

भारत सरकार
जल शक्ति मंत्रालय
जल संसाधन नदी विकास एवं गंगा संरक्षण विभाग
केंद्रीय जल आयोग
कंक्रीट एवं चिनाई बांध अभिकल्प (उत्तर एवं
पश्चिम) निदेशालय



Government of India
Ministry of Jal Shakti
Dept. of Water Resources,
RD&GR
Central Water Commission
Concrete & Masonry Dam Design
(North & West) Directorate

Sub: Minutes of Meeting for the meeting held on 03.09.2020 on DPR of River Sarasvati Revival Project - reg.

Please find enclosed Minutes of Meeting held on 03.09.2020 on Project of Haryana Sarasvati Heritage Development Board, Government of Haryana for revival Saraswati River.

Digitally signed by RANDHIR KUMAR CHOUDHARY
Date: 2020.09.16 15:22:51 IST

(Randhir K Choudhary)
Deputy Director

To

1. PPS to Chairman, Central Water Commission (CWC), 2nd Floor, Sewa Bhawan, New Delhi-110066. (Email: chairman-cwc@nic.in, Tel: 9811581705)
2. PPS to Member, WP&P, CWC, 5th Floor (S), Sewa Bhawan, New Delhi-110066. (Email: mwp@nic.in, Tel.: 9425693077)
3. PPS to Member, D&R, CWC, 4th Floor (S), Sewa Bhawan, New Delhi-110066. (Email: memberdr-cwc@nic.in, Tel.: 9911202525)
4. Chief Engineer, Design (N&W), CWC, 8th Floor (S), Sewa Bhawan, New Delhi-110066, (Email-cesnw@nic.in, Tel.- 9958953355).
5. Chief Engineer, IMO, CWC, 5th Floor (S), Sewa Bhawan, New Delhi-110066, (Email-ceimo-cwc@nic.in, Tel.- 9868104740).
6. Sh. Vijayendra Kumar, Chief Executive Officer, Haryana Sarasvati Heritage Development Board, SCO-217, Sector -14, Panchkula-134113. (Email: sarasvatihdb.office@gmail .com, Tele. : 0172 – 2711697)
7. Sh. Jai Deep Rao, Chief Engineer/Construction, Irrigation & Water Resources Department, Govt. of Haryana, Sector 5, Panchkula, Haryana. (Email: ce-const.irr@gov.in, Tel.: 94164-96304)
8. Sh. D.P. Mathuria, Member Secretary, Upper Yamuna River Board, West Block - 1, Ground Floor, Wing - 4, R.K. Puram, New Delhi – 110066. (Email - uyrb-mowr@nic.in, Tel. 9911725111)
9. Sh. Goverdhan Prasad, Director, Hydrology (N) Directorate, CWC, Sewa Bhawan, New Delhi-110066. (Email- hydnorth@nic.in, Tel.: 9899936765)
10. Sh. M. K. Meena Director, BCD (N&W) Directorate, CWC, Sewa Bhawan, New Delhi-110066. (Email- bcdnw-cwc@nic.in, Tel.: 9868331622)
11. Sh. Arvind Kaushik, Superintending Engineer, Sarasvati Heritage Circle, Kurukshetra, Haryana. (Email- pwwirrig.kr@hry.nic.in, Tel.: 9416262436).

8 वीं मंजिल (दक्षिण), सेवा भवन,
राम कृष्ण पुरम, नई दिल्ली -110066
दूरभाष: 011-295833614 / 5033,
ई मेल: cmddnw@nic.in

●जल संरक्षण-सुरक्षित भविष्य●



8th floor (South), Sewa Bhawan,
R.K. Puram, New Delhi-110066
Tel: 011-295833614 / 5033,
E-mail: cmddnw@nic.in

●Conserve Water- Save Life●

Minutes of Meeting held on 03.09.2020 on project of Saraswati Heritage Development Board, Govt. of Haryana for Revival of Sarasvati River.

A meeting was held on 03.09.2020 in CWC through video conferencing under the chairmanship of Chairman, CWC to discuss the issues related to the project of Govt. of Haryana on 'Revival of Sarasvati River'. The list of participants is attached as **Annexure-I.**

At the outset, Chairman, CWC welcomed the participants of the meeting and assured the State Govt.. of full support of CWC for the project. Director, CMDD, CWC briefly discussed the project.

PROJECT IN BRIEF

To divert water of river Somb to river Sarasvati for its revival, Govt.. of Haryana has decided to construct a dam on river Somb for storing water. A 28.5 m high concrete dam in Himachal Pradesh (HP), at a distance of 400 m from of Haryana-Himachal Pradesh border, with a live storage capacity of 2.12 MCM is planned. A barrage (Somb-Saraswati barrage), 2.45 Km d/s of the dam, in the State of Haryana, with a small live capacity of 0.45 MCM is also envisaged in the project. The purpose of providing barrage is to divert regulated flows from the dam to the proposed Saraswati reservoir. The Saraswati Reservoir is 7.12 km from the barrage and will function as source of water for the revived river Saraswati. The gross capacity of the Saraswati reservoir is 14.75 MCM. The releases from the Saraswati reservoir have been worked out by considering diversion of the entire water of the river Somb in to the reservoir.

Subsequent to this, agenda points were discussed and detailed deliberations took place. Following are the deliberations and decisions taken during the meeting:

1. MOU with Himachal Pradesh for Adi Badri dam

Sh. Arvind Kumar Kausik, SE, Haryana Saraswati Heritage Development Board (SHDB) informed that the Govt. of HP has issued NOC for the construction of the dam in their territory subject to the signing of a MoU. A draft MoU was sent by SHDB to Govt. of Himachal Pradesh for their perusal. The Govt. of Himachal Pradesh forwarded the same to the Ministry of Jal Shakti on 28th February 2019 without any amendment with a copy to SHDB. He further mentioned that it implied their concurrence to the draft MoU.

The Chairman, CWC desired to know the reason for forwarding the draft MoU to Central Govt. Sh. Kausik from SHDB informed that due to the national importance of the project it was proposed to sign a tri-partite MoU between the two states and the Central Government. The Chairman, CWC advised that both the states can go-ahead to sign the MoU on mutual consent to avoid delay and share the signed MoU document with MoJS & CWC. If there is any requirement to enter into any MoU with the central government, the same can be taken up separately at a later stage.

2. Inter-State and International Clearances:

CWC officials stated that river Somb is the tributary of river Yamuna and there is a water-sharing agreement amongst the five states for sharing waters of river Yamuna. Member Secretary UYRB informed that discharge of Somb river, a tributary of Yamuna, outfalls into Dadupur headworks and mixes with water of WJC. Thereafter excess flow is diverted to river Yamuna from Dadupur. The construction of dam on river Somb may therefore effect the flows being diverted into Yamuna. He also mentioned that UYRB vide letter no UYRB/Tech-7/2019/1142 dated 12.07.2019 addressed to CWC as below:-

"....In the project report, it is proposed to store the excess water during the monsoon period only. So this office has no

objection as long as the share of riparian states of allocated Yamuna water is not affected."

It was clarified during the meeting that the project proposes to store non-monsoon flows also and not only monsoon flows as mentioned in the letter of UYRB.

The officials of Govt. of Haryana intimated that non-monsoon flows of the river Somb are diverted to the Western Jamuna Canal (WJC) at Pathrala barrage on the river Somb. During monsoon season only, the excess flows, if any, in the river Somb are diverted to river Yamuna. Thus, construction of the project would not affect the existing flow pattern into river Yamuna during non-monsoon. Haryana Govt. officials were asked to submit specific data/information/undertaking in this regard to UYRB for issuance of NOC from the inter-state angle. With regards to diversion of flows during monsoon, the state govt. officials clarified that the river Somb water meets river Yamuna d/s of the Tajewala and therefore will not affect the interests of Rajasthan regarding their share of water during monsoon season from Tajewala.

Further, It was decided that the Project Authority may be asked by UYRB to clearly specify the actual quantum of proposed diversion of water from river Somb to Sarasvati reservoir and UYRB has to ensure that construction of dam on river Somb does not affect allocations made under MoU dated 12.05.1994 among Yamuna basin States and seasonal distribution approved by UYRB in its 42nd meeting dated 06 July, 2012 should not be varied until further changes are approved by UYRB in consultation with other party States.

CE, IMO, CWC stated that river Somb is the tributary of river Yamuna, which in turn is a tributary of river Ganga. Further, since river Ganga is an international river (flows into Bangladesh), clearance from the international angle would be needed. For obtaining international clearance, information in the prescribed format needs to be sent to the FM Wing of DoWR, RD & GR, MoJS.

In this regard it was decided that the PAO unit of CWC would provide the prescribed "Form" for obtaining international clearances to the Government of Haryana. The

same is to be submitted to CWC by Govt. of Haryana so that clearance from international angle may be obtained by CWC from MoJS.

3. Water availability for river Sarasvati revival:

CWC officials stated that based on the water availability data as approved by CWC, simulation studies were carried out by NIH and SHDB using their in-house developed software. The studies took into account the storages that would be created and the reduction of storage capacity due to sedimentation. As per SHDB simulation studies, the availability of water for different dependability would be as shown in the table:-

Table

(All figures in cusecs)

Year of Siltling	50% dependability		75% dependability		90% dependability	
	Non Monsoon	Monsoon	Non Monsoon	Monsoon	Non Monsoon	Monsoon
0	25.61	31.48	21.20	27.89	18.20	21.99
5	25.37	31.49	21.26	28.47	18.13	22.30
10	25.40	32.15	21.27	29.00	18.05	22.62
15	25.24	32.61	21.29	29.62	17.99	23.02
20	24.62	33.05	21.20	30.50	17.87	23.79
25	24.72	33.99	21.06	30.77	17.76	24.13
30	24.47	34.54	20.91	31.34	17.63	24.68
35	24.27	35.05	20.76	31.80	17.56	25.07
40	23.90	36.45	20.45	32.68	17.42	26.08
45	23.80	36.92	20.37	32.94	17.38	26.29
50	23.72	37.49	20.30	36.27	16.45	25.27

A perusal of the above indicates that 25.61 cusecs water is available in the starting year during non-monsoon (9-months) period for the revival of Saraswati River at its head at 50% dependability. However, the quantity of availability of flows en route the revived river Saraswati and the length of river in which these flows will sustain will

depend upon the seepage, evaporation and other losses on the route of the revived river.

Sh. Arvind Kumar Kausik, SE, SHDB stated that this quantum of water is sufficient to revive the Sarasvati River.

Sh. M. K. Goel, Scientist G, NIH also stated that the proposed quantum of water is sufficient for the fulfilment of the symbolic need of the revival of Sarasvati River from heritage considerations.

Chairman, CWC mentioned that although there may not be any mandatory requirement of release of minimum e-flows into the river Somb downstream of the project at present, the same may have to be released from the project in the future. Project Authorities assured that the same would be taken into account whenever the need arises.

4. Sediment Management:

Chief Engineer, Design (N&W), CWC stated that the Sarasvati Heritage Project, as planned, utilizes the whole water of river Somb for diversion. All the incoming sediment gets trapped in the storage space proposed to be created. No mechanism has been proposed in the structures to hydraulically flush out the sediments. Moreover, no water is available for flushing purposes. The absence of proper sediment management could limit the useful life of the scheme. The river revival should be on a long-term basis and not for a short time frame. Further, deposited sediment in the reservoirs will not be sand and thus would not be attractive to the sand miners.

Sh. Harmail Singh, Advisor of Govt. of Haryana stated that mining will be allowed to dispose of the deposited sediment and after 50 yrs some other measures like flushing, construction of the open channel, etc. could be adopted for silt management. The officials of Haryana Govt. informed that the proposed manual sediment management evacuation would enhance project life. Other

measures/techniques, as available in the future, would also be employed for this purpose.

5. Establishment of Gauge, Discharge & Sediment (GDS) Site:

Chairman CWC advised the Haryana Govt. to establish a Gauge, Discharge & Sediment (GDS) observation site at a suitable location on river Somb near the proposed project site for collecting site-specific hydrological data which will help in post-project management also. He assured that CWC will provide the guidance to the state Govt. for establishing the GDS-site, if so required.

6. Construction Planning:

Director CMDD(N&W), CWC stated that as per the planning proposed in the DPR, barrage and other d/s project components are proposed to be constructed in the 1st phase and Adi Badri dam in 2nd phase. CWC officials mentioned that if the barrage is constructed before the dam, then the barrage will get silted up within no time considering the quantum of sediment.

Sh Arvind Kumar Kausik, SE, SHDB informed that both the structures i.e. barrage & dam are proposed to be constructed simultaneously. Since clearances required for the construction of the barrage are less, the construction work of the barrage will be started first and simultaneously construction work of the dam will also be taken up after obtaining the required clearances.

7. Other:

Member (D&R), CWC stated that considering the small amount of water available in river Somb for revival of river Sarasvati, it will be appropriate if the flow of the river Sarasvati is augmented by taking water from the Western Jamuna Canal (WJC). The Project authority assured that the same would be looked into.

Project authorities requested for taking up of design consultancy work by CWC at the earliest.

8. Summary:

Summarizing up the discussions the Chairman, CWC stated that the Project Authorities may take the following actions:

- a) Sign MoU with Himachal Pradesh and share the same with CWC/MoJS.
- b) Provide necessary data/documents/undertaking to the Upper Yamuna River Board (UYRB) to the effect that pattern of flow of water from river Somb into river Yamuna does not get altered during non-monsoon season due to the proposed project.
- c) Provide information in the requisite Form to PAO, CWC to process the case for the International Clearance.

The consultancy work for designs and drawings of the project will be formally taken up by CWC as soon as actions on the above points are completed and clearances from inter-state and international angle are obtained. Meanwhile, the Haryana Govt. can take up the work of geological investigations and laboratory testing so that the necessary data is available once the consultancy work commences.

The meeting ended with thanks to the chair.

ANNEXURE-I

List of participants:

Central Water Commission:

1. Sh. R. K. Jain, Chairman
2. Sh. S. K. Haldar, Member WP&P
3. Dr. R.K. Gupta, Member D&R
4. Sh. S. K. Sibal, Chief Engineer Design (N&W)
5. Sh. Vijay Saran, Chief Engineer IMO,
6. Sh. Ashok Goel, Chief Engineer, PAO
7. Sh. Anil Jain Director, CMDD (N&W)
8. Sh. Goverdhan Prasad, Director Hydrology(N)
9. Sh. Kiaran Pramanik, Director PA (N)
10. Sh. Vivek Johari, DD, BCD (N&W)

Upper Yamuna River Board:

1. Sh. D. P. Mathuria, Member Secretary

Haryana Irrigation &Water Resources Department:

1. Sh. Jaideep Rao, Chief Engineer, Construction
2. Sh. Harmail Singh, Advisor
3. Sh. Arvind Kausik, S.E., SHC, Kkr Saraswati Heritage Circle, Kurukshetra
4. Sh. Satish Kumar, SDO, Jagadhri

Haryana Sarasvati Heritage Department Board:

1. Sh. Vijayendra Kumar, IAS, Chief Executive Officer
2. Sh. B. B. Kausik, HCS, Additional Chief Executive Officer
3. Sh. G. S. Gautam, Consultant
4. Sh. Aditya Dharupta, Consultant (Tech)

NIH Roorkee:

1. Sh. M. K. Goel, Scientist G, WRSD