरी 4 पत्थर की या ईट की 12 मी. नामीय गिट्टी के साथ मिलाकर डालना, कूटना, दबाना तथा तराई आदि समेत। (v) पत्थर की गिट्टी। (BSR आईटम सं. 58A)	1	3.00	0.60		1.80			
		2	1.50	0.60		1.80			
		2	1.00	0.45		0.90			
		1	3.00	0.30		0.90			
						5.40	244.00	प्रति वर्ग मी.	1317.60
4.	नींव तथा कुर्सी में पत्थर की वे रद्धा- ढोका सीमेन्ट- बजरी 1:3, 1:6 या 1:8 मसाले में, मय बगल की झिरी बन्द करना तथा तरीई आदि। (v)सीमेन्ट बजरी 1:6 (B SR आईटम सं.24A)	1	3.00	0.75	0.60	1.35			
		2	1.50	0.60	0.60	1.08			
		2	1.00	0.60	0.60	0.72			
		1	3.00	0.45	0.45	0.61			
		1	3.00	1.00	0.30	0.90			
						4.66	1815.00	प्रति घन मी.	8457.90
5.	अतिरिक्त जोड़े अधिरचना पत्थर की चिनाई में आईटम 21 से 24 तक तथा आईटम 25 के अनुसार। ,30 सेमी. से कम मोटाई के लिये	1	3.00	0.60	0.60	1.08			

	(BSR आईटम सं. 24+25)								
		2	1.50	0.60	0.90	1.62			
		2	1.00	0.60	0.60	0.72			
		1	3.00	0.45	0.30	0.41			
						3.83	1815.00	प्रति घन मी.	6951.45
6.	पत्थर या ईंट के काम पर सपाट या रूल्ड टीप 1:3 अनुपात में सीमेन्ट बजरी मसाले में मय तराई के। (V) पत्थर की ऊपर। (BSR आईटम सं. 70A) 25 mm`	1	3.00	0.60		1.80			
		4	1.50	0.60		3.60			
		2	1.00	0.60		1.20			
		2	3.00	0.30		1.80			
						8.40	144.00	प्रति वर्ग मी.	921.60
							योग		23650.83
	2: आकस्मिक व्यय								455.22
	सभी दरें BSR पं०स० स०मा० के अनुसार						महायोग		23240.99
							say		24000.00

कनिश्ठ अभियंता
आई.डब्ल्यू.एम.पी.
पंचायत समिति स०मा०

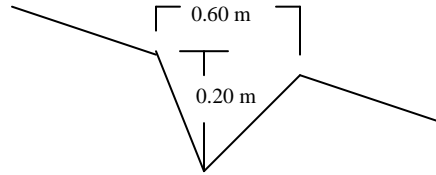
सहायक अभियंता
आई.डब्ल्यू.एम.पी.
पंचायत समिति स०मा०

मॉडल तकमीना 1 हैक्टेयर के लिए

वी डिच का निर्माण 8% से कम ढलान वाले क्षेत्र के लिए
 पिट माप $1/2 \times 0.60 \times 0.20 = 0.06$ वर्ग मीटर सीआई - 10 मी.
 वी डिच त्र 800 मीटर / हैक्टै.
 कुल मात्रा = $0.06 \times 800 = 48$ घन मीटर ($1/2 \times 0.60 \times 0.20$)

क्र.सं.	आईटम	इकाई	मात्रा	मूल्य	राशि
1	मिट्टी का कार्य बन्ध में, सूखी या गीलीद्ध, 15 सेमी. परत में डालना, ढेलों को तोडना, घास पात तथा कंकर बीनकर अलग करना तथा मिट्टी की दरेसी करना तथा भीप फूट रोलर/ हैड रेमर से मिट्टी दबाना, 1.5 मी उठान तथा 50 मी. दूरी के लिए। कठोर मिट्टी।	घन मी.	48.00	92.00	4416.00
2	बीज बुवाई बनाये गये रिज पर।	आरएमटी	800.00	0.65	420.00
3	धमन / स्टाईलो हमेटा / करडघास बीज 4 कि.ग्रा. / हैक्टे.	प्रति किग्रा./ हैक्टे.	4.00किग्रा.	50.00	200.00
			योग		5136.00
	2 % आकस्मिक व्यय				103.00
	सभी दरें BSR पं0स0 स0 मा0 के अनुसार		महायोग		5239.00
	Say				5250.00

कनिश्ठ अभियंता
 आई.डब्ल्यू.एम.पी.
 पंचायत समिति स0 मा0



सहायक अभियंता
 आई.डब्ल्यू.एम.पी.
 पंचायत समिति स0 मा0

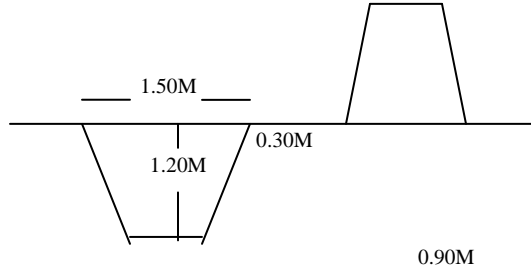
चारागाह क्षेत्र में डिच कम बण्ड फ़ैन्सिंग का निर्माण

क्रोस सैक्शन – 1.44 वर्गमीटर
 शीर्ष – 1.50 मी.
 तल – 0.90 मी.
 गहराई – 1.20 मी.

प्रति मीटर लम्बाई

क्र.सं.	आईटम	इकाई	मात्रा	मूल्य	राशि
1	नीव व ट्रेचेज में मिट्टी की खुदाई का कार्य, खुदी हुई मिट्टी का निस्तारण तथा समतल करना। कठोर मिट्टी।	घन मी.	1.44	162.00	233.28
2	बीज बुवाई बनाये गये रिज पर।	आएमटी	3.00	0.65	1.95
3	बीज की लागत	एलएस	–	–	2.00
	योग				237.23
	2 : आकस्मिक व्यय				7.12
	सभी दरें BSR पं०स० स० मा० के अनुसार		महायोग		244.35
	Say				250.00

कनिश्ठ अभियंता
 आई.डब्ल्यू.एम.पी.
 पंचायत समिति स० मा०



सहायक अभियंता
 आई.डब्ल्यू.एम.पी.
 पंचायत समिति स० मा०

विस्तृत तकमीना

कार्य का नाम – घास के बीज चारागाह क्षेत्र में बोना

लागत / 1 हैक्टे.

क्र.सं	आईटम	मात्रा	मूल्य	राशि
1	ट्रैक्टर द्वारा क्षेत्र की जुताई ।	1.0 हैक्टे.	एलएस	800.00
2	घास के बीज का छिडकाव	1.0 हैक्टे.	एलएस	135.00
3	स्टाईलो हमेटा बीज की लागत	6.0 किग्रा	30.00	180.00
4	धमन बीज की लागत	2.00 किग्रा.	50.00	100.00
5	मैन्चूर यूरिया की लागत	50.00 किग्रा.	6.00	300.00
6	कम्पोस्ट खाद की लागत	1/2 ट्रॉली	2000.00	1000.00
			योग	2515.00
	2% आकस्मिक व्यय			50.30
			कुल योग	2565.30
			say	3000.00

कनिश्ठ अभियंता
आई.डब्ल्यू.एम.पी.
पंचायत समिति स0 मा0

सहायक अभियंता
आई.डब्ल्यू.एम.पी.
पंचायत समिति स0 मा0

मॉडल तकमीना
चारागाह क्षेत्र में वृक्षारोपण

क्र.सं.	आईटम	इकाई	मात्रा	मूल्य	राशि
1	45x45x45 सेमी. माप के गड्डे करना। (c)कठोर मिट्टी। (BSR आईटम नं. 112B)	संख्या	1.00	7.40	7.40
2	प्लांट की लागत	प्रति संख्या	1.00	5.00	5.0
3	नर्सरी से रोपण क्षेत्र तक प्लांट का आवागमन व्यय	प्रति संख्या	1.00	2.48	2.48
4	पौधे रोपण करना। (c सामान्य जमीन। (BSR आईटम नं.113B)	प्रति संख्या	1.00	3.20	3.20
5	पौधों को उपलब्ध पानी पिलाना। 15ली. प्रति पौधा। (BSR आईटम नं.115)	प्रति प्लांट	8	1.90	15.20
6	पानी की लागत	एलएस	—		1.50
7	थावला बनाना। कम से कम 50 से. मी. अर्द्धव्यास का। (c)अन्य जमीन। (BSR आईटम नं.117B)	संख्या	1	1.90	1.90
8	पौधों निडाई गुडाई करना। 15 सेमी. गहराई तक तथा 45 से.मी. अर्द्धव्यास (BSR आईटम नं.116)	संख्या	2	1.30	2.60
9	देखभाल	एलएस	—	—	2.75
10	फर्टिलाइजर	किग्रा.	250 ग्रा.	4.00	1.00
11	इनसेक्टसाईड्स (2 मिली/प्लांट) साल में 2 बार	लीटर	4 मिली.	एलएस	1.00
			योग	44.03	
			2: आकस्मिक व्यय	0.88	
	सभी दरें BSR पं०स० स० मा० के अनुसार		कुल योग	44.91	
			say	45.00 / प्लांट	

कनिष्ठ अभियंता
IWMP
पंचायत समिति स० मा०

सहायक अभियंता
IWMP
पंचायत समिति स० मा०

कार्य का विवरण
कार्य का नाम – रिटेनिंग वॉल का निर्माण

क्र. सं.	कार्य का विवरण	संख्या	लम्बाई	चौड़ाई	ऊंचाई	मात्रा	इकाई
1	नींव, खाई,परनाला में 1.5 गहराई तक मिट्टी की खुदाई करना, मल को कूटना, पानी डालना, बगल को संवारना, खुदी मिट्टी को बाहर निकालना, नींव भरने के बाद खाली स्थानों को पुनः मिट्टी से भरना तथा बची हुई मिट्टी को 50 मीटर की दूरी तक निस्तारण करना। (c) सख्त, चिकनी, कंकर मिट्टी में। (BSR आईटम सं.2B)						
		1	10.00	0.75	0.75	5.625	घन मी.
2	सीमेन्ट, कंक्रीट, नींव या फर्श में 40 मिमी. नाभीय माप की पत्थर मिट्टी ईट गिट्टी, सीमेन्ट- रेत मसाला में 1 सीमेन्ट: 4 रेत: 8 गिट्टी अनुपात में मिलाकर डालना तथा कुटाई करना, तराई समेत। (c) ईट की गिट्टी के साथ। (BSR आईटम सं.11B)						
	हैडबाल	1	10.00	0.75	0.15	1.125	घन मी.
3	नींव तथा कुर्सी में पत्थर की वे रद्धा- ढोका सीमेन्ट- बजरी 1:3, 1:6 या 1:8 मसाले में, मय बगल की झिरी बन्द करना तथा तरीई आदि। (v)सीमेन्ट बजरी 1:6 (BSR आईटम सं.24A)						
	हैडबाल	1	10.00	0.75	0.60	4.5	घन मी.
4	अतिरिक्त जोड़े अधिरचना पत्थर की चिनाई में आईटम 21 से 24 तक तथा आईटम 25 के अनुसार। ;30 सेमी. से कम मोटाई के लियेद्ध (BSR आईटम सं. 26)						
	हैडबाल	1	10.00	0.750. 45%2	0.75	7.31	घन मी.
5	सीमेन्ट प्लास्टर दीवार पर 1:4 अनुपात में सीमेन्ट- बजरी मिलाकर कर जोड़ों को कुरेदने तथा तराई सहित 25 मिमी./20मिमी./12 मिमी. में। (v) 25 मिमी. (BSR आईटम सं. 67A)						
	हैडबाल	2	10.00		0.75	15.00	घन मी.
6	50मिमी. मोटाई में सीमेन्ट कंक्रीट 1:2:4 मिश्रण जिसमें 1 सीमेन्ट 2 बजरी 4 पत्थर की या ईट की 12 मी. नाभीय गिट्टी के साथ मिलाकर डालना, कूटना, दबाना तथा तराई आदि समेत। (v) पत्थर की गिट्टी। (BSR आईटम सं. 58A)						
	हैडबाल	1	10.00		0.45	4.5	घन मी.
7	मिट्टी का कार्य बन्ध में ;सूखी या गीलीद्ध, 15 सेमी. परत में डालना, ढेलों को तोड़ना, घास पात तथा कंकर बीनकर अलग करना तथा मिट्टी की दरेसी करना तथा भीष फूट रोलर/ हैड रैमर से मिट्टी दबाना, 1.5 मी उठान तथा 50 मी. दूरी के लिए। कठोर मिट्टी। (BSR आईटम सं. 119B)						
						100.00	घन मी.

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सहायक अभियंता
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लागत का विवरण

कार्य का नाम – रिटेनिंग वॉल का निर्माण

क्र. सं.	कार्य का विवरण	मात्रा	दर	राशि	इकाई
1.	नींव, खाई,परनाला में 1.5 गहराई तक मिट्टी की खुदाई करना, मल को कूटना, पानी डालना, बगल को संवारना, खुदी मिट्टी को बाहर निकालना, नींव भरने के बाद खाली स्थानों को पुनः मिट्टी से भरना तथा बची हुई मिट्टी को 50 मीटर की दूरी तक निस्तारण करना। (c) सख्त, चिकनी, कंकर मिट्टी में। (BSR आईटम सं.2B)				
		5.625	92	517.50	घन मी.
2.	सीमेन्ट, कंक्रीट, नींव या फर्श में 40 मिमी. नाभीय माप की पत्थर मिट्टी ईट गिट्टी, सीमेन्ट- रेत मसाला में 1 सीमेन्ट: 4 रेत: 8 गिट्टी अनुपात में मिलाकर डालना तथा कुटाई करना, तराई समेत। (c) ईट की गिट्टी के साथ। (BSR आईटम सं.11B)				
		1.125	2259	2541.38	घन मी.
3.	नींव तथा कुर्सी में पत्थर की वे रद्धा- ढोका सीमेन्ट- बजरी 1:3, 1:6 या 1:8 मसाले में, मय बगल की झिरी बन्द करना तथा तरीई आदि। (v) सीमेन्ट बजरी 1:6 (BSR आईटम सं.24A)				
		4.50	1815	8167.50	घन मी.
4.	अतिरिक्त जोड़े अधिरचना पत्थर की चिनाई में आईटम 21 से 24 तक तथा आईटम 25 के अनुसार। .30 सेमी. से कम मोटाई के लिये (BSR आईटम सं. 26)				
		7.31	1815	13267.65	घन मी.
5.	सीमेन्ट प्लास्टर दीवार पर 1:4 अनुपात में सीमेन्ट- बजरी मिलकर कर जोड़ों को कुरेदने तथा तराई सहित 25 मिमी./20मिमी./12 मिमी. में। (v) 25 मिमी. (BSR आईटम सं. 67A)				
		15.00	166	2490	वर्ग मी.
6.	50मिमी. मोटाई में सीमेन्ट कंक्रीट 1:2:4 मिश्रण जिसमें 1 सीमेन्ट 2 बजरी 4 पत्थर की या ईट की 12 मी. नाभीय गिट्टी के साथ मिलाकर डालना, कूटना, दबाना तथा तराई आदि समेत। (v) पत्थर की गिट्टी। (BSR आईटम सं. 58A)				
		4.5	244	1098	वर्ग मी.
7.	मिट्टी का कार्य बन्ध में ,सूखी या गीलीद्ध, 15 सेमी. परत में डालना, ढेलों को तोड़ना, घास पात तथा कंकर बीनकर अलग करना तथा मिट्टी की दरेसी करना तथा भीप फूट रोलर/ हैड रैमर से मिट्टी दबाना, 1.5 मी उठान तथा 50 मी. दूरी के लिए। कठोर मिट्टी। (BSR आईटम सं. 119B)				
		100.00	92	9200	घन मी.
				37282.03	
	योग			745.64	
	2 % आकस्मिक व्यय			38027.67	
	सभी दरें BSR पं०स० स०मा० के अनुसार		महायोग	40000.00	
			say	40000.00	

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DETAILED - ESTIMATE (Anicut)

WHS IWMP VIII Dubbi bidarakha

Work CODE

लम्बाई - **20.00** मीटर

ऊंचाई - **1.70** मीटर

0

Location - -

Item No. Of GKN-06	S.No.	Item	No.	L	B	H	Qty.	Amount	Labour Component
--------------------	-------	------	-----	---	---	---	------	--------	------------------

168(ब) 1 Earth work in excavation in foundation trenches or drains including dressing of sides and ramming of bottoms, lift upto 1.5 Mtr. including taking out the excavated soil as directed within a lead of 50 Mtr.

(a) Hard Soil

NREGS-L	62
Other-L	68
Total-	68

HW	1x20x(3.5+0.45)x2.5	197.500	cu.m
COT		0.000	cu.m
SideWall with US	2x7.5x1.6x2.5	60.000	cu.m
WW-US-1	1x4.28x1.6x2.5	17.120	cu.m
WW-US-2	1x4.28x1.6x2.5	17.120	cu.m
WW-DS-1	1x5.28x1.31x1.2	8.300	cu.m
WW-DS-2	1x5.28x1.31x1.2	8.300	cu.m
HWE	2x4.6x1.8x(2.5)	41.400	cu.m
HWE-2	0x2.1x0.9x0.9	0.000	cu.m
Apron	1x20x4.5x0	0.000	cu.m
TW	1x20x0.6x0.97	11.640	cu.m
Hard soil + Hard Rock			
Total		361.380	cu.m

Labour @ Rs. 68 Cu.m.
@Rs. 92 Cu.m.

Labour 24573.84

Rs. **33246.96**

Note : Add Extra Lift qt.@8/- cum

- 2 Providing and laying cement concrete including curing compaction etc complete using stone aggregate 40mm nominal size (Hand broken) in foundation plinth, excluding the cot of shuttering, using.

(a) 1 cement : 4sand : 8aggregate

NREGS-L	213
Other-L	233
Total-	1415

HW	1x20x3.5x0.3	21.000	cu.m
COT		0.000	cu.m
SideWall with US	2x7.5x1.6x0.15	3.600	cu.m
WW-US-1	1x4.28x1.6x0.15	1.027	cu.m
WW-US-2	1x4.28x1.6x0.15	1.027	cu.m
WW-DS-1	1x5.28x1.31x0.15	1.038	cu.m
WW-DS-2	1x5.28x1.31x0.15	1.038	cu.m
HWE	2x4.6x1.8x0.15	2.484	cu.m
HWE-2	0x2.1x0.9x0.15	0.000	cu.m
Apron	1x20x4.5x	0.000	cu.m
TW	1x20x0.6x0.15	1.800	cu.m

Total 33.014 cu.m.

Labour @ Rs. 233
@Rs. 2259

Cu.m.
Cu.m.

Labour 7692.26

Rs. 74578.63

Note: Add Extra if Crusher Broken @150/- cum.

27(अ)

- 3 Random Rubble stone masonry for foundation and plinth in cement sand mortar 1 : 6 (1cement : 6 sand) for above 30 cm. thick walls.

NREGS-L	120
Other-L	240
Total-	1170

HW	1x20x3.2x(2.5-0.3)	140.800	cu.m
HW-plinth	1x20x3.2x1.7	108.800	cu.m
SideWall with US	2x7.5x1.6x(2.5-0.15)	56.400	cu.m
WW-US-1	1x4.28x1.6x(2.5-0.15)	16.093	cu.m
WW-US-2	1x4.28x1.6x(2.5-0.15)	16.093	cu.m
WW-DS-1	1x5.28x1.31x(1.2-0.15)	7.263	cu.m
WW-DS-2	1x5.28x1.31x(1.2-0.15)	7.263	cu.m
HWE	2x4.6x1.8x(2.5-0.15)	38.916	cu.m

HWE-2	0x2.1x0.9x(0.9-0.15)	0.000	cu.m
TW	1x20x0.6x(0.97-0.15)	9.840	cu.m
Total		401.468	cu.m.

Labour @ Rs. 240.00 Cu.m. Labour 96352.32
 @Rs. 1815 Cu.m. Rs. **728664.42**

27(अ)+28

4 Random rubble stone masonry in superstructure up to 4.5Mtr. height above plinth level in cement sand mortar 1 : 6 (1 cement : 6 sand) wall thickness above 30 Cm

NREGS-L	120
Other-L	240
Total-	1170

HW	1x20x[(1.8+3.2)/2]x1.7	85.000	cu.m.
SideWall with US	2x7.5x[(0.45+1.6)/2]x4.53	69.649	cu.m.
WW-US-1	1x4.28x[(0.45+1.6)/2]x[(4.53+4.53)/2]	19.873	cu.m.
WW-US-2	1x4.28x[(0.45+1.6)/2]x[(4.53+4.53)/2]	19.873	cu.m.
WW-DS-1	1x5.28x[(0.45+1.31)/2]x[(4.53+1.2)/2]	13.312	cu.m
WW-DS-2	1x5.28x[(0.45+1.31)/2]x[(4.53+1.2)/2]	13.312	cu.m
HWE	2x4.6x[(0.45+1.8)/2]x4.53	46.886	cu.m
HWE-2	0x2.1x[(0.45+0.9)/2]x0.6	0.000	cu.m
TW	1x20x[(0.45+0.6)/2]x0.45	4.725	cu.m
Total		272.630	cu.m

Labour @ Rs. 240.00 Cu.m. Labour 65431.20
 @Rs. 1815 Cu.m. Rs. **494823.45**

73(v)

5 Plaster on new surface on walls in cement sand mortar 1:6 including racking of joint etc. complete fine finished :
 (a) 25mm Thick

NREGS-L	19
Other-L	45
Total-	93

HW	1x20x[(2.5-0.3+1.7)+1.7+[Sqrt{(1.7^2)+((3.2-1.8)^2)}]]	156.045	Sq.m.
SideWall with US	2x7.5x[(2.5-0.15)+4.53]	103.200	Sq.m.
WW-US-1	1x4.28x[(4.53+4.53)/2]	19.388	Sq.m.
WW-US-2	1x4.28x[(4.53+4.53)/2]	19.388	Sq.m.
WW-DS-1	1x5.28x[(4.53+1.2)/2]	15.127	Sq.m.
WW-DS-2	1x5.28x[(4.53+1.2)/2]	15.127	Sq.m.
TW	2x20x0.45	18.000	Sq.m.
HWE-2	2x0x2.1x0.6	0.000	Sq.m.
Total		346.275	Sq.m.

Labour @ Rs. 45.00 Sq.m. Labour 15582.38
 @Rs. 144.00 Sq.m. Rs. **49863.60**

6 Earth Filling including watering ramming consolidation and dressing complete including all.

NREGS-L	50
Other-L	56
Total-	56

Filling in between US & DS W.Walls
Embk-1 US Slope 2.5:1
Embk-2

Deduction as per item No.1	361.380	Cu.m.
$2x[7.5+(7.5+4.28)]/2x3.70648x4.53$	323.718	Cu.m.
$0x[(1+4.375)/2]x[(1.5+0)/2]$	0.000	Cu.m.
$0x[(1+4.375)/2]x[(1.5+0)/2]$	0.000	Cu.m.
Total	-37.662	Cu.m.

Labour @ Rs. 56.00 Cu.m.
@Rs. **56.00** Cu.m.

Labour 0.00

Rs. **0.00**

172

7 Providing and laying cement concrete including curing compaction etc complete using stone aggregate 20mm nominal size (crusher broken) in foundation plinth, excluding the cot of shuttering, using.

(a) 1 cement : 2sand : 4aggregate

NREGS-L	183
Other-L	227
Total-	2309

HW	20x1.8x0.1	3.600	cu.m
Coping	$[4.28+4.28+5.28+5.28]x0.45x0.1$	0.860	cu.m
SideWall with US	$2x7.5x0.45x0.1$	0.675	cu.m
Apron	$20x4.5x0.1$	9.000	cu.m
TW	$20x0.45x0.1$	0.900	cu.m
HWE	$2x4.6x0.45x0.1$	0.414	cu.m
HWE-2	$0x2.1x0.45x0.1$	0.000	cu.m
Total		15.449	cu.m.

Labour @ Rs. 227 Cu.m.
@Rs. **3404** Cu.m.

Labour 3506.92

Rs. **52588.40**

8 Supply & Spreading quarry rubbish under pitching (Item No.-85)

NREGS-L	45
Other-L	61
Total-	171

$0x2.019x0.10$	0.000	cu.m
$0x2.019x0.10$	0.000	cu.m

Total 0.000 cu.m

Labour @ Rs. 61.00 Cu.m.
@Rs. **239.00** Cu.m.

Labour 0.00

Rs. **0.00**

124(c)

9 Random rubble stone kharanja under floor in CM 1:6 as per GKN Rates

NREGS-L	32
Other-L	72
Total-	212

Apron

20x4.5

90.000 Sqm

Total

20.700 cum

Labour @ Rs. 72.00 sqm
@Rs. **1539.00** cum

Labour **1490.40**Rs. **31857.30**

10 Filling of Black Cotton Soil with watering & Ramming complete in jhiri U/S Side with all lead & lift

NREGS-L	100
Other-L	100
Total-	200

1x20x0.45x2.5

22.500 cum

Total

22.500 cum

Labour @ Rs. 100.00 Cu.m.
@Rs. **200.00** Cu.m.

Labour **2250.00**Rs. **4500.00**

11 RR Dry Stone Pitching of Course Rubble

NREGS-L	50
Other-L	116
Total-	531

0x2.02 x 0

0.000 cum

0x2.02 x 0

0.000 cum

Total

0.000 cum

Labour @ Rs. 116.00 Cu.m.
@Rs. **890.00** Cu.m.

Labour **0.00**Rs. **0.00**

12 S/F Anchor Bars of Dia.16mm 1.20 Mtr C/C in zig-zag way from foundation to upto top of Super Structure

NREGS-L	1
Other-L	2.1
Total-	49.4

No. of Bars T-Length T-Weight

Anchor Bars 0 0 0 Kgs

0 Kgs

Total

0.000 Kgs

Labour @ Rs. 2.10 Cu.m.
@Rs. **49.40** Cu.m.

Labour **0.00**Rs. **0.00**

1.428571429

		TOTAL	Rs.	1470122.76
		Add. 3% Cont.	Rs.	44103.68
	A-	Grand Total	Rs.	1514226.44
	B-	<i>Labour</i>	Rs.	216879.00
	C-	Add 0% reduction in task as per order of govt.	Rs.	0.00
	D-			
Total Cost		(A+ C)		1514226.44

Say Rs.	1514200.00
LABOUR (B+C)	Rs. 216879.00
MATERIAL	Rs. 1297321.00

Note -

1-Foundation depth should not be more than 1.80 Mtr.

2-If sandy(Bajari) strata is available up to 1.8 Mtr Depth than excavate the foundation up to the soil (Loam etc.) .After wards the Site Engineer feels further excavation is required than provide cut off trench.

J.En.

A.En./ Ex.En.

Note -

Please do not disturb the white Cells & Black Fonts

COST

1514200.00

FORM

Name of Work - WHS IWMP VIII Dubbi bidarakha

Gram- दुब्बी

GP- अजनाोटी

PS- सवाई माधोपुर

AS No.-

Date-

Amount-

Work CODE -

Time of Completion- 6 Months

Location-

-

River/Nala/W.Weir

nala

Scheme-NREGS

IWMP

TASK Red %

COT Required Y/N -

n

B

H

0.6

0.6

AREA in Hact.

1200

Hact.

Over Burden

0

Crest Length

20

Mtr.

D/S Wing Wall
Additional Length

1

Designed
Length

4.28

Height of Anicut

1.7

Mtr.

U/S Wing Wall
Additional Length

0

Designed
Length

4.28

Plinth Ht. Of HW

1.7

Mtr.

Top Width of Side
Wall & W.Wall

0.45

Fetch Length

1

Km

TW - Top Width

0.45

Density of
Masonry-p

2.3

t/cum

TW Ht

0.45

Depth of Foundation

2.5

Mtr.

Note - Please do not disturb the white Cells & Black Fonts

Part	Nos.	Length	Fd.W/ Width	Fd.D	CC-Th.	W.Th-Base	W.Th-Top	SS-H1	SS-H2
HW	1	20	3.5	2.5	0.3	3.2	1.8	1.7	
SideWall with US	2	7.5	1.6	2.5	0.15	1.6	0.45	4.53	
WW-US-1	1	4.28	1.6	2.5	0.15	1.6	0.45	4.53	4.53
WW-US-2	1	4.28	1.6	2.5	0.15	1.6	0.45	4.53	4.53
WW-DS-1	1	5.28	1.31	1.2	0.15	1.31	0.45	4.53	1.2
WW-DS-2	1	5.28	1.31	1.2	0.15	1.31	0.45	4.53	1.2
HWE	2	4.6	1.8	2.5	0.15	1.8	0.45	4.53	4.53
HWE-2	0	2.1	0.9	0.9	0.15	0.9	0.45	0.6	0.6
Apron	1	20	4.5	0					
TW	1	20	0.6	0.97	0.15	0.6	0.45	0.45	
Embk-1 US Slope 2.5:1			0	1.875		4.375	1	1.5	0
Embk-2			0	1.875		4.375	1	1.5	0
Pitching Y/N	y				COST	1514200.00			
Pitching Thick.	0								

Coping on WW	0.1
Coping on HW	0.1
CC in Apron	0.1

Note - Please do not disturb the white Cells & Black Fonts

HYDAULIC DESIGN

$Q = CIA/36$

C - Runoff Coefficient

I - Rainfall intensity-CM/Hr

A - Area in Hact.

0.3	Runoff Coefficient for SOIL	Agr.	Grassland	Forest
9	Sandy	0.29	0.15	0.1
1200	Alluvial	0.4	0.35	0.3
	Black Cotton	0.5	0.45	0.4

Q= 90 Cum/Sec

$Q = CA^{3/4}$

C = 11.4

A - Area in SqKm

11.4

12

Q= 73.501 Cum/Sec

Q= 90 Cum/Sec

Discharge Max.of both

Depth of Flow(Flood Lift)

$Q=C_dLh^{3/2}$

C_d -Coefficient of discharge for broad crested weir

1.71

L - Crest Length

20

$h_f=(Q/C_dL)^{3/2}$

h_f= 1.906 Mtr.

Say **1.9 Mtr.**

Free Board - H_f

$f_b=h_w$

$h_w=0.384(F)^{1/2}+0.763-0.217(F)^{1/4}$

F - Fetch Length in Km

1

$h_w= 0.93$ Mtr.

Say 0.93 Mtr.

2.83 Mtr.

Say **2.8 Mtr.**

$H_f = h + h_w$

STRUCTURAL DESIGN

Head Wall

Bottom Width	$b = (H+hf)/(p-1)^{1/2}$	3.16	Mtr.
	Say	3.2	Mtr.
Top Width	$a = b - (0.80 \times H)$	1.84	Mtr.
	$a = 0.55 \times (H)^{1/2}$	0.72	
	Say	1.8	Mtr.
Width of Concrete Bed	$= b + 0.3$	3.5	Mtr.

Head Wall Extension

Length	$= H + h + 1.00$	4.6	Mtr.
Top Width		0.45	Mtr.
Bottom Width	$= 0.45 + 0.30(H + \text{FreeBoard})$	1.8	Mtr.
Depth of Foundation	$= 2.5 + \text{Over Burden}$	2.5	Mtr.
Length of Apron	$= 0.696 \times C \times (H)^{1/2}$		
C- Bligh's Coefficient=5		4.54	Mtr.
	Say	4.5	Mtr.
Thickness of Apron	$t = (H/1.811)^{1/2}$	0.97	Mtr.
(Allowed 30 Cms 23Cms Stone Kharanja in CM & 10 Cm CC 1:2:4)		0.30	Mtr.

Side Wall

Length=	$1.75H + 0.75h + 0.45$	4.85	Mtr.
Adopt Length of Side Wall=Apron		4.5	Mtr.
Height at Head Wall extension Junction	$H + \text{Flood Lift} + \text{FreeBoard}$	4.53	Mtr.
Height at Wing Wall Junction	$1.50 \times \text{Flood Lift}$	2.85	Mtr.
	Top Width	0.45	Mtr.
Bottom Width=	$0.45 + 0.30 \times [(H + \text{FreeBoard}) + (1.5 \times \text{Flood Lift})]$	1.55	Mtr.

Say **1.6 Mtr.**

D/S Wing Wall

Length	=2.25 x Flood Lift	4.28	Mtr.
		5.28	Mtr.
		0.45	Mtr.
Bottom Width=	0.45+[0.30 x (1.50 x Flood Lift)]	1.31	Mtr.
	Adopt	1.31	Mtr.
Height=	1.50 x Flood Lift	2.85	Mtr.

U/S Wing Wall

Length	=2.25 x Flood Lift	4.28	Mtr.
		5.28	Mtr.
		0.45	Mtr.
Bottom Width=	0.45+[0.30 x (1.50 x Flood Lift)]	1.31	Mtr.
	Adopt	1.31	Mtr.
Height =	H+ Flood Lift+ Free Board	4.53	Mtr.

Toe Wall

		Top Width	0.45	Mtr.
		Height	0.45	Mtr.
Bottom Width=	Tw+[0.30 x Ht]	0.59	Mtr.	
	Adopt	0.6	Mtr.	
Depth of Foundation=	Thickness of Apron Calculated	0.97	Mtr.	

FORCES		Vertical Forces	Horizontal Forces	Lever arm from Toe	Moment at Toe	
		V	H		Mr	Mo
W1=axHxLxp	1.8x1.7x1x2.3	7.04		2.3	16.19	
W2=1/2(b-a)xHxLxp	1/2x(3.2-1.8)x1.7x1x2.3	2.737		0.93	2.55	
W3=aXhxLxw	1.8x1.9x1x1	3.42		2.3	7.87	
P1=wxh X H	1x1.9x2.3		4.37	0.85		3.71
P2=wx(H x H)/2	1x(1.7x1.7)/2		1.445	0.57		0.82
U=CxwHxb/2	0.50x1x1.7x3.2/2	-1.36		2.13		2.9
TOTAL		11.84	5.82		26.61	7.43

CHECK	FORMULA	VALUES	LIMITS	REMARK
Over Turning	$\frac{\sum Mr}{\sum Mo}$	26.61 / 7.43	>1.5	SAFE
Sliding	$\frac{\mu \sum V}{\sum H}$	0.65x11.835 / 5.815	>1	SAFE
Stress at Toe	$(\frac{\sum V}{b})x(1+\frac{6e}{b})$	(11.835/3.2)x{1+(6x-0.02/3.2)}	<10	SAFE
Stress at Heel	$(\frac{\sum V}{b})x(1-\frac{6e}{b})$	(11.835/3.2)x{1-(6x-0.02/3.2)}	>0	>0 SAFE
Eccentricity	$(\frac{b}{2})-[(\frac{\sum Mr}{\sum V})]$	(3.2/2)-(19.18/11.835)	<0.53	<b/6 SAFE

DETAILED - ESTIMATE (Anicut)

WHS IWMP VIII Dhundha

Work CODE

लम्बाई - 12.00 मीटर

ऊंचाई - 2.00 मीटर

0

Location - -

Item No. Of GKN-06	S.No.	Item	No.	L	B	H	Qty.	Amount	Labour Component
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168(ब)

- 1 Earth work in excavation in foundation trenches or drains including dressing of sides and ramming of bottoms, lift upto 1.5 Mtr. including taking out the excavated soil as directed within a lead of 50 Mtr.

(a) Hard Soil

NREGS-L	62
Other-L	68
Total-	68

HW	1x12x(3.2+0.45)x2.5	109.500	cu.m
COT		0.000	cu.m
SideWall with US	2x7.9x1.4x2.5	55.300	cu.m
WW-US-1	1x2.93x1.4x2.5	10.255	cu.m
WW-US-2	1x2.93x1.4x2.5	10.255	cu.m
WW-DS-1	1x3.93x1.04x1.2	4.905	cu.m
WW-DS-2	1x3.93x1.04x1.2	4.905	cu.m
HWE	2x4.3x1.71x(2.5)	36.765	cu.m
HWE-2	0x2.1x0.9x0.9	0.000	cu.m
Apron	1x12x4.9x0	0.000	cu.m
TW	1x12x0.6x1.05	7.560	cu.m
Hard soil + Hard Rock		Total	239.445 cu.m

Labour @ Rs. 68 Cu.m.
@Rs. 92 Cu.m.

Labour 16282.26

Rs. 22028.94

Note : Add Extra Lift qt.@8/- cum

- 2 Providing and laying cement concrete including curing compaction etc complete using stone aggregate 40mm nominal size (Hand broken) in foundation plinth, excluding the cot of shuttering, using.

(a) 1 cement : 4sand : 8aggregate

NREGS-L	213
Other-L	233
Total-	1415

HW	1x12x3.2x0.3	11.520	cu.m
COT		0.000	cu.m
SideWall with US	2x7.9x1.4x0.15	3.318	cu.m
WW-US-1	1x2.93x1.4x0.15	0.615	cu.m
WW-US-2	1x2.93x1.4x0.15	0.615	cu.m
WW-DS-1	1x3.93x1.04x0.15	0.613	cu.m
WW-DS-2	1x3.93x1.04x0.15	0.613	cu.m
HWE	2x4.3x1.71x0.15	2.206	cu.m
HWE-2	0x2.1x0.9x0.15	0.000	cu.m
Apron	1x12x4.9x	0.000	cu.m
TW	1x12x0.6x0.15	1.080	cu.m

Total 20.580 cu.m.

Labour @ Rs. 233
@Rs. 2259

Cu.m.
Cu.m.

Labour 4795.14

Rs. 46490.22

Note: Add Extra if Crusher Broken @150/- cum.

27(अ)

- 3 Random Rubble stone masonry for foundation and plinth in cement sand mortar 1 : 6 (1cement : 6 sand) for above 30 cm. thick walls.

NREGS-L	120
Other-L	240
Total-	1170

HW	1x12x2.9x(2.5-0.3)	76.560	cu.m
HW-plinth	1x12x2.9x1.7	59.160	cu.m
SideWall with US	2x7.9x1.4x(2.5-0.15)	51.982	cu.m
WW-US-1	1x2.93x1.4x(2.5-0.15)	9.640	cu.m
WW-US-2	1x2.93x1.4x(2.5-0.15)	9.640	cu.m
WW-DS-1	1x3.93x1.04x(1.2-0.15)	4.292	cu.m

WW-DS-2	1x3.93x1.04x(1.2-0.15)	4.292	cu.m
HWE	2x4.3x1.71x(2.5-0.15)	34.559	cu.m
HWE-2	0x2.1x0.9x(0.9-0.15)	0.000	cu.m
TW	1x12x0.6x(1.05-0.15)	6.480	cu.m
Total		256.605	cu.m.

Labour @ Rs. 240.00 Cu.m.
@Rs. 1815 Cu.m.

Labour 61585.20

Rs. **465738.08**

27(अ)+28

4 Random rubble stone masonry in superstructure up to 4.5Mtr. height above plinth level in cement sand mortar 1 : 6 (1 cement : 6 sand) wall thickness above 30 Cm

NREGS-L	120
Other-L	240
Total-	1170

HW	1x12x[(1.3+2.9)/2]x2	50.400	cu.m.
SideWall with US	2x7.9x[(0.45+1.4)/2]x4.23	61.821	cu.m.
WW-US-1	1x2.93x[(0.45+1.4)/2]x[(4.23+4.23)/2]	11.464	cu.m.
WW-US-2	1x2.93x[(0.45+1.4)/2]x[(4.23+4.23)/2]	11.464	cu.m.
WW-DS-1	1x3.93x[(0.45+1.04)/2]x[(4.23+1.2)/2]	7.949	cu.m
WW-DS-2	1x3.93x[(0.45+1.04)/2]x[(4.23+1.2)/2]	7.949	cu.m
HWE	2x4.3x[(0.45+1.71)/2]x4.23	39.288	cu.m
HWE-2	0x2.1x[(0.45+0.9)/2]x0.6	0.000	cu.m
TW	1x12x[(0.45+0.6)/2]x0.45	2.835	cu.m
Total		193.170	cu.m

Labour @ Rs. 240.00 Cu.m.
@Rs. 1815 Cu.m.

Labour 46360.80

Rs. **350603.55**

73,अद्ध

5 Plaster on new surface on walls in cement sand mortar 1:6 including racking of joint etc. complete fine finished :

(a) 25mm Thick

NREGS-L	19
Other-L	45
Total-	93

HW	1x12x[(2.5-0.3+1.7)+2+[Sqrt{(2^2)+((2.9-1.3)^2)}}]	101.535	Sq.m.
SideWall with US	2x7.9x[(2.5-0.15)+4.23]	103.964	Sq.m.
WW-US-1	1x2.93x[(4.23+4.23)/2]	12.394	Sq.m.
WW-US-2	1x2.93x[(4.23+4.23)/2]	12.394	Sq.m.
	1x3.93x[(4.23+1.2)/2]	10.670	Sq.m.

WW-DS-1			
WW-DS-2	$1 \times 3.93 \times [(4.23 + 1.2) / 2]$	10.670	Sq.m.
TW	$2 \times 12 \times 0.45$	10.800	Sq.m.
HWE-2	$2 \times 0 \times 2.1 \times 0.6$	0.000	Sq.m.

Total 262.427 Sq.m.

Labour @ Rs. 45.00 Sq.m.
@Rs. 144.00 Sq.m.

Labour 11809.22

Rs. 37789.49

6 Earth Filling including watering ramming consolidation and dressing complete including all.

NREGS-L	50
Other-L	56
Total-	56

Filling in between US & DS W.Walls
Embk-1 US Slope 2.5:1
Embk-2

		-	
Deduction as per item No.1		239.445	Cu.m.
$2 \times [7.9 + (7.9 + 2.93)] / 2 \times 2.53738 \times 4.23$		201.031	Cu.m.
$0 \times [(1 + 4.375) / 2] \times [(1.5 + 0) / 2]$		0.000	Cu.m.
$0 \times [(1 + 4.375) / 2] \times [(1.5 + 0) / 2]$		0.000	Cu.m.
Total		-38.414	Cu.m.

Labour @ Rs. 56.00 Cu.m.
@Rs. 56.00 Cu.m.

Labour 0.00

Rs. 0.00

172

7 Providing and laying cement concrete including curing compaction etc complete using stone aggregate 20mm nominal size (crusher broken) in foundation plinth, excluding the cot of shuttering, using.

(a) 1 cement : 2sand : 4aggregate

NREGS-L	183
Other-L	227
Total-	2309

HW	$12 \times 1.3 \times 0.1$	1.560	cu.m
Coping	$[2.93 + 2.93 + 3.93 + 3.93] \times 0.45 \times 0.1$	0.617	cu.m
SideWall with US	$2 \times 7.9 \times 0.45 \times 0.1$	0.711	cu.m
Apron	$12 \times 4.9 \times 0.1$	5.880	cu.m
TW	$12 \times 0.45 \times 0.1$	0.540	cu.m
HWE	$2 \times 4.3 \times 0.45 \times 0.1$	0.387	cu.m
HWE-2	$0 \times 2.1 \times 0.45 \times 0.1$	0.000	cu.m
Total		9.695	cu.m.

Labour @ Rs. 227 Cu.m.
@Rs. 3404 Cu.m.

Labour 2200.77

Rs. 33001.78

8 Supply & Spreading quarry rubbish under pitching (Item No.-85)

NREGS-L	45
Other-L	61
Total-	171

0x2.019x0.10 0.000 cu.m
0x2.019x0.10 0.000 cu.m

Total 0.000 cu.m

Labour @ Rs. 61.00 Cu.m.
@Rs. 239.00 Cu.m.

Labour 0.00

Rs. 0.00

124.बद्ध

9 Random rubble stone kharanja under floor in CM 1:6 as per GKN Rates

NREGS-L	32
Other-L	72
Total-	212

Apron

12x4.9 58.800 Sqm
Total 13.524 cum

Labour @ Rs. 72.00 sqm
@Rs. 1539.00 cum

Labour 973.73

Rs. 20813.44

10 Filling of Black Cotton Soil with watering & Ramming complete in jhiri U/S Side with all lead & lift

NREGS-L	100
Other-L	100
Total-	200

1x12x0.45x2.5 13.500 cum

Total 13.500 cum

Labour @ Rs. 100.00 Cu.m.
@Rs. 200.00 Cu.m.

Labour 1350.00

Rs. 2700.00

11 RR Dry Stone Pitching of Course Rubble

NREGS-L	50
Other-L	116
Total-	531

0x2.02 x 0 0.000 cum

0x2.02 x 0 0.000 cum

Total 0.000 cum

Labour @ Rs. 116.00 Cu.m.
@Rs. 890.00 Cu.m.

Labour 0.00

Rs. 0.00

12 S/F Anchor Bars of Dia.16mm 1.20
Mtr C/C in zig-zag way from
foundation to upto top of Super
Structure

NREGS-L	1
Other-L	2.1
Total-	49.4

	No. of Bars	T-Length	T-Weight	
Anchor Bars	0	0	0	Kgs
Reinforcement in Apron 8mm dia @0.50 Mtr/c			0	Kgs

Total 0.000 Kgs

Labour @ Rs. 2.10

Cu.m.

Labour 0.00

@Rs. 49.40

Cu.m.

Rs. 0.00

1.428571429

	TOTAL	Rs.	979165.50
	Add. 3% Cont.	Rs.	29374.97
A-	Grand Total	Rs.	1008540.47
B-	Labour	Rs.	145357.00
	Add 0% reduction in task as per order of		
C-	govt.	Rs.	0.00
D-			
Total Cost	(A+ C)		1008540.47

Say Rs.	1008500.00
LABOUR (B+C)	Rs. 145357.00
MATERIAL	Rs. 863143.00

Note -

1-Foundation depth should not be more than 1.80 Mtr.

2-If sandy(Bajari) strata is available up to 1.8 Mtr Depth than excavate the foundation up to the soil (Loam etc.) .After wards the Site Engineer feels further excavation is required than provide cut off trench.

J.En.

A.En./

Ex.En.

Note -

Please do not disturb the white Cells & Black Fonts

COST

1008500.00

FORM

Name of Work - WHS IWMP VIII Dhundha

Gram- दुँढा

GP- जटवाडाकलां

PS- सवाई माधोपुर

AS No.-

Date-

Amount-

Work CODE -

Time of Completion- 6 Months

Location-	-	River/Nala/W.Weir	nala
Scheme-NREGS	IWMP	TASK Red %	COT Required Y/N - n
	0	B H	0.6 0.6

AREA in Hact.	350	Hact.	Over Burden	0	
Crest Length	12	Mtr.	D/S Wing Wall Additional Length	1	Designed Length 2.93
Height of Anicut	2	Mtr.	U/S Wing Wall Additional Length	0	Designed Length 2.93
Plinth Ht. Of HW	1.7	Mtr.	Top Width of Side Wall & W.Wall	0.45	
Fetch Length	1	Km	TW - Top Width	0.45	
Density of Masonary-p	2.3	t/cum	TW Ht	0.45	
Depth of Foundation	2.5	Mtr.			

Note -
Please do not disturb the white Cells & Black Fonts

Part	Nos.	Length	Fd.W/ Width	Fd.D	CC-Th.	W.Th-Base	W.Th-Top	SS-H1	SS-H2
HW	1	12	3.2	2.5	0.3	2.9	1.3	2	
SideWall with US	2	7.9	1.4	2.5	0.15	1.4	0.45	4.23	
WW-US-1	1	2.93	1.4	2.5	0.15	1.4	0.45	4.23	4.23
WW-US-2	1	2.93	1.4	2.5	0.15	1.4	0.45	4.23	4.23
WW-DS-1	1	3.93	1.04	1.2	0.15	1.04	0.45	4.23	1.2
WW-DS-2	1	3.93	1.04	1.2	0.15	1.04	0.45	4.23	1.2
HWE	2	4.3	1.71	2.5	0.15	1.71	0.45	4.23	4.23
HWE-2	0	2.1	0.9	0.9	0.15	0.9	0.45	0.6	0.6
Apron	1	12	4.9	0					
TW	1	12	0.6	1.05	0.15	0.6	0.45	0.45	
Embk-1 US Slope 2.5:1		0		1.875		4.375	1	1.5	0
Embk-2		0		1.875		4.375	1	1.5	0
Pitching Y/N	y				COST	1008500.00			
Pitching Thick.	0								

Coping on WW	0.1
Coping on HW	0.1
CC in Apron	0.1

Note -
Please do not disturb the white Cells & Black Fonts



HYDAULIC DESIGN

$Q = CIA/36$

C - Runoff Coefficient

I - Rainfall intensity-CM/Hr

A - Area in Hact.

0.3	Runoff Coefficient for SOIL	Agr.	Grassland	Forest
9	Sandy	0.29	0.15	0.1
350	Alluvial	0.4	0.35	0.3
	Black Cotton	0.5	0.45	0.4

$Q = CA^{3/4}$

C = 11.4

A - Area in SqKm

Q=	26.25	Cum/Sec
	11.4	
	3.5	
Q=	29.171	Cum/Sec
Q=	29.171	Cum/Sec

Discharge Max.of both

Depth of Flow(Flood Lift)

$Q=C_dLh^{3/2}$

C_d -Coefficient of discharge for broad crested weir

L - Crest Length

	1.71
	12

$h_f=(Q/C_dL)^{3/2}$

h_f=	1.264	Mtr.
Say	1.3	Mtr.

Free Board - H_f

$f_b=h_w$

$h_w=0.384(F)^{1/2}+0.763-0.217(F)^{1/4}$

F - Fetch Length in Km

	1
--	---

	$h_w =$	0.93	Mtr.
	Say	0.93	Mtr.
$H_f = h + h_w$		2.23	Mtr.
	Say	2.2	Mtr.

STRUCTURAL DESIGN

Head Wall

Bottom Width	$b = (H+h_f)/(p-1)^{1/2}$	2.89	Mtr.
	Say	2.9	Mtr.
Top Width	$a = b - (0.80 \times H)$	1.3	Mtr.
		0.78	
	Say	1.3	Mtr.
Width of Concrete Bed	$= b + 0.3$	3.2	Mtr.

Head Wall Extension

Length	$= H + h + 1.00$	4.3	Mtr.
Top Width		0.45	Mtr.
Bottom Width	$= 0.45 + 0.30(H + \text{FreeBoard})$	1.71	Mtr.
Depth of Foundation	$= 2.5 + \text{Over Burden}$	2.5	Mtr.
Length of Apron	$= 0.696 \times C \times (H)^{1/2}$		
C- Bligh's Coefficient=5		4.92	Mtr.
	Say	4.9	Mtr.
Thickness of Apron	$t = (H/1.811)^{1/2}$	1.05	Mtr.
(Allowed 30 Cms 23Cms Stone Kharanja in CM & 10 Cm CC 1:2:4)		0.30	Mtr.

Side Wall

Length=	$1.75H + 0.75h + 0.45$	4.925	Mtr.
Adopt Length of Side Wall=Apron		4.9	Mtr.
Height at Head Wall extension Junction	$H + \text{Flood Lift} + \text{FreeBoard}$	4.23	Mtr.
Height at Wing Wall Junction	$1.50 \times \text{Flood Lift}$	1.95	Mtr.

Top Width 0.45 Mtr.
 Bottom Width= $0.45 + 0.30 \times [(H + \text{Free Board}) + (1.5 \times \text{Flood Lift})]$ 1.37 Mtr.
 Say **1.4 Mtr.**

D/S Wing Wall

Length = $2.25 \times \text{Flood Lift}$ 2.93 Mtr.
 Length 3.93 Mtr.
 Top Width 0.45 Mtr.
 Bottom Width= $0.45 + [0.30 \times (1.50 \times \text{Flood Lift})]$ 1.04 Mtr.
 Adopt **1.04 Mtr.**
 Height= $1.50 \times \text{Flood Lift}$ 1.95 Mtr.

U/S Wing Wall

Length = $2.25 \times \text{Flood Lift}$ 2.93 Mtr.
 Length 3.93 Mtr.
 Top Width 0.45 Mtr.
 Bottom Width= $0.45 + [0.30 \times (1.50 \times \text{Flood Lift})]$ 1.04 Mtr.
 Adopt **1.04 Mtr.**
 Height = $H + \text{Flood Lift} + \text{Free Board}$ 4.23 Mtr.

Toe Wall

Top Width 0.45 Mtr.
 Height 0.45 Mtr.
 Bottom Width= $T_w + [0.30 \times H_t]$ 0.59 Mtr.
 Adopt **0.6 Mtr.**

Depth of Foundation= Thickness of Apron Calculated 1.05 Mtr.

FORCES		Vertical Forces	Horizontal Forces	Lever arm from Toe	Moment at Toe	
		V	H		Mr	Mo
$W1 = a \times H \times L \times p$	$1.3 \times 2 \times 1 \times 2.3$	5.98		2.25	13.46	
$W2 = 1/2 \times (b-a) \times H \times L \times p$	$1/2 \times (2.9 - 1.3) \times 2 \times 1 \times 2.3$	3.68		1.07	3.94	

W3=aXhxLxw	1.3x1.3x1x1	1.69		2.25	3.8	
P1=wxh X H	1x1.3x2.3		2.99	1		2.99
P2=wx(H x H)/2	1x(2x2)/2		2	0.67		1.34
U=CxwHxb/2	0.50x1x2x2.9/2	-1.45		1.93		2.8
TOTAL		9.90	4.99		21.20	7.13
CHECK		FORMULA		VALUES	LIMITS	REMARK
Over Turning	$\sum Mr / \sum Mo$	21.2 / 7.13		2.97	>1.5	SAFE
Sliding	$\mu \sum V / \sum H$	0.65x9.9 / 4.99		1.29	>1	SAFE
Stress at Toe	$(\sum V/b)x(1+6e/b)$	$(9.9/2.9)x\{1+(6x0.03/2.9)\}$		3.63	<10	SAFE
Stress at Heel	$(\sum V/b)x(1-6e/b)$	$(9.9/2.9)x\{1-(6x0.03/2.9)\}$		3.2	>0	>0 SAFE
Eccentricity	$(b/2)-[(\sum Mr-\sum Mo) / \sum V]$	$(2.9/2)-(14.07/9.9)$		0.03	<0.48	<b/6 SAFE

DETAILED - ESTIMATE (Anicut)

WHS IWMP VIII Dhundha

Work CODE

लम्बाई – 20.00 मीटर

ऊंचाई – 1.50 मीटर

0

Location - —

Item No. Of GKN-06	S.No.	Item	No.	L	B	H	Qty.	Amount	Labour Component
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168(ब)

- 1 Earth work in excavation in foundation trenches or drains including dressing of sides and ramming of bottoms, lift upto 1.5 Mtr. including taking out the excavated soil as directed within a lead of 50 Mtr.

(a) Hard Soil

NREGS-L	62	HW					1x20x(2.2+0.45)x2.5	132.500	cu.m
Other-L	68	COT						0.000	cu.m
Total-	68	SideWall with US					2x7.3x1.1x2.5	40.150	cu.m

WW-US-1	1x1.58x1.1x2.5	4.345	cu.m
WW-US-2	1x1.58x1.1x2.5	4.345	cu.m
WW-DS-1	1x2.58x0.9x1.2	2.786	cu.m
WW-DS-2	1x2.58x0.9x1.2	2.786	cu.m
HWE	2x3.2x1.38x(2.5)	22.080	cu.m
HWE-2	0x2.1x0.9x0.9	0.000	cu.m
Apron	1x20x4.3x0	0.000	cu.m
TW	1x20x0.6x0.91	10.920	cu.m

Hard soil + Hard Rock

Total 219.912 cu.m

Labour @ Rs. 68
@Rs. 92

Cu.m.
Cu.m.

Labour 14954.02

Rs. 20231.90

Note : Add Extra Lift qt. @8/- cum

171

2 Providing and laying cement concrete including curing compaction etc complete using stone aggregate 40mm nominal size (Hand broken) in foundation plinth, excluding the cot of shuttering, using.

(a) 1 cement : 4sand : 8aggregate

NREGS-L	213
Other-L	233
Total-	1415

HW	1x20x2.2x0.3	13.200	cu.m
COT		0.000	cu.m
SideWall with US	2x7.3x1.1x0.15	2.409	cu.m
WW-US-1	1x1.58x1.1x0.15	0.261	cu.m
WW-US-2	1x1.58x1.1x0.15	0.261	cu.m
WW-DS-1	1x2.58x0.9x0.15	0.348	cu.m
WW-DS-2	1x2.58x0.9x0.15	0.348	cu.m
HWE	2x3.2x1.38x0.15	1.325	cu.m
HWE-2	0x2.1x0.9x0.15	0.000	cu.m
Apron	1x20x4.3x	0.000	cu.m
TW	1x20x0.6x0.15	1.800	cu.m

Total 19.952 cu.m.

Labour @ Rs. 233

Cu.m.

Labour 4648.82

@Rs. **2259** Cu.m.

Rs. **45071.57**

Note: Add Extra if Crusher Broken @150/- cum.

27(अ)

3 Random Rubble stone masonry for foundation and plinth in cement sand mortar 1 : 6 (1cement : 6 sand) for above 30 cm. thick walls.

NREGS-L	120
Other-L	240
Total-	1170

HW	1x20x1.9x(2.5-0.3)	83.600	cu.m
HW-plinth	1x20x1.9x1.7	64.600	cu.m
SideWall with US			
	2x7.3x1.1x(2.5-0.15)	37.741	cu.m
WW-US-1	1x1.58x1.1x(2.5-0.15)	4.084	cu.m
WW-US-2	1x1.58x1.1x(2.5-0.15)	4.084	cu.m
WW-DS-1	1x2.58x0.9x(1.2-0.15)	2.438	cu.m
WW-DS-2	1x2.58x0.9x(1.2-0.15)	2.438	cu.m
HWE	2x3.2x1.38x(2.5-0.15)	20.755	cu.m
HWE-2	0x2.1x0.9x(0.9-0.15)	0.000	cu.m
TW	1x20x0.6x(0.91-0.15)	9.120	cu.m
Total		228.860	cu.m.

Labour @ Rs. 240.00 Cu.m.

Labour **54926.40**

@Rs. **1815** Cu.m.

Rs. **415380.90**

27(अ)+28

4 Random rubble stone masonry in superstructure up to 4.5Mtr. height above plinth level in cement sand mortar 1 : 6 (1 cement : 6 sand) wall thickness above 30 Cm

NREGS-L	120
Other-L	240
Total-	1170

HW	1x20x[(0.7+1.9)/2]x1.5	39.000	cu.m.
SideWall with US	2x7.3x[(0.45+1.1)/2]x3.13	35.416	cu.m.
WW-US-1	1x1.58x[(0.45+1.1)/2]x[(3.13+3.13)/2]	3.833	cu.m.
WW-US-2	1x1.58x[(0.45+1.1)/2]x[(3.13+3.13)/2]	3.833	cu.m.
WW-DS-1	1x2.58x[(0.45+0.9)/2]x[(3.13+1.2)/2]	3.770	cu.m
WW-DS-2	1x2.58x[(0.45+0.9)/2]x[(3.13+1.2)/2]	3.770	cu.m
HWE	2x3.2x[(0.45+1.38)/2]x3.13	18.329	cu.m
HWE-2	0x2.1x[(0.45+0.9)/2]x0.6	0.000	cu.m
TW	1x20x[(0.45+0.6)/2]x0.45	4.725	cu.m

Total 112.676 cu.m

Labour @ Rs. 240.00 Cu.m.
@Rs. 1815 Cu.m.

Labour 27042.24

Rs. 204506.94

73.अद्ध

5 Plaster on new surface on walls in cement sand mortar 1:6 including racking of joint etc. complete fine finished :

(a) 25mm Thick

NREGS-L	19
Other-L	45
Total-	93

HW	$1 \times 20 \times [(2.5 - 0.3 + 1.7) + 1.5 + \{\text{Sqrt}\{(1.5^2) + ((1.9 - 0.7)^2)\}]]$	146.419	Sq.m.
SideWall with US	$2 \times 7.3 \times [(2.5 - 0.15) + 3.13]$	80.008	Sq.m.
WW-US-1	$1 \times 1.58 \times [(3.13 + 3.13) / 2]$	4.945	Sq.m.
WW-US-2	$1 \times 1.58 \times [(3.13 + 3.13) / 2]$	4.945	Sq.m.
WW-DS-1	$1 \times 2.58 \times [(3.13 + 1.2) / 2]$	5.586	Sq.m.
WW-DS-2	$1 \times 2.58 \times [(3.13 + 1.2) / 2]$	5.586	Sq.m.
TW	$2 \times 20 \times 0.45$	18.000	Sq.m.
HWE-2	$2 \times 0 \times 2.1 \times 0.6$	0.000	Sq.m.

Total 265.489 Sq.m.

Labour @ Rs. 45.00 Sq.m.
@Rs. 144.00 Sq.m.

Labour 11947.01

Rs. 38230.42

6 Earth Filling including watering ramming consolidation and dressing complete including all.

NREGS-L	50
Other-L	56
Total-	56

	Deduction as per item No.1	219.912	Cu.m.
Filling in between US & DS W.Walls	$2 \times [7.3 + (7.3 + 1.58)] / 2 \times 1.36828 \times 3.13$	69.294	Cu.m.
Embk-1 US Slope 2.5:1	$0 \times [(1 + 4.375) / 2] \times [(1.5 + 0) / 2]$	0.000	Cu.m.
Embk-2	$0 \times [(1 + 4.375) / 2] \times [(1.5 + 0) / 2]$	0.000	Cu.m.

Total 150.618 Cu.m.

Labour @ Rs. 56.00 Cu.m.
@Rs. 56.00 Cu.m.

Labour 0.00

Rs. 0.00

- 7 Providing and laying cement concrete including curing compaction etc complete using stone aggregate 20mm nominal size (crusher broken) in foundation plinth, excluding the cot of shuttering, using.

(a) 1 cement : 2sand : 4aggregate

NREGS-L	183
Other-L	227
Total-	2309

	HW	20x0.7x0.1	1.400	cu.m
	Coping	[1.58+1.58+2.58+2.58]x0.45x0.1	0.374	cu.m
	SideWall with US	2x7.3x0.45x0.1	0.657	cu.m
	Apron	20x4.3x0.1	8.600	cu.m
	TW	20x0.45x0.1	0.900	cu.m
	HWE	2x3.2x0.45x0.1	0.288	cu.m
	HWE-2	0x2.1x0.45x0.1	0.000	cu.m
	Total		12.219	cu.m.

Labour @ Rs. 227
@Rs. 3404

Cu.m.
Cu.m.

Labour 2773.71

Rs. 41593.48

- 8 Supply & Spreading quarry rubbish under pitching (Item No.-85)

NREGS-L	45
Other-L	61
Total-	171

		0x2.019x0.10	0.000	cu.m
		0x2.019x0.10	0.000	cu.m
	Total		0.000	cu.m

Labour @ Rs. 61.00
@Rs. 239.00

Cu.m.
Cu.m.

Labour 0.00

Rs. 0.00

- 9 Random rubble stone kharanja under floor in CM 1:6
as per GKN Rates

NREGS-L	32
Other-L	72
Total-	212

	Apron	20x4.3	86.000	Sqm
	Total		19.780	cum

Labour @ Rs. 72.00
@Rs. 1539.00

sqm
cum

Labour 1424.16

Rs. 30441.42

10 Filling of Black Cotton Soil with watering & Ramming complete in jhiri U/S Side with all lead & lift

NREGS-L	100
Other-L	100
Total-	200

1x20x0.45x2.5 22.500 cum

Total 22.500 cum

Labour @ Rs. 100.00 Cu.m.
@Rs. 200.00 Cu.m.

Labour 2250.00

Rs. 4500.00

11 RR Dry Stone Pitching of Course Rubble

NREGS-L	50
Other-L	116
Total-	531

0x2.02 x 0 0.000 cum

0x2.02 x 0 0.000 cum

Total 0.000 cum

Labour @ Rs. 116.00 Cu.m.
@Rs. 890.00 Cu.m.

Labour 0.00

Rs. 0.00

12 S/F Anchor Bars of Dia.16mm 1.20 Mtr C/C in zig-zag way from foundation to upto top of Super Structure

NREGS-L	1
Other-L	2.1
Total-	49.4

	No. of Bars	T-Length	T-Weight	
Anchor Bars	0	0	0	Kgs
Reinforcement in Apron 8mm dia @0.50 Mtr/c			0	Kgs

Total 0.000 Kgs

Labour @ Rs. 2.10 Cu.m.
@Rs. 49.40 Cu.m.

Labour 0.00

Rs. 0.00

1.428571429

TOTAL	Rs.	799956.63
Add. 3% Cont.	Rs.	23998.70
Grand Total	Rs.	823955.33
Labour	Rs.	119966.00

A-
B-

Location-	-		River/Nala/W.Weir	nala	
Scheme-NREGS	IWMP	TASK Red % 0	COT Required Y/N - n		
			B	H	0.6
					0.6
AREA in Hact.	200	Hact.	Over Burden	0	
Crest Length	20	Mtr.	D/S Wing Wall Additional Length	1	Designed Length 1.58
Height of Anicut	1.5	Mtr.	U/S Wing Wall Additional Length	0	Designed Length 1.58
Plinth Ht. Of HW	1.7	Mtr.	Top Width of Side Wall & W.Wall	0.45	
Fetch Length	1	Km	TW - Top Width	0.45	
Density of Masonary-p	2.3	t/cum	TW Ht	0.45	
Depth of Foundation	2.5	Mtr.			

Note - Please do not disturb the white Cells & Black Fonts

Part	Nos.	Length	Fd.W/ Width	Fd.D	CC-Th.	W.Th- Base	W.Th- Top	SS-H1	SS-H2
HW	1	20	2.2	2.5	0.3	1.9	0.7	1.5	
SideWall with US	2	7.3	1.1	2.5	0.15	1.1	0.45	3.13	
WW-US-1	1	1.58	1.1	2.5	0.15	1.1	0.45	3.13	3.13
WW-US-2	1	1.58	1.1	2.5	0.15	1.1	0.45	3.13	3.13
WW-DS-1	1	2.58	0.9	1.2	0.15	0.9	0.45	3.13	1.2
WW-DS-2	1	2.58	0.9	1.2	0.15	0.9	0.45	3.13	1.2
HWE	2	3.2	1.38	2.5	0.15	1.38	0.45	3.13	3.13

HWE-2	0	2.1	0.9	0.9	0.15	0.9	0.45	0.6	0.6
Apron	1	20	4.3	0					
TW	1	20	0.6	0.91	0.15	0.6	0.45	0.45	
Embk-1 US Slope 2.5:1		0		1.875		4.375	1	1.5	0
Embk-2		0		1.875		4.375	1	1.5	0
Pitching Y/N	y				COST	824000.00			
Pitching Thick.	0								
Coping on WW	0.1								
Coping on HW	0.1								
CC in Apron	0.1								

Note - Please do not disturb the white Cells & Black Fonts

HYDAULIC DESIGN

$Q = CIA/36$

C - Runoff Coffieient

I - Rainfall intensity-CM/Hr

A - Area in Hact.

0.3	Runoff Coffieient for SOIL	Agr.	Grassland	Forest
	Sandy	0.29	0.15	0.1
	Alluvial	0.4	0.35	0.3
	Black Cotton	0.5	0.45	0.4

Q= 15 Cum/Sec

$Q = CA^{3/4}$

C = 11.4

A - Area in SqKm

11.4
2

Q= 19.172 Cum/Sec

Q= 19.172 Cum/Sec

Discharge Max.of both

Depth of Flow(Flood Lift)

$Q=C_dLh^{3/2}$

C_d -Coefficient of discharge for broad crested weir

1.71

L - Crest Length			20	
$h_f = (Q/C_d L)^{3/2}$	$h_f =$	0.68	Mtr.	
	Say	0.7	Mtr.	
Free Board - H_f				
$f_b = h_w$				
$h_w = 0.384(F)^{1/2} + 0.763 - 0.217(F)^{1/4}$				
F - Fetch Length in Km			1	
	$h_w =$	0.93	Mtr.	
	Say	0.93	Mtr.	
$H_f = h + h_w$		1.63	Mtr.	
	Say	1.6	Mtr.	

STRUCTURAL DESIGN

Head Wall				
Bottom Width	$b = (H+h_f)/(p-1)^{1/2}$		1.93	Mtr.
		Say	1.9	Mtr.
Top Width	$a = b - (0.80 \times H)$		0.7	Mtr.
	$a = 0.55 \times (H)^{1/2}$		0.67	
		Say	0.7	Mtr.
Width of Concrete Bed	$= b + 0.3$		2.2	Mtr.
Head Wall Extension				
Length	$= H + h + 1.00$		3.2	Mtr.
Top Width			0.45	Mtr.
Bottom Width	$= 0.45 + 0.30(H + \text{FreeBoard})$		1.38	Mtr.
Depth of Foundation	$= 2.5 + \text{Over Burden}$		2.5	Mtr.
Length of Apron	$= 0.696 \times C \times (H)^{1/2}$			
C- Bligh's Coefficient=5			4.26	Mtr.
		Say	4.3	Mtr.
Thickness of Apron	$t = (H/1.811)^{1/2}$		0.91	Mtr.

(Allowed 30 Cms 23Cms Stone Kharanja in CM & 10 Cm CC 1:2:4)

Side Wall		0.30	Mtr.
	Length= $1.75H+0.75h+0.45$	3.6	Mtr.
	Adopt Length of Side Wall=Apron	4.3	Mtr.
	Height at Head Wall extension Junction		
	$H+Flood Lift+FreeBoard$	3.13	Mtr.
	Height at Wing Wall Junction		
	$1.50 \times Flood Lift$	1.05	Mtr.
	Top Width	0.45	Mtr.
	Bottom Width= $0.45 + 0.30 \times [(H+FreeBoard)+(1.5 \times FloodLift)]$	1.07	Mtr.
	Say	1.1	Mtr.

D/S Wing Wall

	Length = $2.25 \times Flood Lift$	1.58	Mtr.
	Length	2.58	Mtr.
	Top Width	0.45	Mtr.
	Bottom Width= $0.45+[0.30 \times (1.50 \times Flood Lift)]$	0.77	Mtr.
	Adopt	0.9	Mtr.
	Height= $1.50 \times Flood Lift$	1.05	Mtr.

U/S Wing Wall

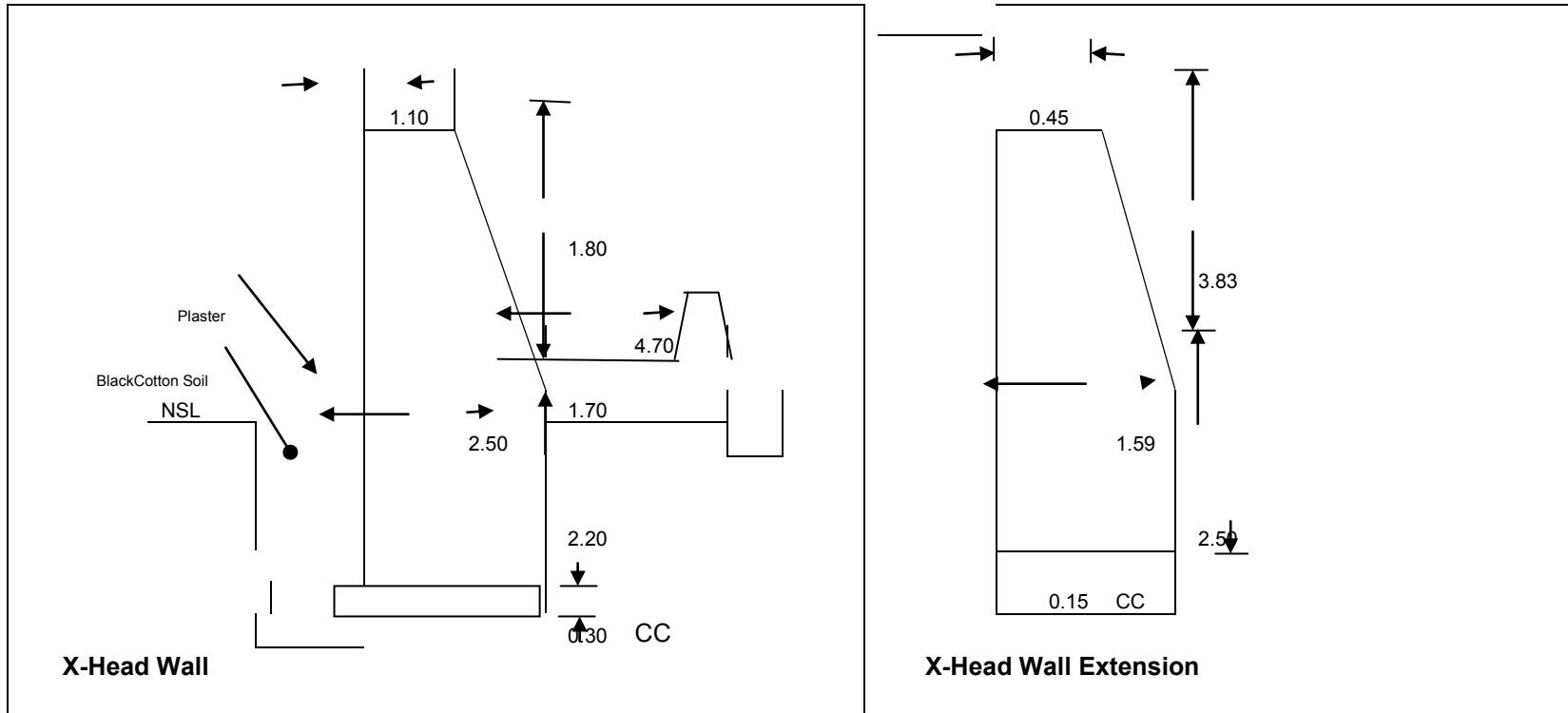
	Length = $2.25 \times Flood Lift$	1.58	Mtr.
	Length	2.58	Mtr.
	Top Width	0.45	Mtr.
	Bottom Width= $0.45+[0.30 \times (1.50 \times Flood Lift)]$	0.77	Mtr.
	Adopt	0.9	Mtr.
	Height = $H+ Flood Lift+ Free Board$	3.13	Mtr.

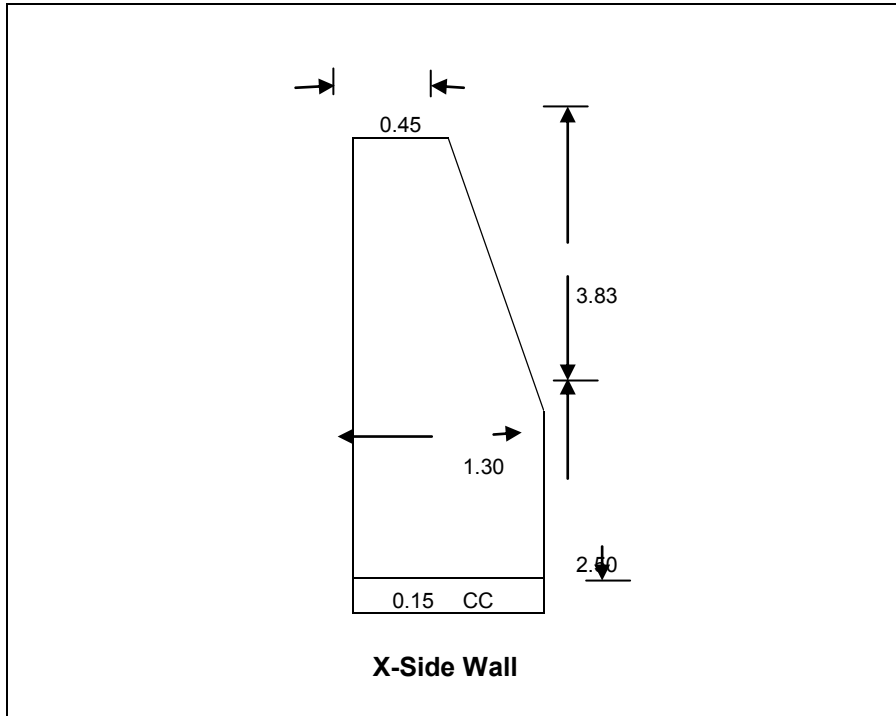
Toe Wall

		Top Width	0.45	Mtr.
		Height	0.45	Mtr.
Bottom Width=	$T_w + [0.30 \times H_t]$		0.59	Mtr.
	Adopt		0.6	Mtr.
Depth of Foundation=	Thickness of Apron Calculated		0.91	Mtr.

FORCES		Vertical Forces V	Horizontal Forces H	Lever arm from Toe	Moment at Toe	
					Mr	Mo
$W1 = a \times H \times L \times p$	0.7x1.5x1x2.3	2.42		1.55	3.74	
$W2 = 1/2(b-a) \times H \times L \times p$	$1/2 \times (1.9 - 0.7) \times 1.5 \times 1 \times 2.3$	2.07		0.8	1.66	
$W3 = a \times H \times L \times w$	0.7x0.7x1x1	0.49		1.55	0.76	
$P1 = w \times h \times H$	1x0.7x2.3		1.61	0.75		1.21
$P2 = w \times (H \times H) / 2$	$1 \times (1.5 \times 1.5) / 2$		1.125	0.5		0.56
$U = C \times w \times H \times b / 2$	0.50x1x1.5x1.9/2	-0.7125		1.27		0.9
TOTAL		4.26	2.74		6.16	2.67

CHECK	FORMULA	VALUES	LIMITS	REMARK
Over Turning	$\Sigma Mr / \Sigma Mo$	6.16 / 2.67	>1.5	SAFE
Sliding	$\mu \Sigma V / \Sigma H$	0.65x4.2625 / 2.735	>1	SAFE
Stress at Toe	$(\Sigma V/b) \times (1+6e/b)$	$(4.2625/1.9) \times \{1+(6 \times 0.13/1.9)\}$	<10	SAFE
Stress at Heel	$(\Sigma V/b) \times (1-6e/b)$	$(4.2625/1.9) \times \{1-(6 \times 0.13/1.9)\}$	>0	>0 SAFE
Eccentricity	$(b/2) - [(\Sigma Mr - \Sigma Mo) / \Sigma V]$	$(1.9/2) - (3.49/4.2625)$	<0.32	<b/6 SAFE





Work CODE

0

DETAILED - ESTIMATE (Anicut)

WHS IWMP VIII Dubbi bidarakha

Work CODE

लम्बाई – **15.00** मीटर

ऊंचाई – **1.80** मीटर

0

Location - —

Item No. Of GKN-06	S.No.	Item	No.	L	B	H	Qty.	Amount	Labour Component
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^{168(ब)}

1 Earth work in excavation in foundation trenches or drains including dressing of sides and ramming of bottoms, lift upto 1.5 Mtr. including taking out the excavated soil as directed within a lead of 50 Mtr.

(a) Hard Soil

NREGS-L	62
Other-L	68
Total-	68

HW	1x15x(2.6+0.45)x2.5	114.375	cu.m
COT		0.000	cu.m
SideWall with US	2x7.7x1.2x2.5	46.200	cu.m
WW-US-1	1x1.8x1.2x2.5	5.400	cu.m
WW-US-2	1x1.8x1.2x2.5	5.400	cu.m
WW-DS-1	1x2.8x0.9x1.2	3.024	cu.m
WW-DS-2	1x2.8x0.9x1.2	3.024	cu.m
HWE	2x3.6x1.5x(2.5)	27.000	cu.m
HWE-2	0x2.1x0.9x0.9	0.000	cu.m
Apron	1x15x4.7x0	0.000	cu.m
TW	1x15x0.6x1	9.000	cu.m
Hard soil + Hard Rock			
Total		213.423	cu.m

Labour @ Rs. 68 Cu.m.

@Rs. **92** Cu.m.

Note : Add Extra Lift qt.@8/- cum

Labour **14512.76**

Rs. **19634.92**

- 2 Providing and laying cement concrete including curing compaction etc complete using stone aggregate 40mm nominal size (Hand broken) in foundation plinth, excluding the cot of shuttering, using.

(a) 1 cement : 4sand : 8aggregate

NREGS-L	213
Other-L	233
Total-	1415

HW	1x15x2.6x0.3	11.700	cu.m
COT		0.000	cu.m
SideWall with US	2x7.7x1.2x0.15	2.772	cu.m
WW-US-1	1x1.8x1.2x0.15	0.324	cu.m
WW-US-2	1x1.8x1.2x0.15	0.324	cu.m
WW-DS-1	1x2.8x0.9x0.15	0.378	cu.m
WW-DS-2	1x2.8x0.9x0.15	0.378	cu.m
HWE	2x3.6x1.5x0.15	1.620	cu.m
HWE-2	0x2.1x0.9x0.15	0.000	cu.m
Apron	1x15x4.7x	0.000	cu.m
TW	1x15x0.6x0.15	1.350	cu.m

Total 18.846 cu.m.

Labour @ Rs. 233
@Rs. 2259

Cu.m.
Cu.m.

Labour 4391.12

Rs. 42573.11

Note: Add Extra if Crusher Broken @150/- cum.

27⁽³⁾

- 3 Random Rubble stone masonry for foundation and plinth in cement sand mortar 1 : 6 (1cement : 6 sand) for above 30 cm. thick walls.

NREGS-L	120
Other-L	240
Total-	1170

HW	1x15x2.3x(2.5-0.3)	75.900	cu.m
HW-plinth	1x15x2.3x1.7	58.650	cu.m
SideWall with US	2x7.7x1.2x(2.5-0.15)	43.428	cu.m
WW-US-1	1x1.8x1.2x(2.5-0.15)	5.076	cu.m
WW-US-2	1x1.8x1.2x(2.5-0.15)	5.076	cu.m
WW-DS-1	1x2.8x0.9x(1.2-0.15)	2.646	cu.m
WW-DS-2	1x2.8x0.9x(1.2-0.15)	2.646	cu.m
HWE	2x3.6x1.5x(2.5-0.15)	25.380	cu.m

HWE-2	0x2.1x0.9x(0.9-0.15)	0.000	cu.m
TW	1x15x0.6x(1-0.15)	7.650	cu.m
Total		226.452	cu.m.

Labour @ Rs. 240.00 Cu.m.
@Rs. 1815 Cu.m.

Labour 54348.48

Rs. **411010.38**

27(3r)+28

4 Random rubble stone masonry in superstructure up to 4.5Mtr. height above plinth level in cement sand mortar 1 : 6 (1 cement : 6 sand) wall thickness above 30 Cm

NREGS-L	120
Other-L	240
Total-	1170

HW	1x15x[(0.9+2.3)/2]x1.8	43.200	cu.m.
SideWall with US	2x7.7x[(0.45+1.2)/2]x3.53	44.849	cu.m.
WW-US-1	1x1.8x[(0.45+1.2)/2]x[(3.53+3.53)/2]	5.242	cu.m.
WW-US-2	1x1.8x[(0.45+1.2)/2]x[(3.53+3.53)/2]	5.242	cu.m.
WW-DS-1	1x2.8x[(0.45+0.9)/2]x[(3.53+1.2)/2]	4.470	cu.m.
WW-DS-2	1x2.8x[(0.45+0.9)/2]x[(3.53+1.2)/2]	4.470	cu.m.
HWE	2x3.6x[(0.45+1.5)/2]x3.53	24.781	cu.m.
HWE-2	0x2.1x[(0.45+0.9)/2]x0.6	0.000	cu.m.
TW	1x15x[(0.45+0.6)/2]x0.45	3.544	cu.m.
Total		135.798	cu.m

Labour @ Rs. 240.00 Cu.m.
@Rs. 1815 Cu.m.

Labour 32591.52

Rs. **246473.37**

73(v)

5 Plaster on new surface on walls in cement sand mortar 1:6 including racking of joint etc. complete fine finished :
(a) 25mm Thick

NREGS-L	19
Other-L	45
Total-	93

HW	1x15x[(2.5-0.3+1.7)+1.8+[Sqrt{(1.8^2)+((2.3-0.9)^2)}}]	119.705	Sq.m.
SideWall with US	2x7.7x[(2.5-0.15)+3.53]	90.552	Sq.m.
WW-US-1	1x1.8x[(3.53+3.53)/2]	6.354	Sq.m.
WW-US-2	1x1.8x[(3.53+3.53)/2]	6.354	Sq.m.
WW-DS-1	1x2.8x[(3.53+1.2)/2]	6.622	Sq.m.
WW-DS-2	1x2.8x[(3.53+1.2)/2]	6.622	Sq.m.
TW	2x15x0.45	13.500	Sq.m.
HWE-2	2x0x2.1x0.6	0.000	Sq.m.
Total		249.709	Sq.m.

Labour @ Rs. 45.00 Sq.m. Labour 11236.91
 @Rs. 144.00 Sq.m. Rs. 35958.10

6 Earth Filling including watering ramming consolidation and dressing complete including all.

NREGS-L	50
Other-L	56
Total-	56

Filling in between US & DS W.Walls
 Embk-1 US Slope 2.5:1
 Embk-2

Deduction as per item No.1
 $2 \times [7.7 + (7.7 + 1.8)] / 2 \times 1.5588 \times 3.53$ 213.423 Cu.m.
 $0 \times [(1 + 4.375) / 2] \times [(1.5 + 0) / 2]$ 94.644 Cu.m.
 $0 \times [(1 + 4.375) / 2] \times [(1.5 + 0) / 2]$ 0.000 Cu.m.
 Total 118.779 Cu.m.

Labour @ Rs. 56.00 Cu.m. Labour 0.00
 @Rs. 56.00 Cu.m. Rs. 0.00

172

7 Providing and laying cement concrete including curing compaction etc complete using stone aggregate 20mm nominal size (crusher broken) in foundation plinth, excluding the cot of shuttering, using.

(a) 1 cement : 2sand : 4aggregate

NREGS-L	183
Other-L	227
Total-	2309

Coping HW 15x0.9x0.1 1.350 cu.m.
 $[1.8 + 1.8 + 2.8 + 2.8] \times 0.45 \times 0.1$ 0.414 cu.m.
 SideWall with US 2x7.7x0.45x0.1 0.693 cu.m.
 Apron 15x4.7x0.1 7.050 cu.m.
 TW 15x0.45x0.1 0.675 cu.m.
 HWE 2x3.6x0.45x0.1 0.324 cu.m.
 HWE-2 0x2.1x0.45x0.1 0.000 cu.m.
 Total 10.506 cu.m.

Labour @ Rs. 227 Cu.m. Labour 2384.86
 @Rs. 3404 Cu.m. Rs. 35762.42

8 Supply & Spreading quarry rubbish under pitching (Item No.-85)

NREGS-L	45
Other-L	61
Total-	171

0x2.019x0.10 0.000 cu.m
0x2.019x0.10 0.000 cu.m

Total 0.000 cu.m

Labour @ Rs. 61.00 Cu.m.
@Rs. 239.00 Cu.m.

Labour 0.00

Rs. 0.00

124,बद्ध

9 Random rubble stone kharanja under floor in CM 1:6 as per GKN Rates

NREGS-L	32
Other-L	72
Total-	212

Apron

15x4.7 70.500 Sqm
Total 16.215 cum

Labour @ Rs. 72.00 sqm
@Rs. 1539.00 cum

Labour 1167.48

Rs. 24954.89

10 Filling of Black Cotton Soil with watering & Ramming complete in jhiri U/S Side with all lead & lift

NREGS-L	100
Other-L	100
Total-	200

1x15x0.45x2.5 16.875 cum

Total 16.875 cum

Labour @ Rs. 100.00 Cu.m.
@Rs. 200.00 Cu.m.

Labour 1687.50

Rs. 3375.00

11 RR Dry Stone Pitching of Course Rubble

NREGS-L	50
Other-L	116
Total-	531

0x2.02 x 0 0.000 cum

0x2.02 x 0 0.000 cum

Total 0.000 cum

Labour @ Rs. 116.00 Cu.m.
@Rs. 890.00 Cu.m.

Labour 0.00

Rs. 0.00

12 S/F Anchor Bars of Dia.16mm 1.20 Mtr
C/C in zig-zag way from foundation to
upto top of Super Structure

NREGS-L	1
Other-L	2.1
Total-	49.4

	No. of Bars	T-Length	T-Weight	
Anchor Bars	0	0	0	Kgs
Reinforcement in Apron 8mm dia @0.50 Mtr/c			0	Kgs

Total 0.000 Kgs

Labour @ Rs.	2.10	Cu.m.	Labour	0.00
@Rs.	49.40	Cu.m.	Rs.	0.00

1.428571429

TOTAL	Rs.	819742.19
Add. 3% Cont.	Rs.	24592.27
Grand Total	Rs.	844334.46
A-		
B-	Labour	Rs. 122321.00
C-	Add 0% reduction in task as per order of govt.	Rs. 0.00
D-		
Total Cost	(A+ C)	844334.46

Say Rs.	844300.00
LABOUR (B+C)	Rs. 122321.00
MATERIAL	Rs. 721979.00

Note - 1-Foundation depth should not be more than 1.80 Mtr.
2-If sandy(Bajari) strata is available up to 1.8 Mtr Depth than excavate the foundation up to the soil (Loam etc.) .After wards the Site Engineer feels further excavation is required than provide cut off trench.

Note - J.En. A.En/ Ex.En.
COST

FORM

Please do not disturb the white Cells & Black Fonts

844300.00

Name of Work - WHS IWMP VIII Dubbi bidarakha

Gram- लोरवाडा

GP- लोरवाडा

PS- सवाई माधोपुर

AS No.-

Date-

Amount-

Work CODE -

Time of Completion- 6 Months

Location- - River/Nala/W.Weir nala

Scheme-NREGS IWMP TASK Red % COT Required Y/N - n

0

B H 0.6 0.6

AREA in Hact.	200	Hact.	Over Burden	0	
Crest Length	15	Mtr.	D/S Wing Wall Additional Length	1	Designed Length 1.8
Height of Anicut	1.8	Mtr.	U/S Wing Wall Additional Length	0	Designed Length 1.8
Plinth Ht. Of HW	1.7	Mtr.	Top Width of Side Wall & W.Wall	0.45	
Fetch Length	1	Km	TW - Top Width	0.45	
Density of Masonry-p	2.3	t/cum	TW Ht	0.45	
Depth of Foundation	2.5	Mtr.			

Note -

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Part	Nos.	Length	Fd.W/ Width	Fd.D	CC-Th.	W.Th-Base	W.Th-Top	SS-H1	SS-H2
HW	1	15	2.6	2.5	0.3	2.3	0.9	1.8	
SideWall with US	2	7.7	1.2	2.5	0.15	1.2	0.45	3.53	
WW-US-1	1	1.8	1.2	2.5	0.15	1.2	0.45	3.53	3.53
WW-US-2	1	1.8	1.2	2.5	0.15	1.2	0.45	3.53	3.53
WW-DS-1	1	2.8	0.9	1.2	0.15	0.9	0.45	3.53	1.2
WW-DS-2	1	2.8	0.9	1.2	0.15	0.9	0.45	3.53	1.2
HWE	2	3.6	1.5	2.5	0.15	1.5	0.45	3.53	3.53
HWE-2	0	2.1	0.9	0.9	0.15	0.9	0.45	0.6	0.6
Apron	1	15	4.7	0					
TW	1	15	0.6	1	0.15	0.6	0.45	0.45	

Emb1- US Slope 2.5:1		0		1.875		4.375	1	1.5	0
Emb2-		0		1.875		4.375	1	1.5	0
Pitching Y/N	y				COST	844300.00			
Pitching Thick.	0								

Coping on WW	0.1
Coping on HW	0.1
CC in Apron	0.1

Note -

Please do not disturb the white Cells & Black Fonts

HYDAULIC DESIGN

$$Q = CIA/36$$

C - Runoff Coefficient

I - Rainfall intensity-CM/Hr

A - Area in Hact.

0.3	Runoff Coefficient for SOIL	Agr.	Grassland	Forest
9	Sandy	0.29	0.15	0.1
200	Alluvial	0.4	0.35	0.3
	Black Cotton	0.5	0.45	0.4

$$Q = 15 \text{ Cum/Sec}$$

$$Q = CA^{3/4}$$

$$C = 11.4$$

A - Area in SqKm

$$11.4$$

$$2$$

$$Q = 19.172 \text{ Cum/Sec}$$

$$Q = 19.172 \text{ Cum/Sec}$$

Discharge Max. of both

Depth of Flow(Flood Lift)

$$Q = C_d L h^{3/2}$$

C_d - Coefficient of discharge for broad crested weir

L - Crest Length

$$1.71$$

$$15$$

$$h_f = (Q/C_d L)^{2/3}$$

$$h_f = 0.824 \text{ Mtr.}$$

$$\text{Say } 0.8 \text{ Mtr.}$$

Free Board - H_f

$$f_b = h_w$$

$$h_w = 0.384(F)^{1/2} + 0.763 - 0.217(F)^{1/4}$$

F - Fetch Length in Km

$$1$$

$$h_w = 0.93 \text{ Mtr.}$$

$$\text{Say } 0.93 \text{ Mtr.}$$

$$1.73 \text{ Mtr.}$$

$$\text{Say } 1.7 \text{ Mtr.}$$

$$H_f = h + h_w$$

STRUCTURAL DESIGN

Head Wall

Bottom Width	$b = (H+hf)/(p-1)^{1/2}$	2.28	Mtr.
		2.3	Mtr.
Top Width	$a = b - (0.80 \times H)$	0.86	Mtr.
	$a = 0.55 \times (H)^{1/2}$	0.74	
		0.9	Mtr.
Width of Concrete Bed	$= b + 0.3$	2.6	Mtr.

Head Wall Extension

Length	$= H + h + 1.00$	3.6	Mtr.
Top Width		0.45	Mtr.
Bottom Width	$= 0.45 + 0.30(H + \text{FreeBoard})$	1.5	Mtr.
Depth of Foundation	$= 2.5 + \text{Over Burden}$	2.5	Mtr.
Length of Apron	$= 0.696 \times C \times (H)^{1/2}$		
C- Bligh's Coefficient=5		4.67	Mtr.
		4.7	Mtr.
Thickness of Apron			
	$t = (H/1.811)^{1/2}$	1	Mtr.

(Allowed 30 Cms 23Cms Stone Kharanja in CM & 10 Cm CC 1:2:4)

0.30 Mtr.

Side Wall

Length=	$1.75H + 0.75h + 0.45$	4.2	Mtr.
Adopt Length of Side Wall=Apron		4.7	Mtr.
Height at Head Wall extension Junction	$H + \text{Flood Lift} + \text{FreeBoard}$	3.53	Mtr.
Height at Wing Wall Junction	$1.50 \times \text{Flood Lift}$	1.2	Mtr.

	Top Width	0.45	Mtr.
Bottom Width=	$0.45 + 0.30 \times [(H + \text{FreeBoard}) + (1.5 \times \text{FloodLift})]$	1.16	Mtr.
	Say	1.2	Mtr.

D/S Wing Wall

	Length = $2.25 \times \text{Flood Lift}$	1.8	Mtr.
	Length	2.8	Mtr.
	Top Width	0.45	Mtr.
Bottom Width=	$0.45 + [0.30 \times (1.50 \times \text{Flood Lift})]$	0.81	Mtr.
	Adopt	0.9	Mtr.
Height=	$1.50 \times \text{Flood Lift}$	1.2	Mtr.

U/S Wing Wall

	Length = $2.25 \times \text{Flood Lift}$	1.8	Mtr.
	Length	2.8	Mtr.
	Top Width	0.45	Mtr.
Bottom Width=	$0.45 + [0.30 \times (1.50 \times \text{Flood Lift})]$	0.81	Mtr.
	Adopt	0.9	Mtr.
Height =	$H + \text{Flood Lift} + \text{Free Board}$	3.53	Mtr.

Toe Wall

	Top Width	0.45	Mtr.
	Height	0.45	Mtr.
Bottom Width=	$T_w + [0.30 \times H_t]$	0.59	Mtr.
	Adopt	0.6	Mtr.
Depth of Foundation=	Thickness of Apron Calculated	1	Mtr.

FORCES		Vertical Forces V	Horizontal Forces H	Lever arm from Toe	Moment at Toe	
					Mr	Mo
W1=axHxLxp	0.9x1.8x1x2.3	3.73		1.85	6.89	
W2=1/2(b-a)xHxLxp	1/2x(2.3-0.9)x1.8x1x2.3	2.898		0.93	2.7	
W3=aXhxLxw	0.9x0.8x1x1	0.72		1.85	1.33	
P1=wxh X H	1x0.8x2.3		1.84	0.9		1.66
P2=wx(H x H)/2	1x(1.8x1.8)/2		1.62	0.6		0.97
U=CxwHxb/2	0.50x1x1.8x2.3/2	-1.035		1.53		1.58
TOTAL		6.31	3.46		10.92	4.21

CHECK	FORMULA	VALUES	LIMITS	REMARK
Over Turning	$\frac{\sum Mr}{\sum Mo}$	10.92 / 4.21	>1.5	SAFE
Sliding	$\frac{\mu \sum V}{\sum H}$	0.65x6.309 / 3.46	>1	SAFE
Stress at Toe	$(\sum V/b)x(1+6e/b)$	(6.309/2.3)x{1+(6x0.09/2.3)}	<10	SAFE
Stress at Heel	$(\sum V/b)x(1-6e/b)$	(6.309/2.3)x{1-(6x0.09/2.3)}	>0	>0 SAFE
Eccentricity	$(b/2)-[(\sum Mr-\sum Mo)/\sum V]$	(2.3/2)-(6.71/6.309)	<0.38	<b/6 SAFE

Model Estimate

1. कार्य का नाम : पेयजल टंकी निर्माण कार्य

भाग (अ) मात्राओं का विवरण (मानचित्र में दिए परिणाम के आधार पर)

क्र. सं.	विशिष्ट (दर अनुसूची से)	माप मीटर में				मात्रा	ईकाई घ.मी./ व.मी./ल.मी.
		संख्या	लम्बाई	चौड़ाई	ऊँचाई		
1	2		3	4	5	6	7
1	नींव खाई परनाला मय 1.5 गहराई तक मिट्टी की खुदाई करना तल को कूटना पानी डालना बगल को संवारना खुदी हुई मिट्टी को बाहर निकालना नींव भरने के बाद खानी स्थानों को पुनः मिट्टी से भरना तथा बची हुई मिट्टी को 50मीटर की दूरी तक निस्तारण करना।						
		3.14	9.25	2.00	4.00	232.36	
						6.58	घ.मी.
2	सीमेन्ट कंक्रीट, नींव या फर्श में 40मिली मीटर नामीय माप की पत्थर गिट्टी/ईट गिट्टी सीमेन्ट रेत मसाला में 1 सीमेन्ट, 4रेत, 8गिट्टी अनुपात में मिलाकर डालना तथा कुटाई करना तराई समेत। पत्थर की गिट्टी के साथ						
		3.14	9.25	2.00	0.50	29.05	
						0.82	घ.मी.
3	नींव तथा कुर्सी में पत्थर की व रद्दा ढोका सीमेन्ट बजरी 1:6 मसाले में मय बगल की ढिरी बन्द करना तथा तराई करना आदि।						
		3.14	9.25	1.50	3.00	130.70	
						3.70	घ.मी.
4	सेन्टरिंग, शटरिंग का आर.सी.सी. छत स्लेब बीम छज्जे लिंटल आदि डालने के लिए लगाना 4.5मीटर ऊँचाई तक के लिए हटाना आदि विशेष विवरण के अनुसार।						
	2x3.14=	6.28	9.25	0.00	12.00	697.08	
						64.76	व.मी.
5	सीमेन्ट कंक्रीट 1:1.5:3 मिश्रण की प्रवलिंत सीमेन्ट कंक्रीट में डालना तथा आपूर्ति करना छत की स्लेब छज्जे बीम लिंटल आदि में दवाना तलाई करना तथा सतह को 1:3सीमेन्ट मसाले में संकल करना आदि समेत परन्तु स्टील करना तथा शटरिंग की कीमत अलग से।						
		3.14	9.25	0.75	12.00	261.41	
						7.40	घ.मी.

6	आर.सी.सी.काम के लिए लोहे को काटना मोड़ना तथा स्थान पर लगाना तथा बांधने का कार्य मय आपूर्ति के।						
		1	7.40	30.00	0.00	222.00	
						222.00	कि.ग्रा.
7	सीमेन्ट प्लास्टर नई दीवार पर 1:6 अनुपात में सीमेन्ट बजरी मिलाकर जोड़ो को कुरेदना तथा तलाई सहित 25मिमी. मोटाई में।						
		2x3.14=	6.28	9.25	0.00	10.00	580.90
						53.97	व.मी.
8	फर्श के नीचे सूखे पत्थरो का खंरजा लगाना व आपूर्ति करना।						
		(8.50+3+3) x (8.50+3+3)/4	3.14	52.56	0.75	1.00	123.78
						3.50	घ.मी.
9	50मिमी मोटाई में सीमेन्ट कंक्रीट 1:2:4 मिश्रण जिसमें 1सीमेन्ट/2बजरी/4पत्थर की 12मिमी नामीय गिट्टी के साथ मिलाकर डालना व कूटना व दबाना तथा तराई आदि समेत।						
		(8.50+3+3) x (8.50+3+3)/4	3.14	52.56	0.50	1.00	82.52
						2.34	घ.मी.
10	अवल दर्जे की पत्थर की पट्टियों की छत डालना, ऊपर तथा नीचे से जोड़ो में पत्थर की चीप के साथ 1:4 में सीमेन्ट मसाले से भरना						
		1x3.14=	3.14	121.00	0.25	1.00	94.99
						8.82	व.मी.
11	सिंगलफेस मोटर सबमर्सिबल पम्पसेट					1.00	नग
12	पेनल बोर्ड मय ए-मीटर, बोल्ट मीटर व स्टार्टर आपूर्ति सहित					1.00	नग
13	एच.डी.पी.ई.पाईप 35एम.एम. व्यास मय आपूर्ति					100.00	मीटर
14	3/4मि.मी. कोर वायर (केबिल)					120.00	मीटर

Model Estimate

1. कार्य का नाम : पेयजल टंकी निर्माण कार्य

भाग (ब) सारांश (अनुमोदित दर अनुसूची अनुसार)

क्र. सं.	विशिष्ट (दर अनुसूची से) भाग "अ" के क्रमानुसार	मात्रा (भाग 'अ' से)	दर	श्रम राशि	सामग्री राशि	योग (रूपये में)
1	2	3	4	5	6	7
1	नींव खाई परनाला मय 1.5 गहराई तक मिट्टी की खुदाई करना तल को कूटना पानी डालना बगल को संवारना खुदी हुई मिट्टी को बाहर निकालना नींव भरने के बाद खानी स्थानों को पुनः मिट्टी से भरना तथा बची हुई मिट्टी को 50मीटर की दूरी तक निस्तारण करना।					
		6.58	100.00			657.58
			P.Cum			
2	सीमेन्ट कंक्रीट, नींव या फर्श में 40मिली मीटर नामीय माप की पत्थर गिट्टी/ईट गिट्टी सीमेन्ट रेत मसाला में 1 सीमेन्ट, 4रेत, 8गिट्टी अनुपात में मिलाकर डालना तथा कुटाई करना तराई समेत। पत्थर की गिट्टी के साथ					
		0.82	2248.00			1847.80
			P.Cum			
3	नींव तथा कुर्सी में पत्थर की व रद्दा ढोका सीमेन्ट बजरी 1:6 मसाले में मय बगल की ढिरी बन्द करना तथा तलाई करना आदि।					
		3.70	1882.00			6961.29
			P.Cum			
4	सेन्टरिंग, शटरिंग का आर.सी.सी. छत स्लेब बीम छज्जे लिंटल आदि डालने के लिए लगाना 4.5मीटर ऊँचाई तक के लिए हटाना आदि विशेष विवरण के अनुसार।					
	2x3.14=	64.76	103.00			6670.15
			P.Sqm			
5	सीमेन्ट कंक्रीट 1:1.5:3 मिश्रण की प्रवलित सीमेन्ट कंक्रीट में डालना तथा आपूर्ति करना छत की स्लेब छज्जे बीम लिंटल आदि में दवाना तलाई करना तथा सतह को 1:3सीमेन्ट मसाले में संकल करना आदि समेत परन्तु स्टील करना तथा शटरिंग की कीमत अलग से।	7.40	4066.00			30079.30
			P.Cum			
6	आर.सी.सी.काम के लिए लोहे को काटना मोडना तथा स्थान पर लगाना तथा बांधने का कार्य मय आपूर्ति के।					

		222.00	60.10			13342.20
			P.Kg			
7	सीमेन्ट प्लास्टर नई दीवार पर 1:6 अनुपात में सीमेन्ट बजरी मिलाकर जोड़ो को कुरेदना तथा तलाई सहित 25मिमी. मोटाई में।	53.97	166.00			8958.29
	2x3.14=		Psqm			
8	फर्श के नीचे सूखे पत्थरो का खंरजा लगाना व आपूर्ति करना।					
	(8.50+3+3) x (8.50+3+3)/4	3.50	890.00			3117.76
			P.Cum			
9	50मिमी मोटाई में सीमेन्ट कंक्रीट 1:2:4 मिश्रण जिसमें 1सीमेन्ट/2बजरी/4पत्थर की 12मिमी नामीय गिट्टी के साथ मिलाकर डालना व कूटना व दबाना तथा तराई आदि समेत।					
	(8.50+3+3) x (8.50+3+3)/4	2.34	3634.00			8486.86
			P.Cum			
10	अव्वल दर्जे की पत्थर की पट्टियों की छत डालना, ऊपर तथा नीचे से जोड़ो में पत्थर की चीप के साथ 1:4 में सीमेन्ट मसाले से भरना					
	1x3.14=	8.82	953.00			8409.37
			P.Sqm			
11	सिंगलफेस मोटर सबमर्सिबल पम्पसेट	1.00	18500.00	प्रति नग		18500.00
12	पैनल बोर्ड मय ए-मीटर, बोल्ट मीटर व स्टार्टर आपूर्ति सहित	1.00	3000.00	प्रति नग		3000.00
13	एच.डी.पी.ई.पाईप 40एम.एम. व्यास मय आपूर्ति	100.00	60.00	प्रति मीटर		6000.00
14	3/4मि.मी. कोर वायर (केबिल)	120.00	80.00	प्रति मीटर		9600.00
15	मोटर को बोर में डालना विद्युत कनेक्शन लगाना मय फिटिंग मजदूरी चार्जेज मय रस्सी					2500.00
						128130.61
	3प्रति.कन्टीजेन्सी चार्जेज					3843.92
	योग					131974.52

Say Rs. :- 1.32 Lac

CHAPTER - VIII Enclosures -

- a. Location –District, block, village, watershed location map
- b. Map of 6/10-11SWM IWMP Project (Watershed Boundary demarcation in cadastral & Topo Sheet)
- c. PRA Map (along with photos & paper drawing)
- d. Treatment map (Indicate proposed works)
- e. Cadastral Map on watershed boundary
- f. Information on Soils, Soil fertility, Land capability, Soil chemical problems like salinity, alkalinity
- g. Land Use Land Cover map
- h. Information on existing water harvesting structures & well inventory along with GPS co-ordinates.
- i. High resolution, latest Remote Sensing Satellite data

Documents of Agreements:

Proceedings of gram sabha for EPA approval

Proceedings of gram sabha Resolution for committee constitution

Proceedings of gram sabha for DPR approval

DPR approval by district

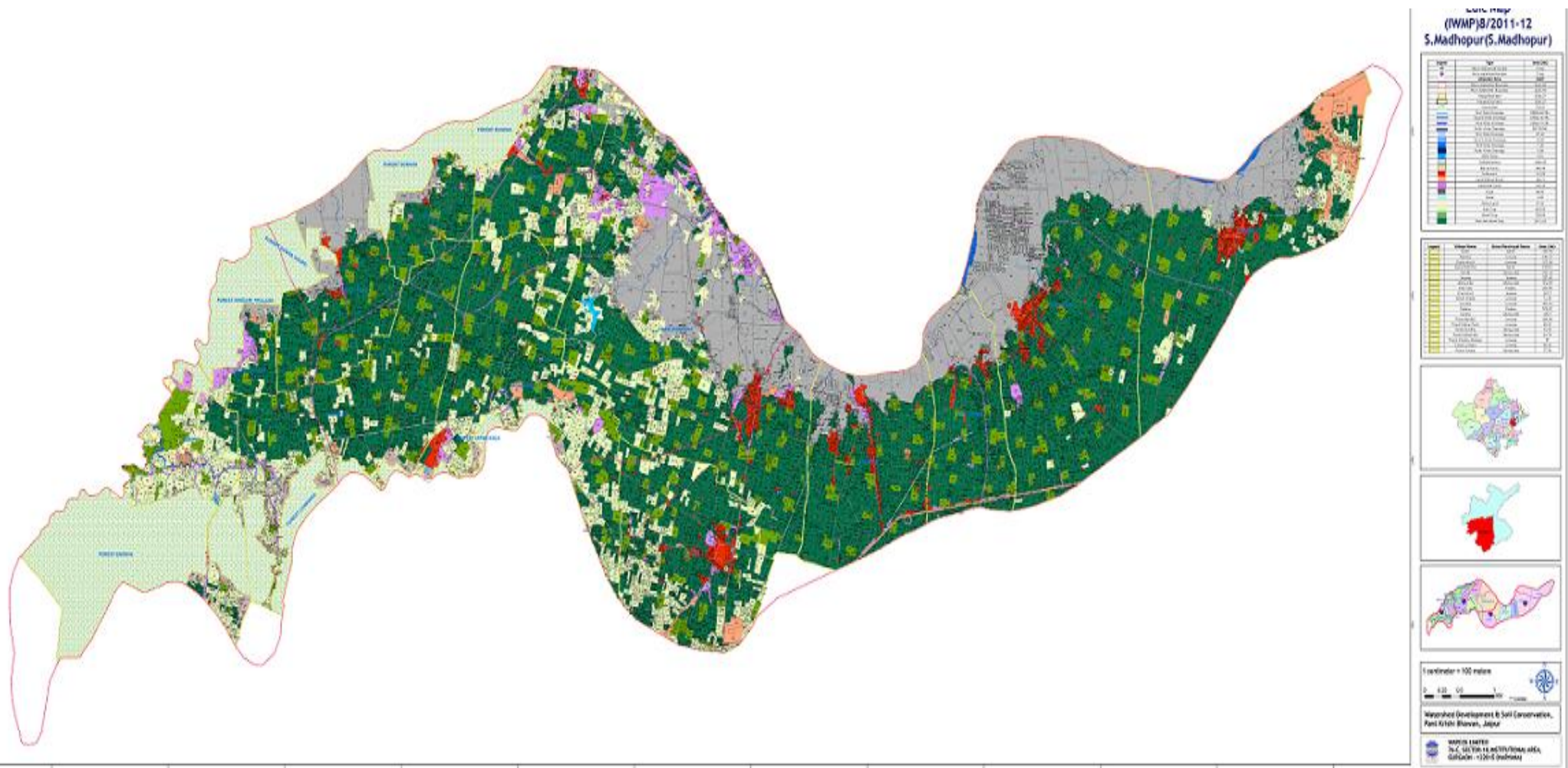
Watershed Committee Registration certificate

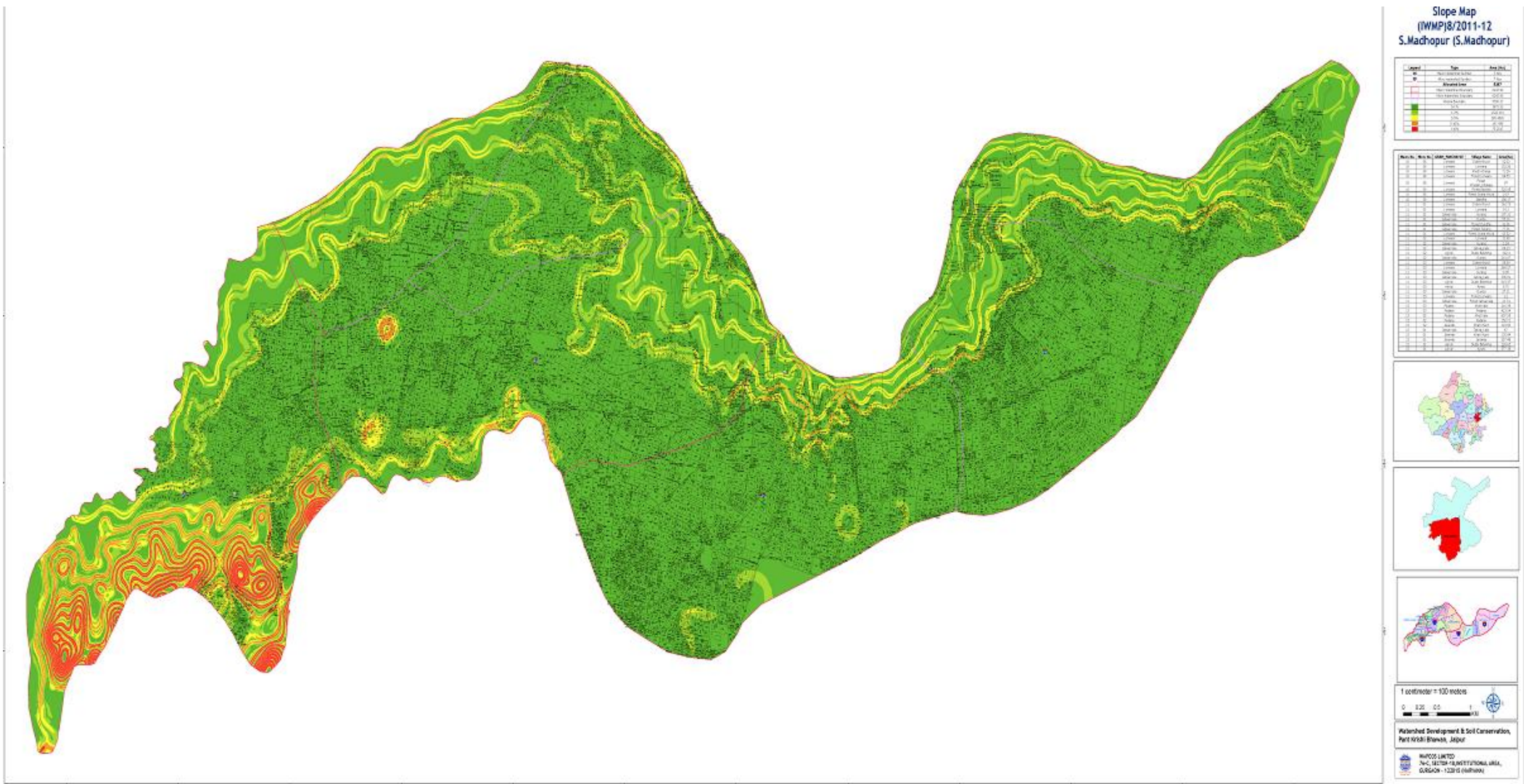
MoU – PIA – DWMA, PIA – WC(in case of NGO as PIA)

**LAND USE DETAILS OF MICRO WATERSHEDS
PANCHAYAT SAMITI-SAWAI MADHOPUR
DISTRICT-SAWAI MADHOPUR**

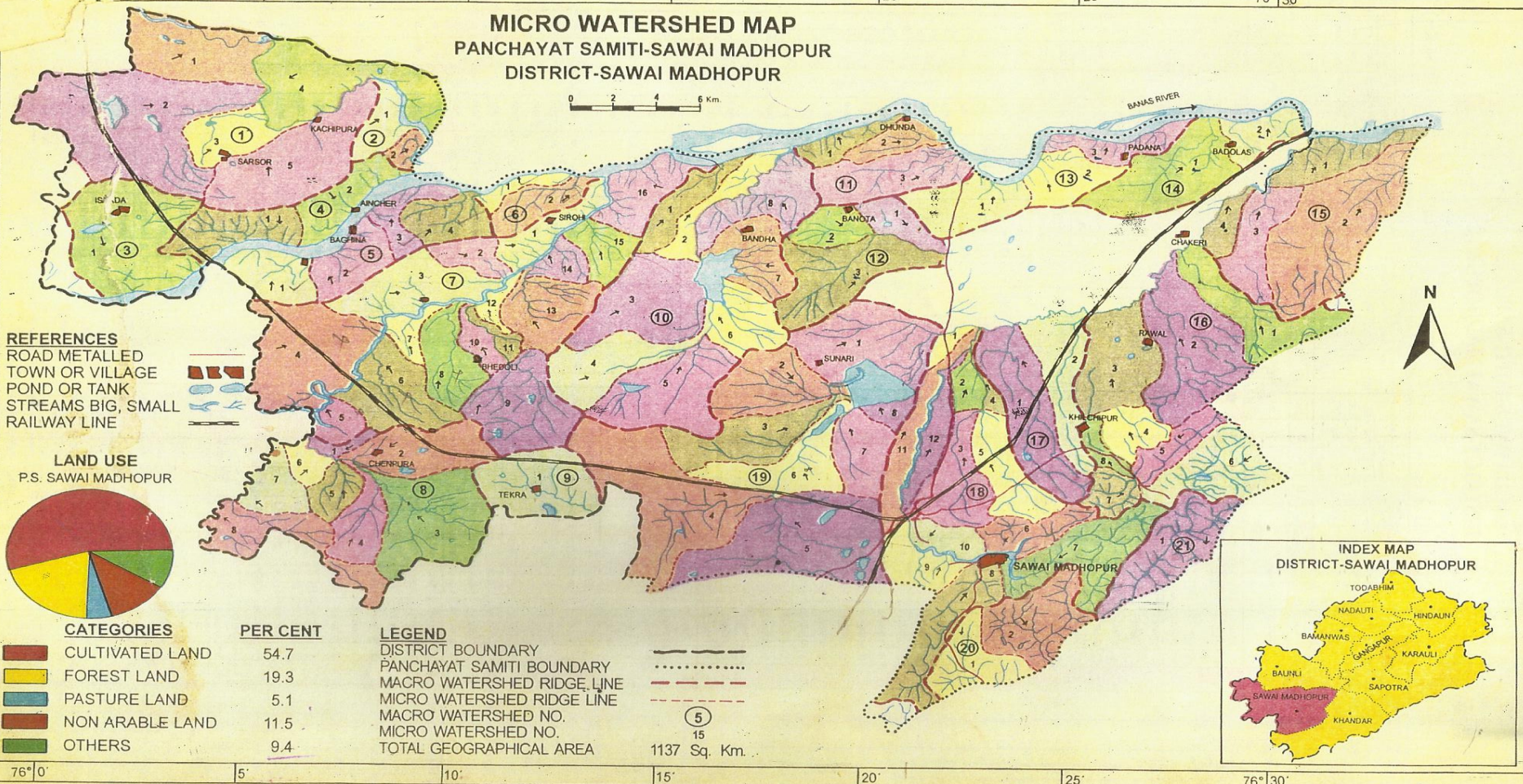
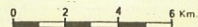
(Total Geographical area 1137 Sq. Km.)

Macro Watersheds					Micro Watersheds										Macro Watersheds					Micro Watersheds											
S. No.	Code No.	Name	Area (ha.)	Priority rating	S. No.	Code No.	Area (ha.)	Major land use (Area in ha.)					RE-MA-RKS	S. No.	Code No.	Name	Area (ha.)	Priority rating	S. No.	Code No.	Area (ha.)	Major land use (Area in ha.)					RE-MA-RKS				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	1	2	3	4	5	6	7	8	9	10	11	12	13	14				
1	070701	Sarsor	10057.0	D	1	07070101	1615.0	1499.0	-	116.0	-	D	RA	12	071212	Banota	2720.0	B	1	07121201	490.0	435.0	-	-	55.0	D	-				
					2	07070102	3847.0	3420.0	53.0	374.0	-	D	RA					2	07121202	570.0	535.0	-	15.0	20.0	B	-					
					3	07070103	800.0	690.0	-	80.0	30.0	D	-					3	07121203	1660.0	1511.0	-	-	127.0	22.0	B	-				
					4	07070104	1545.0	1433.0	-	-	112.0	D	RA	13	071213	Padana	2511.0	D	1	07121301	1102.0	992.0	-	-	25.0	85.0	D	-			
					5	07070105	2250.0	2030.0	145.0	55.0	20.0	D	-					2	07121302	802.0	674.0	-	-	-	-	128.0	D	-			
2	070702	Kachipura	769.0	D	1	07070201	542.0	460.0	-	45.0	37.0	D	-					3	07121303	607.0	270.0	-	-	95.0	242.0	E	-				
					2	07070202	227.0	117.0	-	-	110.0	D	-	14	071214	Badolias	2478.0	C	1	07121401	1880.0	1345.0	-	-	218.0	317.0	C	-			
3	070703	Isarda	2547.0	C	1	07070301	2547.0	2159.0	66.0	155.0	167.0	C	-					2	07121402	598.0	313.0	-	-	65.0	220.0	C	-				
4	070704	Aincher	1900.0	D	1	07070401	1040.0	408.0	124.0	48.0	460.0	E	-	15	071215	Chakeri	5362.0	C	1	07121501	907.0	250.0	-	-	92.0	565.0	E	RA			
					2	07070402	860.0	507.0	-	-	353.0	D	-					2	07121502	3095.0	2843.0	112.0	125.0	15.0	B	RA					
5	071205	Baghina-I	2872.0	D	1	07120501	755.0	577.0	-	-	178.0	D	RA					3	07121503	990.0	881.0	-	-	81.0	28.0	B	-				
					2	07120502	862.0	512.0	-	-	350.0	D	-					4	07121504	370.0	326.0	-	-	44.0	-	C	-				
					3	07120503	490.0	395.0	-	-	95.0	D	-	16	071216	Rawal	8992.0	E	1	07121601	1430.0	841.0	230.0	32.0	327.0	D	-				
					4	07120504	765.0	730.0	-	-	35.0	B	-					2	07121602	2558.0	1671.0	740.0	147.0	-	-	C	-				
6	071206	Sirohi	877.0	E	1	07120601	220.0	80.0	125.0	15.0	-	E	-					3	07121603	1585.0	1418.0	52.0	-	115.0	D	-					
					2	07120602	657.0	247.0	340.0	70.0	-	E	-					4	07121604	617.0	212.0	405.0	-	-	-	E	-				
7	071207	Bhedoli	12675.0	C	1	07120701	630.0	132.0	338.0	105.0	55.0	E	-					5	07121605	630.0	-	630.0	-	-	-	G	-				
					2	07120702	445.0	400.0	20.0	-	25.0	D	-					6	07121606	1498.0	-	1498.0	-	-	-	G	-				
					3	07120703	1345.0	1060.0	25.0	205.0	55.0	C	-					7	07121607	427.0	-	427.0	-	-	-	G	-				
					4	07120704	2065.0	1947.0	-	-	118.0	D	RA					8	07121608	247.0	57.0	190.0	-	-	-	F	-				
					5	07120705	340.0	302.0	-	38.0	-	C	RA	17	071217	Khilchipur	3155.0	B	1	07121701	1880.0	1334.0	412.0	134.0	-	-	B	-			
					6	07120706	1375.0	1088.0	145.0	122.0	20.0	C	-					2	07121702	1275.0	1093.0	120.0	62.0	-	-	B	-				
					7	07120707	350.0	285.0	-	65.0	-	C	-					18	071218	Sawai Madhopur-I	9085.0	D	1	07121801	180.0	160.0	-	20.0	-	D	-
					8	07120708	917.0	722.0	158.0	15.0	22.0	B	-					2	07121802	325.0	240.0	-	-	85.0	-	D	-				
					9	07120709	1572.0	635.0	907.0	-	30.0	E	-					3	07121803	1105.0	543.0	82.0	73.0	407.0	E	-					
					10	07120710	277.0	250.0	17.0	10.0	-	D	-					4	07121804	195.0	180.0	-	-	15.0	-	D	-				
					11	07120711	202.0	162.0	40.0	-	-	D	-					5	07121805	1075.0	565.0	470.0	40.0	-	-	D	-				
					12	07120712	185.0	120.0	35.0	30.0	-	D	-					6	07121806	695.0	35.0	525.0	-	135.0	-	F	-				
					13	07120713	1025.0	157.0	836.0	32.0	-	E	-					7	07121807	1678.0	-	1678.0	-	-	-	G	-				
					14	07120714	360.0	-	360.0	-	-	G	-					8	07121808	1220.0	-	1220.0	-	-	-	G	RA				
					15	07120715	627.0	47.0	580.0	-	-	F	-					9	07121809	660.0	405.0	255.0	-	-	-	D	RA				
					16	07120716	960.0	317.0	508.0	-	135.0	E	-					10	07121810	450.0	286.0	47.0	-	117.0	-	D	-				
8	071208	Chenpura	6414.0	B	1	07120801	190.0	175.0	-	15.0	-	D	-					11	07121811	832.0	684.0	-	-	148.0	-	D	-				
					2	07120802	1248.0	738.0	208.0	195.0	107.0	D	-					12	07121812	670.0	477.0	-	-	22.0	171.0	D	-				
					3	07120803	2040.0	1710.0	-	278.0	52.0	B	RA	19	071219	Sunari	12659.0	D	1	07121901	2175.0	2056.0	-	-	27.0	92.0	C	-			
					4	07120804	745.0	450.0	-	295.0	-	B	-					2	07121902	1332.0	1188.0	-	-	128.0	16.0	B	-				
					5	07120805	459.0	444.0	-	15.0	-	B	-					3	07121903	1237.0	1202.0	-	-	35.0	-	B	-				
					6	07120806	220.0	205.0	-	15.0	-	D	-					4	07121904	3115.0	3057.0	-	-	58.0	-	B	RA				
					7	07120807	627.0	537.0	-	90.0	-	D	-					5	07121905	2950.0	2851.0	-	-	99.0	-	B	RA				
					8	07120808	885.0	845.0	-	40.0	-	B	RA					6	07121906	625.0	615.0	-	-	10.0	-	C	-				
9	071209	Tekra	1460.0	B	1	07120901	1460.0	1387.0	-	73.0	-	B	RA					7	07121907	885.0	885.0	-	-	-	-	B	-				
10	071210	Bandha	9158.0	D	1	07121001	725.0	475.0	55.0	15.0	180.0	D	-					8	07121908	340.0	317.0	-	-	23.0	-	C	-				
					2	07121002	507.0	223.0	172.0	17.0	95.0	E	-					20	090320	Sawai Madhopur-II	2460.0	G	1	09032001	980.0	-	980.0	-	-	G	RA
					3	07121003	1868.0	855.0	978.0	35.0	-	E	-					2	09032002	1480.0	-	1480.0	-	-	-	G	RA				
					4	07121004	1230.0	1120.0	82.0	28.0	-	C	-					21	090321	Sawai Madhopur-III	1750.0	G	1	09032101	1750.0	-	1750.0	-	-	G	RA
					5	07121005	1840.0	1812.0	-	28.0	-	B	-																		
					6	07121006	860.0	680.0	-	108.0	72.0	C	-																		
					7	07121007	998.0	896.0	-	20.0	82.0	B	-																		
					8	07121008	1130.0	222.0	292.0	-	616.0	E	-																		
11	071211	Dhunda	2255.0	C	1	07121101	440.0	155.0	60.0	-	225.0	B	-																		
					2	07121102	482.0	290.0	47.0	-	145.0	C	-																		
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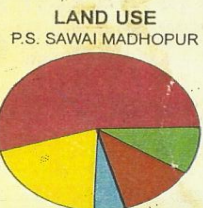




MICRO WATERSHED MAP
PANCHAYAT SAMITI-SAWAI MADHOPUR
DISTRICT-SAWAI MADHOPUR



REFERENCES
 ROAD METALLED
 TOWN OR VILLAGE
 POND OR TANK
 STREAMS BIG, SMALL
 RAILWAY LINE



CATEGORIES	PER CENT
CULTIVATED LAND	54.7
FOREST LAND	19.3
PASTURE LAND	5.1
NON ARABLE LAND	11.5
OTHERS	9.4

LEGEND
 DISTRICT BOUNDARY
 PANCHAYAT SAMITI BOUNDARY
 MACRO WATERSHED RIDGE LINE
 MICRO WATERSHED RIDGE LINE
 MACRO WATERSHED NO.
 MICRO WATERSHED NO.
 TOTAL GEOGRAPHICAL AREA 1137 Sq. Km.

