

**GOVERNMENT OF INDIA  
CENTRAL WATER COMMISSION  
NATIONAL WATER ACADEMY, PUNE**

**Training need assessment**

**A: ABOUT THE ORANGANISATION:**

1.	Name of the Organisation	
2.	State	
3.	Address	
	Tel (with STD Code)	
	Fax (with STD Code)	
	E-mail	
4.	Name and Designation of HoD	
5.	Name, Address and Nodal Officer in-charge of Training in your organization	
6.	Brief function and specialization of your organization	
7.	Organisation Hierarchy (Junior Level to Senior Level)	

**B: HUMAN RESOURCES**

1.	Functional Units and their scope of Work	
2.	Total of Officials placed at (Junior, Middle and Top Level) at the various functional units of your organisation	
3.	Minimum Qualification of officials placed at (Junior, Middle and Top Level)	
4.	Training Policy of your Organisation	
5.	Career Progression Policy of your organistaion	

**C: TRAINING NEEDS ASSESSMENT**

1. Competency requirements under the various functional units or areas of your organisation for



**4. Types of Training required by your organization under various functional unit :**

<i>Type of Programs</i>	<i>Target Group</i>	<i>Duration</i>	<i>Objective</i>	<i>No of Training Required</i>	<i>No of Officials to be Trained</i>
Exposure Programs (EP)	Senior Level officials	3 days. (covering 4 to 6 topics)	These are intended for exposing to what is new. These are not “training programs”, in the sense the participants are not expected to learn “how to” do it, but only appreciate what is the state of art, so that they can take strategic decisions to use it in their own departments		
Operational Level Training Programs (OLP)	JEs, to SEs levels (separately),	5 days to 15 days duration and focus on one topic only	participants are trained at operational level in the given topic		
Refresher programs (RP)	JE to SE level,	3-days and address more than one topic	To bring the participants up-to-date on latest developments in the given topic and brush up forgotten concepts. The participants are expected to be already well versed with the subject, and are brought up to date with the latest developments.		
Distance Learning (DL)					
Orientation Programs (OP)	For newly promoted officers				
Induction Training Programs (ITP)	For newly recruited officers				

**D: BASED ON THE TYPES OF TRAINING OFFERED AREAS IN WHICH TRAINING NEEDED BY YOUR ORGANISATION**

As you know, Training is about enhancing knowledge and skills for effective performance of your duties and responsibilities in the organisation. Do you require up-gradation of your knowledge and skills for improving your abilities for performing your duties mentioned above much more effectively and

efficiently? If Yes, the please choose from the areas below the type of training required; mentioned number of training required and the number of officials to be trained.

number of training required and the number of officials to be trained.								
Sr. No.	Broad Areas along with list of areas to be covered	Duration in weeks offered by NWA	Type of Training required			No of Training Required	No of Officials to be Trained	Phasing of officials to be trained by your organization
			(EP)	(OLP)	(RP)			
A] Integrated Water Resources Development & Management (IWRDM)								
1	IWRDM	1						
2	Application of Modelling Software for Pilot Basin	1						
3	Artificial Neural Network in Water Resources Development	1						
4	SWAT Modelling Software	1						
5	River Basin Planning	1						
6	DSS Planning for IWRDM of River Basins	1						
B} Investigations, planning and formulation of river valley projects								
7	Survey and Investigation	1						
8	Preparation of Detailed Project Report of Water Resources Projects	1						
9	Geophysical, Geotechnical / Hydrological Investigation	1						
10	Sedimentation planning of reservoir	1						
11	Project Planning	1						
Designs & Analysis; FEM/FEA, designs of various structures, software for designs, dam safety								
12	Analysis and Design of Dams	1						
13	FEM using IDEAS Software	1						
14	Design of Hydro-power Structures	1						
15	Design of Barrages and Canals	1						
16	Dam Safety Instrumentation	1						
17	Design Flood Estimation	1						
18	Application of Finite Element Analysis in WR structures	1						
19	Design of Hydro-mechanical Equipment (Gates)	1						
20	Dam safety concerns and awareness	1						
21	Design of spillway energy dissipaters	1						

<b>Irrigation - Command Area Development, Watershed management, Participatory Irrigation Management, Benchmarking of irrigation systems</b>								
22	Irrigation Sector Reforms	1						
23	Irrigation Planning	1						
24	Performance Evaluation and Benchmarking of Irrigation Projects	1						
25	Repair, Renovation & Restoration of water bodies directly linked to agriculture	1						
26	Training of Trainers in Participatory Irrigation Management	1.5						
27	Assessment of Irrigation demand and irrigation	1						

	scheduling							
28	Canal Automation	1						
29	Command area development	1						
30	Watershed Management	1						
<b>Hydrology</b>								
31	Basic hydrology	2						
32	Operational Hydrology	2						
33	Project Hydrology	2						
34	Hydrological Design Aids	1						
35	Hydrological Modelling	1						
36	Hydrological review of existing projects	1						
<b>Flood Management, Flood Forecasting</b>								
37	Flood Management	1						
38	Flood Forecasting Techniques	2						
39	Flood Disaster Management	1						
<b>Remote Sensing and GIS techniques</b>								
40	Application of Geo-informatics in Water Sector	2						
41	Application of Information Technology in Water Resources Sector	1						
42	Hydro-informatics and soft computing in water sector	1						
43	Watershed analysis using geo-spacial tools.	1						
44	Practical application of Geomatics in watershed	1						
<b>Hydrometry and data processing</b>								
45	Surface Water Data Processing and Validation using HYMOS Software.	2						
46	ToT Program in Surface Water Data Processing and its Validation using HYMOS Software	2						
47	Training of Trainers in Hydrometry	1.5						
48	E-SWIS Software	1						
49	Telemetry	1						

<b>Environmental, social and human aspects of river valley projects.</b>								
50	Water Quality Management	1.5						
51	Socio Economic Analysis of Irrigation Projects	1						
52	Environmental Management and Social Aspects of River Valley Projects.	1						
<b>Construction and economic aspects of river valley Projects</b>								
53	Construction Management	1						
54	Contract Management and Financial Procedures	1						
55	Project Planning using MS Project and Primavera Software	1						
56	Construction aspects of Hydro-power projects	1						
<b>Water Law, and river valley dispute</b>								
57	Brain Storming Program on Strategic Issues in water resources Sector	3 days						
58	Water laws and their role in IWRM	2 days						
59	Strategic Issues in Water Resources Development & Management	1 Week						
60	Mediation of Disputes in water sector	1						
61	Constitutional and Legal aspects of WR	1						
<b>Management Development program for senior officers</b>								
62	Leadership and Communication Skills - HP-II for the officers of Hydrology Project-II	1						
63	Management Development Programme for Senior Officers	2						
64	Management Development Programme for Non-Engineering officers	1						
65	Train the Trainers	1						
<b>Induction / Orientation course</b>								
67	Induction Training Program for newly recruited engineers of PSUs / States	14						
69	Orientation Program for officers of PSUs/States	2						
<b>Other Miscellaneous Topics</b>								
70	Introductory Program on Water Resources Management for NGOs and Media Personnel	2 days						
71	Introductory Program on Water Resources Management for School Teachers	1 day						
72	Adapting to Climate Change	2 days						
73	Panchayat Raj Institutions	1						
74	Coastal Erosion Protection and Coastal Zone Management	1						
76	Rainwater Harvesting and Groundwater Recharging	1						
77	Recycle and Reuse of Wastewater	1						
78	The World Bank Procurement Procedures	1						

**E. AT PRESENT, WATER RESOURCES PROFESSIONALS HAVE AN OPPORTUNITY TO USE A HOST OF EMERGING TECHNOLOGIES AND TECHNIQUES SUCH AS**

**DIGITAL SPATIAL DATABASE, REMOTE SENSING, AUTO CAD AND NEW METHOD AND TECHNIQUES OF DATA MANAGEMENT FOR PLANNING AND MONITORING OF EXECUTION OF PROJECTS. KINDLY MENTION IN WHICH OF THE EMERGING PLANNING CONCEPTS, TOOLS AND TECHNOLOGIES YOU WILL LIKE TO ACQUIRE NEW SKILLS? IF YES, PLEASE SPECIFY TOPICS, LEVEL AND DURATION.**

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_

**F HOW MANY WORK DAYS PER YEAR CAN YOUR ORGAANISATION IS ABLE TO SPARE THE OFFICIALS TO BE AWAY FROM OFFICE FOR TRAINING? PLEASE TICK ANY**

- ☐ 0
- ☐ 1-2
- ☐ 3-5
- ☐ 6-9
- ☐ 10+

**G. WHICH OF THE FOLLOWING TRAINING MODE WOULD YOUR ORGANISATION LIKE TO NOMINATE THEIR PARTICIPANTS FOR TRAINING? (CHECK ALL THAT APPLY)**

- ☐ Classroom training
- ☐ Day long workshop-style event
- ☐ Webinar
- ☐ Distance Learning ( can be completed at participants place)(e.g., satellite or web-based courses)
- ☐ A combination of classroom delivery and distance learning
- ☐ Other (please specify)

**H. SPECIFY TIME PROCESS REQUIRED FOR PLANNING THE TRAINING PROGRAMS AT THE VARIOUS LEVEL?**

**I. SPECIFY IMPEDIENTS IN NOMINATING YOUR OFFICIALS OUTSIDE YOUR ORGANISATION FOR ATTENDING THE TRAINING PROGRAMS, IF ANY.**

**J. PLEASE SPECIFY ANY ADDITIONAL TRAINING NEEDS APART FROM THE ABOVE REQUIRED FOR YOUR ORGANISATION.**

**K. APART FROM NATIONAL WATER ACADEMY, PUNE FOR GETTING YOUR OFFICERS TRAINED WHAT ARE POTENTIAL TRAINING INSTITUTIONS IDENTIFIED BY YOUR ORGANISATION.**

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