सत्यमेव जयते

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Joint Secretary

जय हिन्द

भारत सरकार
पेयजल आपूर्ति विभाग
ग्रामीण विकास मंत्रालय
राजीव गांधी राष्ट्रीय पेयजल मिशन
Government of India
Ministry of Rural Development
Department of Drinking Water Supply
Rajiv Gandhi National Drinking Water Mission

D.O. No. W-11011/01/2009-Water
Dated: February 12, 2010

Dear «Sir_Name»

The Guidelines for National Rural Drinking Water Programme require that a Village Water Security Plan be prepared. These would then be used to prepare a District Water Security Plan. It has been recognized that Village level planning including water budgeting is the key factor in ensuring optimum utilization of water, especially for drinking purposes.

The States had been asked to prepare a preliminary District Perspective Plan in the first year, recognising the fact that Village level plans would take much longer. Also many states had indicated that an indicative format may be given to them for guidance in preparing the Village plans.

To this end, a format has been designed and is attached for your perusal. It is also available on our website. We would welcome comments on the same for finalizing it for adoption by all States.

May I request you to send your comments latest by 10.3.2010. The comments may also be emailed to jstm@nic.in, with a copy to rksinha@nic.in.

With regards,

Yours sincerely,

(T.M. Vijay Bhaskar)

Encl: As Above

To

Secretaries/ Principal Secretaries incharge of rural water supply in all States.

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Draft

Guideline for the preparation of Village Water Security Plan (VWSP)

1 Background

The revised National Rural Drinking Water Programme (NRDWP) Guidelines 2009-2012 issued by Rajiv Gandhi National Drinking Water Mission, Department of Drinking Water Supply has shift the focus from 'source development and installation of water supply system for providing drinking water supply to rural household' to focus on development of 'village security plan' which also includes village safety plan before taking up planning & installation of water supply system to ensure provision of safe and adequate water supply to each rural household at a convenient location on a sustainability basis. Basically it envisage provision of drinking water as a part of the overall water resource management.

2. Logistic support required

To enable the GP, VWSC and the field staff of State Rural Water Supply Department to prepare VWSP ***as per the new guideline and as per the existing institutional set up in the States*** the following logistic support is required and it is pre requisite:

i. In the new guideline (NRDWP) under frame work for Water Quality Monitoring & Surveillance (Annexure IV para 4) it is indicated under sub heading **Proposed Strategy** "For data collection at the household level and at the habitation level one person preferably women from VWSC elected at Gram Sabha under the control of GP and paid appropriately on job basis for the specified activities. The person selected will be designated as "JAL SURAKSHAK"

ii. Water Quality Testing Laboratory with computer facilities (fund for the same is provided in the new guideline) are to be in place at the Sub-Division (PHED) Level for testing of all the village-wise drinking water sources (chemical and bacteriological) from where the house holds collects water.

iii. GPS instruments (provision made under MIS guideline) are to be procured for identification of water resources in the villages for development of village water resource maps.

iv. Collect water and sanitation related data from NRHM so that sanitary inspection can be carried out for identification of source of contamination and take remedial measures

v. Household and village data analysed at the sub-division level along with data from NRHM will enable VWSC under the technical guidance of field staff of PHED to prepare **village water security plan** which includes **water safety plan** which is basically identification for source of contamination (hazard analysis) and take corrective measures for the existing water supply system both for safe and unsafe sources including government and or private water supply system

vi. Based on the village water security plan the action plan for planning of new/augmentation of the water supply scheme is to be prepared in consultation with all stake holders

3. Inter Departmental Convergence:

a) To prepare village security plan in put from State Ground Water Board, State Water Resource Department, Irrigation Department and PHED will be required as these departments have to a great extent micro-level data. CGWB and NRSA data are broad

based, block based and require highly specialized hydrologist to understand and analyze the existing information and maps for preparation of village level water security plan.

b) To understand the water and sanitation disease burden and remedial measures, coordination with village level functionaries of the National Rural Health Mission is highly essential.

c) Community should develop its own village water security plan taking into consideration the present water availability, reliability and its different usage and equity based on experience and wisdom. At the village level the water resource (both surface and ground water) can not be measured it can be only be judged in term of adequate and inadequate.

d) Women generally manage domestic water, and an essential ingredient of community participation is to improve women's involvement in the democratic decision-making process. Since women are the principal beneficiaries of this programme and are pivot around which sustainability is evolved, it is of critical importance that women are involved at all the stages of planning, implementation and management of rural water supply schemes. Women's associations could provide a strong framework for community participation. Prominent women from the habitation should be represented in the Village Water & Sanitation Committees/ Pani Samitis.

e) For the community to function as an organization it is important to make Village Water and Sanitation Committee (whose members should be elected in Gram Sabha) fully functional and effective VWSC should be made a standing committee of the Gram Panchayat.

4. Suggestive formats

4.1. General Profile

1	Name of Village and census code	
2	Gram panchayat	
3	Block	
4	District	
5	Number of Households in village	
6	Population of village in numbers (as per Census 2001) Total- Male Female	
7	Present Population of village in numbers (Present as per survey) Total- Male Female	

4.2 Habitation Details

S. No.	Name of Habitation	Code of habitation	Population (in No.)	No. of public and private drinking water sources	No of Households			
					SC	ST	Other	Total
(1)	(2)	(3)	(4)	(6)	(10)	(11)	(12)	(13)
1)								
2)								
3)								
4)								
5)								
6)								

4.3 Household water security plan survey format

Proforma No.

Block: Gram Panchayat:

Village: Habitation:

A	**Basic information**				
1	Household Head Name:				
2	Category (BPL , APL) Belonging to SC/ ST/ Minorities/ Others				
3	No. of family members	Male	Female	Children	Total
B	**Source**				
4	Source of water (Public, Private)				
5	If Public, Type of source				
	Spot sources	PWSS	Street Standpost (PWS)(6)	House Connection	Others (Specify)
6	If Private type of source		Spot source	Pond/spring etc	Others
7	Distance between house and water source point in meters (below 100 m - 200m - 1, 200 - 500 m-2, above 500 m - 3)				
8	Whether water availability is round the year (Yes - 1, No- 2)				
9	If No, how many month it remains dry / inadequate				
C	**Water requirement for HH consumption**				
10	Use / consumption of water for family in L	Drinking/ cooking	Washing utensils	other purposes	Total
11	Type of source used		Drinking/ cooking	Washing utensils	other purposes
12	Whether the available water is adequate for drinking/cooking purpose (Yes , No) What is the amount of water charge you pay ? How much time does it take to fetch water for domestic needs (to reach the source and fetch water from there in minutes) 0-30 min, 30 min – 1 hr, 1 hr and above Who fetches water normally in your house Men Women Male children Female children Helper/ others				
13	If no, additional demand in litres		Drinking / Cooking	other purposes	total
D	**Household water management**				
14	Is there any storage facility available in the Household (Yes, No)				
15	If yes, HH level storage capacity available in L		Drinking/cooking	other purposes	total

16	Do the HH have any water filter (yes, No)				
17	If yes, it regularly used? (yes, No)				
18	If no, would like to have filter? (yes, No)				
19	Do they have any idea about where the filter could be procured? (yes, No)				
20	Is they have any idea about the relationship between water quality and disease burden (yes, No)				
E	**Knowledge, Attitude and Practise (KAP**				
21	Water container is covered with lid (Yes, No) How long did you experience water?				
22	Whether HH use long handle ladder / tap to take out water? (Yes, No)				
23	Whether the container is kept at higher plat form (Yes, No)				
F	**Operation and Maintenance**				
24	Whether aware about Village Water and Sanitation Committee in the village? (yes - 1, No - 2)				
25	Is the family willing to pay community contribution towards O&M (Yes - 1, No- 2)				
G	**Water quality & Disease burden**				
26	whether aware about the quality of the water source (Yes - 1, No- 2)				
27	Incidence of Diseases burden during last 3 months, no. of cases	Diarrohea	Cholera	Malaria	Jaundice
28	Approximate medical expenditure incurred during last 3 months in Rs (below one hundred - 1, above one hundred – 2)				
H	**Additional information**				
29	Whether HH is having toilet facility (Yes-1, No-2) How many members use toilet regularly? How many members defecate in the open regularly.?				
30	Whether family members use soap for hand washing before eating? (Ys -1, No-2)				
31	Whether family members use soap for hand washing after defecation? (Ys -1, No-2)				
32	Whether HH is having RWH structures?(Yes-1, No-2)				
33	Type of House (Pukka - 1, Kuchha – 2)				
34	Willingness to construct RWH in house (Yes - 1, No -2)				
35	Approximate roof area of house (in sq.m)				
I	**Data management**				
36	**Sanitary survey score**			Public	Private
37	**GPS Survey**	Water Source		Water Source	
		Latitude	Longitude	Latitude	Longitude
	Laboratory report				
38	**Water Source ID**	Source(Public/Private)	Type (system)	Year of installation	
		Depth (M)	SWL (M)	Discharge level	Sample collection date

39	**Testing date and results (only sample quality category indicated)**	pH	Total Hardness (mg/L)	Arsenic (mg/L)	
		Iron (mg/L)	Total Coliform (MPN/100ml)	Faecal Coliform (MPN/100ml)	
J	**Water budget**				
40	Requirement/ Demand of water for the family		Drinking/cooking	other purposes	Total
41	Current availability of water		Drinking/cooking	other purposes	Total
42	Balance requirement		Drinking/cooking	other purposes	Total

4.4 Institutional detail:

S. No.	Name of Habitation	Schools	College	Anganwadi Centres	Hospitals	Others
1.						
2.						
3.						
4.						
5.						
6.						
	Total					

4.5 Institutional water security plan format

Institutional water security plan - Baseline Survey

Proforma No.

Block: Gram Panchayat:

Village: Habitation:

A	**Basic information**				
1	Institution Name:				
2	If school, No. of Students, if other institution means the total no. of persons	Boys	Girls	Total	
B	**Source**				
3	Source of water (Hand pump, PWS)				
4	Location of Hand pump (Inside the campus, Outside the campus)				
5	PWS connection (Inside school, Outside school)				
6	Supply of water through PWS (Continuous, intermittent)				
7	Distance between Institution and water source point in meters				
8	Whether water availability is round the year (Yes, No)				
9	If No, how many months it remains dry				
C	**Water requirement for Institution consumption**				
10	Use / consumption of water in L	Drinking/cooking	other purposes	Total	
11	Type of source used (specify)		Drinking/cooking	Other purposes	
12	Whether the available water is adequate (Yes, No)				
13	If no, additional demand in Ltrs	Drinking/cooking	other purposes	total	
D	**Institutional water management**				
14	Is there any storage facility available in the Institution (Yes, No)				
15	If yes, storage capacity available in Ltrs	Drinking/cooking	other purposes	total	
16	Do the institution have any water filter (yes, no)				
17	If yes, is it regularly used? (yes, no)				
18	If no, would they like to have filter? (yes, no)				

19	Do they have any idea about where the filter could be procured? (yes, no)				
20	Do they have any idea about the relationship between water quality and disease burden (yes, no)				
H	**Additional information**				
21	Whether institution is having toilet facility (Yes, No) a) Whether toilet has adequate facility for cleaning and handwashing? b) Who cleans the toilet?				
22	Whether institution is having RWH structures?(Yes, No)				
23	Type of building (Pukka, Kuchha)				
24	Willingness to construct RWH (Yes, No)				
25	Approximate roof area of school building				
E	**Data management**				
26	**Sanitary survey score**				
27	**GPS Survey**	Water Source 1		Water Source 2	
		Latitude	Longitude	Latitude	Longitude
G	**Laboratory report**				
28	**Water Source ID**	Type	Year of sinking	Depth (M)	SWL (M)
		Discharge level	Sample collection date		
29	**Testing date (quality data as per requirement)**	pH	Total Hardness (mg/L)	Arsenic (mg/L)	
		Iron (mg/L)	Total Coliform (MPN/100ml)	Fecal Coliform (MPN/100ml)	
I	**Water budget**				
30	Requirement of water for the institution				
31	Supply of water for the institution				
32	Balance requirement				

5 Water demand assessment

Analysis of water requirement

At the end of household survey, all the facilitators will sit together and compile the information. The village action plan template will be completed, and the following analysis will be conducted.

The purpose of this analysis is to identify the present situation, water demand and gap, with probable solutions as offered by the community. This information will be put on a large chart by the facilitators and will be shared with the community during the village meeting.

a) Total nos of households in the village as per survey
b) Total nos of households which does not have water security for drinking water in a complete year. What is the gap (For how much days the water security is not available)? And if the house is pucca, the area of roof in sq.m.
c) Total nos of households which do not have water security for other purposes in a complete year. What is the gap (For how much days the water security is not available)? And if the house is pucca, the area of roof in sq.m.
d) Total nos of water sources available in the village as per survey
e) Nos of functional water sources available in the village as per survey
f) Nos of non functional water sources available in the village as per survey
g) How many of the non functional sources can be repaired/rejuvenated
h) Nos of water sources affected by water quality parameter and can not be used for drinking purposes. Individual water source to be analysed for which parameter or parameters of water quality is not under permissible limits. Can this water source can be treated for water quality problem?
i) Nos of traditional water sources available in the village , how many out of them are presently being used , for which purpose, how many out of them are not being used but can be revived, what is the quality of water?
j) Total nos of institutions and their individual pucca area
k) Water availability for complete village combined (Drinking and other purposes) as well as separate(Drinking and other purposes) and gap as per the survey
l) Probable solutions as offered by the community in percentage and as per priority.
m) Topography sheet showing habitations, streets, position of existing water sources and slopes is to be prepared. This will help community in selecting options.

6 Summary of Household water security plan survey

S.No	Habitation name	Total No. of HH	No. of HH having adequate safe water supply	Additional quantity of water safe required in L

7. Village profile based on HH survey

Village Profile based on HH survey

S.No	*Particulars*			*Details*	
A	***Primary Information***				
1	No. of habitations				
2	Population				
3	No. of families				
B	**Source**	Whether working or defunct	Whether water supplied a) regularly b)Sometimes c) Irregular	Whether all communities use this source	Quality of water Good/ Bad
4	No. of public water sources				
	a) Hand pump				
	b) Dugwell				
	c) Street Stand Post(PWS)				
	d) HH Connection				
	e) Others				
5	No. of private water sources				
	a) Hand pump				
	b) Dugwell				
	c) Others				
6	No. of families using public water sources				
7	No. of families using private water sources				
8	No. of families using PWS				
9	No. of families using protected water supply (Sanitary risk <5)				
10	a) No. of water sources accessible within 100 m - 200m				
	b) No. of water sources accessible within 200 m - 500m				
	c) No. of water sources accessible > 500 m				
11	Frequency of water collection per day (No. of families)				
	a) one time				
	b) Two times				
	c) more than 2 times				
12	No. of families taking time to collect water of				
	a) less than 30 min				
	b) above 30 min c) below 60 min d) above 60 min				
13	No. of families getting water round the year				
C	**Water requirement for HH consumption**				
14	Consumption of water in L				
	a) Drinking/ cooking				
	b) Washing Utensils				

	c) Other purposes	
	d) Total	
15	a) No. of families using HP as drinking water source	
	b) No. of families using DW as drinking water source	
	Whether water available throughout the year a) Parts of the year b) Stops during summer	
	Common causes cited for water supply disruption: a) Poor maintenance b) Power cut c) Source has gone dry d) Reduced water availability e) Lack of staff f) contaminated water g) Irregular staff h) population increase i) financial crunch	
	c) No. of families using PWS as drinking water source	
	d) No. of families using pond water as drinking water	
	e) No. of families using HP as drinking water source	
	f) No. of families using DW as drinking water source	
	g) No. of families using PWS as drinking water source	
	h) No. of families using pond water as drinking water	
16	No. of families getting adequate water	
17	Additional demand L	
	a) Drinking / cooking	
	b) Other purposes	
D	**Household water management**	
18	No. of families have HH level water storage facility	
19	No. of families aware about the place of filter availability	
20	No. of families having HH water filter	
21	No. of families regularly using filter	
22	No. of families interested to procure filter	
23	No. of families aware about linkages between water quality and health	
E	**KAP**	
24	No. of households covering container with lid	
25	No. of HH using long handle ladder/ tap to take out water	
26	No. of HH keeping water at higher platform	
F	**O&M**	

27	No. of families willing to contribute money for O&M	
G	**Water Quality and disease burden**	
28	No. of families aware about the quality of water	
29	Incidence of water borne diseases in last three months (No. of cases)	
	a) Diarrohea	
	b) Chlolera	
	c) Malaria	
	d) Jaundice	
30	Medical expenses (No. of families) for last three months	
	a) Below Rs. 100	
	b) Above Rs. 100	
31	No. of HH having toilets	
32	a)No. of families washing hand with soap before taking food	
	b)No. of families washing hand with soap after defecation	
33	No. of HH having RWH	
34	No. of families willing to construct RWH	
35	Water Quality and sanitary score (as per lab report)	
	a) Safe	
	b)Unsafe	
	i) Chemical	
	ii) bacteriological	
	c)Sanitary risk score > 5	
36	Water budget	
	a)Requirement of water for the village	
	b)Availability of water for the village	
	c)Balance requirement of water for the village	

8. Community consultation for selection of technical options

After the completion of HH survey and compilation of data, all the facilitators, surveyor, technical resource person and PHED engineer will organise a village meeting with community members, PRI members and members of VWSC/Gram. The participatory techniques will be used by the facilitators for developing the village action plan for water security.

The purpose of the village meeting is as follows:

- Problem identification
- Problem analysis
- Planning for solutions
- Selecting options
- Finalizing options with capital and operation and maintenance cost at individual level as well as at community level

- Finalizing the mechanism for management of water supply schemes inside the village and developing the rules for sharing O&M cost and regulation for equitable water distribution
- Finalising source sustainability measures recharge structures – RWSS
- Finalise capacity building plan for GP/ VWSC members, pump operators, mechanics, watermen, engineers
- Agreement on Village Action Plan and approved by GP/VWSC/ community

The following steps are to be followed for development of the village action plan:

1. Here the technical person/PHED person will explain the technical and financial details for the all the options selected by community (Source sustainability, feasibility of the option, geological conditions, capital cost, O&M cost per year, rain water harvesting capital cost and management cost at institutional and individual level, differential use of water etc) to the community and VWSC. Based on the discussions the VWSC will finalise the options at village and individual level. The finalised options will be listed out by the facilitator with details of capital, management and O&M cost and their mechanism. The rules for equitable distribution of water to every individual in the village will also be framed and discussed.
2. The community and VWSC/Gram Panchayat will finalised the mechanism of management and O&M of the source and schemes and equitable distribution of water and will agree to share the responsibility. The rules formed/mechanism developed will be a part of village level action plan.

9. Preparation of Participatory Rural Appraisal (PRA) maps

Based on the available primary information's village level PRA maps depicting important land marks like schools, hospitals, etc along with drinking water sources will be prepared.

A PRA (Participatory rural Appraisal) is an intensive, systematic, but semi structured learning experience carried out in a community generally by multidisciplinary team with community members as primary actors.

The tools of PRA are the instruments that are used to gather, synthesize and analysis information in participatory way. The selection of tools and its development are done according to the objective of work and field situation.

9. Village Action Plan

from Community Meeting in consultation with PHED engineer(s)

S. No.	Description of water source/ scheme	Location	Capacity required (Liters per day)	Households	Financial							Sustainability		Responsibility		
					Capital Cost (Rs.)	Who pays for capital	IEC Training cost	Estimated O&M cost (Rs)	Who pays for O&M	Recharge measures	RWH measures	Community rules developed for the O&M of sources / schemes (Y/N)	Rules for management of sources and schemes (Y/N)	PHED	PRI	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
A - Drinking water																
1																
2																
3																
4																
5																
Total																
B - Other purpose water																
1																
2																

3																
4																
Total																

Legend for above table	
Column No.	Description/Clarification
2	Options: new source, repair existing, revive tradition source, rain water harvesting, treatment (household or community), etc
3	Location based on community preference but technologically correct (as assessed by PHED)
4	To ensure water security for every household
5	For households benefiting from the intervention
7	What is the funding source- NRDWP (including component), PRIs
9	Community and/ or Government programme
10-11	If yes, attach as annexure
12-14	Examples: detailed design, final signoff on design and location, engage contractor, overall management of project, day to day oversight to ensure quality, O&M, collection of remuneration, long term management