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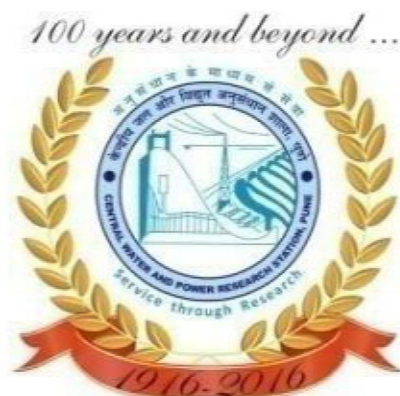
Citizen's / Client's Charter

Central Water and Power Research Station

Government of India

Ministry of Jal Shakti

Department of Water Resources, River Development and Ganga Rejuvenation



June 2023

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Next Review:



Vision

To be a world-class centre of excellence in hydraulic engineering research and allied areas; which is responsive to changing global scenario, and need for sustaining and enhancing excellence in providing technological solutions for optimal and safe design of water resources structures.

Mission

- To meet the country's need for basic & applied research in water resources, power sector and coastal engineering with world-class standards.
- To develop competence in deployment of latest technologies by networking with the top institutions globally, to meet the future needs for development of water resources projects in the country effectively.
- To disseminate information, built skills and knowledge for capacity-building and mass awareness for optimization of available water resources.

Core Values:

- Creativity and innovation through R&D
- Integrity - We believe in conducting ourselves in honest and ethical manner with service recipients/providers and each other
- Empathy - We realise that that the best way to interact with each other is by putting ourselves into their shoes and seeing things from their perspective
- Learning - We believe that learning is a continuous process that is essential for growth as professional and as human beings
- Coordination of multidisciplinary tasks
- Capacity building
- Team spirit

Details of Business Transacted

- Undertaking specific research studies relating to development of water resources, power and coastal projects.
- Consultancy and advisory services to Central and State Governments, private sector and other countries.
- Disseminating research findings and promoting/assisting research activities in other organizations concerned with water resources projects.
- Contributions to Bureau of Indian Standards and International Standards Organization.
- Carrying out basic and applied research to support the specific studies.
- Contribution towards advancements in technology through participation in various committees at National and State Levels.

Services Provided

The Central Water and Power Research Station (CWPRS) Pune, established in 1916, is a premier hydraulic research institute in India, under the Government of India Ministry of Water Resources, River Development and Ganga Rejuvenation.

Water-use scenario of today is centered on sustainable development and environmental issues. The mandate of CWPRS is to find and provide technical solutions to various problems associated with water resources projects, energy, water-borne transport and coastal engineering. Over the years CWPRS has evolved into multidisciplinary institute of international repute in the major area of hydraulics.

CWPRS caters to the project specific R&D needs and provides comprehensive recommendations of practical utility through physical and mathematical model studies, desk studies, field and laboratory experiments in specialized areas such as river training and flood control, hydraulic structures, harbours, coastal protection, foundation engineering, construction materials, pumps and turbines, ship hydrodynamics, hydraulic design of bridges, earth sciences, and cooling water intakes, environmental studies, water resources development, management and planning etc

CWPRS is one of the few institutions of its kind in the world, dealing with the entire life cycle of water, from its occurrence to joining the ocean and dealing with various uses of water on the one hand and water-related disasters on the other. CWPRS is the recognised regional laboratory for the Economic and Social Commission for Asia and Pacific (ESCAP) since 1971. The institution has rendered services for a number of projects from neighbouring, Middle East and African countries.

The total sanctioned staff strength of CWPRS, as of now is 1084; whereas the existing strength as on June, 2023 is 713. The research cadre, comprising a sanctioned strength of 315 personnel in different categories, is supported by technical, auxiliary technical, administration, accounts and ancillary services. The Director is the Head of Department (HoD). The activities of CWPRS encompass varied studies that are undertaken in the major disciplines listed below.

- I. River Engineering
- II. River & Reservoir System Modelling
- III. Reservoir & Appurtenant Structures
- IV. Coastal and Offshore Engineering V. Foundation & Structures
- VI. Applied Earth Sciences
- VII. Instrumentation, Calibration and Testing Services

Almost all important irrigation, power, water supply, navigation and ports projects have imprints of this institution. It is one of the few institutions of its kind in the world, dealing with the entire life cycle of water, from its occurrence to joining the ocean dealing with various uses of water on the one hand and water-related disasters on the other. Owing to its receptivity towards incorporating new technology with the changing times, the CWPRS's journey has continued ceaselessly over a century,

earning it the stature of a world-class water and power research institution. The institute has proudly completed its 100 years of existence in the year 2016 and is continued to be in the forefront of hydraulic research and played an important role in providing solutions to a large number of complex problems through physical and mathematical model studies and field, desk and laboratory studies fulfilling the mandate of '**Service to the Nation through Research**'. CWPRS has been awarded **ISO 9001:2015** certificate since the year 2017.

Various kinds of works/activities routinely undertaken by CWPRS is given in Annexure.

Clientele

- Central/ State Government Organisations
- Public/ Private Sector Agencies/ Organisations/ Undertakings
- Municipal Corporations and other Local Bodies
- Port Trusts

Procedure Followed While Undertaking Studies by CWPRS

Step-1: Receipt of formal reference from the project authority to the Director, CWPRS, detailing nature of the problem, scope of the studies, requisite drawings, etc.

Step-2: Preparation of the cost-estimate by subject experts from CWPRS, giving scope of the study, duration, data requirement, methodology etc. on a no-profit no-loss basis. Forwarding, in duplicate, of the cost-estimate approved by the Director to the project authority for perusal and sanction

Step-3: On receipt of the full estimated amount and the specified data, study taken up

Step-4: During the conduct of the studies, the estimate is operated as per actual, and accounts maintained in accordance with the Central Public Works Account Code.

Step-5: On completion of the studies, a Final Report is submitted to the client. On clearing of all debits by the concerned departments, a Completion Report is sent to the client; and balance amount, if any, refunded.

Expectations from Clients

The clients of CWPRS are expected to:

- Send proposals in respect of proposed studies by following the prescribed procedure
- Prompt compliance as regards CWPRS requirements to facilitate expediently taking up of the studies.
- Timely supply requisite hydraulic/ hydrological/ hydro-meteorological data for the proposed R&D study.

- Intimate feedback on the results/ recommendations by CWPRS, both during implementation and post-implementation stages; so as to enable making amends as needed, learning from experiences, and/ or increasing effectiveness.

Grievance Redressal Mechanism

In case of non-compliance of the service standards the service recipients/ stake holders can contact the following public grievance officer of CWPRS for redress of their grievance:

Shri Jiweshwar Sinha,
Scientist E and Chairman, Grievance Cell
CWPRS, Pune 411024;
Tel.: 020-24103293 (O) Fax: 020-24381004 e-mail: sinha.J@cwprs.gov.in

The grievance can also be lodged online on the following link:

<https://pgportal.gov.in>

In case of the grievance is not redressed finally, the same can be taken up at higher level to the following nodal authority:

Dr R. S. Kankara,
Director, CWPRS,
Pune 411024;
Tel.: 020-24103500 (O) Fax: 020-24380540
[e-mail: director@cwprs.gov.in](mailto:director@cwprs.gov.in)

Evaluation and Monitoring of Citizen's Charter

Implementation of the Citizen's Charter at CWPRS will be monitored and evaluated periodically and updated as per need. Stakeholders are urged to send their suggestions/ inputs towards improving effectiveness of the Charter, to:

Shri A. A. Purohit
Scientist 'E'
CWPRS, Khadakwasla
Pune 411024
Tel: 020-24103508(O) , Fax: 020-24381004
[email: purohit_aa@cwprs.gov.in](mailto:purohit_aa@cwprs.gov.in)

Suggestions/ inputs for improving the Charter would normally be considered within a time frame of two weeks of receipt of the same; and action taken in the regard intimated to the concerned party.

For more information on CWPRS, you are invited to visit the website:

<https://www.cwprs.gov.in>

Type of works/activities routinely undertaken by CWPRS

SI. No.	Services	Service/ Performance Standards	Rate/ Cost of work
1	Area Drainage Studies for power plants	Time limit Depends upon the requirement	Varies as per requirement of client and scope of the studies.
2	Determination of Safe Grade Elevation for power plants	- Do -	-Do-
3	Water Availability studies for Catchment	- Do -	-Do-
4	a) Dam Break Analysis and Emergency Action planning b) Studies for Diversion of Nala /river	- Do -	-Do-
5	Analysis of physico-chemical parameters of water samples	- Do -	- Do -
6	Grain-size distribution of sediment samples	- Do -	- Do -
7	Chemical analysis of construction material	- Do -	- Do -
8	Primary productivity (Density-Diversity Composition)	- Do -	- Do -
9	Alkali Aggregate Reactivity	- Do -	- Do -
10	Ratio of Cement and Sand in Mortar	- Do -	- Do -
11	Mathematical Modeling WQ Studies of rivers and reservoirs	- Do -	- Do -
12	Static Analysis of Stability of earth and Rockfill embankments and foundations (desk studies), Breakwaters and their foundation	- Do -	- Do -
13	Dynamic Analysis of Stability of earth and Rockfill embankments and foundations (desk studies), Breakwaters and their foundation	Time limit Depends upon the requirement	Varies as per requirement of client and scope of the studies.
14	Liquefaction studies of embankments and foundation	- Do -	- Do -
15	Determination of properties of geotextiles	- Do -	- Do -
16	Determination of physical and strength properties of soils	- Do -	- Do -
17	Determination of strength and elastic properties, thermal properties viz: adiabatic temperature rise, diffusivity, coefficient of thermal expansion and creep properties of mass concrete and roller compacted concrete gravity dams and to estimate suitable placement temperature and devise cooling arrangement for a particular construction schedule of dam.	- Do -	- Do -
18	Testing of construction materials such as cement, brick, sand, aggregates for assessing their suitability in civil construction.	- Do -	- Do -
19	Testing of repair materials for assessing their suitability towards rehabilitation/ repairs of distressed hydraulic structures such as gravity dam, aqueduct, energy dissipating arrangement etc.	- Do -	- Do -
20	Assessing structural health of gravity dams by testing extracted cores from dam body and testing in laboratory by determining physical parameters such as density, elasticity, compressive strength, Poisson's ratio.	- Do -	- Do -
21	Estimation of site-specific seismic design parameters for river valley projects	- Do -	- Do -
22	Micro-earthquake studies of river valley projects	- Do -	- Do -

Sl. No.	Services	Service/ Performance Standards	Rate/ Cost of work
23	Periodical calibration of water current meters used for discharge measurement.	- Do -	- Do -
24	Drag force evaluation for water bodies	- Do -	- Do -
25	Studies for River training works	Time limit Depends upon the requirement	Varies as per requirement of client and scope of the studies
26	Morphological Studies for behaviour of rivers	- Do -	- Do -
27	Hydraulic model studies for bridges, barrages, weirs, spurs, etc	- Do -	- Do -
28	Hydraulic model studies for channelization of rivers for improving flow conditions	- Do -	- Do -
29	Hydraulic model studies for gate operation patterns of barrages/ weirs	- Do -	- Do -
30	Desk studies for water availability/low flow in river and canals	- Do -	- Do -
31	2 -D flume studies for bridge piers	- Do -	- Do -
32	Mathematical/ Physical model studies for assessing extend of back water in barrage/ weirs	- Do -	- Do -
33	Laboratory studies for determination of engineering properties of rock	- Do -	- Do -
34	Laboratory studies for determination of shear strength parameters of rock	- Do -	- Do -
35	Measurement of In-situ stress & deformation modulus	- Do -	- Do -
36	Determination of in-situ shear strength	- Do -	- Do -
37	Determination of deformation modulus by plate load test	- Do -	- Do -
38	Determination of rock Permeability	- Do -	- Do -
39	BEM and FEM analysis of underground openings.	- Do -	- Do -
40	Mathematical Model studies for assessment of wave tranquillity in the harbour basin for design of harbour layouts	- Do -	- Do -
41	Mathematical Model studies for assessment of shoreline changes due to construction of coastal structures	- Do -	- Do -
42	Non- destructive studies for assessment of in-situ quality of concrete and masonry of massive engineering structures.	Time limit Depends upon the requirement	Varies as per requirement of client and scope of the studies
43	Seismic qualification studies of various equipment and installation for their seismic safety using shaking table. Vibration studies for in-situ dynamic properties of foundation rock using shaker. Monitoring of vibrations on structures using online data acquisition system.	- Do -	- Do -
44	Controlled blasting studies at construction sites to minimize the unwanted effects of blasting viz. ground vibration, air blast, fly rocks, over breakage and propagation of cracks at the perimeter.	- Do -	- Do -
45	Monitoring of blast vibrations during rock excavation.	- Do -	- Do -
46	Hydraulic model studies for bridges	- Do -	- Do -
47	Morphological studies for deciding location of Intake	- Do -	- Do -
48	One dimensional mathematical studies for bridge/intake etc.	- Do -	- Do -
49	Desk studies for location and hydraulic design of Intake	- Do -	- Do -
50	Sectional model studies for bridge / barrages	- Do -	- Do -

SI. No.	Services	Service/ Performance Standards	Rate/ Cost of work
51	Stress and Stability analysis of Gravity Dam by FEM	- Do -	- Do -
52	Analysis and Interpretation of Instrumentation Data Pertaining to Gravity Dams /Hydro Power Plants/ Water Conductor System	- Do -	- Do -
53	In-situ/Prototype Hydro Static Test of Water Conductor System for Assessing Structural Safety.	- Do -	- Do -
54	Extreme value analysis of meteorological parameters	- Do -	- Do -
55	Assessment of dependable flow and Water availability studies	Time limit Depends upon the requirement	Varies as per requirement of client and scope of the studies
56	Assessment of low flows using statistical approach	- Do -	- Do -
57	Rating curve analysis using regression methods	- Do -	- Do -
58	Hydrological modelling of river basins (Rainfall - Runoff)	- Do -	- Do -
59	Development of flood forecasting models for water resources projects	- Do -	- Do -
60	Assessment of sediment yield for catchments/ mine area	- Do -	- Do -
61	Studies on backwater effect due to dams/ barrages/ weirs- Flood inundation	- Do -	- Do -
62	Studies on backwater effect due to dams/ barrages/ weirs- Power generation	- Do -	- Do -
63	Installation, Testing of Automatic Tide Generating System (A.T.G) for various tidal physical models.	- Do -	- Do -
64	Installation, Testing of Discharge control system for various river models.	- Do -	- Do -
65	Hydrographic Survey of lakes and Reservoirs for estimation of water storage capacity and evaluating sedimentation.	- Do -	- Do -
66	Advice and supervision of dam instrumentation for various dams.	- Do -	- Do -
67	Reservoir Sedimentation studies for hydroelectric power project	- Do -	- Do -
68	Flushing of sediment from reservoir	- Do -	- Do -
69	Flood protection measures for river	- Do -	- Do -
70	Studies for desilting basin for hydroelectric power project	- Do -	- Do -
71	Studies for barrages	- Do -	- Do -
72	3D Mathematical modelling for Thermal /Salinity dispersion	- Do -	- Do -
73	2D Mathematical modelling for Thermal /Salinity dispersion	- Do -	- Do -
74	2D Mathematical modelling for Sediment /Mud transport	Time limit Depends upon the requirement	Varies as per requirement of client and scope of the studies
75	2D Mathematical modelling for Water Quality parameters	- Do -	- Do -
76	Littoral Drift and shoreline evolution studies	- Do -	- Do -
77	Scour depth determination in tidal condition	- Do -	- Do -
78	Physical Wave Model studies in Multipurpose Wave Basin	- Do -	- Do -
79	2D MMS for Littoral drift/Shoreline evaluation	- Do -	- Do -
80	1D MMS for evaluation of water level and flow conditions.	- Do -	- Do -
81	Physical tidal model studies in the existing facilities.	- Do -	- Do -
82	2D MMS for Hydrodynamic and siltation.	- Do -	- Do -
83	Desk studies for development of Ports and Harbours	- Do -	- Do -
84	Study of Shoreline Changes using Satellite Remote Sensing (SRS) Techniques	- Do -	- Do -
85	River Morphological studies using Satellite Remote Sensing (SRS) Techniques	- Do -	- Do -

SI. No.	Services	Service/ Performance Standards	Rate/ Cost of work
86	Estimate of reservoir sedimentation using Satellite Remote Sensing (SRS) Techniques to	- Do -	- Do -
87	Training and demonstration of canal automation	- Do -	- Do -
88	Rating of canals	- Do -	- Do -
89	Physical model studies for tidal hydrodynamics for port layout optimisation.	- Do -	- Do -
90	Mathematical model studies for wave transformation from deep sea to shallow coastal region for feasibility study.	- Do -	- Do -
91	Mathematical model studies for wave tranquillity for port layout optimisation.	- Do -	- Do -
92	Mathematical model studies for tidal hydrodynamics for identification of circulation pattern in the area of port development.	Time limit Depends upon the requirement	Varies as per requirement of client and scope of the studies
93	Mathematical model studies for identification of siltation pattern and quantity of sediments for development of the port.	- Do -	- Do -
94	Mathematical model studies for shoreline evolution and littoral drift distribution due to coastal structures.	- Do -	- Do -
95	Thermal dispersion studies for locating intake and outfall of a Thermal Power Plant	- Do -	- Do -
96	Analysis of meteorological data	- Do -	- Do -
97	Studies for improvement and optimization of Cooling Water system using innovative techniques	- Do -	- Do -
98	Physical hydraulic model studies for the development of Port	- Do -	- Do -
99	Field data collection and analysis	- Do -	- Do -
100	Design, Development, Installation, testing commissioning, maintenance of computer based data acquisition systems for measurement of various hydraulic parameters such as Water Level, Velocity, Temperature, Pressure, Wave height etc. On physical hydraulic models	- Do -	- Do -
101	Underwater seismic reflection survey for delineating sediment and rock topography for reservoirs, ports and harbours	- Do -	- Do -
102	Seismic tomography survey for delineating weak zones for Dams and power projects	- Do -	- Do -
103	Seismic refraction survey for finding depth to bedrock, rock quality, fractures and joints for foundation of dams, power projects and other civil structures	- Do -	- Do -
104	Cross-hole seismic studies for finding P-wave, S-wave velocity, Young's and shear moduli for foundation of dams and power projects	- Do -	- Do -
105	Ground Penetrating Radar survey for finding cavities, pipes, buried objects, landmines for dams and various civil projects	- Do -	- Do -
106	Electrical Resistivity Imaging survey for determining depth to bedrock, mapping of faults and fractures, finding groundwater potential zones and location of buried drums for dams, power projects and other civil structures	Time limit Depends upon the requirement	Varies as per requirement of client and scope of the studies
107	Mathematical model studies for tidal hydrodynamics and estimation of siltation for the development of port facilities	- Do -	- Do -
108	Physical hydraulic model studies for the assessment of flow conditions for finalising alignment of berth/terminal navigational channel/ effect of reclamation etc. In Mumbai area	- Do -	- Do -
109	Mathematical model studies to assess the wave conditions at berths/ terminals/ waterfront facilities	- Do -	- Do -
110	Mathematical model studies to identify dumping grounds for disposal of dredged material	- Do -	- Do -

SI. No.	Services	Service/ Performance Standards	Rate/ Cost of work
111	Desk and Wave flume studies for design of Breakwaters/ groynes for development of major/ minor/ fishery ports	- Do -	- Do -
112	Desk and Wave flume studies for design of coastal protection structures	- Do -	- Do -
113	Desk studies for design of fish landing centres	- Do -	- Do -
114	Desk and Wave flume studies for design of Breakwaters/ Sea walls for development of major/ minor/ fishery ports	- Do -	- Do -
115	Desk and Wave flume studies for design of coastal protection structures	- Do -	- Do -
116	Desk studies for Storm surge analysis and Wave Hind casting for different projects	- Do -	- Do -
117	Hydraulic model studies for Power Intake to observe (a)Flow condition near intake (b) possibility of any air entering vortices (c)Design of Anti-vortex device, if required	- Do -	- Do -
118	Hydraulic model studies for Vertical Lift gates to assess (a)Hydrodynamic forces on it (b)Air demand on downstream of gate for proper size of air vent	- Do -	- Do -
119	Hydraulic model studies for performance of sluice outlets	- Do -	- Do -
120	Hydraulic model studies for performance of Tailrace channel/ tunnel	- Do -	- Do -
121	Hydraulic transient analysis for water hammer pressure and to check the adequacy of surge tank by way of physical/ mathematical modelling	- Do -	- Do -
122	Identification of seepage through hydraulic structures using borehole logging	- Do -	- Do -
123	Detection of seepage through hydraulic structures using tracer studies	- Do -	- Do -
124	Innovative solutions to complex hydraulic problems through physical modelling.	- Do -	- Do -
125	Physical and Numerical flow model of Reservoir & Appurtenant structure of Dam.	- Do -	- Do -
126	Studies pertaining to the hydraulics of Spillways & Outlet works.	- Do -	- Do -
127	Studies for spillways, Energy dissipater devices, selection of proper energy dissipater arrangement.	- Do -	- Do -
128	Hydraulics of Diversion Tunnel.	- Do -	- Do -
129	Studies for Power Intakes of hydroelectric power plants.	- Do -	- Do -
130	Studies pertaining to hydraulics of Headrace, Tailrace and Water conductor system of Hydropower Plants.	- Do -	- Do -
131	Studies for Intakes of pumped storage plants.	- Do -	- Do -
132	Hydraulics of Drop Shaft, de-aerator of water conveying tunnels.	- Do -	- Do -
133	Hydraulic transient analysis and design recommendation for control of pressure surge and surge protection, safe opening/closing of valves.	- Do -	- Do -
134	Water hammer analysis of water conveyance system of Hydropower Plants.	- Do -	- Do -
135	Transient analysis for load rejection and acceptance, load variation at hydroelectric power plants to evaluate penstock designs.	- Do -	- Do -
136	Surge protection practices for design & operation of pump stations and pipe lines.	Time limit Depends upon the requirement	Varies as per requirement of client and scope of the studies
137	Hydraulics of surge tank & Penstocks.	- Do -	- Do -

SI. No.	Services	Service/ Performance Standards	Rate/ Cost of work
138	Recommendation on design for large diameter water transmission system.	- Do -	- Do -
139	Studies for hydraulics of high head hydraulic gates and valves of water conveyance system of hydroelectric power plants, spillways and outlet works of dam.	- Do -	- Do -
140	Regular Calibration of flowmeters and Cv/Kv test of various types of valves	- Do -	- Do -
141	Regular pressure drop test of various types of Filters	- Do -	- Do -
142	Periodic performance test of submersible test	- Do -	- Do -
143	Periodic accuracy test of water meters	Time limit Depends upon the requirement	Varies as per requirement of client and scope of the studies
144	Flow measurement and calibration of flow meters at site	- Do -	- Do -
145	Performance evaluation of hydro turbines at site	- Do -	- Do -
146	Fabrication and installation of Radial gates and its operating mechanism for Tide Generation physical models in the field hydraulic model studies.	- Do -	- Do -
147	Miscellaneous and residuary matters and emerging studies	- Do -	- Do -