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**STANDING COMMITTEE ON WATER RESOURCES  
(2011-12)**

**FIFTEENTH LOK SABHA**

**MINISTRY OF WATER RESOURCES**

**REVIEW OF CENTRAL SOIL AND MATERIALS RESEARCH STATION**

**ELEVENTH REPORT**



**LOK SABHA SECRETARIAT**

***NEW DELHI***

March, 2012/Phalgun, 1933 (Saka)

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MINISTRY OF WATER RESOURCES

REVIEW OF CENTRAL SOIL AND MATERIALS RESEARCH STATION

*Presented to Lok Sabha on 27.03.2012*

*Laid on the Table of Rajya Sabha on 27.03.2012*



*LOK SABHA SECRETARIAT  
NEW DELHI*

*March, 2012/Phalguna, 1933 (Saka)*

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## COMPOSITION OF THE STANDING COMMITTEE ON WATER RESOURCES (2011-2012)

Shri Dip Gogoi - Chairman

### **LOK SABHA**

2. Shri Ghanshyam Anuragi
3. Shri Pulin Bihari Baske
4. Shri Badri Ram Jakhar
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16. Shri N. Chaluvarya Swamy
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19. Dr. P. Venugopal
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30. Dr. Gyan Prakash Pilonia
31. Smt. Bimla Kashyap Sood

### **SECRETARIAT**

1. Shri Devender Singh - Joint Secretary
2. Shri B.S. Dahiya - Director
3. Smt. Rita Jaikhani - Additional Director

## INTRODUCTION

I, the Chairman, Standing Committee on Water Resources (2011-2012) having been authorized by the Committee, do present on their behalf this Eleventh Report on 'Review of Central Soil and Materials Research Station'

2. The Committee (2009-2010) took up the subject "Review of Central Soil and Materials Research Station' for a detailed examination and Report. The Committee were briefed by the representatives of the Ministry of Water Resources and the Central Soil and Materials Research Station on the subject at their sitting held on 02 June 2010. The Committee also took oral evidence of the representatives of the Ministry of Water Resources and the Central Soil and Materials Research Station on various aspects of the subject at their sitting held on 11 March 2011.

3. The Committee at their sitting held on 14 February 2012 considered and adopted the Report subject to amendments/modifications made in the Report after incorporating the suggestions made by the Hon'ble Members and the corrections arising out of factual verification of the Report by the Ministry.

4. The Committee wish to express their thanks to the officers of the Ministry of Water Resources and the Central Soil and Materials Research Station who appeared before the Committee and placed their considered views. They also wish to thank the Ministry of Water Resources for furnishing the requisite material on the points raised by the Committee in connection with the examination of the subject.

5. The Committee would like to place on record their sense of deep appreciation for the invaluable assistance rendered to them by the officers of the Lok Sabha Secretariat attached to the Committee.

**NEW DELHI**  
**29 February, 2012**  
**10 Phalgun, 1933(Saka)**

**DIP GOGOI,**  
***Chairman,***  
***Standing Committee on Water Resources***

## **CHAPTER-I REPORT**

### **ORGANISATIONAL SETUP AND OBJECTIVES**

#### **(A) BACKGROUND**

1.1 The Central Soil and Materials Research Station (CSMRS), New Delhi, an attached Office of the Ministry of Water Resources, was established in 1954 as Silt and Construction Materials Directorate of the erstwhile Central Water and Power Commission (CWPC). Based on the recommendations of a High Level Committee headed by Dr. M.S. Swaminathan, the CSMRS was delinked from CWC in 1981. The Central Soil and Materials Research Station (CSMRS) New Delhi was established on 27<sup>th</sup> June, 1981. CSMRS is a premier organisation in the country dealing with laboratory and field investigations, basic and applied research in the areas of Soil mechanics, Rock Mechanics and Concrete Technology and applied areas.

#### **(B) OBJECTIVES OF THE CSMRS**

1.2 Mandate of CSMRS is as under:-

- (i) To carry out basic and applied research in the fields of soil mechanics, rock mechanics, concrete technology and allied areas which have a vital bearing on the irrigation and power development of the country.
- (ii) To assist Central and State Government organizations, Ministries/Departments of Government of India, Public Sector Undertakings etc. primarily in the field of soil mechanics, rock



mechanics, construction materials and allied fields pertaining to projects in the water sector and other infrastructure projects. Assistance to neighbouring countries as and when required.

- (iii) To undertake site characterization, laboratory and field investigations including stress measurements, instrumentation and other measurements of prototype structures to monitor their behavior, quality control in water resources and other complex civil engineering structures.
- (iv) To undertake construction materials survey, to evolve mix design of mortars, concrete, shotcrete etc. for use in projects to realize economical utilization of locally available materials.
- (v) To undertake chemical analysis of all construction materials.
- (vi) To impart training to engineers and scientists from within the country and from overseas for investigation and testing in the fields of soil mechanics, rock mechanics, construction materials, concrete technology, water quality, numerical modeling etc.

1.2 (A) Considering the importance of the mandate given to the CSMRS and its potential role, the Committee selected the subject for detailed examination on 10.09.2009 and took the evidence of the representatives of the Ministry/CSMRS on 2.06.2010 and 11.03.2011 respectively.

1.3 On being asked about the extent to which the objectives of the CSMRS have been achieved till date, the Ministry of Water Resources in their written reply stated that activities of the CSMRS are continuing in nature and the CSMRS has successfully completed the identified activities to achieve the objectives.

**(C) ROLES OF THE CENTRAL WATER COMMISSION, THE CSMRS AND THE MINISTRY OF WATER RESOURCES**

1.4 Detailing the fields of cooperation among the Central Water Commission, the CSMRS and the Ministry of Water Resources, the Ministry in their written reply stated as under:-

"Both Central Water Commission (CWC) and CSMRS are attached offices of Ministry of Water Resources. A Standing Technical Advisory Committee under the Chairmanship of Member (Design & Research). CWC supervises the technical and research activities of the Research Station. Further, there is close cooperation between the Design Directorates of CWC and CSMRS on technical matters related to projects. CSMRS is represented in various technical committees of CWC in specific areas such as investigations, instrumentation, evaluation of old structures etc. On the advice of CWC, CSMRS undertakes investigations for detailed project reports. CSMRS also carries out the evaluation of the detailed project reports submitted by various States to CWC in respect of issues related to materials & soils. The Research Station corresponds directly with the Ministry of Water Resources on administrative, financial and other general matters."

1.5 Elaborating on the coordination amongst the CSMRS, the CWC and the Ministry of Water Resources, Secretary, the Ministry of Water Resources, during the evidence added as under:-

"Yes, it is a part of the same Ministry, it is also under us. It is a sister organization..... When CWC does this work, it undertakes designs, hydrological studies, siltation etc., and they take the help of CSMRS. It is nothing separated. This is focused here and that is focused there. That is the only thing . They are both attached offices of our Ministry."

1.6 When the Committee sought to know during the evidence about the role of the CSMRS, Secretary, the Ministry of Water Resources informed that states approach the CSMRS and on the request of a state, the CSMRS undertake the activities related to investigation and testing of soils, materials etc. in respect of the specific projects. State Governments and Union Territories extend full cooperation to the CSMRS during the course of investigation.

#### **(D) ORGANIZATIONAL SET UP**

1.7 According to the information provided by the Ministry to the Committee, the CSMRS has a Governing Council headed by the Secretary, Ministry of Water Resources and Standing Technical Advisory Committee headed by Member(Design& Research), Central Water Commission.

1.8 To a specific query as to whether the CSMRS have any bodies in the State, Secretary, the Ministry of Water Resources deposed :-

"It is only in the Centre. It is a small organization, a research institute of the Centre."

#### **CONSTITUTION OF THE GOVERNING COUNCIL**

##### **(i) Governing Council**

The Governing Council functions as principal policy formulating and advisory body under the Chairmanship of Secretary,

Ministry of Water Resources. The Governing Council comprises members from Central Water Commission, Planning Commission, Department of Science and Technology, experts representing academic and research institutes, other organizations and concerned officers from MoWR. The Governing Council monitors the overall progress and performance of the Research Station.

**(ii) Standing Technical Advisory Committee**

The Standing Technical Advisory Committee (STAC) with Member (Design & Research). Central Water Commission as its Chairman inter-alia provides an overall perspective and guidance, technical scrutiny of research programmes and recommending priorities, scrutinizes and recommends the expansion proposals in the form of five year plans/external assistance and suggests programmes for training of manpower.

**(iii) Infrastructure and Manpower**

CSMRS is headed by a Director and located in Delhi adjacent to Indian Institute of Technology in a campus of 8.4 acres. Research infrastructure includes laboratories in the areas of soil mechanics, soil dynamics, rockfill technology, geosynthetics, rock mechanics, concrete technology, concrete chemistry and instrumentation. The laboratories have state of art equipments in the field of soil mechanics, rock mechanics, concrete technology and allied fields. It has other infrastructural facilities such as lecture hall, auditorium and trainee hostel. Well qualified and experienced research personnel are working in different areas of specialization.

The research station has sanctioned staff strength of 333 including Ministerial staff. The organizational chart of CSMRS is enclosed as **Annexure-I**.

When asked whether the existing organizational set up is sufficient to cater to the requirement for smooth functioning of the Research Station, the Ministry of Water Resources in a written reply have stated that the existing organizational set up is considered adequate to cater to the present requirement for smooth functioning of the Research Station.

**(E) STAFF POSITION IN THE CENTRAL SOIL AND MATERIALS RESEARCH STATION (CSMRS)**

1.9 On being asked about the staff position of the Central Soil and Materials Research Station (CSMRS) as it stands on 1<sup>st</sup> July 2011, CSMRS have furnished in written reply as follows :

**Staff position in CSMRS AS ON 01-07- 2011**

Sl. No.	Designation & Scale of Pay	No. of Posts Sanctioned	In Position	Vacant
<b>Group A Gazetted</b>				
1.	Director -PB-4( Rs.37400-67000+10000 GP)	01	01	-
2.	Scientist- E-PB-4( Rs.37400-67000+8700 GP)	27	22	05
3.	Scientist - D-PB-3( Rs.15600-39100+7600 GP)			
4.	Scientist C-PB-3( Rs.15600-39100+6600 GP)			
5.	Scientist B-PB-3( Rs.15600-39100+5400 GP)	40+14(Newly created posts)	22+17( Ad-hoc promotion of AROs)	15
6.	Under Secretary -PB-3( Rs.15600-39100+6600 GP)	02	01	01
7.	Principal Private Secretary-PB-3 (Rs.15600-39100+6600 GP)	01	01	-
	<b>TOTAL</b>	<b>85</b>	<b>64</b>	<b>21</b>
<b>Group B Gazetted</b>				
8.	Section Officer-PB-2( Rs.9300-34800+4800 GP)	2	2	-
9.	Assistant Research Officer-PB-2( Rs.9300-34800+4800 GP)	16	13	3
10.	Private Secretary-PB-2( Rs.9300-34800+4800 GP)	4	4	-
11.	Assistant Director(OL) -PB-3( Rs.15600-39100+5400 GP)	1	1	-
12.	Head D'man-PB-2( Rs.9300-34800+4600 GP)	1	-	1

13.	Astt. Library Information Officer-PB-3( Rs.15600-39100+5400 GP)	1	1	-
14.	Assistant Accounts Officer(Rs.9300-34800+4800)	1	-	1
	<b>TOTAL</b>	<b>26</b>	<b>21</b>	<b>5</b>
<b>Group B (Non Gazetted)</b>				
15.	Research Assistant-PB-2( Rs.9300-34800+4600 GP)	16	15	1
16.	Assistant-PB-2( Rs.9300-34800+4600 GP)	6	6+2@	-(-2)
17.	Personal Assistant(Rs.9300-34800+4600)	6	1	5
18.	Draftsman Gr.I-PB-2( Rs.9300-34800+4200 GP)	1	1	-
19.	Hindi Translator-PB-2( Rs.9300-34800+4200 GP)	1	1	-
20.	Supervisor I-PB-2( Rs.9300-34800+4200 GP)	7	7	-
21.	Store Keeper Gr.I-PB-2( Rs.9300-34800+4200 GP)	1	1	-
	<b>TOTAL</b>	<b>38</b>	<b>32(+2)</b>	<b>6(-2)</b>
<b>Group C</b>				
22.	Laboratory Assistant Gr.I PB-1( Rs.5200-20200+2800 GP)	5	4	1
23.	Laboratory Assistant Gr.II PB-1(GP Rs.5200-20200+2400)	10	10	-
24.	Laboratory Assistant Gr.III(Rs.5200-20200+2000)	21	21	-
25.	Sr. Computer -PB-1( Rs.5200-20200+2800 GP)	1	-	1
26.	Jr. Computer PB-1( Rs.5200-20200+1900 GP)	2	-	2
27.	Draftsman Gr.II-PB-2( Rs.9300-34800+4200 GP)	2	-	2
28.	Draftsman Gr.III-PB-1( Rs.5200-20200+2400 GP)	1	-	1
29.	Foreman(Workshop) -PB-1( Rs.5200-20200+2800 GP)	1	1	-
30.	Mechanic-PB-1( Rs.5200-20200+2400 GP)	4	4	-
31.	Assistant Driller-PB-1( Rs.5200-20200+2400 GP)	1	1	-
32.	S.C. Driver Gr.I-PB-1( Rs.5200-20200+2800 GP)	2	2	-
33.	S.C. Driver Gr.II -PB-1( Rs.5200-20200+2400 GP)	2	2	-
34.	S.C.Driver (Ordinary Grade) -PB-1( Rs.5200-20200+1900 GP)	3	2	1
35.	Library Information Assistant)PB-2 (Rs.9300-34800+4200 )	1	1	-
36.	Store Keeper Gr.II-PB-1( Rs.5200-20200+2400 GP)	2	2	-
37.	Telephone Operator-PB-1( Rs.5200-20200+1900 GP)	2	2	-
38.	Electrician Gr.I-PB-1( Rs.5200-20200+2400 GP)	1	1	-
39.	Electrician -PB-1( Rs.5200-20200+1900 GP)	1	-	1
40.	Fitter Gr.I -PB-1( Rs.5200-20200+2400 GP)	1	-	1
41.	Carpenter-PB-1( Rs.5200-20200+1900 GP)	1	1	-
42.	Driller-PB-1( Rs.5200-20200+2800 GP)	3	3	-
43.	Reprographic Assistant-PB-1( Rs.5200-20200+1900 GP)	1	-	1
44.	Upper Division Clerk-PB-1( Rs.5200-20200+2400 GP)	13	4	9
45.	Stenographer-PB-1( Rs.5200-20200+2400 GP)	3	2	1
46.	Lower Division Clerk-PB-1( Rs.5200-20200+1900 GP)	4	4+1*	-(-1)
47.	LDC(Time Keeper)-PB-1( Rs.5200-20200+1900 GP)	1	1	-
48.	Laboratory Helper( Rs.5200-20200+1800 GP)	52	52	-
49.	Library Attendant (Rs.5200-20200+1800)	01	01	-
50.	Multi Tasking Staff( Rs.5200-20200+1800)	17	15	2
51.	Manager-PB-1( Rs.5200-20200+2000 GP)	1	1	-
52.	Junior Clerk-PB-1( Rs.5200-20200+1900 GP)	1	1	-
53.	Halwai-PB-1( Rs.5200-20200+1900 GP)	1	1	-
54.	Tea Maker-PB-1(Rs.5200-20200+1900 GP)	1	1	-
55.	Bearer- PB-1( Rs.5200-20200+1900 GP)	3	3	-

56	Sweeper- (PB-1 Rs. 5200-20200+1800 GP)	1	1	-
<b>Total</b>		<b>167</b>	<b>144(+1)</b>	<b>23(-1)</b>
<b>Group D Posts</b>				
57.	Wash Boy- (IS Rs.4440-7440 +1300 GP)	1	1	-
Total		<b>01</b>	<b>01</b>	-

**STAFF POSITION IN BRIEF AS ON 1.7.2011**

No. of posts				
Sl.No.	Category of posts	Sanctioned	Filled	Vacant
1	Group A	85	64	21
2	Group B Gazetted	26	21	05
3	Group B Non Gazetted	38	32(+2)@	06(-2)
4	Group C	167	144(+1)*	23(-1)
5	Group D	01	01	-
Total		317	262(+3)	55(-3)

@Three posts of UDCs were upgraded to the post of Assistant on ad-hoc basis by MOWR. However, at present there are two in position .

\*One post of LDC adjusted against the post of UDC

1.10 Further the Ministry of Water Resources have also given in their reply, about the vacancy position and action taken by the CSMRS as on 1<sup>st</sup> July 2011 which is as under :

**STATEMENT SHOWING VACANCY POSITION AND ACTION TAKEN BY CSMRS (AS ON 01-07.2011)**

Sl. No.	Designation and pay scale & Date since vacant	No. of vacancy	Date of vacancy & Reasons of vacancy	Action to fill up the vacancy	Results achieved
<b>Group A</b>					
1.	Scientist B(Research Officer) PB-3 (Rs. 15600-39100+5400 GP)	Sc E =1 Sc C =4 Sc B = 15 ===== 20  (Under FCS, vacancy occur in the lowest entry grade at Group A level i.e Scientist B)	<p><b>1.08.07</b>- Due to promotion of one JD(Scientist E) to Director.</p> <p><b>1.08.07</b> - Due to Retirement of one RO(Scientist B).</p> <p><b>24.12.07</b> - VRS of one SROs (Scientist C).</p> <p><b>7.05.08</b> - VRS of one SRO(Scientist C).</p> <p><b>1.03.09</b> - Retirement of one CRO. (Scientist D).</p> <p><b>9.09.09</b> - Due to expiry of one SRO(Scientist C).</p> <p><b>1.02.10</b> - Retirement of one JD (Scientist E).</p> <p><b>30.06.10</b> - Due to retirement of one JD(Scientist E).</p> <p><b>30.09.10</b> - Retirement of JD(Scientist E).</p> <p><b>31.12.10</b> - Retirement of CRO (Scientist D).</p> <p><b>15.01.06</b> - Due to death of one RO(Scientist B).</p>	<p><b>DR Vacancies.</b></p> <p>(i) 5 vacancies (Rectt. year 2006-07) Selection process over, 1 yet to join</p> <p>(ii) Action to fill up 10 vacancies pertaining to the recruitment years 2007-08, 2008-09, 2009-10 and 2010-11 is under process of the UPSC after advertisement of the posts.</p> <p>(iii) 7 vacancies revived in 2011-12 and proposed to be filled by promotion of ARO's as Scientist B as a special case.</p> <p>(iv) 2 Vacancies arising in 2011-12 to be filled.</p>	<p>(i) Selection process completed. 4 candidates have joined. One yet to join.</p> <p>-</p> <p>(iii) &amp; (iv): Recruitment process is being initiated.</p>



			<p><b>1.05.08</b> – Retirement of one RO(Scientist B).</p> <p><b>1.02.09</b> - Due to retirement of RO(Sc) (Scientist B).</p> <p><b>01.05.09</b> – Due to VRS to RO(Sc) (Scientist B).</p> <p><b>01.07.09</b> – Retirement of one RO(Sc) (Scientist B).</p> <p><b>01.10.09</b> – Retirement of one RO(Sc) (Scientist B).</p> <p><b>01.05.11</b> - Due to VRS of one Scientist C.</p> <p><b>01.06.11</b> – Retirement of one Scientist B</p> <p><b>01</b> vacancy belong to 2004-05.</p>		
<b>Group B</b>					
2.	Assistant Research Officer (Rs.9300-34800+4800GP)	03	27.04.2011 – Due to promotion as Scientist B	Action is being initiated to fill up three vacancies by RAs shortly.	-
3.	Assistant Accounts Officer (Rs.9300-34800+4600GP)	01	12.11.10 – Transfer of AAO	Request sent to Controller of Accounts for filling up the post.	Posting awaited from Controller of Accounts.
4.	Research Assistant PB-2 (Rs.9300-34800+4800GP)	01	16.3.10 – Due to promotion of one RA to ARO	Matter under consideration on the advise of DoPT	-

5.	Head Draftsman – PB-2(Rs.9300-34800+4600GP)	01	30-9-2010 - Due to superannuation of the incumbent.	Letter sent to CWC to post one Head Draftsman as they are the Cadre Controlling Authority.	Posting awaited from CWC.
<b>Group C</b>					
6	Draftsman Gr.II – PB-1 (Rs.5200-20200+2400GP)	02	31.12.05 - Due to superannuation of the incumbent.	IWSU has not recommended for filling up of only one post. Requisition sent to CWC.	Posting awaited from CWC.
7	Lab. Assistant Gr.I– PB-1 (Rs.5200-20200+2800GP)	01	31.01.11 - Due to superannuation of the incumbent.	Requested MOWR/ IWSU for permission to fill up the post, as the IWSU in their study report has recommended for abolition of the post.	Kept in abeyance till clearance by IWSU.
8.	Draftsman Gr.III – PB-1 (Rs.5200-20200+2400GP)	01	Vacant since long.	IWSU has not recommended for filling up the post.	No action is required.
9.	Staff Car Driver (Ordinary Grade)(Rs.5200-200+1900GP)	01	2.2.2010 – Due to promotion to the next higher grade.	Request with Directorate of Employment, NCT of Delhi to send names of suitable applicants for selection/appointment..	Names of applicants awaited.
10	Multi Tasking Staff (Rs.5200-20200+1800GP)	02	16.12.09- Death of the incumbent. & 27.01.2010 – Due to promotion as LDC.	Requested Staff Selection Commission to nominate suitable candidates for the posts.	Nomination of suitable candidate awaited.
11	Electrician (Rs.5200-20200+1900GP)	01	28.10.10 – Promotion to the next higher grade	Request with Directorate of Employment, NCT of Delhi to send names of suitable applicants for selection/appointment..	Names of applicants awaited.
12.	Reprographic Assistant (Rs.5200-20200+1900GP)	01	17.9.10 - Due to resignation.	Request with Directorate of Employment, NCT of Delhi to send names of suitable applicants for selection/appointment..	Names of applicants awaited.

13	Junior Computer (Rs.5200- 20200+1900GP)	02	07.08.06 - Due to transfer of the incumbent to CWC.	CWC, the cadre controlling authority has been requested to fill up the post. .	Posting awaited from CWC
14.	Senior Computer (Rs.5200- 20200+1900GP)	01	Vacant since long.	CWC, the cadre controlling authority has been requested to fill up the post	Posting awaited from CWC
15	Fitter Gr.I- PB-1 (Rs.5200- 20200+2400GP)	01	31.01.2011 – Due to superannuation of the incumbent.	Requested Directorate of Employment, GNCT of Delhi on 29.06.11 to send names of suitable applicants for selection/appointment	Names of applicants awaited.
	Total	<b>39</b>			

**Ministerial Posts**

Sl. No.	Grade	No. of vacancy	Date of vacancy & reasons for vacancy	Action to be taken by MOWR.	Result achieved.
1.	Under Secretary	<b>01</b>	1.7.2011- Due to Transfer .	Substitute yet to join	-
2.	Personal Assistant	<b>05</b>	<b>7.7.07</b> - Transfer on Promotion. <b>31.8.09</b> – On Transfer. <b>11.3.10</b> - Transfer on Promotion. <b>29.4.11</b> ( 2 vacancy) – Two officers promoted to the grade of PS.	Ministry of Water Resources is being requested to fill up the vacant posts of PAs.	-
3.	Stenographer Grade -III	<b>01</b>	<b>10.5.10</b> – Transferred out of CSMRS.	Ministry of Water Resources is being requested to fill up the vacant posts.	-
4.	UDC	<b>09*</b>	<b>30-3-07</b> ( 2 vacancies ) – Due Transfer on Promotion. <b>5.4.07</b> - Transfer on Promotion. <b>31.10.2006</b> ( 2 vacancies) – Transfer on Promotion. 8.10.07 – Transfer on Promotion. 3.6.10 – Transfer on Promotion. 30.8.10 (2 vacancies): Promotion to the post of Assistant..	Ministry of Water Resources is being requested to fill up the vacant posts	-
	Total	<b>16</b>			

\* Two posts adjusted against Assistant and 1 post adjusted against LDC.

Grand Total = 39 + 16 = 55

1.11 The Committee while perusing the staff position in the Central Soil and Materials Research Station (CSMRS) enquired about the action taken with regard to the promotion of Assistant Research Officers now re-designated as Scientist B, and also about the policy of the Government in this regard. The Committee further enquired why there is lack of consistent and uniform policy and why Scientists are forced to seek judicial remedy and what attempts are being made to resolve the problem. The Ministry informed in their written reply stated as follows :

- i) In the first instance it may be pointed out that Assistant Research Officers have not been re-designated as Scientist B. Scientist B is a Group A post and the Research Officers of CSMRS have been re-designated as Scientist B. However, Assistant Research Officer is a Group B Gazetted post and continues to be designated as Assistant Research Officer.
- ii) Briefly, as per the previous Recruitment Rules namely, CSMRS Group A posts Recruitment Rules 1983 and subsequent amendment dated 7<sup>th</sup> June, 1988, there were two streams i.e Engineering and Scientific, in the Assistant Research Officer (ARO) and Research Officer (RO) cadres. Research Officer (Engineering) was filled 80% by Direct Recruitment and 20% from Assistant Research Officer (Engineering) by promotion. Similarly, Research Officer (Scientific) was filled 80% by promotion and 20% by Direct Recruitment. Though, a proposal for amendment of CSMRS Group 'A' Rectt. Rules were initiated by the Ministry in 1999 to incorporate uniform Scientific designation as prescribed under DoPT OM dated 9.11.98 , the Rectt. Rules could not be got finalized even after prolonged consultation with DOPT & UPSC as the Scheme of

FCS was under review of Committee of Secretaries/Appointment Committee of Cabinet. In the meanwhile, ARO (Engineering) and ARO (Scientific) were merged in 2001 to form a single entity called Assistant Research Officer. However, since the promotional post namely, Research Officer (Engineering) and Research Officer (Scientific) still remained separate the Assistant Research Officers who were now placed in the unified cadre of ARO could not be promoted due to differential category of scientists prevailing in the Research Officer cadre. The matter was taken up by the Ministry of Water Resources a number of times with the DOPT to resolve the issue either by way of grant of one time relaxation or partial modification/amendment of Group 'A' Rectt Rules confined to the Research Officer grade but the same was not agreed to by the DOPT pending review of the RRs under FCS.

- iii) Guidelines for modified FCS were subsequently notified on 10<sup>th</sup> September, 2010 by DOPT to be implemented by all S&T organizations of Government of India. Consequently, new Recruitment Rules namely “ The Ministry of Water Resources, Central Soil and Materials Research Station, New Delhi, Group 'A' Posts Recruitment Rules, 2010” was notified by Ministry of Water Resources vide GSR No. 213 dated 23<sup>rd</sup> November, 2010 . According to the said new Rectt. Rules, the erstwhile RO(Engg.) & RO(Sc) were merged to form a single entity known as Scientist B. Further, all the Group A Posts except that of Director were also re-designated as provided in the modified FCS Scheme as under:

	<b>Earlier Designation</b>	<b>Revised Designation</b>
1	Research OfficerPB-3(Rs.15600-39100) GP Rs.5400)	Scientist B

2	Sr. Research OfficerPB-3(Rs.15600-39100) GP Rs.6600)	Scientist C
3	Chief Research OfficerPB-3(Rs.15600-39100) GP Rs.7600)	Scientist D
4	Joint DirectorPB-4(Rs.37400-67000) GP Rs.8700)	Scientist E

- iv) The Group B scientific posts(Gazetted) in CSMRS consists of Assistant Research Officer only. As per the new recruitment Rules, the post of Scientist B(earlier Research Officer) is to be filled 25% by promotion from Assistant Research Officers with two years regular service in the grade and 75% by direct recruitment.
- v) Inordinate delay in amendment of Group A Rectt. Rules for reasons submitted in Para 2 above, resulted in further stagnation in the ARO cadre. Some of the AROs resorted to Court Cases. However, consequent to the rectification of anomaly in Scientist B grade, the process of promotions of AROs has started. In order to further rectify the problem of stagnation amongst the AROs, the Ministry of Water Resources have separately formulated a proposal for en-block upgradation of the posts of Assistant Research Officer to Scientist B. The proposal is currently under consideration of the Ministry of Water Resources and the same is in the process of being forwarded to the Ministry of Finance, Deptt. of Expenditure, for their concurrence.

**1.12 The Committee note that the Central Soil and Materials Research Station (CSMRS) was established on 27 June, 1981, with the objective to carry out basic and applied research in the fields of soil, rock mechanics and in concrete technology; to assist Central and State**

**Govt. Organizations, Ministries/Departments of Govt. of India, Public Sector Undertakings; to undertake site characterization, Laboratory and field investigations; to undertake construction materials survey; and to undertake chemical analysis and impart training to engineers and scientists. The Committee note that the CSMRS was setup as a premier organisation in the field of soil and material testing. The Committee, therefore, desire that a comprehensive statement may be furnished to them showing the mandate of the CSMRS and achievements made by them during the last five years in each area of their mandate. The CSMRS need to equip their laboratories with the State-of-the-art equipments and periodic review of the functioning of the CSMRS be done by the Government.**

**1.13 The Committee are constrained to note that although proposal for amendment of the CSMRS Group A Recruitment Rules were initiated by the Ministry in 1999 to incorporate uniform scientific designation as prescribed under DoPT, the Recruitment Rules could not be got finalised even after prolonged consultation with DoPT and UPSC. The Committee also note with dismay that the promotional post namely Research Officers (Engineering) and Research Officer (Scientific) remained separate, the Assistant Research Officers who**

were then placed in the unified cadre of ARO could not be promoted due to differential category of scientists prevailing in the Research Officer cadre. The Committee are further distressed to note that though this matter was taken up by the Ministry of Water Resources with the DoPT to resolve the issue but the same was not agreed to by the DoPT pending review of the RRS under FCS. The Committee, therefore, strongly recommend that DoPT should be approached again by the MoWR to resolve this problem once forever.

**1.13A** The Committee also express their displeasure that due to inordinate delay in amendment of Group A Recruitment Rules which resulted in further stagnation in the ARO Cadre, some AROs resorted to court cases. The Committee observe that such inordinate delay in amending the respective rules of various Group of officers leads to anomaly and financial loss for incumbent officers. Surprisingly, the proposal for en-block upgradation of the posts of Assistant Research Officers to Scientists B is yet to be forwarded to Ministry of Finance for their concurrence. The Committee strongly recommend that the Govt. should take immediate and concrete steps to improve the state of affairs in the CSMRS and rectify the problem of stagnation amongst AROs and put the working of the CSMRS in order. While expressing



their serious displeasure, the Committee further recommend that Government should take immediate corrective measures to ensure that there is transparency in the functioning of the CSMRS and also there is quick redressal of the grievances of the officers regarding their promotional avenues to overcome their sense of denial and discrimination at the earliest within three months of the presentation of this Report.

1.14 The Committee further note that in the CSMRS there are various categories of posts like Group A (Gazetted) Group B (Gazetted) Group B (Non-Gazetted) Group C and Group D. There are 21 posts vacant against 85 sanctioned posts in Group 'A' Gazetted, 6 vacant posts in Group 'B' Non-Gazetted, against 38 sanctioned posts, 5 vacant posts against 26 sanctioned posts in Group 'B' Gazetted, 23 vacant posts against 167 sanctioned posts in Group 'C'. Regarding the Action Taken by the CSMRS to fill up the vacancies under various categories, the Ministry informed that the process is being initiated as in some cases postings were awaited from Controller of Accounts while in some other cases posting were awaited from the Central Water Commission (CWC). It was further stated that action was being taken by the MoWR to update the vacancy position. The

**Committee, therefore, recommend that action be initiated expeditiously for time-oriented mechanism of recruitment and also directions be issued to the Central Water Commission to obtain sanctions from the competent authority so that the work of scientific institute is not hindered. The Ministry of Water Resources should also ensure that there is no lapse on its part and should conduct a fresh review of the various staff categories of the CSMRS and also ascertain the actual requirement of the Staff and Officers considering the importance of the mandate of the CSMRS. The Committee would also like to be apprised of the status of the action taken up in this regard at the earliest.**

**CHAPTER-II**  
**FINANCIAL PERFORMANCE**

**(A) BUDGET ALLOCATIONS OF THE CSMRS**

2.1 On being asked whether the funds allocated for the CSMRS are under an independent Head, the Ministry of Water Resources replied as under:-

“There is specific allocation of funds for CSMRS under the Demand No.103, Ministry of Water Resources – Major and Medium Irrigation under Major Head 2701 for both Plan and Non-Plan.”

2.2 When the Committee during the course of the evidence desired to know whether the allocated budget of Rs. 35 crore marked for research work, out of which 70% were utilized, was sufficient or they required any additional support, the Director, CSMRS stated as under:-

“So far as 35 crore rupees are concerned, this is the R&D Scheme of the Ministry. There are many research centres, one of which component is CSMRS. There is no difficulty of money because under Plan Scheme if we desire to ask for little more money, there will be no difficulty. We will get the money.”

## **(B) REVENUE GENERATION BY CSMRS**

2.3 The following table indicates the revenue generated by the CSMRS during the last five years.

### **Revenue Earned for five years**

Year	Amount (Rs. in Lakhs)
2006-2007	108.06
2007-2008	35.34
2008-2009	22.29
2009-2010	46.47
2010-2011	177.93
<b>Total</b>	<b>390.09</b>

2.4 Regarding the steps taken to increase the generation of revenue and results achieved, the Ministry stated as follows:

- (a) Greater efforts to complete the investigation work in coordination with project authorities at the earliest.
- (b) CSMRS has been vigorously showcasing its capabilities in different forums such as seminars, conferences, exhibitions, training programmes etc. It is likely to result in more work from both public and private sectors.

- (c) Schedule of rates is being rationalized to attract more works from the public and private sectors.

The Ministry further explained that as a result of close coordination between the CSMRS and project authorities at the initial stage itself, this Research Station has been able to attract more than 30 National projects and 10 International projects which were under various stages of investigation for the preceding one year (2010-2011). According to the Ministry, greater efforts were being made to complete the investigation reports in time. Revenue during 2011-12 was likely to increase considerably after the completion of these projects.

**2.5 The Committee note that during the years 2007-08 to 2009-10, the revenue generation went down drastically in comparison to 2006-07. Surprisingly, it went down to Rs. 22.29 lacs during 2008-09 which is about 1/5 of the revenue generated during 2007-08. Although, during 2009-10, the revenue earned was Rs.46.47 lacs which further increased substantially i.e. Rs.177.93, the Ministry needs to explain the reasons for decline and fall in the revenues of the CSMRS during 2007-2008, 2008-2009 and 2009-2010 and factors responsible for quantum leap in the revenue during 2010-2011. The Committee, would like the CSMRS to carry out the wide mandate**

**assigned to it while ensuring constant rise in its earnings. The Committee are of the considered view that in a fiercest competitive globalised world no research institute can sustain itself for long unless it becomes self-sustaining.**

## CHAPTER-III

### CSMRS SPECIALIZATIONS

#### (A) SOIL MECHANICS AND FOUNDATION ENGINEERING

3.1 The Ministry have stated that the CSMRS undertakes field and laboratory soil investigations viz. foundation and borrow area investigations of various river valley projects and civil engineering structures for characterization of soil and construction/foundation materials. Besides, characterization of soil under dynamic loading condition including evaluation of liquefaction potential, characterization of rock fill materials and evaluation of chemical properties of soil are also undertaken. In addition, special investigations are also carried out for characterizing the problematic soils such as expansive and dispersive soils. The core areas covered are Soil mechanics, Rockfill technology, Soil dynamics, Geosynthetics, Numerical modelling and Soil chemistry

Some of the sophisticated equipments used by the CSMRS are computer controlled triaxial shear test, Truck mounted cone penetrometer, Permeability test setup, Large size oedometer system, Tensile testing equipment and Large size triaxial shear test system.

3.2 Regarding the kinds of soil, its nomenclature and varieties, the Secretary deposed as under:

“The second issue is what is soil.....Soil consists of a number of particles. The first is gravel; the second is sand; the third is silt and the fourth is clay. All of this depends on the grain size. Constitution will be the same but it just depends on the size of the grain. For example, clay is a grain of 0.002 mm. Silt is 0.002 to 0.75 mm. Sand is 0.75 mm to 4.75 mm. Gravel is anything above 4.75 mm. So, this is how we classify them. It is only the grain size. It is the size of the particle which differentiates the different parts of the soil..... Clay has this holding power to hold all the water. Otherwise you would not have any ponds.”

3.3 On being asked to give in detail the research work undertaken with regard to the utility of desert soil, stating whether it can be used in cement, concrete or in construction work, Ministry stated that desert sand is predominately found in parts of Rajasthan, Gujarat etc. This sand is locally used for construction of temporary structures such as kuccha house, mud house etc. Since sand dunes consists of fine sand and silt, its use in permanent cement concrete structures is not advisable. Regarding its use in water retaining structures, it can be used as filter material in earthen dams if found suitable as per laid down criteria and also if it is economically viable as far as transport cost is concerned.



3.4 When further asked about the acceptability of the Fly ash and any research work done in this matter, the Ministry have given the details of complete research work as under:-

**(a) Role of fly ash in minimizing corrosion in RCC structures**

Fly ash based cement or fly ash as a part replacement of cement is used in the preparation of concrete for reinforced cement concrete (RCC). There were some apprehensions in some quarters about the efficacy of fly ash in RCC with special references to corrosive effect on steel reinforcement. The CSMRS had undertaken special study on short term and long term effects of fly ash on reinforcement. Studies indicated that there is no adverse effect of corrosion on steel reinforcement.

**(b) Leaching behavior of fly ash in ground water**

Applied research on this topic was undertaken at the request of Central Electricity Authority. Case study of leaching behavior of fly ash pond of Panipat Thermal Power Plant, Haryana was taken up. Based on specially designed field and laboratory tests, it was conclusively proved that fluoride contamination in the well (ground water) in the nearby village was on account of leaching from the ash pond area.

**(c) Low permeability barrier layer for liner system of ash pond**

Primarily, there are two types of fly ash disposal systems – the wet disposal and the dry disposal system. In the wet disposal system, the ash is mixed with water to make a slurry which is then pumped through pipelines to the already constructed ash ponds. In the dry scheme, the ash is conditioned by adding moisture to minimize dust pollution and then conveyed to the disposal area through conveyors or in trucks. At the disposal area, the dry ash is dumped to form mounds of ash using elaborate earth moving machinery. Most thermal power plants in India dispose ash by the wet disposal system.

Case study of ash ponds was taken up. Ash ponds are required to be lined in order to prevent the possibility of contamination of ground water, by the leachates generated than the fly ash, if any. An elaborate experimental study was carried out to find out the suitability of the available soil duly amended with the bentonite clay as a liner. This study indicated the cost effectiveness of the solution.

**(d) Pseudostatic and Probabilistic Stability Analyses of Ash Containment Systems**

Ash dykes and ash mounds are required to be planned, designed and constructed like a hydraulic structure. The stability analyses carried out through this study optimizes the design of the ash mound and the ash embankment.

Following study is in progress:

**(e) Stabilization of expansive soil using flyash**

Generally lime is used for stabilization of expansive soil. Flyash is a resource material containing certain amount of lime. A self sponsored programme on use of flyash for treatment of expansive soil is under progress. This study would help in usage of a material which is available at practically no cost.

3.5 The Committee have also been informed that the plan expenditure incurred for development and upgradation of laboratories for soil mechanics and foundation engineering is Rs. 811.62 lakhs. An amount of Rs. 34.87 lakhs was incurred on the purchase of sophisticated equipments and the total funds available were stated adequate to meet their requirements.

## **(B) CONCRETE TECHNOLOGY**

3.6 This wing of CSMRS undertakes field and laboratory investigation of construction materials viz. coarse aggregate and fine aggregate, cement, pozzolanas, steel rods, admixtures, design of mass concrete/structural grade concrete and high strength concrete mixes, diagnostic assessment of concrete structures using portable ultrasonic nondestructive digital indicator tester (PUNDIT), evaluation of thermal properties of concrete, performing as quality control consultant for major hydroelectric projects, studies on permeability of concrete, testing of concrete for underwater abrasion, testing for alkali-aggregate/alkali carbonate reaction in concrete etc. The core areas covered are Construction materials characterization, Non-destructive testing, Concrete mix design and Drilling technology.

Some of the sophisticated equipments used are Thermal conductivity test equipment, 1000T, 250T and 200 T Universal testing machines, Portable ultrasonic non-destructive digital indicatory tester (PUNDIT), Underwater abrasion test equipment and Concrete permeability apparatus

3.7 When the Committee enquired about the available use of marble and granite waste in the light of the CSMRS, the Secretary, Ministry of Water Resources stated that “Marble and granite waste can be used as

something because in Rajasthan, this is a big problem. Whenever there is mining, there is a lot of marble waste; and there is a lot of granite waste. The CSMRS has not actually done any study. But they say it is not recommended because it does not have strength. If we mix it in concrete then the house will collapse. So it is not recommended. That is what the CSMRS says.”

3.8 Asked whether the CSMRS is in continuous touch with the technological advancement in the area of Polymer chemistry and Nano Molecular Chemistry the Secretary, Ministry of Water Resources stated as under:-

“I quite agree with the Hon’ble Member. Composites is the future and how polymers can interact with these waste materials and what sort of composites can be formed is the future. Perhaps we will start looking at this while designing dams if such composites can be used, where it can be done, is it cost effective, is it strength-wise the right strength to hold the dam. The suggestion of the Hon’ble Member is well taken.”

3.9 The Committee pointed out that at present marble, granite and other stones have a huge mass which goes waste throughout the country, it is available at no cost, just a waste material. The CSMRS should find some

method, by constant research, for its utility. In response, the Secretary, deposed :

“The first thing which you said about using the marble and granite waste in construction, I quite agree. We would pass on your suggestion to the Central Building Research Institute. They are an institute which does a lot of this work and they will be quite happy to ponder over it.”

3.10 On being asked about the amount of funds allocated and released for investigations in this field since the last five years, the Ministry in their written reply have stated that the expenditure incurred for development and upgradation of laboratories for concrete technology under Plan is Rs.1053.42 lakhs.

3.11 On being further asked the funds allocated and released for acquiring sophisticated equipments during the last five years, Ministry informed that an amount of Rs.75.26 lakhs was incurred on purchase of sophisticated equipments. The details are given below :

<b>S. No.</b>	<b>Name of the equipment</b>	<b>Cost (In Rs.)</b>	<b>Indigenous or Import</b>	<b>Year of Purchase</b>	<b>Year of Commissioning</b>
1.	Polarizing Microscope	2160332.00	Imported	2008-09	2008-09
2.	Multi Product Calibrator	1126012.00	Imported	2008-09	2008-09
3.	Pressure Calibrator	2202641.00	Imported	2008-09	2008-09

4.	Load Cell (1000 T capacity) for Universal Testing Machine	601650.00	Indigenous	2008-09	2008-09
5.	Air entrainment meter	140625.00	Imported	2008-09	2008-09
6.	Rapid Chloride Permeability Test Equipment	1295000.00	Imported	2010-11	2010-11
<b>Total Rs.</b>		<b>75,26,261.00</b>			

### **(C) CONCRETE CHEMISTRY**

3.12 When Committee enquired about the funds allocated and released for acquiring sophisticated equipments during the last five years, the Ministry informed that an amount of Rs.118.94 lakhs was incurred on purchase of the following sophisticated equipments during the period from 2006-07 onwards :

<b>S. No.</b>	<b>Name of the equipment</b>	<b>Cost (In Rs.)</b>	<b>Indigenous or Import</b>	<b>Year of Purchase</b>	<b>Year of Commissioning</b>
1.	Atomic Absorption Spectrophotometer	1286750.00	Imported	2006-07	2006-07
2.	X-Ray Diffraction Spectrophotometer	4429032.00	Imported	2006-07	2006-07
3.	Differential Scanning Calorimeter	1174880.00	Imported	2006-07	2006-07
4.	Fourier Transform Infra Red spectrometer	760460.00	Imported	2007-08	2007-08
5.	Gel Permeation Chromatography	1951155.00	Imported	2008-09	2008-09

6.	Personal Computer based Automated Titrator	1071461.00	Imported	2009-10	2009-10
7.	Micro Cover meter	396000.00	Imported	2010-11	2010-11
8 .	ICDD Software for X-Ray Diffraction Equipment	823807.00	Imported	2010-11	2010-11
<b>Total Rs.</b>		<b>1,18,93,545.00</b>			

3.13 When asked whether the equipments which have been Imported were not available indigenously, the Ministry stated that some of the equipments were available indigenously. The Ministry, however, clarified that while procuring such sophisticated equipments, wide publicity is given through newspapers/website by calling tenders. Supply order is placed with the lowest bidder subject to fulfilling all the procurement norms as well as meeting the CSMRS specifications.

#### **(D) ROCK MECHANICS**

3.14 The Committee pointed out whether the CSMRS looks into the age factor of the dams. To this Secretary, Ministry of Water Resources during the evidence held on 11.3.2011 stated as under:-

“Exactly, we will very well taken note of that.”

He further elaborated as under:

“Now coming to rock deformability and rock reinforcement. In this, it happens that dam is sitting on rocks finally. Dam has a weight. We have to check that if the dam goes, will these rocks below deform?”

Means the whole structure will collapse. So, this is a very important test which is done. You know at a certain pressure, even sand becomes liquid. It behaves like a liquid. It is not moving. You think you have made it with so much of sand, if the pressure is more then it becomes like a liquid. It just becomes like a liquid.”

3.15 On being asked whether seismological forecasting is done which may lead to rock deformation, the Secretary stated as under:

“While designing a dam, the seismology of that area is taken into account and there is a limit. For example, the Tehri dam has been designed to withstand an 8.6 Richter scale earthquake because that is how it is designed. But there is a problem. Today, in Japan there was an 8.9 Richter scale earthquake. So, there is always a problem. In case anything so dreadful will happen then nothing can stand.”

3.16 Further, when the Committee pointed out that in Japan an earthquake and Tsunami of such a scale came, the Secretary responded as under :-

“In case anything like this happens, it will be very difficult. You cannot predict anything.”

3.17 When the Committee enquired whether available seismologic data is taken into consideration, the Secretary deposed;

“We do. When we design a dam we take one in 10,000 years flood. In 10,000 years which has most of the flood, can it survive from such flood or not but it may so happen that in 11000 year one such flood may come. We have date series. We are collecting all the data..... Fortunately, the British People also kept very good records in lot of



areas. In some places, we have a lot of data. This is a very important part of our function.”

3.18 The Chairman, Central Water Commission further elaborated the method of calculating the data as under:-

“We have data limited for 30 years or 40 years which we extrapolate it to 500 years. It is statistical method.”

3.19 The Committee pointed out that after dams are constructed, the people of down stream area do not get water due to diversion or water ponding. On being asked whether the Government has any proposal in this regard, the representative of the Ministry stated :

“.....Now we are going to change this and are communicating with Planning Commission as to what should be there, that when Dam is constructed, as to what the Hon’ble Member is mentioning is also there. Now, we are also saying that when Dam is made, then there should be sufficient release for regeneration of the river. The rivers which are down-stream, why are you killing them, that is also a living river. You make a dam but leave some water for regeneration. When this is not done rivers dry. At present Yamuna has no water. We are also communicating with the Ministry of Environment about the river share and river regeneration. There is an error in our Planning, dam is ready but there is no water for the people living down the stream.”

He further elaborated as under:-

“Our efforts are to ensure minimum share for river generation, wherever there will be diversion of water and places, there should be water for river re-generation. We are realizing our mistake.”

3.20 The Committee drew the attention of the witnesses about the disability of making small check dams. In response to this, Secretary informed the Committee as under:-

“People have suggested this system also.”

The Chairman, Central Water Commission elaborated on this as under :

“We cannot hold water in this for long time. We store the water during the three months of the Monsoon, which we release in the coming nine months. Small-small dams will give water for 3-4 months only and will not be able to give water after that. It is economical to make big dam rather than small dam.”

**3.21 The Committee note that the CSMRS has conducted studies on the role of flyash in minimizing corrosion in RCC structure, leading behavior of flyash in ground water, low permeability barrier layer for liner system of ash pond, pseudostatic and probabilistic stability of ash containment systems. According to the Ministry, a self sponsored programme on use of flyash for treatment of expansive**

soil is under progress and to explore the usage of a material which is available at practically no cost. The Committee, therefore, recommend that the CSMRS make all out efforts to complete the study within specific timelines. The Committee also recommend that the CSMRS take steps to popularize usage of flyash as it is cost effective.

3.22 The Committee strongly feel that the study on ash ponds be undertaken all over the country and expeditiously specially where there are cases of fluoride contamination. Further, the Committee recommend that every effort be made by the Central Soil and Materials Research Station to popularize the use of ash ponds which would help in popularizing usage of a material which is cost effective.

3.23 Taking note of huge waste of marble, granite and other stones left after crushing/cutting and polishing, throughout the country, the Committee recommend that the CSMRS undertake research on priority so that the sand stone waste found in abundance in the country, is put to good use. In case the Central Soil and Materials Research Station are not equipped to conduct such a vital study, the matter may be referred to the Central Road Research Institute. The

**Committee would like to be apprised of the outcome of the initiative taken in the matter in due course.**

**3.24 The Committee note that Rs.118.94 lakhs was incurred on purchase of sophisticated equipments during the period from 2006-2007. The Committee also note that some of the equipments were available indigenously. The Committee would therefore like to know the precise reasons for buying such imported equipments when they were available within the country and the efforts made to encourage the use of indigenous equipments whenever available.**

**3.25 The Committee note that the CSMRS also carries out diverse types of field and laboratory investigations of dams and underground structures for various river valley and other engineering construction projects. The Committee however express their concern over disaster caused by the earthquake and Tsunami. The Committee, therefore, recommend that the CSMRS should strive to evolve new technologies and construction material so that the dams are able to withstand the impact of such seismic convulsions.**

**3.26 The Committee further express their serious concern over the fact that wherever the dams are constructed in the country, water**

reaches to that area easily but it does not reach to the people living in the lower stream area of that place. The Committee therefore, recommend that the Government should while constructing dams also ensure that there is sufficient release of water for the rivers of that area, so that down-stream rivers of that area do not die. The Committee desire that Government should come back to the Committee with a proposal in this regard.

## CHAPTER – IV

### AWARENESS GENERATION PROGRAMMES

4.1 The Ministry have informed that the CSMRS assists MOWR in the organisation of limited number of mass awareness programme particularly related to conservation of water. The CSMRS had conducted mass awareness programme on conservation of water in Jowai, Meghalaya in the year 2009 on a specific request from Meghalaya State Electricity Board.

4.2. When asked about the amount of expenditure incurred on the mass awareness programmes conducted during the last five years, year-wise and state-wise, the Ministry have stated that an amount of Rs.1,89,000.00 is incurred on the mass awareness programmes conducted during the last five years. The details are furnished below:-

Year	Events	Venue	Amount (Rs.)
2007-08	Exhibition to showcase CSMRS area of expertise and capabilities during Asian Regional Conference organized by IGS (Indian Geo-technical Society)	Kolkata, West Bengal	85,000/-
2008-09	Mass awareness programme held for school students and common people	Jowai, Meghalaya	90,000/-
2009-10	Exhibition to showcase CSMRS area of expertise and capabilities during Conference organized by Central Board of Irrigation & Power, New Delhi.	Vigyan Bhawan, New Delhi	14,000/-

2010-11	National Painting Competition for school students to be held on 21 <sup>st</sup> January, 2011.	CSMRS, Delhi	3,66,000*
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\*Estimated amount

4.3 When asked by the Committee whether any steps have been taken or proposed to be undertaken to increase the frequency of such mass awareness programme since 2009 onwards, the Ministry replied in a written reply that Mass awareness programmes are undertaken by the CSMRS under the directions of MoWR. Furthermore, the CSMRS shall endeavour to undertake such programmes in future also in consultation with MoWR and other organisations in the states.

4.4 During the course of briefing meeting the Committee pointed out that general mass awareness programmes should be conducted by the CSMRS in other States also. The Director, the CSMRS stated as under :

“Sir, we under these programmes show awareness programmes. We go there and try to bring awareness amongst the local people about the conservation of water and show different programmes related to this subject..... Secondly, on small-small topics in a very simple language, they are made to understand that how we are mis-utilizing water or are wasting it. You should use the water sensibly and try to conserve it the most. Because in this area there is lot of water this is why children do not know whether they should waste water or not but they liked what we are telling them, as these are for our benefit only.”

4.5 During the evidence of the Committee held on 11.3.2011, the Committee pointed out that the Manuals and Monographs published by the CSMRS, only one of them was completed. The Committee further enquired if it was with respect to just that year or it is through inception. The Director, CSMRS explained as under:

“The Manual which has been referred to is more than a year old. Two have gone for printing, which should be out in this year. We started this programme and we took a very conscious decision three years back that it is time that they serve the nation by giving the monographs and manuals on free basis because when a DPR is prepared, people should be aware of many aspects. That is why, we are preparing it. A conscious effort is made by CSMRS that whatever manual we put, before it is published, even though we prepare it, we take the opinion of the peers in the field. Then, we publish it. This year, we should be able to come out with two and probably next year, majority of them. But we want to put only the authenticated ones, after having been reviewed by the peers in the field.”

4.6 On being asked by the Committee whether these are available to the public and how do the CSMRS give it to some Institutions, the Director, CSMRS elaborated as under:

“What we are proposing to do, after the two are out, is this. We are preparing a list of organizations, especially the State Government organizations and some private organizations which are into the field of DPR preparation. We think that they should be aware of this. It would also be very necessary that we send it to the State Irrigation



Laboratories which are there throughout the length and breadth of the country.

It is done so that they are also aware of the area, which they have to work; what further is to be done; and how to enlighten them whether by test procedures; whether by the state of knowledge; whether by case studies, and which is a very important component that forms a part of our manual so that people are enlightened that in this subject area this is the state of art available and how we should go about it.”

4.7 When asked about the status of the Manual on the Methodology of risk analysis, the Ministry of Water Resources in their written reply stated that a draft manual on methodology of risk analysis was sent by Norwegian Geotechnical Institute, Oslo to the CSMRS for vetting on 17<sup>th</sup> January, 2011. The same was duly vetted by the CSMRS and sent back to NGI on 10<sup>th</sup> March, 2011. Final manual is expected shortly.

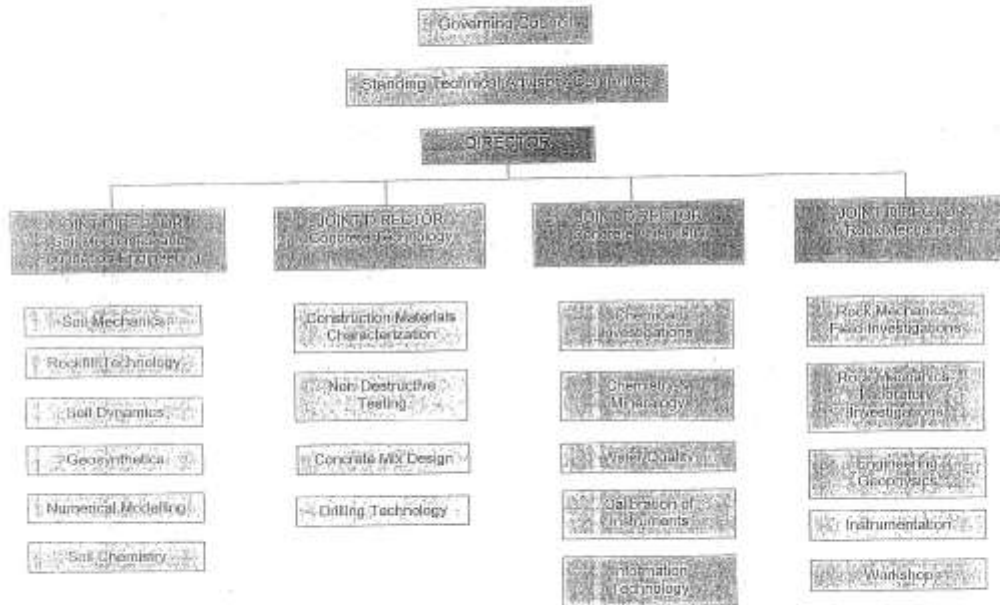
**4.8 The Committee note with displeasure that so far awareness camps for generating awareness among the people on conservation of water are not organized on a befitting scale all over the country by the CSMRS. Keeping this in view, the Committee recommend that a defined programme should be arranged by the CSMRS while organizing awareness camps across the country especially in the remote and inaccessible areas both in print and electronic media.**

**4.9 The Committee note with appreciation that the Manual on the Methodology of risk analysis has been vetted by the CSMRS and sent to Norwegian Geotechnical Institute, Oslo on 10 March 2011. The Committee would like the Manual to be published expeditiously.**

**NEW DELHI;  
29 February, 2012  
10 Phalguna, 1933 (Saka)**

**DIP GOGOI  
*Chairman,*  
*Standing Committee on Water Resources***

### ORGANIZATION CHART OF CSMRS



\* In addition to that shown there are two administrative divisions reporting directly to Director, CSMRS

MINUTES OF THE THIRTEENTH SITTING OF THE STANDING COMMITTEE ON WATER  
RESOURCES (2009-10) HELD ON WEDNESDAY, 02 JUNE 2010

The Committee sat from 1500 hours to 1630 hours in Committee Room 'D', Ground Floor,  
Parliament House Annexe, New Delhi.

**PRESENT**

**Shri Beni Prasad Verma – Chairman**

**MEMBERS**

**LOK SABHA**

2. Shri Ghanshyam Anuragi
3. Shri Mahendrasinh P. Chauhan
4. Shri Sher Singh Ghubaya
5. Shri Badri Ram Jakhar
6. Shri Virender Kashyap
7. Shri S.P.Y. Reddy
8. Shri Arjun Roy
9. Dr. P. Venugopal (Tiruvallur)
10. Shri Sajjan Verma

**RAJYA SABHA**

11. Dr. Gyan Prakash Pilonia
12. Shri Anil Madhav Dave
13. Shri Kumar Deepak Das
14. Dr. Ashok S. Ganguly

**SECRETARIAT**

- |    |                     |   |                      |
|----|---------------------|---|----------------------|
| 1. | Shri N.K. Sapra     | - | Additional Secretary |
| 2. | Shri Devender Singh | - | Joint Secretary      |
| 3. | Shri B.S. Dahiya    | - | Director             |

## REPRESENTATIVES OF THE MINISTRY OF WATER RESOURCES

1. Shri U.N. Pajjar, Secretary, MoWR
2. Shri A.K. Bajaj, Chairman, CWC
3. Shri Murari Ratnam, Director, CSMRS

At the outset, the Chairman welcomed the representatives of the Ministry of Water Resources and the Central Soil and Materials Research Station to the sitting of the Committee convened to have briefing on “Central Soil and Materials Research Station”.

2. After the introduction, the Secretary, Ministry of Water Resources gave an overview of the Central Soil and Materials Research Station. Thereafter, power point presentation was made on the ‘Working of the Central Soil and Material Research Station’. The Members sought clarifications on various issues relating to the subject which were replied to by the representatives of the Ministry and the Central Soil and Materials Research Station.
3. As the representatives of the Ministry/CSMRS were not prepared with certain queries of the Members, they assured to furnish replies thereon in due course.

(The witnesses then withdrew)

4. The following points emerged out of discussion :
  - (a) utility of desert soil in cement concrete or construction.
  - (b) acceptability of fly ash.
  - (c) silting and contamination of soil.
  - (d) evaluation of dam’s and bridges’ safety.
  - (e) rock reinforcement.

- (f) use of slurry of marbles and granite in construction work.
  - (g) use of mobile camera in under water structures.
  - (h) need for mandatory pre & post construction certification.
  - (i) awareness of local people about water conservation.
- 5.      xxxx    xxxx    xxxx
  - 6.      The verbatim proceedings of the sitting have been kept for record.

The Committee then adjourned.

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xxxx      Minutes in respect of other matters kept separately.

MINUTES OF THE SIXTH SITTING OF THE STANDING COMMITTEE ON WATER RESOURCES  
(2010-11) HELD ON FRIDAY, 11 MARCH 2011

The Committee sat from 1500 hours to 1615 hours in Room No. 62, First Floor, Parliament House, New Delhi.

**PRESENT**

**Shri Dip Gogoi – Chairman**

**MEMBERS**

**LOK SABHA**

2. Shri Ghanshyam Anuragi
3. Shri Mahendrasinh P. Chauhan
4. Shri Badri Ram Jakhar
5. Shri Arjun Roy
6. Smt. Annu Tandon

**RAJYA SABHA**

7. Shri Anil Madhav Dave
8. Dr. Gyan Prakash Pilonia
9. Shri Mangala Kisan
10. Dr. Ashok S. Ganguley

**SECRETARIAT**

1. Shri N.K. Sapra - Additional Secretary
2. Shri B.S. Dahiya - Director

**REPRESENTATIVES OF MINISTRY OF WATER RESOURCES**

4. Shri Dhruv Vijai Singh, Secretary, MoWR
5. Shri A.K. Bajaj, Chairman, CWC
6. Shri Murari Ratnam, Director, CSMRS

At the outset, the Chairman welcomed the Members to the sitting of the Committee. Thereafter, the Chairman welcomed the representatives of the Ministry of Water Resources and the Central Soil and Materials Research Station to the sitting of the Committee convened to have oral evidence on the subject "Review of Central Soil and Materials Research Station".

2. After the introduction, the Secretary, Ministry of Water Resources gave a brief overview of the subject through a power point presentation on the 'Working of Central Soil and Materials Research Station'. The Members sought clarifications on various issues related to the subject which were replied to by the representatives of the Ministry. The points raised during the sitting of the Committee included the following :

- (i) Need for CSMRS to carry out studies not only on soils but also on silt;
- (ii) Rock deformation and rock reinforcement including role of seismological forecasting in rock deformation;
- (iii) Exploring the use of marble and granite waste in construction;
- (iv) Feasibility of placing the subject of water under a single Ministry;
- (v) Advances in the polymer chemistry and nano molecular chemistry;
- (vi) Use of desert sand in construction; and
- (vii) Awareness of people through manuals and monographs.

The verbatim proceedings of the sitting have been kept for record.

The Committee then adjourned.



**MINUTES OF THE SIXTH SITTING OF THE STANDING COMMITTEE ON WATER RESOURCES  
HELD ON TUESDAY, 14 FEBRUARY 2012**

The Committee sat from 1130 hours to 1215 hours in Committee Room 'E', Basement, Parliament House Annexe, New Delhi.

**PRESENT**

Shri Dip Gogoi – Chairman

**MEMBERS**

**LOK SABHA**

2. Shri Pulin Bihari Baske
3. Shri Haribhau Jawale
4. Shri Virender Kashyap
5. Shri Mahendrasinh P. Chauhan
6. Shri S.P.Y. Reddy
7. Smt. Jagadanand Singh
8. Shri Bhisma Shankar *alias* Kushal Tiwari
9. Shri Mangani Lal Mandal
10. Shri Arjun Roy

**RAJYA SABHA**

11. Shri Balwinder Singh Bhunder
12. Shri Anil Madhav Dave
13. Shri Kumar Deepak Das
14. Dr. Ashok S. Ganguly
15. Dr. Gyan Prakash Pilonia

**SECRETARIAT**

1. Shri B.S. Dahiya - Director
2. Smt. Rita Jaikhani - Addl. Director

At the outset, the Chairman welcomed the Members to the sitting of the Committee convened for consideration and adoption of draft Report on the subject "Review of Central Soil and Materials Research Station".

2. Thereafter, the Committee took up the draft Report for consideration. After some discussion, the Committee adopted the Report with minor amendments/modifications as suggested by the Members.

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3. The Committee then authorized the Chairman to finalize the Report in view of the consequential changes arising out of factual verification and the suggestion of the Members and present the same to Parliament in the ensuing Session.

*The Committee then adjourned*

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xxxx Minutes in respect of other matters kept separately.