जा.क्र.-धसुसं/धसुवि1/पुणे प्रदेश/ध.स्थि.अ.2019-20/212/2020, दि. 21/05/2020

Government of Maharashtra
Water Resources Department

Annual Consolidated Health Status Report of Identified Large Dams in

Pune Region (Year 2019-20)

Koyna Dam

Superintending Engineer,
Dam Safety Organization,
CDO Building, Dindori Road,Nashik- 422004

GOVERNMENT OF MAHARASHTRA
Water Resource Department
Superintending Engineer
Dam Safety Organisation (DSO),, Nashik
Dindori Road, Nashik-422004.
Phone (Off.): 0253 – 2530030.
Fax: 0253 – 2530030.
E-mail: se.damsafety@gmail.com
Website: www.mahadso.org

सत्यमेव जयते

DSO

महाराष्ट्र शासन
जलसंपदा विभाग
अधीक्षक अभियंता,
धरण सुरक्षितता संघटना,नाशिक
दिंडोरी मार्ग, नाशिक- 422 004
दूरध्वनी (ऑ.):0253 - 2530030
फॅक्स : 0253 - 2530030.
ई-मेल :se.damsafety@gmail.com

जा.क्र.धसुसं/धसुवि१/पुणे प्रदेश/ध.स्थि.अ.२०१९-२०/ २१२ /२०२० दि. २१/ ०५ / २०२०

प्रति,

१. मा. मुख्य अभियंता,
जलसंपदा विभाग,पुणे.

२. मा. मुख्य अभियंता,
(वि. प्र), पुणे.

३. मा. अप्पर आयुक्त तथा मुख्य अभियंता (स्थानिक स्तर)
मृद व जलसंधारण प्रादेशिक क्षेत्र,
पुणे-

विषय:- पुणे प्रदेशातील पूर्ण झालेल्या मोठ्या धरणांचा पावसाळा पूर्व - उत्तर २०१९ धरण स्थिती अहवाल

संदर्भ:- १. महाराष्ट्र शासनाचे इंग्रजी पत्र क्र. पा. वि. १०७७ / २४०२ / १८६७ / २, दि.१९/०१/१९८२.
२. केंद्रिय जल आयोगाचे इंग्रजी पत्र क्र. No.-3/19/NCDS/HS/DSM/ 2001/627/56, dated 28/08/2002.

संदर्भीय पत्रानुसार पुणे प्रादेशिक विभागाचा धरण स्थिती अहवाल धरण सुरक्षितता संघटना मार्फत तयार करण्यात येतो. तथापि धरण स्थिती अहवालात परिशिष्ट १ नुसार क्षेत्रिय कार्यालयांकडून अहवाल विहीत कालावधीत प्राप्त न झाल्याने धरण स्थिती अहवाल प्रकाशित करण्यास विलंब झालेला आहे.

सन २०१८-१९ या वर्षात आढळून आलेल्या संवर्ग-२ तृटी निर्मूलनाबाबत अक्षम्य दुर्लक्ष झाल्याचे निदर्शनास आले आहे. याबाबत आपण वैयक्तिकरित्या लक्ष देऊन आवश्यक कार्यवाही करणे अपेक्षित आहे.

क्षेत्रिय स्तरावरून प्राप्त पावसाळा पूर्व व उत्तर २०१९ धरण तपासणी अहवालांची छाननी करून मा. महासंचालक (सं. प्र. ज. सं. सु.) मेरी, नाशिक यांच्या मान्यतेने धरण स्थिती अहवाल प्रकाशित करण्यात येत आहे.

धरण स्थिती अहवालात तक्ता क्र. २.१८ मध्ये वर्ग-१ धरणातील व तक्ता क्र. २.१९ मध्ये संवर्ग-२ तृटी नमूद केलेल्या आहेत, त्या तृटींच्या निर्मूलनाबाबत प्रादेशिक स्तरावरून प्रामुख्याने तिमाही आढावा घेऊन संवर्ग-२ च्या तृटी निर्मूलन करण्याचे नियोजन करावे. जेणेकरून धरणाची सुरक्षितता वाढविणे शक्य होईल.

(२२)

केंद्र शासनाने Dam Health And Rehabilitation Monitoring Application (DHARMA) Portal वर धरणांची माहिती भरणेबाबत कार्यवाही प्रगतीपथावर आहे. सदर बाबींचे संनियंत्रणही तिमाही आढावा घेऊन करण्याची विनंती आहे. धरण स्थिती अहवाल सर्व संबंधित मंडळ व विभागीय कार्यालयांना कार्यालयांना ई-मेलद्वारे पाठविण्यांत येत आहे.

हे आपले माहिती व पुढील कार्यवाहीसाठी सविनय सादर.

सहपत्र : धरण स्थिती अहवालाची प्रत.

o/c

(य.का.भदाणे) 19/05/2020
अधीक्षक अभियंता,
धरण सुरक्षितता संघटना,
नाशिक.

प्रत मा. प्रधान सचिव (जसंव्य व लाक्षेवि), जलसंपदा विभाग, मंत्रालय, मुंबई-३२ यांना अहवालासह माहितीस्तव सविनय सादर.

प्रत मा. महासंचालक, संकल्पन, प्रशिक्षण, जलविज्ञान, संशोधन व सुरक्षितता, मेरी, नासिक यांना अहवालासह माहितीस्तव सविनय सादर.

प्रत मा. कार्यकारी संचालक, कृष्णा खोरे पाटबंधारे विकास महामंडळ, पुणे यांना अहवालासह माहितीकरीता सविनय सादर.

प्रत मा. मुख्य अभियंता, नियोजन व जलविज्ञान, नाशिक यांना अहवालासह माहितीकरीता सविनय सादर.

प्रत मा. मुख्य अभियंता, यात्रिकी (जलसंपदा विभाग), नाशिक यांना माहितीस्तव अहवालासह सादर.

प्रत,

१) अधीक्षक अभियंता, पुणे पाटबंधारे मंडळ, पुणे.
२) अधीक्षक अभियंता, पुणे पाटबंधारे प्रकल्प मंडळ, पुणे.
३) अधीक्षक अभियंता, कोल्हापूर पाटबंधारे मंडळ, कोल्हापूर.
४) अधीक्षक अभियंता, सांगली पाटबंधारे मंडळ, सांगली.
५) अधीक्षक अभियंता, व प्रशासक, लाभक्षेत्र विकास प्राधिकरण, पुणे.
६) अधीक्षक अभियंता, कुकडी पाटबंधारे मंडळ, पुणे.
७) अधीक्षक अभियंता, सातारा पाटबंधारे प्रकल्प मंडळ, सातारा.
८) अधीक्षक अभियंता, व प्रशासक, लाभक्षेत्र विकास प्राधिकरण, सोलापूर.
९) अधीक्षक अभियंता, भीमा कालवे मंडळ, सोलापूर
१०) अधीक्षक अभियंता, सातारा पाटबंधारे मंडळ, सातारा
११) अधीक्षक अभियंता, , लघुसिंचन (जलसंधारण), पुणे
१२) अधीक्षक अभियंता, (मा. ध. / द. ध. / दरवाजे), म. सं. चि. सं., नाशिक.
१३) व्यवस्थापक, टाटा पॉवर कंपनी लिमिटेड, मुंबई - पुणे रस्ता, लोणावळा कॅम्प, लोणावळा, ता.मावळ, जि. पुणे.
१४) व्यवस्थापक, अॅम्बी व्हॅली सिटी, सहारा इंडिया कॉर्पोरेशन साइट, ऑफिस कॉम्प्लेक्स अंबवणे, ता. मुळशी, जि.पुणे.

यांना माहितीसाठी व पुढील योग्य त्या कार्यवाहीसाठी अहवालासह सस्नेह अग्रेषित

२/- दोष व त्रुटी बद्दल त्वरीत कार्यवाही करुन अनुपालन / पूर्तता अहवाल या कार्यालयास त्वरित पाठवावा, ही विनंती. सदर अहवालाची प्रत ई-मेल व्दारे पाठविण्यांत आलेली आहे.

प्रत,

१) कार्यकारी अभियंता, पुणे पाटबंधारे विभाग, पुणे.
२) कार्यकारी अभियंता, खडकवासला पाटबंधारे विभाग, पुणे.
३) कार्यकारी अभियंता, लघु पाटबंधारे विभाग क्र. १, पुणे
४) कार्यकारी अभियंता, नीरा उजवा कालवा विभाग , फलटण. जि. सातारा
५) कार्यकारी अभियंता, भामा आसखेड धरण विभाग, पुणे.
६) कार्यकारी अभियंता, नीरा देवधर प्रकल्प विभाग , सांगवी (भाटघर) जि. पुणे
७) कार्यकारी अभियंता, टेमघर प्रकल्प विभाग, पुणे.
८) कार्यकारी अभियंता, दूधगंगा कालवे विभाग क्र.१, कोल्हापूर.
९) कार्यकारी अभियंता, मध्यम प्रकल्प विभाग क्र. २, कोल्हापूर.
१०) कार्यकारी अभियंता, वारणा कालवे विभाग क्र. १, इस्लामपूर, ता. वाळवा, जि.सांगली
११) कार्यकारी अभियंता, लघु पाटबंधारे विभाग,(उत्तर) कोल्हापूर
१२) कार्यकारी अभियंता, सांगली पाटबंधारे विभाग, सांगली.
१३) कार्यकारी अभियंता, कोल्हापूर पाटबंधारे विभाग, (दक्षिण) कोल्हापूर .
१४) कार्यकारी अभियंता, कुकडी पाटबंधारे विभाग, क्र. १, नारायणगाव जि. पुणे
१५) कार्यकारी अभियंता, कुकडी पाटबंधारे विभाग, क्र. २, श्रीगोंदा, जि.अहमदागर
१६) कार्यकारी अभियंता, धोम पाटबंधारे विभाग, सातारा
१७) कार्यकारी अभियंता, पिंपळगाव जोगे धरण विभाग, नारायणगाव जि. पुणे
१८) कार्यकारी अभियंता, डिंभे धरण विभाग, मंचर, जिल्हा पुणे.
१९) कार्यकारी अभियंता, लघु पाटबंधारे विभाग, सातारा
२०) कार्यकारी अभियंता, कण्हेर कालवे विभागक्र. १, कारवाडी (कराड).
२१) कार्यकारी अभियंता, कण्हेर कालवे विभागक्र. २, वाई, जिल्हा सातारा.
२२) कार्यकारी अभियंता, उरमोडी धरण विभाग, सातारा .
२३) कार्यकारी अभियंता, धोम बलकवडी प्रकल्प विभाग वाई, जिल्हा सातारा.
२४) कार्यकारी अभियंता, उजनी धरण व्यवस्थापन विभाग, भीमानगर, ता.माढा, जि. सोलापूर.
२५) कार्यकारी अभियंता, सोलापूर पाटबंधारे विभाग, सोलापूर.
२६) कार्यकारी अभियंता, भीमा विकास विभाग क्र. २, सोलापूर.
२७) कार्यकारी अभियंता, लघु पाटबंधारे विभाग क्र. १, सोलापूर.
२८) कार्यकारी अभियंता, उजनी कालवा विभाग क्र. ८, सोलापूर.
२९) कार्यकारी अभियंता, कोयना धरण व्यवस्थापन विभाग, कोयनानगर, जि.सातारा.
३०) कार्यकारी अभियंता, लघुसिंचन (जलसंधारण), सातारा
३१) कार्यकारी अभियंता, लघुसिंचन (जलसंधारण), कोल्हापूर
३२) कार्यकारी अभियंता, लघुसिंचन (जलसंधारण), सांगली .
३३) कार्यकारी अभियंता, ,चासकमान पाटबंधारे विभाग पुणे .

यांना माहितीसाठी व पुढील योग्य त्या कार्यवाहीसाठी अहवालासह रवाना.

२/- दोष व त्रुटी बद्दल त्वरीत कार्यवाही करुन अनुपालन / पुर्तता अहवाल या कार्यालयास त्वरित पाठवावा ही विनंती. सदर अहवालाची प्रत ई-मेल व्दारे पाठविण्यात आलेली आहे.

प्रत -

१) कार्यकारी अभियंता, धरण सुरक्षा विभाग क्र . २, नाशिक ४
२/- यांना ग्रंथालयात संग्रहासाठी.
२) कार्यकारी अभियंता, धरण सुरक्षा विभाग क्र .३, नाशिक ४
२/- यांना ग्रंथालयात संग्रहासाठी.

प्रत - ग्रंथालय, मध्यवर्ती संकल्पचित्र संघटना, नाशिक यांना अहवालाच्या प्रतीसह माहितीसाठी.

FOREWORD

1. "The Annual Health Status Report of Identified Large Dams i.e. Large Dams Class-I and Large Dams Class-II in Pune Region for the Year 2019-20 is prepared, based on the Inspection Reports (Pre and Post Monsoon 2019) received from field officers and the test inspections carried out by Dam Safety Organization during year 2019-20. The period of the report is from April 2019 to March 2020.
2. This Report comprises of following parts, as per guidelines received from Dam Safety Monitoring Unit of Central Water Commission, New Delhi vide letter No. 3/19/NCDS/HS/DSM/2001 dt. 28/8/2002.

   Part-I: Action Taken Report on the Health Status Report 2018 on deficiencies classified under Category I & II.

   Part-II: Annual Consolidated Health Status Report prepared for the year 2019-20as described above for identified Large Dam Class-I and Dam Class-II on the basis of deficiencies classified under Category No. 1, 2 & 3.

   Part-III: Annual Report of Performance of Dam Instruments installed on identified large dams.

   Part-IV: Annual Report of Performance of Meteorological Instruments installed on large Dams.

   Part-V: Status of NCDS documents submitted to D. S. O. (including private dams)

   Part-VI: DHARMA : Dam Health and Rehabilitation Monitoring Application

   Part-VII: Status report of various gated dams in the region (including private dams)

3. This report provides condensed summary of dam deficiencies noticed during inspection carried out by field officer and dam safety organization in the year **2019.**Field officer / owners of dams are requested to remove deficiencies to achieve dam safety aspects and send compliance report earliest.

4. Inspecting officers are requested to follow the suggestion given in Annexure – 1 while carrying out forthcoming Pre/Post Monsoon inspections of dams. In Annexure – 1 general information viz. Time schedule of inspection, classification of dams, inspection authorities, Preparation of AHSR for class-I & class-II dams, NRLD register updation, categorization and standardization of deficiencies, monitoring of deficiency removal program is given, which will be helpful to field officers.

5. As Health Status Report of Large Dams of Class I & II is prepared by Dam Safety Organization, it is suggested to carry out inspections of Class-III dams and small dams by competent field officers and to prepare the Health Status Report of these dams at the Regional Level & forward it to DSO. This has been also pursued through letters, but the response from field officers is not encouraging. So special attention needs to be paid by field Chief Engineers in this regard.

6. This report covers Dam Health Status of **314** Class-I & II dams owned by WRD and also covers all private dams inspected by DSO twice in the year.

7. In Pune region 66 Class- I & 233 Class-II dams of Government & 7 Class-I and 8 Class-II private dams are in existence. Pre monsoon inspection report of 1 Class-I dam and Post Monsoon Inspection report of 1 Class-II dam has not been received & all other received inspection reports have been scrutinized for preparation of HSR.

8. Director General, MERI, Nashik has issued technical circular in 2006 (No.5325 of 2006 dated 15/12/2006) regarding guide lines for periodical inspections of spillway gates by the mechanical Organisation information regarding no. of deficiencies observed during the inspections carried out by Mechanical Organisation are also incorporated in this Health Status Report.

Statement showing total number of dams having deficiencies

Sr. No.	Dam Owner	Year	Number of Dams								
			Class-I	Class-II	Total	Class-I dams Having Deficiencies			Class-II dams Having Deficiencies		
						Cat.-I	Cat.-II	Total	Cat.-I	Cat.-II	Total
1	**WRD**	2018	64	219	283	00	26	26	00	25	25
		2019	66	233	299	00	48	48	00	63	63
2	**Private**										
	Tata power	2018	04	02	06	00	00	00	00	00	00
		2019	04	02	06	00	00	00	00	00	00
	KMC Kolhapur	2018	00	03	03	00	00	00	00	03	03
		2019	00	03	03	00	00	00	00	03	03
	INS	2018	00	02	02	00	00	00	00	00	00
		2019	00	02	02	00	00	00	00	00	00
	Sahara India	2018	03	00	03	00	02	02	00	00	00
		2019	03	00	03	00	02	02	00	00	00
	Kagal Nagar Parishad	2018	00	01	01	00	00	00	00	00	00
		2019	00	01	01	00	00	00	00	00	00
Grand Total		2018	71	227	298	00	28	28	00	28	28
		2019	73	241	314	00	50	50	00	66	66

Statement showing total number of deficiencies

Sr. No.	Dam Owner	Year	Number of Deficiencies								
			Category-I			Category-II			Category-III		
			Class-I	Class-II	Total	Class-I	Class-II	Total	Class-I	Class-II	Total
1	**WRD**	2018	00	00	00	98	40	138	465	1193	1658
		2019	00	00	00	270	93	363	848	1650	2498
2	**Private**										
	Tata power	2018	00	00	00	00	00	00	22	10	32
		2019	00	00	00	00	00	00	18	09	27
	KMC Kolhapur	2018	00	00	00	00	04	04	00	13	13
		2019	00	00	00	00	04	04	00	11	11
	INS	2018	00	00	00	00	04	04	00	13	13
		2019	00	00	00	00	04	04	00	10	10
	Sahara India	2018	00	00	00	00	09	09	18	00	18
		2019	00	00	00	00	09	09	16	00	16
	Kagal Nagar Parishad	2018	00	00	00	00	00	00	00	05	05
		2019	00	00	00	00	00	00	00	06	06
Grand Total		2018	00	00	00	98	57	155	505	1234	1739
		2019	00	00	00	270	110	380	882	1686	2568

Statement showing total number of deficiencies in gated dams
(As per data from Mechanical Organization)

No.	Dam Owner	Year	Number of Gated Dams			No. of dams inspected		Number of Deficiencies								
								Category-I			Category-II			Category-III		
			Cl.I	Cl II	Ttl	Cl I	Cl II	Cl -I	Cl-II	Ttl	Cl-I	Cl-II	Ttl	Cl-I	Cl-II	Ttl
1	**WRD**	2018	40	0	40	37	0	0	0	0	712	0	712	1512	0	1512
		2019	40	0	40	37	0	0	0	0	700	0	700	1772	0	1772
2	**Private**															
	Tata powe	2018	02	0	02	02	0	0	0	0	07	0	07	06	0	06
		2019	02	0	02	01	0	0	0	0	02	0	02	09	0	09
Grand Total		2018	42	0	42	39	0	0	0	0	719	0	719	1518	0	1518
		2019	42	0	42	38	0	0	0	0	702	0	702	1781	0	1781

9. Observations / Findings in HSR-2019

9.1 It is seen that in Pune Region, there is no dam having Category-I deficiency. It is observed that 116 Class-I & II dams (36.94%) are having major deficiencies of Category- II.

9.2 As per HSR 2018, in 56 dams (Class-I & II dams), 155 numbers of major deficiencies were observed. Field officers sent 45 action taken reports but after scrutiny it is observed that, only in 08 dams some deficiencies were attended by field officers, others are pending with them. (Details are given in table no 1.1)

9.3 Regarding deficiencies in Mechanical components (Gates & Hoists etc.) 38 dams have been noticed with Category- 2 deficiencies and need attention of the project authorities.

9.4 The deficiencies shown in the present report are based on the pre/ post monsoon inspections of the dams carried out by the field officers and reports of them received by this organization. As such, the deficiencies and action taken thereof is the sole responsibility of the field officers.

9.5 In current HSR, 2 Class-I Dams and 14 Class-II Dams are newly added. As per the request received from the field officer, 3 numbers of Class 2 Dams are deleted from this HSR to include in Class-III Dams. Also, information received from concerned Ex. Engr., Class-II Dam-Mahabaleshwar (Storage Tank) is taken over by MJP Satara. Hence the Pre and Post Monsoon report of this dam will not be submitted by EE MID Satara. Hence this dam is not included in this HSR.

Being the dam owner, safety of the dam is the prime responsibility of the concerned field Executive Engineer. In order to ensure safety of dam/dams in his jurisdiction, he shall initiate the procedures for removal of deficiencies noticed in the pre-post monsoon inspection as well as pointed out in this HSR. Higher authorities shall accord timely sanction to works required for deficiency removal. Executive Director of the corporation is requested to make required funds available to the deficiency removal and monitor the progress periodically. This will help in keeping the dam safe.

I hope this report will serve desired expectations expressed by Dam Safety Monitoring Directorate of C.W.C., New Delhi. Any error, discrepancies omissions if any may please kindly by brought to the notice of this Organisation, so that it can be taken into consideration in the next report.

The efforts taken by the Superintending Engineer, Dam Safety Organisation, Nashik and his staff, for completion of this report are highly appreciated.

Place: Nashik-4
Date: 20 / 05 / 2020

(A. P. Kohirkar)
Director General
Design, Training, Hydrology.
Research and Safety,
MERI, Nashik-4.

INDEX

Annual Consolidated Health Status Report Of Identified Large Dams In Pune Region

PART – 1

Action Taken Report on Annual Health Status Report of Identified Large Dam for Year 2018-19

PART – 1
Action Taken Report on Annual Health Status Report 2018 -19 of Identified Large Dams – Pune Region

1.0 General

The Annual Health Status Report of Pune Region for the year 2018-19 was prepared, submitted and circulated to all field officers and same was submitted to Government of Maharashtra vide letter No.- DSO / DSD-1 / PUNE/ STATUS REPORT -2018-19 / 287, dtd.31.05.2019 by Dam Safety Organization. Field officers were requested to carry out remedial measures to remove major deficiencies pointed out in HSR and send action taken report to DSO.

In most of the cases response received from field officers regarding information of initiation of administrative procedures viz. estimate preparation, reference to design organization or Mechanical organization. In some cases, even though remedial measures are taken, no reports are sent to DSO. In such situation, the ATR, part of this HSR, doesn't give correct picture. Hence, it is necessary that ATR should be sent to DSO only after careful scrutiny at the level of Chief Engineer. The agency wise number of dams having major deficiencies as per HSR 2018-19 and status of compliance is given in Table 1.1

As per HSR 2018-19, in Pune region there are total 298 large dams (Govt- Class-I 64 & Class-II 219, Private-Class-I 07 & Class-II 08). Out of these dams, 56 (Class-I 28 & Class-II 28) dams have major deficiencies. Action taken reports of 11 dams are not received from field officers. Agency wise list of these 11 dams is given in Table 1.2

1.1 Action Taken Report on Deficiencies of Large Dams Class I

1.1.1 Action Taken Report on Deficiency Category-1 of Large Dams Class I

No such dam under this category is reported. (Table 1.3)

1.1.2 Action Taken Report on Deficiency Category-2 of Large Dams Class I

There are 26 dams (2 reports not received) reported under this category. Agency wise list of dams is given in Table 1.4

1.2 Action Taken Report on Deficiencies of Large Dams Class II

1.2.1 Action Taken Report on Deficiency Category-1 of Large Dams Class II

No such dam under this category is reported. (Table 1.5)

1.2.2 Action Taken Report on Deficiency Category-2 of Large Dams Class II

There are 25 dams (4 reports not received) reported under this category. Agency wise list of dams is given in Table 1.6

1.3 Action Taken Report on Deficiencies of Private Large Dams

There are 15 private dams in Pune region. Out of these 07 dams are Class I-dams and 08 dams are Class-II dams

1.3.1 Action Taken Report on Deficiency Category-1 of Private dams Class I

No such dams under this category are reported. (Table 1.7)

1.3.2 Action Taken Report on Deficiency Category-2 of Private dams Class I

There are 02 Class-I private dam (2 reports not received) reported under this category. Agency wise list of dams is given in Table 1.8

1.3.3 Action Taken Report on Deficiency Category-1 of Private dams Class II

No such dam under this category is reported. (Table 1.9)

1.3.4 Action Taken Report on Deficiency Category-2 of Private dams Class II

There are 03 dams (3 reports not received) reported under this category. Agency wise list of dams is given in Table 1.10

Part- 2 of this report gives the details of Annual Health Status Report of identified large dams based on Pre & Post monsoon Inspection Reports - 2019.

Table - 1.1

Statement showing the position of compliance of Deficiencies Identified in Health Status Report (2018-19)

Sr. No.	Agency	Major deficiencies reported in Large Dams			Status of Deficiencies removal as per compliance report received in DSO											
					Physically fully completed			Physically in progress			Administrative action initiated			Compliance report not received in DSO		
		Class-I	Class-II	Total	Class-I	Class-II	Total	Class-I	Class-II	Total	Class-I	Class-II	Total	Class-I	Class-II	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
[A] Chief Engineer, Water Resources, Pune																
(1)	P.I.C., Pune	09	05	14	0	1	1	1	0	1	8	4	12	0	0	0
(2)	P.I.P.C., Pune	01	00	01	0	0	0	1	0	1	0	0	0	0	0	0
(3)	S.I.C., Sangli	00	01	01	0	0	0	0	0	0	0	1	1	0	0	0
(4)	S.I.C, Satara	03	03	06	0	1	1	1	0	1	2	2	4	0	0	0
(5)	K.I.C., Kolhapur	04	02	06	0	0	0	1	1	2	3	1	4	0	0	0
[B] Chief Engineer, Speacial Project, Pune																
(1)	K.I.C. Pune	05	00	05	0	0	0	0	0	0	5	0	5	0	0	0
(2)	SIPC, Satara	02	01	03	0	0	0	0	0	0	0	0	0	2	1	3
(3)	CADA Solapur	01	03	04	0	0	0	1	0	1	0	3	3	0	0	0
(4)	O.I.C., Osmanabad	01	00	01	0	0	0	0	0	0	1	0	1	0	0	0
[C] Chief Engineer,Small Scale Irrigation (WC), Pune																
(1)	SSI (WC) Pune	**00**	10	10	0	0	0	0	0	0	0	7	7	0	3	3
	Govt.Total	**26**	**25**	**51**	**0**	**2**	**2**	**5**	**1**	**6**	**19**	**18**	**37**	**2**	**4**	**6**
Private																
(1)	Tata power	00	00	00	0	0	0	0	0	0	0	0	0	0	0	0
(2)	KMC Kolhapur	00	01	01	0	0	0	0	0	0	0	0	0	0	1	1
(3)	INS	00	01	01	0	0	0	0	0	0	0	0	0	0	1	1
(4)	Sahara India	02	00	02	0	0	0	0	0	0	0	0	0	2	0	2
(5)	Kagal Nagar Parishad	00	01	01	0	0	0	0	0	0	0	0	0	0	1	**1**
	Private Total	**02**	**03**	**05**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**3**	**5**
	Grand Total	**28**	**28**	**56**	**0**	**2**	**2**	**5**	**1**	**6**	**19**	**18**	**37**	**4**	**7**	**11**

Table - 1.2

List of dams whose deficiencies compliance report not received from field officers

Sr. No.	Class - I		Class - II	
	Circle Office	**Compliance report not received**	**Field officers**	**Compliance report not received**
1	**2**	**3**	**4**	**5**
	Govt. dams		**Govt. dams**	
	[B] Chief Engineer, Specified Project, Pune		**[A] Chief Engineer, Water Resources, Pune**	
(1)	SIPC Satara	1) Nagewadi 2) Tarali	Minor Irrigation Division, Satara	1) Mahabaleshwar S T
			[C] Chief Engineer, Small scale Irrigation (WC), Pune	
			SSI Sangli SSI Kolhapur SSI Kolhapur	1) Chandoli 2) Barki 3) Umrani No.2
	Private Dams		**Private Dams**	
(2)	DSO Nashik	1) Ambavane 2) Kolawali	DSO Nashik	1) Kalamba 2) Jaisingrao Talao 3) New Shivsagar
	Total	**4**	**Total**	**7**

Table 1.3
Action Taken Report on Deficiency Category-1 of Large Dams Class I

Sr.No	Name of Dam	Date of Inspection	Main component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested	Implimentation Status
1	2	3	4	5	6	7
---------- No Such Dams under this category are reported ----------						

Table 1.4
Action Taken Report on Deficiency Category-2 of Large Dams Class- I

Sr. No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested	Implementation status
1	2	3	5	6	7	6	7
[A]Chief Engineer (W.R.), Water Resources Department, Pune							
(1) Superintending Engineer, Pune Irrigation Circle, Pune							
(a) Executive Engineer, Pune Irrigation Division, Pune 1							
1	Name : **Bhatghar** (Gated) Tal. Bhor Dist.Pune Year of completion : 1926 Location : Longitude $73^0$52' Latitude $18^0$11' Height : 57.62 m Gross Capacity : 672.65 Mm^3 Spillway capacity:1600 m^3/sec Sr.No.In Large Dam Register 2009: **MH09HH**0048	15.05.2018 11.12.2018	Shri.S.D. Chopade, S.E. P.I.C. Pune	EDA	Scouring observed in central spillway stilling basin. (A7)	Proper remedial measure be taken and scouring be monitored & prevented further scouring.	Bhatghar dam is included in DRIP-II. (Dam rehabilitation and Improvement program). All the Repair work is proposed to be carried out under DRIP II. Estimate amounting to Rs 218.76 Lakh is prepared. The scoured portion in central spillway stilling basin will be filled by rich concrete with anchor bars. Model study should be carried out.
				Main Dam	Existing pointing on u/s side of dam body & D/s side face of south spillway damaged. Extent of damage not mentioned in report.(B8)	Extent of damage needs to mentioned competent field inspecting authority and after confirmation of deficiency necessary remedial measures needs to be carried out.	An estimate of Rs 490.00 lakh for the work of U/S epoxy pointing of dam body & estimate of Rs 49.00 lakh for the work of D/s side face of south spillway damaged are prepared. This work is proposed to be carried out under DRIP-II program.
				Spillway Gate	Due to missing/loose nut bolts of guide frame. Leakages from them is observed.(B5)	Repairs should be carried out in consultation with Mechanical Organization.	The work is completed by Mechanical Wing.

Sr. No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested	Implementation status
1	2	3	5	6	7	6	7
2	Name : **Vadivale**(Gated) Tal. Maval Dist.Pune Year of completion : 1999 Location : Longitude $73^0$31'16" Latitude $18^0$49'20" Height : 29.00 m Gross Capacity : 40.87. Mm^3 Spillway capacity: 746.82m^3/sec Sr.No.In Large Dam Register 2009: **MH09MH** 1517	24.05.2018 10.12.2018	Shri.S.D. Chopade, S.E. P.I.C. Pune	Masonry dam Spillway Wall Intake well EDA Outlet	1. Spillway ogee is not smooth& big cavities, pot holes are observed on ogee surface. (A15) 2. Leakage observed through spillway comes from Pier & through body of spillway.(A11) 3. Heavy leakage through junction of guide wall & canal wall. (A15) 4. Pointing of u/s face of masonry & intake well is damaged. Heavy leakages are observed through UCR wall of intake well on both side of dam.(A6) 5. Scouring observed on d/s of EDA.(A7) 6. Heavy leakage through both irrigation outlet.(A4)	Necessary remedial measures should be carried. Location & quantum of leakage should be investigate causes of leakage should be ascertained & proper remedial measures to prevent leakages should be carried out. Leakages should be attended in time by providing suitable remedial measures after ascertaining the exact cause of leakage. Scouring should be kept under observation. Repairs should be carried out in consultation with Mechanical Organization	Repair Work started.

Sr. No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested	Implementation status
1	2	3	5	6	7	6	7
3	Name : **Kasarsai** (Gated) Tal. Mulashi Dist. Pune Year of completion : 1995 Location : $73^0$40'00" Latitude $18^0$35'30" Height : 36.0 m Gross Capacity : 17.38 Mm^3 Spillway capacity : 933.00 m^3/sec Sr.No.In Large Dam Register 2009: **MH09MH1373**	24.05.2018 10.12.2018	Shri.S.S. Chopade, S.E. P.I.C. Pune	Earth dam Outlet	1. Boils observed from Ch. 300 to 360 at RL 622.50 to 625.00 m. Wet and slushy patches are observed at Ch.300 to 360 m on d/s slopes at R.L. 622.210m. As per field inspection report this leakages are not endanger to the dam, it should be kept under observation.(A1) 2. Leakages are observed through divide wall and outlet of LBC& RBC upto 1 to 2 cusec. (A15) 3. Leakages through left & right bank canal partition wall.(A4)	This deficiency should be kept under observation and after confirmation by competent field authority, if necessary repair should be carried out in consultation with CDO, Nashik. Leakage path should be ascertained & necessary repairs to reduce leakage should be carried out. Both rubber seals need to be changed. Leakage path should be ascertained & necessary repairs to reduce leakage should be carried out	The size of those observed Boils is not increasing. The portion of dam from CH 300 to 360m is kept under strict supervision. Estimates under Special repairs work will be prepared and submitted to Government for approval. Remedial work will be carried out after getting approval from government. Repair work for Small leakages through divide wall and outlet of LBC will be included in annual Maintenance & repair program. After approval from competent authority repair work will be carried out. Repair work for Leakages through LBC & RBC partition wall will be included in annual Maintenance & repair program. After approval from competent authority repair work will be carried out.

Sr. No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested	Implementation status
1	2	3	5	6	7	6	7
(b) Executive Engineer , Khadakwasala Irrigation Division, Pune 11							
4	Name : **Panshet**(Gated) Tal. Velhe Dist.Pune Year of completion : 1972 Location : Longitude $73^0$37' Latitude $18^0$22' 5Height : 63.56 m Gross Capacity : 303 Mm^3 Spillway capacity : 1162.0 m^3/ sec Sr.No.In Large Dam Register 2009: **MH09HH0310**	22.05.2018 17.11.2018	Shri.S.D. Chopade, S.E. P.I.C. Pune	Outlet	1. Operation of HLIO gate no. 2 is not smooth. Also operation of EG is not smooth.(B5)	Necessary repairs should be carried out in consultation with Mechanical Organization.	Work Completed
					2. Leakage through lift joint concrete of LLIO.(B5)	Necessary repairs should be carried out in consultation with Mechanical Organization.	Repairs work will be done as per suggestion from Mech. Organization. Funds are given to Mech. Dept.
				Power Outlet	3. Overall condition of power outlet is not satisfactory and D/S excavation slopes are not stable & loose rock pieces are falling on roof of power house.(Other Std def)	Necessary repairs should be carried out	Estimates are prepared for this work. The repair work will be included in annual Maintenance & repair programme and After approval from competent authority repair work will be carried out.
				W.W & TC	4. There is retrogression (progressive erosion) in tail channel observed due to existence of red amoadialed basalt of depth 1to 2 m. Also guide walls is damaged.(A7)	Scouring should be kept under observation; Proper remedial measure should be carried by approval of competent authority.	Scouring / retrogression action is kept under observation by field staff. Necessary remedial action will be carried out as per observations.

Sr. No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested	Implementation status
1	2	3	5	6	7	6	7
5	Name:**Khadakvasala** (Gated) Tal. Haveli Dist.Pune Year of completion : 1879 Location : Longitude $73^0$45' Latitude $18^0$25' Height : 32.92 m Gross Capacity : 86 Mm^3 Spillway capacity :2755 m^3/ sec Sr.No.In Large Dam Register 2009: **MH09HH0013**	22.05.2018 17.11.2018	Shri.S.D. Chopade, S.E. P.I.C. Pune	Earth Dam Spillway W.W & TC	1. Standing pool observed on D/S of Dam at Ch 1066 to 1095 m.(A2) 2. Seepage & sweating observed on D/S dam near spillway cabin Chainage 1021.60 to 1026.75 and ch.105 m to 120m and Ch 631m to 646 m.(A11) 3. Erosion of tail channel i.e. Scouring observed on D/S of EDA) bet ch 1134 to 1163 m and 1066 to 1095 m .(A7)	Suitable drainage arrangement should be done to drain out the water. Seepage & sweating be monitored and necessary remedial measures be taken. It should be kept under observation and verification of competent authority remedial measures should be taken if necessary.	Estimates under Special repairs work will be prepared and submitted to Government for approval. Remedial work will be carried out after getting approval from government.
6	Name : **Warasgaon**(Gated) Tal. Velhe Dist.Pune Year of completion : 1972 Location : Longitude $73^0$37 Latitude $18^0$23' Height : 63.40 m Gross Capacity : 374.00 Mm^3 Sr.No.In Large Dam Register 2009: **MH09HH0592**	22.05.2018 17.11.2018	Shri.S.D. Chopade, S.E. P.I.C. Pune	Masonry dam Gallery	1. Leakages in foundation & inspection gallery are 209.00 lps on Dt. 14.12.2017 in Post monsoon. (A10) 2. Some drain holes in gallery are chocked (A9)	Necessary repairs should be carried out out in consultation with Mechanical Organization. Foundation drain holes should be cleaned for effective drainage.	Repairs work will be done as per suggestion from Mech. Organization. Funds are given to Mech. Dept. Estimates are prepared for this work. The repair work will be included in annual Maintenance & repair programme and After approval from competent authority repair work will be carried out.

				Dam body	3. There is excessive seepage sweating at the monolith no. 8,9, 10 &12 on the downstream face of the dam.(A11)	It should be kept under observation and necessary remedial measure to be taken by permission of field competent authority.	Grouting work of monolith no. 8,9 & 10 is completed . And estimate of grouting of monolith no. 12 & 13 under Special repairs work will be prepared and submitted to Government for approval. Remedial work will be carried out after getting approval from government.
					4. Considerable leaching from seepage water.(A12)	It should be kept under observation and necessary testing needs to taken.	Estimates are prepared for this Work. The repair work will be included in annual Maintenance & repair program and After approval from competent authority repair work will be carried out.
				Tail Channel	5. Tail channel retrogression (D/S Side erosion at toe and at foundation of end weir) Reported but cannot inspected due to standing water needs verification. (A7)	Confirmation of deficiency needs to be given by field inspecting authority.	Due to heavy leakages and standing pool of water. it is difficult to do verification.
					6. There are leakages through divide wall and it is from foundation gallery's C/S drains.(A15)	Necessary repairs should be carried out in consultation with Mechanical Organization.	Repairs work will be done as per suggestion from Mech. Organization. Funds are given to Mech. Dept.

Sr. No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested	Implementation status
1	2	3	5	6	7	6	7
7	Name : **Pawana** (Gated) Tal. Bhor Dist.Pune Year of completion : 1972 Location : Longitude $73^0$40' 30 Latitude $18^0$21 30' Height : 42.37 m Gross Capacity : 305 Mm^3 Spillway capacity:1250 m^3/sec Sr.No.In Large Dam Register 2009: **MH09HH** 0311	24.05.2018 10.12.2018	Shri.S.D. Chopade, S.E. P.I.C. Pune	Earth dam	1. Toe drains & cross drains are not frely draining.(B2)	Necessary repairs should be carried out.	Cleaning & resectioning of toe drain done. C- drains at three locations are functioning. Pitching in part length of drain executed. Balance work will be included in annual Maintenance & repair programme & carried out.
				Gallery	2. There has been substantial progressive reduction in seepage through the foundation it is due to chocking of 37 Nos drain holes at ch. 430 to 455 m.(A9)	Drain holes should be cleaned.	All uplift pressure relief holes are cleaned, and those are functioning.
				Spillway	3. In tail channel of w.w. retrogression needs to be arrested by providing suitable remedial measures.(A7)	Proper remedial measure be taken and scouring be monitored & prevented further scouring.	This work will be carried out after detail design from CDO Nasik. For design necessary field data will be submitted to CDO Nashik, upto May/ June 2020
				Dam body	4. Dam section is not as per design as strengthening work is incomplete owing to which storage not done upto FSL(B1)	Field authority needs to verify the dam section as per design section and necessary remedial measures needs to be carried out accordingly.	Due to oppose from Project Affected Farmers (PAF) this work is held up. Discussions & solving problem of PAF is-in progress. After resolving this issue work may resume immediately.

Sr. No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested	Implementation status
1	2	3	5	6	7	6	7
(c) Executive Engineer , Chaskaman Irrigation Division, Pune 11							
8	Name : **Chaskaman(**Gated) Tal. Khed Dist.Pune Year of completion : 1999 Location : Longitude $73^0$47' Latitude $18^0$57' Height : 46.28 m Gross Capacity : 241.69 Mm^3 Spillway capacity : 2860 m^3/ sec Sr.No.In Large Dam Register 2009: **MH09HH1522**	19.05.2018 15.12.2018	Shri.S.S. Chopade, S.E. P.I.C. Pune	Earth Dam	1. There are water logging slushy condition on D/S of dam in old river portion & standing pool of water in the D/S of Dam @R.D. 860 meter, D/S 285 meter.(A2)	The downstream area from toe shall be free from slushy condition by draining water properly.	For removing slushy condition on D/s of old river portion near about 3 Km. river regradation is required. The work will be carried out as per availability of funds.
					2. Boils are observed at @R.D.860 meter , D/S 285 meter in existing well left side.(A1)	Cause of boils may be treated; check the drainage arrangement function of Long, cross, toe drains and then proper remedial measures shall be carried out.	Proper remedial measures will be taken after checking the functioning of drainage arrangement.
					3. Rate of seepage on day of inspection is 432 lps at RL 642.670 M. (A10)	Proper drainage arrangement shall be provided to drain out water.	Noted and action will be taken accordingly.
				Masonry dam	4. The monolith no. M-3 & M-4 from Ch. 385 to 457 is not accessible due to seepage water in gallery (flooding in gallery) electrification in gallery totally damaged. (A8)	Proper remedial measures to be taken to reduce leakage & gallery always made available for inspection.	Draining of gallery is being done periodically by electric pumps. Electrical work will be carried out by Electrical wing of W.R. Department.
					5. There has been considerable leaching from the seepage water and deposition of lime near the seepage exist spots.(A12)	It should be kept under observation & leaching material should be sent to MERI/ Lab for testing.	Leaching material is send to MERI Lab for testing. As per Letter No CID/ PB Irri II/2104/ Dt.14/05/2019.
					6. Leakage at D/S face of	Proper remedial	Estimate of grouting work

					right side NOF From ch 457 to 509.15 m & also on left side NOF ch 288.625 to 475 are observed and needs to be reduced(A11)	measures to be taken to reduce leakage.	has been prepared and work will be executed under Special Repair works after getting approval from government.
				Radial Gate	7. Radial gate no. 5 is shifted to right side and it is wearing on trunion bracket and pressing on it. Radial GateNo.4 is vibrating, maintenance of equalizer and pin is necessary. (B5)	Proper remedial measures to be taken in consultation with Mechanical Organization	The work is completed by Mechanical Organization.
				EDA	8. Heavy erosion at toe of the end wall.(A7)	Confirmation of deficiency needs to be given by field inspecting authority before remedial measures.	Remedial measures like construction of 1) D/s apron 10m. From end weir 2) Three check bunds in tail channel has been taken in 2006-07. After that there is no heavy erosion in tail channel.
(d) Executive Engineer, Nira Right Bank canal Division, Phaltan,Dist. Satara							
9	Name: **Veer** (Gated) Tal.Purandar Dist.Pune Year of completion : 1965 Location : Longitude 74^0 5'55 Latitude 18^0 07'05" Height : 39.11 m Gross Capacity : 278.49 Mm^3 Spillway capacity :5154 m^3/ sec Sr.No.In Large Dam Register 2009:**MH09HH0116**	15.05.2018 11.12.2018	Shri.S.D. Chopade, S.E. P.I.C. Pune	Outlet	1. Service gate no 7 is blocked and operation of gate no 5 not smooth owing to damaged wall plate. (B5)	Necessary repairs should be carried out in consultation with Mechanical Organization or under their advice.	Necessary repairs to Service gate No. 7 will be carried out by the Mechanical Organization. Necessary instructions given to Executive Engineer, Gate Erection Dn.No.3 Swargate, (Pune-37) Vide T.O. Letter No PB-4/2174 dated 26/4/2019. Rs.85.00 Lacks transferred to Executive Engineer, Mechanical Division No.2, Swargate, Pune-37 on dated 3/1/2020 for repairs to service gates of Veer Dam.

Sr. No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested	Implementation status
1	2	3	5	6	7	6	7
(2)Superintending Engineer, Pune Irrigation Project Circle, Pune							
(a) Executive Engineer, BhamaAskhed dam division, pune							
10	Name **Temghar** Tal. Mulashi Dist.Pune Year of completion : 2000 Location : Longitude: 73^0 32' Latitude : 18^0 27' Height : 86.67 m Gross Capacity : 107.96 Mm^3 Spillway capacity: 626 m^3/ sec Sr.No.In Large Dam Register 2009: **MH09HH1544**	12.05.2018 24.10.2018	P.S. Kolhe SE PIPC Pune	Masonry Dam	1. There is heavy leakages from D/S Of dam from Ch.350m to 528 at RL 667 m & from sprey wall at ch. 528 & 600 m.There is sweating observed d/s face from ch. 635 to 900 m but The leakage are from D/S face of dam are 413.80 lps after grouting. Masonary pointing is disturbed in some portion which may lead to movement of stones. Cavities noticed on U/S of dam from Ch.15 to 528 reparing and leakage preventation work is in progress. (A11)	Suitable treatment should be carried out as per suggestion of Temghar Expert Committee for balance work.	As per suggestions given by TDEC primary, secondary and tertiary grouting work in this portion is completed, due to which almost 80% leakages are reduced. Necessary pointing in disturbed portion will be taken up in working season 2018-19.To overcome the cavities of U/S face treatment of polypropelene Fiber Reinforcement Shotcrete (PFRS) treatment has been started in this working season and critical monoliths will be completed by the end of may 2019.
				Foundation Gallery	2. There is some leakage from D/S face at CH.45 TO 255 M. (A11)	Suitable treatment should be carried out as per suggestion of Temghar Expert Committee.	As per suggestions given by TDEC the grouting work in this portion is in progress. After completing grouting upstream treatment i.e. PFRS will be started so that there will not be any leakages from downstream side.
					3. Foundation gallery is flooded	Suitable treatment should	To overcome this leakage

					from ch.415 to 705m.instrumentation and lighting arrangement not provided. (A8)	be carried out as per suggestion of Temghar Expert Committee.	curtain grouting to the some extent was done in May2018. Now dewatering of foundation gallery is in progress. After that remaining curtain grouting will be carried out in this portion. Due to heavy leakages and flooding of gallery it was not possible to install any type instrument in gallery. Now in some portion of gallery permanent lighting arrangement are provided. After completing the repair works instrumentation and lighting arrangement in all parts of gallery will be provided.
					4. Excessive leaching is observed in the gallery .Porous blocks in foundation gallery are not seen at ch.185 to 400 m & they are chocked due to leaching.(A12)	Suitable treatment should be carried out as per suggestion of Temghar Expert Committee.	As per suggestion given by TDC the work of drilling / cleaning of V.P.D. holes is in progress. All the VPD will be cleaned and it will be seen that all are functioning.
					5. 58 drain holes are not in working & 94 drain holes are not inspected as gallery is flooded.(A9)	Suitable treatment should be carried out as per suggestion of Temghar Expert Committee.	As per suggestions given by TDC, the work of drilling / cleaning of V.P.D. holes is in progress. All the VPD will be cleaned and it will be seen that all are functioning.
					6. D/s side wall of D.S.S gate seems to be damaged & not working smoothly.(B5)	Suitable treatment should be carried out as per suggestion of Temghar Expert Committee.	Necessary repairs to this gate are carried out and leakages are now controlled. Now this gate is working smoothly.

Sr. No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested	Implementation status
1	2	3	5	6	7	6	7
(3) Superintending Engineer, Kolhapur Irrigation Circle, Kolhapur							
(a) Executive Engineer, Kolhapur Irrigation Division, Kolhapur.							
11	Name : **Radhanagari** (Gated) Tal. Radhanagari Dist. Kolhapur Year of completion : 1954 Location : Longitude $73^0$57'40" Latitude $16^0$20'20" Height : 42.83 m Gross Capacity : 936.56 Mm^3 Sr.No.In Large Dam Register 2009: **MH09HH0067**	13.05.2018 27.11.2018	Shri R.M. Sankpal SE, KIC Kolhapur	Body wall Outlet gate Foundation W.W. Bar	1. Total seepage observed on the date of inspection is 68 Lit/Sec. (A10) 2. The rubber seal of S.G.No.3, 4 & 5 needs replacement. (B12) 3. Overall condition of the power outlet is not satisfactory.(B5) 4. Valves are not functioning proper.(B5) 5. The structural attachment to the counterweight for gate no. 3, 4 & 6 is slightly eroded. Rehabilitation work of counter weight is essential. The rubber seals of gate No. 1 to 4 are to be replaced. (A20) 6. Foundation holes are need to be clean.(A16) 7. End of EDA @ RD 30 m. to 150 m is scoured. Stilling basin is to be repaired in tail race channel. End sill & baffle block is damaged. (A14)	It should be repaired properly. It should be repaired properly in consultation Mechanical organization. It should be repaired properly. It should be repaired properly consultation Mechanical organization It should be repaired properly consultation Mechanical organization It should be cleared properly and data of seepage to be maintained. It should be repaired properly. It should kept under observation.	Necessary repairs work will be carried out in 2020-21. It shall be carried out by Mechanical Organization. Necessary repairs will be carried out in 2020-21. Necessary repairs will be carried out in 2020-21. This work will be carried out by Mechanical There are no foundation holes. Necessary repairs will be carried out in May 2020.

Sr. No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested	Implementation status
1	2	3	5	6	7	6	7
12	Name :**Warana** (Gated) Tal. Shirala Dist. Sangli Year of completion : 1989 Location : Longitude $73^0$05'50 Latitude $17^0$08'10" Height : 77.00 m Gross Capacity 974.18 Mm^3 Sr.No.In Large Dam Register 2009:**MH09HH1542**	25.05.2018 19.12.2018	Shri R.M. Sankpal SE, KIC Kolhapur	Earthen Embankment	1. 180 No. of surface settlement plugs constructed on U/S & D/S slopes of dam but many of them are not working. Max. settlement of 0.09 m. is observed at RD 600m.(D/S plug No.8) (B9)	Necessary repair in consultation with IRD should be taken.	Deficiency will be rectified after getting necessary approval.
				Body wall	2. Maximum leakage on left flank is 709.50 Ltr./sec. & at right flank is 394.70 Ltr. /sec. at lake level 626.250 m. on dated 14/08/2018. Total leakage 1104.20 ltr./sec. Total leakage on the day of inspection(19/12/2018) = 539.20 ltr./sec. (A 10)	Necessary repairs should be carried out to reduce the leakage. Leakage data should be maintained and to be monitored.	Work is in progress. Leaching work is completed.
				EDA	3. Sweating is observed on D/S surface between ch.200 to 400 & 1410 to 1565 m. Seepage & leaching is observed through the body of the dam. (A 11)	Necessary repairs should be carried out to reduce the sweating.	Deficiency will be rectified after inspection and approval. Deficiency will be rectified after getting necessary approval.
					4. Pot holes in bucket to be repaired.(A14)	Necessary repairs should be carried out.	Work is proposed to Mechanical Organization and will be rectified after approval.
					5. Partial erosion on left side of channel. (A16)	Necessary repairs should be carried out.	
					6. Service gate is not operating satisfactorily. (A20)	Necessary repairs should be carried out.	

Sr. No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested	Implementation status
1	2	3	5	6	7	6	7
13	Name : **Meghol**i (Ungated) Tal. Bhudergad Dist. Kolhapur Year of completion : Location : Longitude $74^0$07'00 Latitude $16^0$11'03" Height : 34.12 m Gross Capacity 3.932 Mm^3 Sr.No.In Large Dam Register 2009:**MH09HH1629**	29.04.2018 30.11.2018	Shri R.M. Sankpal SE, KIC Kolhapur	W.W.& Tail Channel	1. Due to peculiar geology condition in foundation of W.W. bar. The dam get self deflected between level RL106.00 to RL 111.50 m. (Leakages could not be measured). Some portion of bar at RD 20 m. Is damaged. (B7)	After necessary investigation, repairs should be carried out to stop the leakage.	Electro resistivity test has been carried out by CWPRS in Jan.2019. Results of same are awaited. After receiving results necessary action will be undertaken.
(b) Executive Engineer, Dudhaganga Canal Division No. 1, Kolhapur							
14	Name: **Dudhaganga** (Gated) Tal. Radhanagari Dist. Kolhapur Year of completion : 1989 Location : Longitude 74^0 1' Latitude $16^0$21' Height : 85.30 m Gross Capacity : 719.12 Mm^3 Sr.No.In Large Dam Register 2009: **MH09HH1226**	13.05.2018 13.11.2018	Shri R.M. Sankpal SE, KIC Kolhapur	Earth dam Section Foundation	1. The D/S slope at right flank ch.1050 to 1155 & 1239 to 1265 m. indicates concavity. The U/S pitching is damaged partly at RD 1120 m. to 1141 m., RD 1150 m. to 1170 m. & RD 1180 m. to 1215 m. in RL 641 m. to 646 m. Piching should be replaced. (B3) 2. The foundation gallery is flooded & hence not easily accessible. Lighting arrangement should be renewed. Foundation holes to be redrilled and should be cleaned. Electrirification in the gallery is damaged. (A8)	Necessary action to be taken by authority. Foundation gallery is to be dewatered and inspected regularly Permanent measures to reduce the leakages should be undertaken.	The deficiency will be completed upto June 2020. The deficiency will be rectified after getting necessary approval.

				Inspection gallery	3. Seepage on the date of inspection 13/11/2018 was 136 lps at water level 611.16 m.(A11)	Necessary action to be taken by authority.	The deficiency will be rectified after getting necessary approval.
				EDA	4. Some porous pipe is chocked. (A9)	Drain hole shall be cleaned.	Work planned to be rectified in year 2019-20.
					5. On D/S face at bucket portion concrete face is damaged at some portion. Some glacious concrete in jump portion (Tangent point) is eroded and steel reinforcement is exposed and ruste. Flaps of trunion girder boxes are eroded. (A14)	The stilling basin should be inspected by draining water.	After completion of maintenance work of CCRS by Mechanical Wing, stilling basin repair works will be rectified. Flaps of trunion girder boxes will be replaced by Mechanical Wing upto March 2020.
				Outlet Gate	6. Right side guide wall in Prelimnary tilling basin some portion is damaged. (A16)	Necessary action to be taken by authority.	The deficiency will be rectified upto June 2021.
					7. Overall condition of river outlet is not satisfactory. There is leakage through CCRS gate. (10 Cusecs. approx.) (B15)	The repairs to minimise leakages should be carried out through mechanical organization	Defeciency will be rectified by Mechanical Organization. (Necessary fund for repair work is directed to Mech Wing.)

Sr. No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested	Implementation status
1	2	3	5	6	7	6	7
(4) Superintending Engineer, Satara Irrigation Circle, and Satara							
(a) Executive Engineer, Dhom Irrigation division, Satara							
15	Name :**Dhom** (Gated) Tal. Wai Dist. Satara Year of completion : 1976 Location : Longitude 73^0 40' Latitude $17^0$58' Height : 50.00 m Gross Capacity : 332.00 Mm^3 Sr.No.In Large Dam Register 2009: **MH09HH0655**	18.05.2018	Smt. Vaishali Narkar SE SIC, Satara	Tail Channel.	1. Erosion & retrogression noticed in tail channel on d/s side of EDA.but as per point no 7.2 (B) (4),10(b) and 12(c) of Pre/Post inspection report no scouring ,erosion at retrogression in tail channel this discrepancy needs to be rechecked by field authority.(A7)	After rechecking of deficiency by competent field authority, Necessary repairs be carried out in consultation with CDO Nashik.	In the post monsoon inspection report the discrepancy has been removed. There is some retrogression observed which was also indicate d in the previous HSR accordingly, repair work is in progress.
16	Name **Kanher** (Gated) Tal. Satara Dist. Satara Year of completion : 1986 Location : Longitude $73^0$55' Latitude $17^0$45' Height : 50.34 m Gross Capacity : 286.00 Mm^3 Sr.No.In Large Dam Register 2009: **MH09HH1141**	23.05.2018 26.11.2018	Smt. Vaishali Narkar SE SIC, Satara	Gallery Outlet gates	1. 55 Nos of porous pipes are in chocked condition.(A9) 2. Emergency gate is under repair (B5)	Porous pipes should be cleaned with permission of competent authority. Necessary repairs be carried out in consultation with Mechanical Organization	Planned in year 2019-20 in special repairs. Trial of emergency gate is not given by mechanical wing.

Sr. No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested	Implementation status
1	2	3	5	6	7	6	7
(b) Executive Engineer , Koyana dam maintaince division, koyanagar							
17	Name: **Kolkewadi**(Gated) Tal. Chiplun Dist. Ratnagiri Year of completion : 1975 Location : Longitude $73^0$38' 50'' Latitude 17^0 25' Height : 66.00 m Gross Capacity : 36.22 Mm^3 Sr.No.In Large Dam Register 2009:**MH09HH0527**	19.05.2018 29.11.2018	Smt. Vaishali Narkar SE SIC, Satara	Masonry Dam	1. Most of foundation drain holes are in chocked condition excluding monolith 6 to 15A. (A9)	Repairs/Cleaning of foundation drain should be carried out.	Quotation For rate invited at division level for preparation of estimate and after sanction of rate work will be completed during this year.
				River Sluice	2. M.S.Bye-pass pipe of 300m dia. Provided for filling of penstock and transfer cooling system have been rusted & leaked near penstock unit no.10 is need to be repaired .(A4)	It should be repaired by suitable remedial measures in consulatation with Mechnical organization and CDO,Nashik	Repairing work of M.S. Bye pass pipe@ unit No.10 and valves of all penstock is decided to carry out by Mechanical Division, As per demand of Mechanical Division Rs.10 Lakhs are given to them. The Tender procedure is completed and work will be carried out during this season.
				Gallery	3. Leaching (Red, White & Blakish) observed at some portion in gallery and D/S of UCR masonary of dam. (A12)	Leaching material should be tested and remedial measures should be carried out as per CWPRS,Pune	The sample of leaching material was submitted to MERI Nashik and get tested. The result of leaching material is received from MERI Nashik. The result will be submitted to CWPRS and remedial measures will be taken.

				Power Outlet	4. Vibrations induced in to dam perticulerly near power outlet (Monolith no 3-4).(Other Std.Def.)	The vibration study should be carried at through CWPRS, Pune and necessary remedial measures should be carried out as per CWPRS vibration study report / recommendation.	Recently CWPRS Pune visited to Kolkewadi Dam on dt.08/01/2018 and 18/01/2018 for detail vibration studies ,the officers requited all 4 units of power should be in running condition at the time of study. CE WRD Pune visited dam site on dt.19/01/2018 and instructed that further vibration studies and its remedies will be carried out by MAHAGENCO under consultation of CWPRS Pune. Accordingly correspondence is done by MAHAGENCO to contact CWPRS Pune and fix suitable date for vibration study and get prepared vibration report from CWPRS. Then final decision will be taken.
[B] Chief Engineer (S.P.),Water Resources Department, Pune							
(1) Superintending Engineer, Kukadi Irrigation Circle, Pune							
(a) Executive Engineer, Kukadi Irrigation Dn No. 1 Narayangaon, Dist.Pune							
18	Name: **Manikdoh** (Gated) Tal. Junnar Dist. Pune Year of completion : 1984 Location : Longitude : $73^0$49' Latitude : 19^0 14' Height : 57.80 m Gross Capacity :308.06 Mm^3 Spillway apacity:143m^3/sec Sr.No.In Large Dam Register 2009: **MH09HH1060**	19.05.2018 07.12.2018	Shri H.T. Dhumal SE KIC, Pune	Foundation gallery	1. Drainage gallery is not easily accessible due to flooding leakage in gallery 236 lps. No sufficient lighting arrangement in both galleries and V.T. Pumps under major repairing(A8)	Providing proper draining arrangement seepage in the gallery. Leakages to be minimized by suitable treatment on upstream surface. Repairs V.T. Pumps should be carried out in consulation with mechanical organization	Estimate for leakage treatment in the dam body are prepared and submitted Manikdoh Dam is included in DRIP-III project Visit of Dam Safety Review Panel was arranged on Manikdoh Dam. The same was postponed on the back drop of Kovid-19. Necessary works will be carried out in DRIP-III. Work of installment of VT-Pumps for dewatering the gallery is in progress through Mechanical wings.

							Electrification of gallery will be carried out after leakage treatment.
				Body of dam	2. Many porous pipes are chocked with leaching material and heavy flow observed through some porous pipe hole.(A12)	Necessary cleaning of chocked porous pipes should be carried out and flow through porous pipes should be measured.	Estimates for cleaning of chocked porous pipes have been prepared and submitted under Extensions and Improvement Program. Leakage in gallery is measured at various locations in the gallery and D/S of Dam.
				Outlets	3. Excessive seepage and leaching through body of the dam and foundation is noticed.(A11)	Necessary remedial measures should be carried out. Leached material to be collected and weighed & record of quantity and weight to be maintained.	As Mentioned above necessary Estimates are submitted .Leached material removal is in progress after dropping of water level in dam and hence reduction leakage.
					4. Sweating and leaching observed at D/S surface of NOF section at Ch.439.20 m to 450.00m and 535 m to 545 m. (A12)	Leaching material should be tested from Lab.	Collected leached material shall be sent to laboratory for testing.
					5. Leakage through junction of guide wall and NOF section about 12 to 15 cusecs(B10)		Estimate for leakage treatment in the dam body are prepared and submitted Manikdoh Dam is included in DRIP-III project Visit of Dam Safety Review Panel was arranged on Manikdoh Dam The same was postponed on the back drop of Kovid-19. Necessary works will be carried out in DRIP-III .Work of installment of VT-Pumps for

					6. EG of power outlet not in working condition (B5)	The repairs should be carried out through mechanical organization.	dewatering the gallery is in progress through Mechanical wings. Electrification of gallery will be carried out after leakage treatment. Repairs to EG of power outlet completed through Mechanical wing.
(b)Executive Engineer , Dimbhe Dam Division, Manchar,Dist. Pune							
19	Name : **Chilewad**i (Gated) Tal. Junnar Dist. Pune Year of completion :2000 Location : Longitude $73^0$50'00" Latitude $19^0$21'00" Height : 62.56 m Gross Capacity : 27.17 Mm^3 Spillway capacity: 1686 m^3/ sec Sr.No.In Large Dam Register 2009:**MH09HH1553**	02.06.2018 07.12.2018	Shri H.T. Dhumal SE KIC, Pune	EG	1. Emergency gate : There is defect in operation and guide tee is absolutely disturbed due to which it in hanging condition at top level.(B5) 2. Out of 8 only 2 piezo meters are working. (B9)	Necessary repairs be carried out in consultation with Mechanical Organization Necessary repairs should be carried consultation with IRD, Nashik.	1. For Repair of E.G & I.G. The amount of Rs.58 Lakhs paid to Executive Engineer, Machanical Division No.2, Pune. 2. For Repair of E.G Dam water is released up to Level 701.90 M. On Dated 17/06/2018. (Bed Level of I.G is 701.67 M.) Repair work is not done monsoon Started at Dt.27/06/2018 hence E. G. is closed. Yet to be attended
20	Name:**Pimpalgaonjoge** Gated Tal. Junnar Dist. Pune Year of completion : 2000 Location : Longitude : $75^0$52'30" Latitude : $19^0$18'45" Height : 34.204 m Gross Capacity : 235.28 Mm^3 Spillway capacity:1167.3cu sec Sr.No.In Large Dam Register 2009:**MH09MH1520**	19.05.2018 06.12.2018	Shri H.T. Dhumal SE KIC, Pune	River Sluice	1. EG of river sluice is not in operation. Leakages observed in river sluice.(B10)	Necessary repairs be carried out in consultation with Mechanical Organization.	Necessary repairs work in is Progress through Mechanical wing.

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1	2	3	5	6	7	6	7
21	Name : **Dimbhe** (Gated) Tal. Junnar Dist. Pune Year of completion : 2002 Location : Longitude $74^0$44'30" Latitude $19^0$5'45" Height : 72.10 m Gross Capacity : 328.22 Mm^3 Spillway capacity: 2870 m^3/ sec Sr.No.In Large Dam Register 2009: **MH09HH1558**	20.05.2018 14.12.2018	Shri H.T. Dhumal SE KIC, Pune	Foundation gallery	1. Foundation gallery between Ch.250 to 520m is under water, hence inspection is not possible. As the foundation gets flooded no instruments are fitted in gallery. Heavy leaching in gallery Ch.520,502.85,484.8,403.50 m.(A8)	Seepage in the gallery to be minimized by suitable treatment to upstream portion	Provision of work is included under DRIP-II.
				Body wall	2. Drainage holes drilling is not done bet ch. 220 tp 500 m VPD & drainage holes cleaning is necessary.Some porous pipes chocked with brown leaching.(A9)	Porous pipes & drain holes should be cleaned for proper functioning.	Provision of work is included under DRIP-II.
					3. Seepage, excessive sweating with leaching observed at some locations in d/s face of dam at ch 630 to 650 m. (A11)	Quantum of seepage should be monitored monolith wise. Leached material to be collected and weighed & record should be maintained. Leaching material to be tested from lab.	Work Completed.
					4. Total seepage in the gallery is 931 lps at RL 709.840 M on date of inspection Dt. 14.12.2018.(A10)		Provision of work is included under DRIP-II.

Sr. No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested	Implementation status
1	2	3	5	6	7	6	7
(c)Executive Engineer , Kukadi Irrigation Division No. 2 ,Shrigonda, Dist. Ahmednagar							
22	Name : **Ghod**(Gated) Tal. Shirur Dist. Pune Year of completion : 1965 Location : Longitude $74^0$51'50 Latitude 17^0 8'10" Height : 34.75 m Gross Capacity : 216.30 Mm^3 Spillway capacity:7465 m^3/ sec Sr.No.In Large Dam Register 2009: **MH09MH0117**	04.06.2018 31.10.2018	Shri H.T. Dhumal SE KIC, Pune	Outlet gate	1. Service gates 3 nos of GLBC are not working properly. Alignment of gates needs to be checked. Leaf and brass plates of these gates are to be replaced with alignment. One GRBC are not working properly gate. it should be repaired with alignment.(B5)	Necessary repairs should be carried out in consultation with Mechanical Organization.	Ghod left canal and right canal service gate 3 &2 respectively- alignment and strengthening the foundation repaired by the mechanical department, the remaining work will be completed as soon as possible by June 2020.
				W.W.& T.C	2. Erosion & retrogression noticed in tail channel next to stilling basin in overall width of tail channel) full length of flank walls (Both side flank wall / guide wall of tail channel) are damaged. Scouring is noticed on immediate downstream of check wall.but details of extent of damage not mention in report. (A7)	Necessary repairs should be carried out consultation with CDO Nashik. Scouring should be kept under observation.	Estimates for filling cavities and gullies in tail channel and construction of cross wall is prepared work will be carried out after completion of flood study.
				End Weir			
					3. Spillway gate no. 9 and 14 wire rope are broken. (A18)	Necessary report on priority should be carried out consultation with Mechanical Organization.	Spillway gate no. 9&14 wire rope has completely changed over the june 2019 by Mechanical organization.

Sr. No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested	Implementation status
1	2	3	5	6	7	6	7
(2) Superintending Engineer , Satara Irrigation Project Circle, Satara							
(a)Executive Engineer , Minor Irrigation Division, Satara							
23	Name **: Nagewadi** (Gated) Tal. Wai Dist. Satara Year of completion : 1999 Location : Longitude $73^0$51'45" Latitude $17^0$55'17" Height : 40.02 m Gross Capacity : 6.47 Mm^3 Sr.No.In Large Dam Register 2009:**MH09HH1518**	08.05.2017 28.11.2017	Shri. Vijay Ghogare SE, SIPC, Satara	Earth dam	1. Leakage in the form of clear water of 182 lps from junction of conduit with surrounding earth work through casing zone but no erosion piping noticed.(A1) 2. Outlet gate: Wire rope of hoist is not serviceable condtion and not free from broken strands (A18)	It should be kept under observation and Necessary repairs should be carried out by permission of competent field authority. Necessary repairs be carried out in consultation with Mechanical Organization.	NOT RECEIVED
24	Name : **Tarali** (Gated) Tal. Patan Dist. Satara Year of completion : 2007 Location : Longitude $73^0$54'15" Latitude $17^0$32'00" Height : 73.41 m Gross Capacity 165.70 Mm^3 Sr.No.In Large Dam Register 2009: **MH09HH1666**	22.04.2018 19.10.2018	Shri. Vijay Ghogare SE, SIPC, Satara	Body Wall OF & NOF Section Outlet ICPU Stop Gate	1. Considerable leaching observed on D/S face of dam (NOF) section.(A12) 2. Appearance of sweating on the downstream face of dam is observed at monolith no.3, 4, 4A, 15 & 16. (A11) 3. While operating D/S service gate, some noise is observed as the capacity of hoisting arrangement is less than required, Enhancing of hoist capacity is in progress.(B5) 4. Hoist capacity of stop log gate on u/s side is less than required.(B5)	Leached material to be collected & recorded of quantity & wait to be maintained. Leaching material should be tested from MERI Nashik. Necessary repairs be carried out in consultation with Mechanical Organization& CDO, Nashik. Necessary repairs be carried out in consultation with Mechanical Organization, Nashik. Necessary repairs be carried out in consultation with Mechanical Organization,Nashik.	NOT RECEIVED

Sr. No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested	Implementation status
1	2	3	5	6	7	6	7
(3)Superintending Engineer & Administrator, C.A.D.A. Solapur							
(a)Executive Engineer, Ujjani Dam Maintenance Division, Pandharpur							
25	Name **: Ujjani** (Gated) Tal. Madha Dist Solapur Year of completion : 1980 Location : Longitude $73^0$7'18'' Latitude $14^0$08'00' Height : 56.40 m Gross Capacity : 332.00 Mm^3 Sr.No.In Large Dam Register 2009: **MH09HH0843**	08.05.2018 11.12.2018	Shri. D.B. Sale SE & Adm. CADA, Solapur.	EarthDam Masonry dam Outlet gate River outlet.	1. Concavity seen on U/S between Ch.2015 to 2040 m. is since last 15 years. However there is no increase in its concavity thereafter. (B1) 2. Most of foundation drain holes are chocked up. The porous pipes are chocked up.(113 nos). (A9) 3. Some rubber seals need to be replaced. (B12) 4. Erosion is observed in the foundation trench on the d/s of weir. (A17)	Dam section should be restored to design section. Porous pipes needs cleaning. The repairs should be carried out through mechanical organization. Proper measures should be taken for it.	This remark is related with sag portion occured in the RHS earthen portion between ch.2015 m to 2040 m on u/s slant portion of the first berm. 1) This issue has been referred to CDO. The drg and relevant data of existing sag portion has been submitted to CDO for stability analysis as per instructions of the CE (SP). Results and recommendations are awaited. Remedial measures will be carried out after receiving proper guidelines by CDO & DSO authority. 2) The CW&PRS, Pune have been also requested recently to study and locate horizontal or vertical flaws, if any in both casing and hearting zones by suitable soil mechanics methods like NDT, UDS or dynamic analysis. The study is yet to be taken in hand. Remedial measures will be proposed and carried out accordingly. 1) Almost all Foundation drain holes are cleaned recently. This deficiency has been now rectified. 2) Porous pipes - Out of 134 vpds, 49 porous pipes have been cleaned. Cleaning of further 15 vpds is under tender process. Most of the remaining porous pipes have been choked up due to gallery wall cement concrete at the time of dam construction work.

							Irrigation Outlet :- Rubber seals of 4 out of 5 SGs of Irrigation outlet have been replaced so far in 2019. CGs are corrected. Bent up Stems are repaired. The work of that of fifth SG is in progress. Bye pass valves and air vents of all 5 SG wells are got repaired and rectified. Rubber seals of EG are also replaced. River Sluice gates :- All rubber seals of all 4 river sluice SGs and EGs have recently been replaced in 2018 and 2019. Total Leakages through all SGs are considerably reduced to only 10 lps now at FRL. Radial Gates :- Rubber seals of 16 RGs in the first bay (regular bay) have been replaced in 2018 and 2019. The work of replacing rubber seals of remaining 25 RGs in the second bay (emergency bay) is in progress. Stop log gates :- Rubber seals of all 21 stop log gates have been replaced in 2019. All above works are carried out through mechanical wing. It is mainly due to removal of back filled material from the foundation trench due to pressure of released water. This causes retrogressive currents in the released water. Plums concrete is proposed here. It is under estimation.

(4)Superintending Engineer Osmanabad Irrigation Circle, Osmanabad							
a)Executive Engineer, SinaKolegaon Project Division, Paranda Dist. Osmanabad							
26	**Name :- SINA KOLEGAON** Year of completion :- 2007 Location : - Longitude :- 75^0 24' 00" Latitude :- 17^0 18' 00" Height :- 36.60 m Gross capacity:-. 19.19 Mm3 Design Spillway capacity :- 11000 Cmecs Sr. No. in National Register Of large Dams - **MH09HH1673**	09/05/2018 13/11/2018	**Shri.S.S.Pagar S.E., OIC, Osmanabad**	Foundation/ Drainage gallery	Drainage gallery is not accessible. In drainage gallery lighting arrangement yet to be provided. (A8) Foundation holes need to be cleaned	Dewatering should be carried out for keeping the gallery dry. Proper access and lighting arrangement should be provided on priority. Foundation holes should be cleaned periodically.	On Dt.27/12/2018 E.E SinaKolegaon Project Dn. Paranda & E.E.Janai sirsai lift irrigation Dn.(Mech.) A.nagar visited jointly the SinaKolegaon Dam Dicided as below 1)Remove chock up of suction pipes in pump room 2)To provide pumping unit using a available 25 HP pumps and suction pipes to dewater the gallery and make it accessible The estimate of the above(9.68lakh) is prepaired from Janai sirsai lift irrigation Dn.(Mech.) A.nagar and the action is in progress to carry out the work After the pamanaent dewatering system installation and lighting arrangement seepage measurements and its control measures will be taken After the pamanaent dewatering system installation as above the Foundation holes cleaning will be carried out.

Table 1.5
Action Taken Report on Deficiency Category-1 of Large Dams Class II

Sr. No	Name of Dam	Date of Inspection	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested	Implimentation Status
1	2	3	4	5	6	7
---------- No Such Dams under this category is reported ----------						

Table 1.6
Action Taken Report on Deficiency Category-2 of Large Dams Class II

Sr. No.	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies noticed	Remedial Measures Suggested	Implementation Status
1	2	3	4	5	6	7	8
[A]Chief Engineer(W.R.)Water Resources Department, Pune							
(1)Superintending Engineer Pune Irrigation Circle, Pune							
(a)Executive Engineer, Pune Irrigation Division, Pune							
1	Name : **Urawade** Tal. Mulashi Dist. Pune Date of completion:-**1983** Location : Longitude - **74°56'00"** Latitude- **18°30'00"** Height :-**23.48 m.** Gross capacity :- **2.00 Mcum** Sr.No.In Large Dam Register 2012:**MH09MH0964**	03.06.2018 17.01.2018	Rajendra Dhodapkar E.E PID. Pune	W.W	1. W.W. masonry damaged at some places repair is required. Leakage is observed through waste weir bar at many locations.(B7)	Necessary repairs to be carried out. The exact locations of damage with quantum of leakages should be mentioned in the report to categories the deficiency properly.	The repair work will be included in annual Maintenance & repair programme. After approval from competent authority repair work will be carried out.
2	Name : **Khamboli** Tal.Mulashi Dist. Pune Date of completion:-**2000** Location: Longitude :-**73°35'00"** Latitude : -**18°35'00"** Height :-**25.36 m.** Gross capacity :- **2.065 Mcum** Sr.No.In Large Dam Register 2012:**MH09MH157**	12.06.2018 17.01.2019	Rajendra Dhodapkar E.E PID. Pune	Drain	1. Leakage at ch.240 to 255 m from downstream side of cross drains. (B2) 2. Retrogression or scouring noticed for full length of tail channel. (A7)	It should be kept under observation and record of leakage need to be mentioned. Necessary repairs are to be carried out. It is kept under observation.	The repair work will be included in annual Maintenance & repair programme. After approval from competent authority repair work will be carried out. The repair work will be included in annual Maintenance & repair programme. After approval from competent authority repair work will be carried out.

Sr. No.	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies noticed	Remedial Measures Suggested	Implementation Status
1	2	3	4	5	6	7	8
(b)Executive Engineer Khadakwasala Irrigation Division, Pune11							
3	Name : **Matoba** Tal. Daund Dist. Pune Date of completion:-**1978** Longitude: -**74° 34'00"** Latitude:-**18°00'23"** Height :-**17.50** Gross capacity :-**45.2 Mcum** Sr.No.In Large Dam Register 2012:**MH09MH0721**	25.05.2018 02.11.2018	P.B. Shelar E.E. Khadakwasala Irrigation Division, Pune11	E. E.	1. Standing pool of water observed on RHS of embankment at some places. (A2)	This area should be well drained so as to avoid any stagnant pools of water.	Work has been carried out.
4	Name : **Shirsuphal** Tal. Baramati Dist. Pune Date of completion:-**1879** Location: Longitude: -**74° 35'20"** Latitude:-**18°21'00"** Height :-**20.11** Gross capacity :-**10.1 Mcum** Sr.No.In Large Dam Register 2012:**MH09MH0011**	22.05.2018 02.11.2018	P.B.Shelar E.E.Khadakwasala Irrigation Division, Pune11	E. E. .	1. Crest profile is below by 1.15 m. than design crest and section is disturbed. (B1)	Necessary repairs are to be carried out to proper section after confirmation by competent field authority.	The repair work will be included in annual Maintenance & repair programme. After approval from competent authority repair work will be carried out.

Sr. No.	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies noticed	Remedial Measures Suggested	Implementation Status
1	2	3	4	5	6	7	8
(d) Executive Engineer, Nira Right Bank Canal Division, Phaltan							
5	Name : **Naigaon** Tal.Khandala Dist. Satara Date of completion: 1983 Location: Longitude: 73° 58' 5" Latitude: 73° 58' 5" Height :18.0 **m.** Gross capacity :1.34 **Mcum** Sr.No.In Large Dam Register 2012:**MH09MH.0986**	24.04.2018 03.11.2018	A.P. Nikam E.E. N. R.B.C. Division Phaltan	W.W. Bar and tail channel	1. Waste weir bar is damaged condition. Heavy Leakage is observed through Waste weir bar. (A15)	Necessary repairs are to be carried out. Leakage record needs to verify before repair.	The repair works of W.W.bar will be included in annual Maintenance & repair programme. After approval from competent authority repair work will be carried out.
(2) Superintending Engineer,Sangli Irrigation Circle Sangli							
(a) Executive Engineer,Tembhu Lift Irrigation Project Management Division, Ogalewadi							
6	Name : **Talegaon Ghogaon** Tal. Khanapur Dist. Sangli Date of completion:-**1984** Location :Longitude - **74°11'00''** Latitude -**17°00'00''** Height :-**21.18 m.** Gross capacity - **56.26 Mcum** Sr.No.In Large Dam Register 2012:	17.04.2018 Date not mentioned	R.Y. Reddiyar EE,TLIPD Ogalewadi	Earthen Embankment	1. Top width & slope is as per design excluding some undulation at top of dam and depression and dislocation of pitching. (B1) 2. Crack is observed at outer at outer face of well from 2 m top. (A6)	Necessary repairs be carried out after verification of section and dam. Necessary repairs be carried out.	Estimate of special repairs of this dam is prepared and submitted to CE Office dated 27-2-2019

Sr. No.	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies noticed	Remedial Measures Suggested	Implementation Status
1	2	3	4	5	6	7	8
(3)Superintending Engineer, Kolhapur Irrigation Circle, Kolhapur							
(a) Executive Engineer. Kolhapur Irrigation Division, (North) Kolhapur							
7	Name :**Daryachi Vadgaon** Tal. Chandgad Dist. Kolhapur Date of completion:-**1993** Location: Longitude:- **74°00'** Latitude: -**16°36'** Height -:**23.65 m.** Gross capacity-**0.8473 Mcum** Sr.No.In Large Dam Register 2012:**MH09MH1302**	19.05.2018 18.12.2018	V.P.Patil EE. KID (North) Kolhapur	Earth.Dam.	1. Leakage through dam body is observed when water level is at RL 88.00 to 92.70 m from ch. 135 to 195 m but colour water is clear. (A1)	Leakage data should be mainted and reason for leakage should be investigated & treated properly. It should be kept under observation strictly.	Work planned to be rectified in year 2020-21.
(b) Executive Engineer,Kolhapur Irrigation Circle (South), Kolhapur							
8	Name : **Yenechavandi** Tal. Gadhinglaj, Dist. Kolhapur Date of completion:-**1996** Location: Longitude- **74°20'** Latitude: -**16°11'** Height :-**21.65 m.** Gross capacity **1.545 Mcum** Sr.No.In Large Dam Register 2012:**MH09MH139**	15.05.2018 14.12.2018	Shrimati S.C. Mane E.E. KID (S) Kolhapur	Earth Dam W. W. Bar and Tail Channel	1. Leakage noticed on downstream berm at ch. 220 at 94.80. (A1) 2. Waste Weir Bar is partly damaged. (B7)	It should be kept under observation. Leakage data should be mainted and reason for leakage should be in investigated & treated properly. Necessary repairs be carried out to damage portion.	Leakage is kept under observation and necessary data is being maintained at field level. Waste Weir repair work is completed

Sr. No.	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies noticed	Remedial Measures Suggested	Implementation Status
1	2	3	4	5	6	7	8
(4)Superintending Engineer, Satara Irrigation Circle, Satara							
(a) Executive Engineer, Krishna Irrigation Division, Satara							
9	Name : **Kankatrewadi** Tal. Phaltan Dist. Satara Date of completion: **1978** Location: Longitude: **74°35′00"** Latitude:**17°29′00"** Height :**19.51 m.** Gross capacity :**1.24 Mcum** Sr.No.In Large Dam Register 2012:**MH09MH0736**	18.05.2018 29.12.2018	Y.R. Dabhade E.E., Krishna Irrigation Division, Satara	W.W	1. Leakage through confluence of earthen and masonry of guide wall observed. (A15)	This should be kept under observation. Leakege should be measured, monitored and necessary repair to be carried out if necessary.	In administration process- All the measures are plan in 2020-21
10	Name :**Thoseghar** Tal. Satara Dist. Satara Date of completion:-**1989** Location : Longitude- **73°52′00"** Latitude -**17°36′00"** Height :-**18.05 m.** Gross capacity :**1.91 Mcum** Sr.No.In Large Dam Register 2012: **MH09MH1208**	04.05.2018 21.11.2018	Y.R.Dabhade E.E., Krishna Irrigation Division, Satara	Earthen Dam Outlet W.W.Bar	1. Relief wells are not functioning. (A5) 2. Leakage from joint of conduit and wall is noticed.(A4) 3. Some leakage is observed through WW. bar. (B7) 4. Tail channel is heavy damaged.(A7)	Necessary repairs be carried out. Causes of exact leakages should be investigated & treated accordingly. Kept under observation leakage quantum should be mentioned in report. Necessary repairs be carried out after reviewing the design.	Planned in 2020-21 by CDO Nashik .Yearly design planned in 2020-21 of WW bar and EDA with special repairs. Tender process has been completed. Work will start after water level reaches to sill level in April 2020 Planned in 2020-21 by CDO Nashik .Yearly design planned in 2020-21 of WW bar and EDA with special repairs.

Sr. No.	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies noticed	Remedial Measures Suggested	Implementation Status
1	2	3	4	5	6	7	8
(b) Executive Engineer, Koyna Irrigation Division, Koynanagar							
11	Name : **Chaphal** Tal. Satara Dist. Satara Date of completion:-**1983** Location : Longitude- **74º00′28"** Latitude -**17º24′24"** Height :-**18.05 m.** Gross capacity :**1.91 Mcum** Sr.No.In Large Dam Register 2012: **MH09MH0966**	16.05.2018 17.11.2018	K.H. Patil E.E., Koyna Irrigation Division, Koynanagar	Outlet	1. Leakage through gate is observed. (Approx. 4 cusecs) (B5)	Kept under observation leakage quantum should be mentioned in report. Necessary repairs be carried out with consultation of Mechanical organization.	Work completed physically and fully. Gates are repaired bt replacing stem rod by mechanical organization and there is no leakage.
[B] Chief Engineer (S.P) Water Resources Department, Pune							
(1) Superintending Engineer & Admn. C.A.D.A. Solapur							
(a) Executive Engineer,Solapur Irrigation Division, Solapur							
12	Name : **Kazikunbus** Tal. Akkalkot Dist. Solapur Date of completion:1992 Location: Longitude -**76°10'00"** Latitude -**17°43'00"** Height :- **20.00m.** Gross capacity 4.031**Mcum** Sr.No.In Large Dam Register 2012:**MH09MH 1224**	17.05.2018 23.11.2018	R.K. Jagtap EE SID Solapur	W.W	1. Gate operation is not working condition due to steam rod problem. (B5)	Necessary repairs be carried out in consultation with Mechanical orgasition.	Necessary repairs will be carried out.

Sr. No.	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies noticed	Remedial Measures Suggested	Implementation Status
1	2	3	4	5	6	7	8
13	Name : **Rajuri** Tal. Karmala Dist. Solapur Date of completion:**1981** Location: Longitude -**74°58'** Latitude -**18°22'** Height :-**19.29 m.** Gross capacity : **2.520 Mcum** Sr.No.In Large Dam Register 2012:**MH09MH0894**	18.05.2018 29.11.2018	R.K. Jagtap EE SID Solapur	W.W.	1. Heavy retrogression is noticed on downstream of bar near divide wall. (A7)	Protective measures, as per necessity shall be undertaken to prevent progressive damage.	Necessary repairs will be carried out with Mechanical organisation.
b)Executive Engineer Bhima Developement Division No.2, Solapur							
14	Name : **Ashti** Tal. Mohol Dist. Solapur Date of completion:-1883 Location : Longitude - **75°-26' 00''** Latitude -17°-47'30'' Height :-**17.60 m.** Gross capacity :23.01 **Mcum** Sr.No.In Large Dam Register 2012:**MH09MH0014**	24.05.2018 23.11.2018	N.V. Joshi EE BDD no.2 Solapur	E. E	1. Cracks are observed at top of embankment in between ch.2/240 to 2/385 m. (A1) 2. Top of embankment from Ch 2340 to 2360 is not as per designed section of dam. (B1)	Necessary repairs be carried out. Necessary repairs be carried out.	Cracks are refilled with casing material and necessary repairs are done by Mechanical Division. Between ch. 2/240 to 2/385m Section is in critical stage. SE CADA, Solapur has proposed NOF concrete section to CDO Nashik for sanction, and sanctioning is in final stage. As after sanctioning the design it is better to construct accordingly.

Sr. No.	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies noticed	Remedial Measures Suggested	Implementation Status
1	2	3	4	5	6	7	8
(2) Superintending Engineer, Satara Irrigation Project Circle, Satara							
(a) Executive Engineer, Minor Irrigation Division Satara							
15	**Mahabaleshwar** Tal- Mahabaleshwar Dist- Satara Date of completion: 2007 Location: Longitude 73°40'00" Latitude 17°56'00'' Height : 21.15 **m.** Gross capacity- **Mcum** Sr.No.In Large Dam Register 2012: **MH09MH1909**	09.04.2018 15.11.2018	S.J. Hiray EE MID Satara	W.W.Bar	1. There is leakage from foundation at ch. 105 is observed.(40 lit/sec) (B7)	Leakages should be kept under observation.	NOT RECEIVED
[C] Chief Engineer Local - Sector Pune							
1) Superintending Engineer Small Scale Irrigation (WC) Pune							
a) Executive Engineer , Small Scale Irrigation Division (WC) Sangali							
16	Name : **Umrani-2** Tal. Jath Dist- Sangli Date of completion: 2005 Location: Longitude **75°00'00"** Latitude **17°00'00"** Height : **14.98 m.** Gross capacity- 21.97 **Mcum** Sr.No.In Large Dam Register 2012: **MH09MH1911**	22.05.2018 10.12.2018	B. M. Teli Sub-divisional W.C. officer Kolhapur	W.W.Bar	1. So many leakages observed at d/s of dam from ch. 0 to 150 m. (A1)	Leakage should be monitored & investigated with respect to location & level and proper remedial measures are to be taken up to prevent leakage .Quantity of leakage not reported.	NOT RECEIVED

Sr. No.	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies noticed	Remedial Measures Suggested	Implementation Status
1	2	3	4	5	6	7	8
(b) Executive Engineer,Small Scale Irrigation (Water Conservation) Kolhapur							
17	Name :**Chandoli** **Tal. Shahuwadi Dist. Kolhapur** Date of completion:**2001** Location: Longitude **73°51'40''** Latitude - **16°57'** Height :**23.19 m.** Gross capacity :**1.762Mcum** Sr.No.In Large Dam Register 2012:**MH09MH1595**	17.05.2018 13.11.2018	Y.L.Thorat District W.C. officer Kolhapur	W.W.Bar	1. Masonry bar partially damaged from ch. 476.00 to 486 m and coping over spillway bar is partially damaged from Ch 486 to 476m.(B7) 2. Coping over waste weir bar is damaged throughout the length (B7)	Necessary repairs be carried out. Necessary repairs be carried out.	NOT RECEIVED
18	Name :**Barki** **Tal. Shahuwadi Dist.Kolhapur** Date of completion: 2005 Location:Longitude - 73°52'30" Latitude - 16°01'30 Height : 23.79**m.** Gross capacity : 1.642**Mcum** Sr.No.In Large Dam Register 2012: **MH09MH.1641**	18.05.2018 03.11.2018	Y.L.Thorat E.E. SSI(WC) Kolhapur	Outlet	1. There is cavitation in in conduit on downstream side of gate. Heavy leakage through these cavitiesd is noticed. (20 lps) (A 4)	Leakages should be kept under observation.	NOT RECEIVED

Sr. No.	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies noticed	Remedial Measures Suggested	Implementation Status
1	2	3	4	5	6	7	8
(c) Executive Engineer Small Scale Irrigation (Water Conservation) Satara							
19	Name : **Naigaon -2 Tal. Kandala Dist. Satara** Date of completion:**1996** Location:Longitude - **73°55'00"** Latitude - **18°30'00"** Height : **17.07m.** Gross capacity : **1.217Mcum** Sr.No.In Large Dam Register 2012: **MH09MH0988**	03.05.2018 24.11.2018	R.S. Otari District WC officer Satara	Outlet W.W	1. The stem rod for lifting gate is not straight.(B5) 2. Outlet well is not in good condition. (A6) 3. Waste weir is damaged, There is some leakage through waste weir bar.(B7)	Neessary repairs should be carried out in consultation with mehanial organization and CDO.	1. The stem rod for lifting gate is repaired and now stem rod is traight 2. Outlet well is repaired and it is in good condition. 3. The estimate has been prepared, the work will be completed after availability of funds
20	Name : **Undale Tal. Karad Dist. Satara** Date of completion:**1997** Location:Longitude - 74°03'00" Latitude - 10°02'00" Height : 16.60 M Gross capacity : 886.78 **Mcum** Sr.No.In Large Dam Register 2012: **Proposed for updation in NRLD 2018**	13.05.2018 08.11.2018	R.S. Otari District WC officer Satara	Outlet	1. Outlet well is not in good condition. (A6) 2. The stem rod for lifting gate is bent at some places. (B5)	Neessary reapirs should be carried out in consultation with mehanial organization and CDO.	1 & 2. The mechanical dept has been informed about repairs after funds are available the work will be completed
21	Name : **Matekarwadi** Tal. Karad Dist. Satara Date of completion: 2007 Location:Longitude - 74°03'42" Latitude - 17°06'30" Height : 21.08 M Gross capacity : 999.00 **Mcum** Sr.No.In Large Dam Register 2012: **MH09MH1925**	14.05.2018 06.11.2018	R.S. Otari District WC officer Satara	Outlet	1. Outlet well not in good condition. (A6) 2. The stem rod is bent at some places.(B5)	Neessary repairs should be carried out in consultation with mehanial organization.	1 & 2. The mechanical dept has been informed about repairs after funds are available the work will be completed

Sr. No.	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies noticed	Remedial Measures Suggested	Implementation Status
1	2	3	4	5	6	7	8
22	Name : **Kiwal** Tal. Karad Dist. Satara Date of completion: 2007 Location:Longitude - 74°04'14" Latitude - 17°25'19" Height : 19.46 M Gross capacity : 589.2 **Mcum** Sr.No.In Large Dam Register 2012: **MH09MH1923**	14.05.2018 03.11.2018	R.S. Otari District WC officer Satara	EE Outlet W.W	1. There are standing pools of water on downstream side at gorge portion.(A2) 2. Outlet well not in good condition. (A6) 3. The coping over spillway bar is not in good condition.(B7)	Neessary drainage arrangement should be carried out and kept under observation Necessary repairs should be carried out in consultation with CDO and Mechanical organization. It should be repaired.	1 & 2. The mechanical dept has been informed about repairs after funds are available the work will be completed
23	Name : **Jinti** Tal. Karad Dist. Satara Date of completion:**1997** Location:Longitude - **74°03'00"** Latitude - **10°2'00"** Height : **16.60m.** Gross capacity : **Mcum** Sr.No.In Large Dam Register 2012: **Proposed for updation in NRLD 2018**	13.05.2018 08.11.2018	R.S. Otari District WC officer Satara	Outlet	1. Outlet well not in good condition. (A6)	Neessary repairs should be carried out in consultation with mehanial organization and to be checked by field authority and repairs to be carried out.	The mechanical dept has been informed about repairs after funds are available the work will be completed
24	Name : **Tulsan Sawade** Tal. Karad Dist. Satara Date of completion: 2013 Location:Longitude - 74°02'6" Latitude - 17°11'29" Height : 21.31 **m.** Gross capacity : 999.0 **Mcum** Sr.No.In Large Dam Register 2012: **Proposed for updation in NRLD 2018**	16.05.2018 16.11.2018	R.S. Otari District WC officer Satara	Outlet W.W	1. Outlet well not in good condition. (A6)	Neessary repairs sh0uld be carried out in consultation with mehanial organization and CDO.	The mechanical dept has been informed about repairs after funds are available the work will be completed

Sr. No.	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies noticed	Remedial Measures Suggested	Implementation Status
1	2	3	4	5	6	7	8
25	Name : **Yenape** Tal. Karad Dist. Satara Date of completion: Location:Longitude - 74°1'30" Latitude - 17°0'06" Height : 28.28 **m.** Gross capacity : 1063 **Mcum** Sr.No.In Large Dam Register 2012: **Proposed for updation in NRLD 2018**	13.05.2018 08.11.2018	R.S. Otari E.E. SSI(WC) Satara	Outlet W.W	1. Outlet well is not in good condition. (A6) 2. The coping over spillway bar is removed at some placed about 12 out of 33 m.(B7)	Necessary repair should be carried out. It should be repaired.	1. The mechanical dept has been informed about repairs after funds are available the work will be completed 2. The estimate has been prepared, the work will be completed after availability of funds

Table 1.7

Action Taken Report on Deficiency Category-1 of Private dams Class I

Sr. No.	Name of Dam	Date of Inspection	Main component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested	Implimentation Status
1	2	3	4	5	6	7
---------- No Such Dams under this category is reported ----------						

Table 1.8

Action Taken Report on Deficiency Category-2 of Private dams Class I

Sr. No	Dam Features	Date of Inspection	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested	Implementation Status
1	2	3	4	5	6	7
1	Name : **Ambavane** (Gated) Tal. Mulashi Dist. Pune Year of completion : **2000** Location : Longitude **73°25'00"** Latitude- **18°40'00"** Height : **38.76 m** Gross Capacity : **8.575 Mcum** Spillway capacity: **738 m³/sec** Sr.No. in Large Dam Register : **MH09MH1898**	27.03.2018 02.10.2018	Main dam Body EDA	1. Heavy leakage with leaching observed on d/s masonry surface & ogee portion & it is in increasing order, immediate attention is necessary. The leakage measuring arrangement is necessary & record should be maintained. (A11, A12) 2. Pointing is damaged on u/s & d/s face.(B8) 3. At two spots on NOF section heavy water jetting was observed near R/S guide wall.(A11) 4. The pounding water @ d/s side in gorge portion in river bed.(A2)	Necessary remedial action to control leakages should be carried in consultation with CDO Nashik. The record of leaching should be maintained. leaching material should be tested from lab and record should be maintained. Necessary repairs should be carried out. To arrest leakages suitable remedial measures like racking out joints & fill with rich mortar or another suitable material or any suitable method immediately. Drainage arrangement should be done to drain out water from stilling basin. & it is drained out by channeling the river bed to proper gradient.	NOT RECEIVED

Sr. No	Dam Features	Date of Inspection	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested	Implementation Status
1	2	3	4	5	6	7
2	Name : **Kolawali** (Ungated) Tal. Mulashi Dist. Pune Year of completion : **2000** Location : Longitude **73°25'00"** Latitude- **18°40'00"** Height : **43.50 m** Gross Capacity : **2.17 Mcum** Spillway capacity**: 90 m^3/sec** Sr. No. in Large Dam Register : **MH09MH1903**	27.03.2018 02.10.2018	Earth Dam section	1. Slushy,muddy and boggy ground on d/s of right flank was observed with thick vegetation on it & the open C/S drains and toe drains were filled with silt and vegetation.Stagnant water observed on d/s &"v" notches should be provided to measure leakage quantity through drains.(A2) 2. Disturbed pitching on u/s side@ 70-80 m length was observed. (B1) 3. Approach road up to dam is not available for inspection It is difficult to inspect the dam .This issue raised in every inspection but approach road not constructed yet.(B6) 4. The section of dam should be got checked with design section.(B1) 5. Heavy bushesh & trees observed on d/s slope & in toe drain.(B1)	All drains should be cleaned from vegetation & silt.Drainage arrangement should be done to drain out water from stilling basin. & it is drained out by channeling the river bed to proper gradient. It is should be repaired to designed section. It should be provided.The approach road should be constructed on top priority as it is essential in emergency situation and routine inspection of dam. It should be made to design section. It should be uprooted properly.	NOT RECEIVED

Table 1.9

Action Taken Report on Deficiency Category-1 of Private dams Class II

Sr. No.	Name of Dam	Date of Inspection	Main component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested	Implimentation Status
1	2	3	4	5	6	7
---------- No Such Dams under this category is reported ----------						

Table 1.10

Action Taken Report on Deficiency Category-2 of Large Private Dams Class- II

Sr. No	Dam Features	Date of Inspection	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested	Implimentation Status
1	2	3	4	5	6	7
1.	Name :**Kalamba** Tal. Karveer Dist.Kolhapur Date of completion:**1983** Location: Longitude **74°21'27″** Latitude **16°55'41″** Height :**16.26. m.** Gross capacity **2.75 Mcum** Sr.No.In Large Dam Register 2012:**MH09MH1015**	- 13.04.2018	Earth Dam	1. Section of dam not as per design.(B1) 2. Dam alignment was shifted at few points.(B1)	Necessary repairs to be carried out. Dam alignment should be checked as per design. .	NOT RECEIVED
2.	Name : **New Shivsagar** Tal. **Mawal** Dist. **Pune** Date of completion:**1989** Location: Longitude- **73°52'00″** Latitude **18°45'00** Height :**2570 m** Gross capacity **1.81 Mcum** Sr.No.In Large Dam Register **MH09MH1230**	26.04.2017 14.12.2017	Body of dam Gallery	1. Leakage observed at junction of O.F. and NOF mason structure at Ch 150 (A11) 2. Heavy leakage observed at gallery walls and floors. (A12) 3. Porous pipes and foundation drains are choked in gallery in most places (A9) 4. Lightening arrangement in gallery is not satisfactory. Gallery not accessible for drain inspection. (A8)	Necessary actions should be taken. Necessary records should be maintained and remedial should be taken. Gallery should be accessible with proper lightinh arrangement	NOT RECEIVED
3.	Name : **Jaisingrao Talao** Tal. Karveer Dist.Kolhapur Date of completion: 1923 Location: Longitude Latitude Height : Gross capacity **Mcum** Sr.No.In **MH09MH1912**	- 13.04.2018		1. Unauthorized residential quarters were seen in tail channel. (A7) 2. The earth filling was observed in W.W. portion .This reduces the length of W.W.(A17)	Necessary actions should be taken Remove the earth filling.	NOT RECEIVED

Annual Consolidated Health Status Report

of Identified Large Dams In

Pune Region 2019-20

PART – 2

Annual Health Status Report of Identified Large Dams Based on Pre & Post Monsoon 2019 Inspection Reports

(Year 2019)

PART – 2

Annual Health Status Report of Identified Large Dams Based on Pre & Post Monsoon 2019 Inspection Reports

2.1 General

The Government of Maharashtra has issued instructions for pre and post monsoon inspection of the dams. Dam Safety Organization, Nashik has issued guidelines regarding questionnaire for inspecting dams by field officers vide letter (Marathi) DSO/DSD-III/128/47, dated 19-1-1998 and also conveyed discrepancies, errors & omissions noticed after the scrutiny of inspections reports time to time. It is again requested to issue orders to field officers to perform careful inspection according to the guidelines for proper monitoring of safety of dams.

The important information like time schedule of inspection, classification of dams, competent authority of dam inspection, preparation of health status report, categorization of deficiencies, monitoring of deficiency removal program, standard procedure for confirmation and removal of category – I deficiency and suggestions for inspection by field officers are given vide Annexure – 1.

Considering the various deficiencies observed over dams of Maharashtra over last few years, Dams Safety Organization has standardized the category wise deficiencies and these are given vide Annexure – 2.

2.2 Inspections of dam.

A systematic approach & working methodology is very essential to monitor the safety aspects of the dams. Maharashtra which is one of the pioneer state has established an elaborate set up for effective monitoring of dams. The periodical inspections of dams are completed by concerned field officers and the inspection reports are sent to Dam Safety Organization for further action.

Dam Safety Organization, Nashik carries out scrutiny of the inspection reports received from field officers for class-I & II dams, significant & serious deficiencies observed during scrutiny are immediately intimated to field officers to carry out remedial measures. To keep a check on the inspections carried out at field level, Test inspections are carried out by Dam Safety Organization as a third party inspection. The annual Dam inspection program of Dam Safety organization is prepared and is sanctioned by Director General, (D.T.H.R.S.) M.E.R.I., Nashik. In Maharashtra, there are about 52 private dams owned by Tata Power, Sahara India Pvt. Ltd. etc. and by Urban Local bodies and Power generation companies. Dam Safety Organization carries out pre and post monsoon inspections of private dams on consultancy basis.

For Pune region following officers have inspected the dams and taken efforts to prepare this report.

1) Er. S. L. Doiphode, Superintending Engineer, DSO, Nashik
2) Er. N. K. Tayade, Superintending Engineer, (Addl. Charge), DSO, Nashik
3) Er. Y. K. Bhadane, Superintending Engineer, DSO, Nashik
4) Er. M. B. Nakil, Executive Engineer, DSD1, Nashik
5) Er. P. R. Shirsath, Executive Engineer, DSD1, Nashik
6) Er. P. D. Gotarne, Executive Engineer (Addl. Charge), DSD1, Nashik
7) Er. S. R. Aambekar, SDO,DSD1, Nashik
8) Er. K. V. Joshi, SDO,DSD1, Nashik
9) Er. V. Z. Nemade, SDO,DSD1, Nashik
10) Er. R. R. Salunkhe, Assistant Engineer-II, DSD1, Nashik
11) Er. L. I. Dudhal, Junior Engineer, DSD1, Nashik
12) Er. H. P. Deokate, Junior Engineer, DSD1, Nashik

2.2.1 Dam inspection by field officers

In Pune region there are 66 Class - I government owned dams (65 dams & 1 barrage) & 233 Class - II dams. Out of these dams, pre-monsoon inspection reports of 65 Class-I and 233 Class -II dams were received as per schedule and post-monsoon inspection reports of 66 Class-I and 232 Class -II dams were received within time schedule in new revised inspection format issued by CWC.. The circle office wise breakup of dams and status of received inspection report is given in Table 2.1. List of dams of which inspection report were not received in DSO from field officers is given in table no. 2.2.

2.2.2 Dam Inspection by Dam Safety Organization.

As per Annual inspection program, DSO has inspected 08 nos. Class-I dams and 14 nos. of Class-II Govt. dams. Also 10 class- I & 08 class-II private dams in the region were inspected by DSO on consultancy basis. List of dams inspected is given in table 2.3 Also the photographs of some of inspections by Dam Safety Organization are appended as Annexure –3

2.3 Overall health status of large dams

Circle wise number of large dams in Pune region where deficiencies are noticed are summarized and given in Table no. 2.4. Dam wise number of category – II deficiencies noticed are given in Table no 2.5. Over all there are 299 dams and there are 111 Govt. dams where category – II deficiencies are noticed. Agency wise, dam wise and category wise detailed status is given in next sections.

2.4 Health Status Report of Class-I dams

2.4.1 Health Status Report of Class-I dams with Category-1 deficiency.

Details of Class-I dams with Category 1 deficiency are given in table 2.6. Out of 66 dams no dam is reported under this category.

2.4.2 Health Status Report of Class-I dams with Category-2 deficiency.

Out of 66 dams 48 dams have been identified as having Category- 2 deficiencies. Details of class – I dams, with category – 2 deficiencies are given in table 2.7.

2.4.3 Health status report of Class-I dams with Category - 3 or NIL deficiency.

Out of 66 dams 66 dams have been identified as having category-3 or minor deficiencies and 0 dams having NIL deficiencies. Details of class-I dams with category – 3 or Nil deficiency are given in table 2.8.

2.5 Health Status Report of Class-II dams

2.5.1 Health Status Report of Class--II dams with Category-1 deficiency.

Out of 233 dams no dam is reported under this category. Details of class – II dams, with category – 1 deficiency are given in table 2.9.

2.5.2 Health Status Report of Class-II dams with Category-2 deficiency.

Out of 233 dams 63 dams have been identified as having category-2 deficiencies. Details of class – II dams, with category – 2 deficiencies are given in table 2.10.

2.5.3 Health Status Report of Class-II dams with Category-3 or NIL deficiency.

Out of 233 dams 233 dams have been identified as having category-3 deficiencies and 0 dams having NIL deficiencies. Details of class – II dams, with category – 3 or Nil deficiencies are given in table 2.11.

2.6 Health Status Report of Class-III dams

2.6.1 Criteria of Inspection of Class –III dams.

The Govt. of Maharashtra has restricted the scope of DSO in monitoring safety aspects to the extent of identified large dams i.e. Class-I and Class-II dams only in view of large no. of dams and limited staff of DSO. The safety monitoring of other large dams (Class-III) including preparation of HSR rests with the respective regional Chief Engineers.

Hence every year for Class III dams, based on inspection report, HSR of Class – III dams need to be prepared by respective Chief Engineer and sent it to Dam Safety Organization for record.

2.6.2 Districtwise and Classwise break up of number of dams

Classwise Number of dams in each district are given as below..

District	Class 1	Class 2	Class 3	Total
Pune	24	49	16	89
Satara	12	40	9	61
Sangli	3	54	26	83
Kolhapur	21	61	6	88
Solapur	3	25	43	71
Ratnagiri	1	0	0	1
A. Nagar	1	4	0	5
Osmanabad	1	0	0	1
Total	**66**	**233**	**100**	**399**
Private	7	8	0	15
Grand Total	**73**	**241**	**100**	**414**

Graphical representation of district wise and class wise dams in the region is given vide Chart No.1

2.7 Health Status Report of Private Class-I dams

2.7.1 Health Status Report of Private Class-I dams with Category-1 deficiency.

Out of 07 dams no dam is reported under this category. Details of class-I Private dams with category 1 deficiency given in Table 2.12.

2.7.2 Health Status Report of Private Class-I dams with Category-2 deficiency.

Out of 07 dams 02 dams have been identified as having category-2 deficiencies. Details of class-I Private dams with category 2 deficiency given in Table 2.13.

2.7.3 Health status report of Private Class-I dams with Category-3 deficiency.

Out of 07 dams 07 dams have been identified as having category-3 deficiencies. Details of class-I Private dams with category 3 deficiency given in Table 2.14.

2.8 Health status report of Private Class-II dams

2.8.1 Health status report of Private Class-II dams with Category-1 deficiency.

Out of 08 dams no dam is reported under this category. Details of class-I Private dams with category 1 deficiency given in Table 2.15.

2.8.2 Health status report of Private Class-II dams with Category-2 deficiency.

Out of 08 dams all the 03 dams have been identified as having category-2 deficiencies. Details of class-II Private dams with category 2 deficiency given in Table 2.16.

2.8.3 Health status report of Private Class-II dams with Category-3 deficiency.

Out of 08 dams all the 08 dams have been identified as having category-3 deficiencies. Details of class-II Private dams with category 3 deficiency given in Table 2.17.

2.9 Observations

1. **Significant category I & II Deficiency wise** list of dams for Class-I & Class-II dams is given in Table 2.18 and in Table 2.19 respectively. Also graphical representation of significant category I & II deficiencies observed for Class-I & II dams are shown in chart 2 & chart -3 respectively.
2. **Top five major deficiencies found in Class-I dams in Pune region are as follows -**
   a) **B 5:** Outlet gates not functioning properly. Stem rod is bent (Service gate / Emergency gate/Stop log gate/sluice gate) (22 Dams)
   b) **B9:** Instruments not in working condition. (19 Dams)
   c) **A 11:** Sweating / seepages through D/S of masonry dam Leakage /Seepage through dam body. (16 Dams)
   d) **A 14:** EDA / Stilling basin damaged/Hydraulic performance not good. (13 Dams)
   e) **A 9:** Foundation drains / porous pipes/chocked/ no seepage through foundation drain holes. (13 Dam)
   f) **A 12:** Excessive considerable leaching from seepage water. (12 dams)
3. **Likewise top five major deficiencies found in Class-II dams are –**
   a) **B7:** Waste weir/waste weir bar not in good condition/coping damaged/leakage through waste weir.W.W. Bar is damaged / Coping of w.w. Bar damaged. (23 dams)
   b) **B 5:** Outlet gates not functioning properly. Stem rod is bent(Service gate/Emergency gate/Stop log gate/sluice gate). (15 Dams)
   c) A6: Outlet well is damaged/not in good condition /cracks observed/jets of water in well. (12 dams)
   d) **A1:** Boil leakage/ seepage/ wet patches/ slushiness in Earthen Dam. (09 dams)
   e) A 2: Standing pool / Ponding / Water Logging / Slushy condition on D/S of Dam (08)

Table 2.1

Status of receipt of Pre / Post monsoon inspection reports - 2019

Sr No	Name of Office	Total dams			Both Pre & Post IR received			Either Pre or Post IR received			Pre & Post both IR not received		
		Class -I	Class -II	Total	Class-I	Class -II	Total	Class-I	Class-II	Total	Class-I	Class-II	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14
	[A] C.E (W.R.) Pune												
1	SE PIC Pune	15	47	62	15	46	**61**	00	01	**01**	0	0	0
								00	00	**00**			
2	SE PIPC Pune	02	01	3	02	01	**03**	00	00	**00**	0	0	0
								00	00	**00**			
3	SE SIC Sangli	3	53	56	3	53	**56**	00	00	**00**	0	0	0
								00	00	**00**			
4	SE KIC Kolhapur	22	39	61	22	39	**61**	00	00	**00**	0	0	0
								00	00	**00**			
5	SE SIC Satara	06	21	27	06	21	**27**	00	00	**00**	0	0	0
								00	00	**00**			
	[B] C.E., S.P, Pune												
1	SE Kukadi IC Pune	08	12	20	07	12	**19**	00	00	**00**	**0**	**0**	**0**
								01	00	**01**			
2	S.E.SIPC. Satara	06	03	9	06	03	**09**	00	00	**00**	**0**	**0**	**0**
								00	00	**00**			
3	SE & Adm, CADA, Solapur	3	16	19	3	16	**19**	00	00	**00**	**0**	**0**	**0**
								00	00	**00**			
4	SE,BCC, Solapur	0	3	3	0	3	**3**	00	00	**00**	**0**	**0**	**0**
								00	00	**00**			
5	SE, OIC Osmanabad	1	0	1	1	0	**1**	00	**00**	**00**	**0**	**0**	**0**
								00	**00**	**00**			
	[C] C.E., SSI, Pune												
1	S.E SSI(WC) Pune**[**	0	38	38	0	38	38	00	00	**00**	**0**	**0**	**0**
								00	00	**00**			
	PRIVATE DAMS												
1	DSO, Nashik	07	08	15	07	08	15	00	00	**00**	0	0	0
								00	00	**00**			
	Grand Total	**73**	**241**	**314**	**72**	**240**	**312**	**01**	**01**	**02**	**0**	**0**	**0**

Table 2.2

List of Dams of which Inspection Reports were not received

Sr. No	Name of Dam	Name of Dam of which inspection reports not received					
		Both for Pre & Post-2019		Either Pre or Post-2019			
				Pre Monsoon 2019		Post Monsoon 2019	
		Class-I	Class-II	Class-I	Class-II	Class-I	Class-II
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
1	Banganga	-	-	-	-	-	Not Received
2	Sina	-	-	Not Received	-	-	-

Table 2.3

List of dams inspected by Dam Safety Organization, Nashik

Officers from Dam Safety Organization Nashik have inspected following dams from 01/04/2019 to 31/03/2020 and inspection notes have been issued to concerned field officers.

Sr.No.	Name of Dam	Category	Date of Inspection
National Important Dams -			
1.	Ujjani	I	08.01.2020
2.	Koyna	I	
Class-I Dams			
1.	Vadivale	I	01.10.2019
2.	Jadhavwadi	I	01.10.2019
3.	Ekrukh	I	09.01.2020
4.	Ghod	I	08.01.2020
5.	Hingni	I	09.01.2020
6.	Koregaon	I	09.01.2020
Class-II Dams			
1.	Guhe	II	18.09.2019
2.	Parunde	II	18.09.2019
3.	Yenere	II	18.09.2019
4.	Bhugaon	II	18.11.2019
5.	Ambegaon	II	18.11.2019
6.	Wagajwadi	II	18.11.2019
7.	Mahakoshi	II	18.11.2019
8.	Pingori	II	19.11.2019
9.	Girzani	II	19.11.2019
10	Tisangi	II	19.11.2019
11.	Pingali	II	19.11.2019
12.	Kankatrewadi	II	20.11.2019
13.	Shivajinagar (Nhavi)	II	20.11.2019
14	Malad	II	20.11.2019
Private Dams -			
Class-I			
1.	Mulashi	I	22.04.2019
2.	Walvan	I	17.09.2019
3.	Thokarwadi	I	17.09.2019
4.	Shirwata	I	17.09.2019
5.	Ambawane	I	18.09.2019
6.	Visakhar	I	18.09.2019
7.	Kolawali	I	18.09.2019
8.	Karcham-Himachal Pradesh	I	17.11.2019
9.	Kuppa- Himachal Pradesh	I	18.11.2019
10.	Nathpa-Himachal Pradesh	I	19.11.2019
Class-II			
1.	Lonawala	II	16.09.2019
2.	Kundali	II	17.09.2019
3.	INS Old Shivsagar	II	17.09.2019
4.	INS New Shivsagar	II	17.09.2019
5.	Rankala	II	18.12.2019
6.	Kalamba	II	18.12.2019
7.	Jaysingrao Talao	II	19.12.2019
8.	Sir Pirajirao Talao	II	19.12.2019

Table 2.4

Circle wise no. of large dams where deficiencies are noticed

Sr.No	Name of Office	Total dams			Large Dam Class-I			Large Dam Class-II		
		Class-I	Class-II	Total	Def. Cat-1	Def. Cat-2	Def. Cat-3 Minor	Def. Cat-1	Def. Cat-2	Def. Cat-3 Minor
1	2	3	4	5	6	7	8	9	10	11
[A] C.E (W.R.) Pune										
1	SE PIC Pune	15	47	**62**	0	15	15	0	17	47
2	SE PIPC Pune	02	01	**03**	0	02	02	0	0	01
3	SE SIC Sangli	3	53	**56**	0	2	3	0	12	53
4	SE KIC Kolhapur	22	39	**61**	0	10	22	0	4	39
5	SE SIC Satara	06	21	**27**	0	06	06	0	06	21
[B] C.E., S.P, Pune										
1	SE Kukadi IC Pune	08	12	**20**	0	08	08	0	02	12
2	S.E.SIPC. Satara	06	03	**09**	0	02	06	0	02	03
3	SE&Adm, CADA, Solapur	3	16	**19**	0	2	3	0	3	16
4	SE,BCC, Solapur	0	3	**3**	0	0	0	0	1	3
	SE, OIC, Osmanabad	1	0	**1**	0	1	1	0	0	0
[B] C.E., SSI, Pune										
1	S.E SSI(WC) Pune	0	38	38	0	0	0	0	16	38
	Total	**66**	**233**	**299**	**0**	**48**	**66**	**0**	**63**	**233**
PRIVATE DAMS										
1	DSO, Nashik	7	8	15	0	2	7	0	3	8
	Grand Total	**73**	**241**	**314**	**0**	**50**	**73**	**0**	**66**	**241**

Table 2.5

Dam wise number of Category-2 deficiencies noticed

Sr. No	Name of Dam	No. of deficiencies noticed
1	2	3
CLASS-I DAMS		
[A]C.E.(Water Resources) Water Resource Department, Pune		
(1) S.E, P.I.C. Pune		
1	Bhatghar	08
2	Jadhavwadi	07
3	Kasarsai	05
4	Nira Deoghar	07
5	Andra Valley	07
6	Vadivale	10
7	Khadakwasala	08
8	Panshet	06
9	Pawana	08
10	Varasgaon	09
11	Chaskaman	13
12	Arala Kalmodi	05
13	Bhama Aaskhed	04
14	Veer	04
15	Nazare	03
S. E P.I.P.C. Pune		
16	**Temghar**	05
17	**Gunjawani**	05
SE, SIC, Sangli		
18	**Morna**	1
19	**Satapewadi Barrage**	3
S. E. K. I.C.Kolhapur		
20	Radhanagari	7
21	Warana	7
22	Megholi	1
23	Dudhaganga	12
24	Kumbhi	1
25	Paleshwar	1
26	Tulshi	1
27	Ghataprabha	5
28	Jambre	1
29	Jangamhatti	2
S.E. SIC Satara		
30	Dhom	06
31	Dhom Balkawadi	06
32	Kolkewadi	06
33	Koyana	01
34	Kanher	12
35	Urmodi	02

Sr. No	Name of Dam	No. of deficiencies noticed
1	2	3
[B]C.E.(Specified Projects) Water Resources Department, Pune		
S.E. KIC Pune		
36	Manikdoh.	12
37	Dimbhe	11
38	Pimpalgaon-Joge	06
39	Wadaj	07
40	Yedgaon	01
41	Ghod	12
42	Chilewadi	05
43	Sina	05
S.E Satara Irrigation Project Circle, Satara		
44	Nagewadi	02
45	Tarali	05
S. E & ADM; C.A.D.A. Solapur		
46	Ujjani	7
47	Ekruk	1
SE, OIC, Osmanabad		
48	Sina Kolegaon	7

CLASS-II DAMS		
GOVT DAMS		
[A] C.E. (Water Resources), Pune		
S.E., Pune Irrigation Circle, Pune		
E.E. Pune Irrigation Division, Pune		
Sr. No	**Name of Dam**	**No. of deficiencies noticed**
1	Urawade	01
2	Chinchwad	01
3	Mahakoshi	01
4	Maranewadi	01
E.E. Khadakwasala Irrigation Division, Pune		
5	Matoba	01
6	Shirsuphal	01
7	Bhugaon	02
8	Malad	01
9	Palasdev	01
E.E, Nira Left Bank Canal Division, Phaltan		
10	Naigaon	04
11	Hingangaon	01
12	Tambave	01
E.E, Chaskaman Irrigation Division, Pune		
13	Nimgaon Mhalungi	01
E.E, Lift Irrigation Management Division, Pune		
14	Malwande	01
15	Pilanwadi	01
16	Thitewadi	01
17	Veernala	01
S.E Sangali Irrigation Circle, Sangali		
EE, Sangli Irrigation Division, Sangli		
18	Antri	1
19	Revnal	1
20	Tippehalli	1
E.E,Tembhu Irrigation project Management Division, Ogalewadi		
21	Buddhihal	1
22	Dighanchi	1
23	Ghanand	2
24	Karandewadi	1
25	Morale	2
26	Nimbhavade	2
27	Pare	1
28	Vejegaon	1

EE, Minor Irrigation Division, Sangli		
29	Mahadikwadi	1
S.E Kolhapur IrrigationCircle, Kolhapur		
E.E. Kolhapur Irrigation Division (North), Kolhapur		
30	Daryachevadgaon	1
31	Kumbhavade	1
32	Padsali	1
E.E. Kolhapur Irrigation Division(South), Kolhapur		
33	Yenechiwanti	1
S.E. Satara Irrigation Circle, Satara.		
E.E, Krishna Irrigation Division, Satara		
34	Kankatrewadi	02
35	Thoseghar	03
36	Ner	01
37	Pingali	01
38	Yeralwadi	01
E.E, Koyana Irrigation Division, Koyananagar		
39	Chaphal	01
[B] C.E. (Specified Projects), Pune		
S.E. & Admn. C.A.D.A. Solapur		
EE, Solapur Irrigation Division, Solapur		
40	Kazikanbus	1
41	Rajuri	1
E.E. Bhima Developement Division No.2, Solapur		
42	Ashti	1
SE, Bhima Canal Circle,Solapur		
EE, Minor Irrigaton Division No.1, Solapur		
43	Babhulgaon	1
Superintending Engineer, Kukadi Irrigation Circle, Pune		
EE, Kukadi Irrigation Division No. 1, Narayangaon		
44	Anepemdara	02
45	Ramjiwadi	02
Superintending Engineer, Satara Irrigation Project Circle, Satara		
EE, Minor Irrigation Division, Satara		
46	Mahind	01
47	Kalgaon	01
[C] Chief Engineer, SSI, Pune		
Superintending Engineer, SSI, Pune		
Executive Engineer, SSI, Sangli		
48	Umrani-2	1

E.E Small Scale Irrigation (Water Conservation) Kolhapur		
49	Chandoli	2
50	Barki	2
51	Nittur	1
52	Bhandarwadi	2
53	Ijoli	1
54	Velavatti	2
55	Awachitwadi	1
E.E Small Scale Irrigation (Water Conservation) Satara		
56	Naigaon -2	3
57	Undale	3
58	Matekarwadi	3
59	Kiwal	3
60	Jinti	6
61	Tulsan Sawade	1
62	Yenape	2
63	Palsawade	1
PRIVATE DAMS		
Class-I Dams		
Sahara India Pvt. Ltd,Lonwala,Pune		
1	Ambawane	4
2	Kolwali	5
Class-II Dams		
kolhapur Munipal Corporation,Kolhapur		
1	Kalamba	2
2	Jaysinghrao	2
INS Shivaji, Indian Navy,lonwala		
3	New shivsagar (INS)	4

Table 2.6

Damwise Health status report of Class-I dams with category-1 deficiency

Sr. No.	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Observation / Significant Deficiencies noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
---------- No Such Dams under this category is reported ----------						

Table 2.7

Damwise Health Status Report of Class-I Dams with Category-2 deficiency

Sr.No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
[A]Chief Engineer (W.R.), Water Resources Department, Pune						
(1) Superintending Engineer, Pune Irrigation Circle, Pune						
(a) Executive Engineer, Pune Irrigation Division, Pune 1						
1	Name : **Bhatghar** (Gated) Tal. Bhor Dist.Pune Year of completion : **1926** Location : Longitude **73^{0}52'** Latitude **18^{0}11'** Height : **57.62 m** Gross Capacity : 672.**65 Mm^3** Spillway capacity:**1600 m^3/sec** Sr.No.In Large Dam Register 2009: **MH09HH**0048	01.06.2019 08.11.2019	Shri.S.D. Chopade, S.E. P.I.C. Pune	Outlet Main Dam Spillway Gate Gallery Body Wall	1. Vibrations & noise noticed in operation of outlet gate (B 5) 2. Existing pointing on u/s side of dam body & D/s side face of south spillway damaged. Extent of damage not mentioned in report.(B8) 3. Due to missing/loose nut bolts of guide frame. Leakages from them is observed.(B5) 4. Nut bolts of guide frame are not in good condition & need to be replaced. Due to missing or loose bolts, there are leakages.(B12) 5. There is no proper ventilation & lighting & handrails arrangement. (A8) 6. Problems of inadequate drainage-Clogged porous pipes. (A8) 7. There been considerable leaching observed from the seepage water and deposition of line near the seepage exit spots(A12) 8. The existing pointing on U/S side is in lime mortar and it seems to be slightly weak	Repairs should be carried out in consultation with Mechanical Organization. Extent of damage needs to mentioned competent field inspecting authority and after confirmation of deficiency necessary remedial measures needs to be carried out. Repairs should be carried out in consultation with Mechanical Organization. Proper arrangement should be made. It should be kept under observation & leaching material should be sent to MERI, Nashik Lab for testing. Necessary repairs shall be carried out.

Sr.No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
					(broken / washed out), hence in between FRL to GL U/S surface pointing is required to repair with epoxy material.(B8)	
				EDA	9. Due to erosion in central spillway stilling basin, pond cannot be drained automatically below the adjacent nala bed level.(A14)	Necessary remedial measures should be carried out.
				End Weir	10. The check wall / end weir is damaged & erosion is observed at D/S of End weir.(A17)	Necessary remedial measures should be carried out.
				General	11. Uplift pressure cell & Water stage recorder are not working.(B9)	Necessary repair should be done in consultation with IRD, Nashik.
2	Name : **Vadivale**(Gated) Tal. Maval Dist.Pune Year of completion : **1999** Location : Longitude **73^{0}31'16"** Latitude **18^{0}49'20"** Height : **29.00 m** Gross Capacity: **40.87. Mm^3** Spillway capacity: **746.82m^3/sec** Sr.No.In Large Dam Register 2009: **MH09MH1517**	22.05.2019 15.12.2019	Shri.S.D. Chopade, S.E. P.I.C. Pune	Masonry dam	1. Spillway ogee is not smooth & big cavities, pot holes are observed on ogee surface. (A15)	Necessary remedial measures should be carried out.
					2. Significant leakage at Over Flow Section & non over flow section junction on downstream face(A15)	Location & quantum of leakage should be investigate causes of leakage should be ascertained & proper remedial measures to prevent leakages should be carried out.
					3. Deterioration to over flow section observed.(B8)	
				Spillway	4. Leakage observed through spillway comes from Pier & through body of spillway.(A11)	
					5. Heavy leakage through junction of guide wall & canal wall. (A15)	Leakages should be attended in time by providing suitable remedial measures after ascertaining the exact cause of leakage.
					6. Concrete at crest level of spillway is damaged and needs rectifications.(B7)	

Sr.No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
				Wall Intake well	7. Pointing of u/s face of masonry & intake well is damaged. Heavy leakages are observed through UCR wall of intake well on both side of dam.(A6)	Scouring should be kept under observation. Repairs should be carried out in consultation with Mechanical Organization
				EDA	8. Scouring observed on d/s of EDA.(A7) 9. The portion of stilling basin concrete (40x6m) broken. (A14)	Leakages should be attended in time by providing suitable remedial measures after ascertaining the exact cause of leakage.
				Outlet	10. Heavy leakage through both irrigation outlet.(A4)	Leakages should be attended in time by providing suitable remedial measures after ascertaining the exact cause of leakage.
				Junction of Earth work with masonary / concrete	11. Leakage springs or wet spots are observed in vicinity of the junctions between earth work and masonry work (A 16)	
				River oulet/ Sluice	12. The heavy leakage observed from wall of intake wells & which is collected in conduit.(B10)	Leakages should be attended in time by providing suitable remedial measures after ascertaining the exact cause of leakage.

Sr.No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
3	Name : **Kasarsai**(Gated) Tal. Mulashi Dist.Pune Year of completion : **1995** Location : **73^{0}40'00"** Latitude **18^{0}35'30"** Height : **36.0 m** Gross Capacity : **17.38** Mm^3 Spillway capacity : **933.00 m^3/sec** Sr.No.In Large Dam Register 2009: **MH09MH1373**	22.05.2019 26.11.2019	Shri.S.D. Chopade, S.E. P.I.C. Pune	Earth dam Outlet Junction of Earth work with Masonry WW Bar Outlet Gates	1. Boils observed from Ch. 300 to 360 at RL 622.50 to 625.00 m. Wet and slushy patches are observed at Ch.300 to 360 m on d/s slopes at R.L. 622.210m. As per field inspection report this leakages are not endanger to the dam, it should be kept under observation.(A1) 2. Leakages are observed through divide wall and outlet of LBC& RBC upto 1 to 2 cusec. (A15) 3. Leakages through left & right bank canal partition wall.(A4) 4. Wet spots are observed in vicinity of the junction between earth work and masonry work.(A1) 5. Water ponding in stilling basin, (A2) 6. The surface of gates and the paints is deteriorated. (B11)	This deficiency should be kept under observation and after confirmation by competent field authority, if necessary repair should be carried out in consultation with CDO, Nashik. Leakage path should be ascertained & necessary repairs to reduce leakage should be carried out. Both rubber seals need to be changed. Leakage path should be ascertained & necessary repairs to reduce leakage should be carried out Necessary remedial measures should be carried out. Necessary remedial measures should be carried out. Necessary repairs should be carried out in consultation with Mechanical Organization.
4	Name : **Jadhavwadi** (Gated) Tal. Maval Dist.Pune Year of completion : **2001** Location : **73^{0}43'00"** Latitude **18^{0}47'00"** Height : **35.52 m** Gross Capacity : **12.03** Mm^3 Spillway capacity : **664.14.00 m^3/sec** Sr.No.In Large Dam Register 2009: **MH09HH1587**	26.11.2019	Shri.S.D. Chopade, S.E. P.I.C. Pune	Spillway Outlet Gates	1. The obstructions observed in or immediately downstream of the spillway.(A17) 2. The full length of the wire rope of the hoist is not in serviceable condition.(A18) 3. The rollers are not well lubricated.(A20) 4. The rubber seals of sides and bottom are not touching the bearing surface uniformly.(B5) 5. The stem rods for lifting the gates are not perfectly	Necessary remedial measures should be carried out. Necessary repairs should be carried out in consultation with Mechanical Organization. Necessary repairs should be carried out in consultation with Mechanical

Sr.No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
					straight.(B5)	Organization.
				U/s slope	6. Concavity appears from ch.480 m. to 545 m. and between ch.810 m. to 980 m. on U/S slope & pitching settled down.(B3)	
				Crest of Dam	7. There are signs of excessive and/or uneven settlement between ch. 400 to 700 & Ch. 850 to 990.(B3)	Necessary remedial measures should be carried out.
					8. Pitching settlement in between chainage 480 to 545 m and Ch 810 to 980 m.(B15)	
				U/s Face	9. Coping of spillway bar is damaged. (B7)	
				WW Bar		
5	**Name : Nira Devghar (Gated)** Tal. Bhor Dist.Pune Year of completion : **2007** Location : **$73^0$43'36"** Latitude **$18^0$06'18"** Height : **58.525m** Gross Capacity : **337.39** Mm^3 Spillway capacity : **1852.00 m^3/sec** Sr.No.In Large Dam Register 2009: **MH09HH1554**	09.11.2019	Shri.S.D. Chopade, S.E. P.I.C. Pune	WW Bar	1. There is scouring in central spillway stilling basin and concrete filling is proposed to prevent further scouring.(A7)	
					2. D/S face @ south spillway needs grouting with epoxy pointing repairing.(A15)	
					3. Guide wall beyond Check Weir is damaged(A16)	Necessary remedial measures should be carried out.
				Gallery	4. Problems of inadequate drainage - 29 Clogged porous pipes out of 48 nos.(A9)	
				Outlet	5. The energy dissipation arrangement is not working satisfactorily -Bed concrete is disturbed.(A14)	
					6. The flow conditions in the stilling basin (or bucket) have a tendency to draw material into the bucket.(A14)	

Sr.No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
				Body Wall General	7. Leaching @ some extent is noticed.(A12) 8. The Plumb bomb, Uplift pressure cell & Piozometer pressure cells are not working.(B9)	Necessary repair should be done in consultation with IRD, Nashik.
6	**Name-Andravalley (Ungated)** Tal.Maval Dist.Pune Year of completion : **2003** Location : **$73^0$39'00"** Latitude **$18^0$20'00"** Height : **34.50m** Gross Capacity : **83.31** Mm^3 Spillway capacity : **3021.00 m^3/sec** Sr.No.In Large Dam Register 2009: **MH09HH1622**	26.11.2019	Shri.S.D. Chopade, S.E. P.I.C. Pune	Gallery D/s Face	1. Drainage gallery is full of water up to bottom of inspection gallery. Sump pit are not running, inadequate drainage.(A8) 2. Foundation gallery not accessible due to flooding during inspection.(A8) 3. Excessive seepage/sweating along gallery/shaft observed.(A10) 4. Seepage through porous pipes, foundation drains & monolith joints collected in Gravity chamber @ D/s of EDA.(A10) 5. Significant or excessive leakage along gallery/shaft/porous drain observed.(A10) 6. Almost all porous pipes in inspection gallery are blocked.(A9) 7. The deterioration of pump and associated equipment observed.(A8) 8. Concrete/masonry deterioration (B8) 9. Excessive seepage/sweating	Necessary remedial measures should be carried out

Sr.No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
					on downstream face observed. (A11) 10. Significant leakage on downstream face observed. (A10)	
				Spillway	11. Light sweating observed at foundation gallery.(A11)	
				EDStructure	12. The problems with under drainage - 29 drain holes are partially blocked.(A9)	Necessary remedial measures should be carried out
				Outlet Gates	13. The surface of gates and the paints is deteriorated (B11) 14. Leakages are observed through rubble seals. Electric wiring and electric motor requires to be repaired. (B5)	
(b) Executive Engineer , Khadakwasala Irrigation Division, Pune 11						
7	Name : **Panshet**(Gated) Tal. Velhe Dist.Pune Year of completion : **1972** Location : Longitude **73^{0}37'** Latitude **18^{0}22'** 5Height : **63.56 m** Gross Capacity : **303 Mm^3** Spillway capacity : **1162.0 m^3/ sec** Sr.No.In Large Dam Register 2009: **MH09HH0310**	21.05.2019 28.11.2019	Shri.S.D. Chopade, S.E. P.I.C. Pune	Outlet	1. Operation of HLIO gate no. 2 is not smooth.Also operation of EG is not smooth.(B5)	Necessary repairs should be carried out in consultation with Mechanical Organization.
					2. Leakage through lift joint concrete of LLIO.(B5)	
				Power Outlet	3. Overall condition of power outlet is not satisfactory and D/S excavation slopes are not stable & loose rock pieces are falling on roof of power house.(B 3)	Necessary repairs should be carried out out in consultation with Mechanical Organization. Necessary repairs should be carried out
				W.W & TC	4. There is retrogression (progressive erosion) in tail channel observed due to existence of red amoadialed basalt of depth 1 to 2 m. Also guide wall is damaged. The progressive erosion observed in tail channel. (A7)	Scouring should be kept under observation; Proper remedial measure should be carried by approval of competent authority.

Sr.No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
				Body Wall	5. There has been considerable leaching from the seepage water and deposition of lime near the seepage exit spots. (A12)	It should be kept under observation & leaching material should be sent to MERI/ Lab for testing.
				Instrumentation	6. Piezometers are out of order.(B9)	Necessary repair should be done in consultation with IRD, Nashik.
				Spillway Gates	7. The damage or wear caused to the seal plates observed. (B12)	Necessary repairs should be carried out out in consultation with Mechanical Organization.
8	Name:**Khadakvasala**(Gated) Tal. Haveli Dist.Pune Year of completion : **1879** Location : Longitude **73^{0}45'** Latitude **18^{0}25'** Height : **32.92 m** Gross Capacity : **86 Mm^3** Spillway capacity :**2755 m^3/ sec** Sr.No.In Large Dam Register 2009: **MH09HH0013**	21.05.2019 28.11.2019	Shri.S.D. Chopade, S.E. P.I.C. Pune	Earth Dam	1. Standing pool observed on D/S of Dam at Ch 1066 to 1095 m. (A2).	Suitable drainage arrangement should be done to drain out the water.
				Spillway	2. Seepage & sweating observed on D/S dam near spillway cabin Chainage 1021.60 to 1026.75 and ch.105 m to 120m and Ch 631m to 646 m. (A11).	Seepage & sweating be monitored and necessary remedial measures be taken.
				W.W & TC	3. The seepage is observed from outlet provided at ch. 0/035 to 0/040m and 0/060 to 0/150m (A11)	It should be kept under observation and verification of comptant authority remedial measures should be taken if necessary.
					4. Erosion of tail channel i.e. Scouring observed on D/S of EDA bet ch 1134 to 1163 m and 1066 to 1095 m. (A7) (A17)	Proper remedial measure should be taken and scouring should be monitored & prevent the further scouring.
					5. The coping over the spillway bar is not in good condition.(B7)	It should be repaired properly.
				EDA	6. Some friction blocks are damaged. (A14)	It should be repaired properly. Necessary repairs should be carried

Sr.No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
				Outlet Gates Instrumentation	7. The stem rod for lifting the gates is not perfectly straight. (B5) 8. Only Pan Evaporimeter is in working condition, Piezometer & Water Stage Recorder are out of order. (B9)	out in consultation with Mechanical Organization. Necessary repairs shall be done in consultation with IRD, Nashik.
9	Name : **Warasgaon**(Gated) Tal. Velhe Dist.Pune Year of completion : **1972** Location : Longitude **73^{0}37'** Latitude **18^{0}23'** Height : **63.40 m** Gross Capacity **: 374.00 Mm^3** Sr.No.In Large Dam Register 2009: **MH09HH0592**	21.05.2019 28.11.2019	Shri.S.D. Chopade, S.E. P.I.C. Pune	Masonry dam Gallery Dam body Body Wall Tail Channel & WW Bar Outlet	1. Heavy leakages in foundation & inspection gallery are 217.00 lps on Dt. 18.08.2018. (A10) 2. Excessive seepage/sweating at M6, M11, M12, M13 observed along gallery/shaft (A10) 3. Some drain holes in gallary are chocked (A9) 4. There is exessive seepage sweating at the monolith no. 8, 9, 10 &12 on the downstream face of the dam.(A11) 5. Considerable leaching from seepage water.(A12) 6. Tail channel retrogression (D/S Side erosion at toe and at foundation of end weir) Reported but canot inspected due to standing water needs verification.(A7) 7. Erosion of foundation of end weir at stilling basin observed (A16) 8. There are leakages through	Necessary repairs should be carried out out in consultation with Mechanical Organization. Foundation drain holes should be cleaned for effective drainage. It should be kept under observation and necessary remedial measure to be taken by permission of field competent authority. It should be kept under observation and necessary testing needs to taken. Confirmation of deficiency needs to be given by field inspecting authority. Necessary repairs should be carried out out.

Sr.No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
					divide wall and it is from foundation gallery's C/S drains.(A15)	
					9. Leakage is observed in lift joints of concrete in outlet wall. (A6)	Necessary repairs should be carried out out.
				Downstream Drainage	10. The portions of longitudinal toe drain and exposed cross drains beyond the downstream toe of the dam is not in regular section and freely draining (B2)	Necessary repairs should be carried out out
				Instrumentation	11. Piezometer & Water Stage Recorder are out of order. (B9)	Necessary repairs shall be done in consultation with IRD, Nashik.
10	Name : **Pawana** (Gated) Tal. Bhor Dist.Pune Year of completion : **1972** Location : Longitude **73^{0}40' 30** Latitude **18^{0}21 30'** Height : 42.37 m Gross Capacity : 305 Mm^3 Spillway capacity:1250 m^3/sec Sr.No.In Large Dam Register 2009: **MH09HH** 0311	21.05.2019 29.11.2019	Shri.S.D. Chopade, S.E. P.I.C. Pune	Earth dam	1. Toe drains & cross drains are not freely draining.(B2)	Necessary repairs should be carried out.
				Gallery	2. There has been substantial progressive reduction in seepage through the foundation it is due to chocking of 37 Nos drain holes at ch. 430 to 455 m.(A9)	Drain holes should be cleaned.
				Spillway	3. In tail channel of w.w. retrogression needs to be arrested by providing suitable remedial measures.(A7)	Proper remedial measure should be taken and scouring shall be monitored & prevented further scouring.
				End Weir	4. At some places concrete superficial layer deteriorated in opening span of gate no. 1 & 3 at bottom part touching to stilling basin.(B8)	Fiels authority needs to verify the dam section as per design section and necessary remedial measures needs to be carried out accordingly.
					5. On some location cement	

Sr.No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
				Downstream Face Hydro-Mechanical Component	concrete is eroded. At present, huge boulders with water, seen on immediate downstrem of weir (A17) 6. Mild sweating observed on d/s face of masonry. (A11) 7. The alternative power system for gate operation is not working properly. (A19) 8. Minor leakage at sill of gate no. 6, when totally lowered. (B12)	The alternative power system should be kept ready for emergency. Proper remedial measures to be taken in consultation with Mechanical Organization.
(c) Executive Engineer , Chaskaman Irrigation Division, Pune 11						
11	Name : **Chaskaman(**Gated) Tal. Khed Dist.Pune Year of completion : **1999** Location : Longitude **73^{0}47'** Latitude **18^{0}57'** Height : **46.28 m** Gross Capacity : **241.69 Mm^3** Spillway capacity **: 2860 m^3/ sec** Sr.No.In Large Dam Register 2009: **MH09HH1522**	17.05.2019 07.10.2019	Shri.S.S. Chopade, S.E. P.I.C. Pune	Earth Dam Masonry dam	1. There are water logging slushy condition on D/S of dam in old river portion & standing pool of water in the D/S of Dam @R.D. 860 meter, D/S 285 meter.(A2) 2. Boils are observed at @ R.D.860 meter , D/S 285 meter in existing well left side.(A1) 3. Rate of seepage on day of inspection is 2256 lps at RL 629.880 M. (A10) 4. The monolith no. M-3 & M-4 From Ch. 385 to 457 is not accessible due to seepage water in gallery (flooding in gallery) electrification in gallery totally damaged. (A8) 5. There has been considerable leaching from the seepage	The downstream area from toe shall be free from slushy condition by draining water properly. Cause of boils may be treated; check the drainage arrangement function of Long, cross, toe drains and then proper remedial measures shall be carried out. Proper drainage arrangement shall be provided to drain out water. Proper remedial measures to be taken to reduce leakage & gallery always made available for inspection. It should be kept under observation &

Sr.No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
					water and deposition of lime near the seepage exist spots.(A12)	leaching material should be sent to MERI/ Lab for testing.
					6. Leakage at D/S face of right side NOF From ch 457 to 509.15 m & also on left side NOF ch 288.625 to 475 are observed and needs to be reduced(A11)	Proper remedial measures to be taken to reduce leakage.
					7. 71 Foundation holes are choked and not cleaned. (A9)	Foundation holes should be cleaned.
				Radial Gate	8. Radial gate no. 5 is shifted to right side and it is wearing on trunion bracket and pressing on it.Radial GateNo.4 is vibrating, maintenance of equiliser and pin is necessary. (B5)	Proper remedial measures to be taken in consultation with Mechanical Organization
				EDA	9. Heavy erosion at toe of the end wall. (A17)	
				Relief Wells	10. The relief wells are not properly surged and cleaned periodically (A5)	Confirmation of deficiency needs to be given by field inspecting authority before remedial measures.
				Gallery	11. Lighting arrangement has been destroyed and heavy leakages in inspecting gallery. Excessive seepage through porous pipe in gallery. Maximum discharge on 04/08/2019 when the dam is at maximum - 4878 lpm (A10)	Alongwith lighting arrangement, proper remedial measures to be taken to reduce leakage.
					12. Leachet deposition is observed around the porous pipe in gallery.(A12)	Leaching material should be tested and remedial measures should be carried out as per CWPRS,Pune
				Downstream	13. Excessive seepage / sweating	

Sr.No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
				Face	observed on d/s face of masonry. (A11)	Necessary repairs should be carried out
				Operating Mechanisms	14. The alternative power system for gate operation is not working properly. (A19)	
					15. Toe drains and cross drains are not working satisfactorily. (B2)	Necessary repairs should be carried out
				Downstream Drainage Outlet	16. In the concrete chamber of service gate, there is a leakage through the concrete from u/s side. (B5)	Necessary repairs should be carried out.
				General Condition	17. Only rain gauge & piezometers provided-which are not in working condition. (B9)	Necessary repairs shall be done in consultation with IRD, Nashik.
12	Name : **Aralakalmodi (Un**Gated) Tal. Khed Dist.Pune Year of completion : **2010** Location : Longitude **$73^0$40'30"** Latitude **$19^0$00'00"** Height : **40.61 m** Gross Capacity : **42.87 Mm^3** Spillway capacity **: 963.21 m^3/ sec** Sr.No.In Large Dam Register 2009: **MH09HH1672**	17/05/219 07/10/2019	Shri.S.D.Chopade, SE, P.I.C., PUNE	Gallery	1. Electrification arrangement has not been provided. (A8) 2. Excessive seepage through porous pipe in gallery. (A10)	Electrification arrangement shall be provided.
				Outlet	3. The energy dissipation arrangement is not working satisfactorily for all the discharges (A14)	Necessary repairs should be carried out
					4. Emergency gate is not in operating condition. (B5)	Necessary repairs should be carried out out in consultation with Mechanical Organization.
				Access Road	5. The structures on the access roads are not adequately safe. The degradation to road surface observed. (B6)	
13	Name : **Bhamaaskhed (**Gated) Tal. Khed Dist.Pune Year of completion : **2014**	17/05/2019 26.11.2019	Shri.S. D. Chopade, SE, P.I.C., PUNE	Outlet Gates	1. The rollers are not working properly. 2. The stem rod for lifting the gates is not perfectly straight.	Necessary repairs should be carried

Sr.No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
	(Dam Portion) Location : Longitude **73^{0}43'00"** Latitude **18^{0}15'00"** Height : **51.125 m** Gross Capacity : **230.473 Mm^3** Spillway capacity **: 1736 m^3/ sec** Sr.No.In Large Dam Register 2009: **MH09HH1559**			Outlet Downstream Drainage General	(B5) 3. Service Gate(s)-Leakages observed through Service Gates. (B12) 4. Drain at ch. 500m is not working.(B5) 5. Rain gauge on Dam - 2 nos. - 1 In working condition, 1 in not working condition (B9)	out out in consultation with Mechanical Organization. Necessary repairs shall be done in consultation with IRD, Nashik.
(d) Executive Engineer, Nira Right Bank canal Division, Phaltan,Dist. Satara						
14	Name: **Veer** (Gated) Tal.Purandar Dist.Pune Year of completion : **1965** Location : Longitude **74^0 5'55** Latitude **18^0 07'05"** Height : **39.11 m** Gross Capacity : **278.49 Mm^3** Spillway capacity **:5154 m^3/ sec** Sr.No.In Large Dam Register 2009:**MH09HH0116**	01.06.2019 27/11/2019	Shri.S.D. Chopade, S.E. P.I.C. Pune	Outlet Spillway Gates Relief Wells Body Wall	1. Service gate no 7 is blocked and operation of gate no 5 not smooth owing to damaged wall plate. (B5) 2. The condition of steel surface and surface paint deteriorated. (B11) 3. The relief wells are not properly surged and cleaned periodically. (A5) 4. Wet patches are seen at 0/075 (A1)	Necessary repairs should be carried out in consultation with Mechanical Organization or under their advice. Necessary repairs should be carried out in consultation with Mechanical Organization or under their advice. Necessary repairs should be carried out
(e) Lift Irrigation Management Division, Pune						
15	Name: **Nazare**(Gated) Tal.Purandar Dist.Pune Year of completion : **1974** Location : Longitude **74^0 12'50"** Latitude **18^0 17'30"** Height : **22.545 m** Gross Capacity : **22.316 Mm^3** Spillway capacity **:2424.71**	01.06.2019 27.11.2019	Shri.S.D.Chopade, SE, P.I.C., PUNE	EDA	1. EDA end wall washed out - 5m. The portion of stilling basin concrete (40x6m) broken.(A 14) 2. The flow conditions in the stilling basin (or bucket) have a tendency to draw material into the bucket and because its churning and abrasion damage	Necessary repairs should be carried out Necessary repairs should be carried out

Sr.No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
	m^3/ sec Sr.No.In Large Dam Register 2009:**MH09MH0453**			End Weir Outlet Gates	to the surface of buckets baffle blocks, apron and end sill. (A14) 3. Erosion of concrete and masonry wall observed - 75m. Scour (158m length) observed on immediate downstream of weir. (A 17) 4. The stem rod for lifting the gates is not perfectly straight. (B5)	Scouring should be monitored and Necessary repairs should be carried out. Necessary repairs should be carried out in consultation with Mechanical Organization or under their advice.
(2)Superintending Engineer, Pune Irrigation Project Circle, Pune						
(a) Executive Engineer, BhamaAskhed Dam Division, pune						
16	Name **Temghar** Tal. Mulashi Dist.Pune Year of completion : **2000** Location : Longitude: **73^0 32'** Latitude : **18^0 27'** Height : **86.67 m** Gross Capacity : **107.96 Mm^3** Spillway capacity: 626 m^3/ sec Sr.No.In Large Dam Register 2009: **MH09HH1544**	21.05.2019 09.11.2019	Shri.P.S. Kolhe SE PIPC Pune	Masonry Dam Foundation Gallery	1. There is some leakage from D/S face at CH.45 TO 255M and heavy leakage from D/S face of the dam from ch.375 to 528m at RL667m. and from spray wall at CH.528m and 600m.There is sweating observed at the d/s face from ch.635 to 900. Masonry pointing is disturbed in some portion which may lead to movement of stones. (A11) 2. A total leakage from dam is 1691 lps in year 2016. Grouting work is in progress, leakage in the year 2017 is 1292 lps, and leakage in year 2018 is 413 lps. However during inspection, no water stored in dam so no seepage was observed. (A11) 3. Foundation Gallery is flooded	Suitable treatment should be carried out as per suggestion of Temghar Expert Committee for balance work. Suitable treatment should be carried out as per suggestion of Temghar Expert Committee. Suitable treatment should be carried out as per suggestion of Temghar Expert Committee.

Sr.No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
					from Ch.430 to Ch.700m. Lighting arrangement in gallery from Ch.430 to Ch.700m. is in progress. (A8) 4. Exessive leaching is observed in the gallery .Porous blocks in foundation gallery are not seen at ch.185 to 400 m & they are chocked due to leaching.(A12) 5. 58 drain holes are not in working & 94 drain holes are not inspected as gallery is flooded. Porous pipes are chocked. Drilling is started. (A9) 6. D/s side wall of D.S.S gate seems to be damaged & not working smoothly. D. S. S. Gate of ICPO: Manual operation of stem rod seems to be heavy, bearings are damaged & leakages are observed. (B5)	Suitable treatment should be carried out as per suggestion of Temghar Expert Committee. Suitable treatment should be carried out as per suggestion of Temghar Expert Committee. Suitable treatment should be carried out as per suggestion of Temghar Expert Committee.
(b) Executive Engineer, Neera Deoghar Project Division, Sangvi(Bhatghar), Tal.- Bhor, Dist. Pune.						
17	Name -**Gunjawani (Gated)** Tal. Velhe Dist.Pune Year of completion : **2018** Location : Longitude: **73° 37 '00"** Latitude : **18° 18 '00"** Height : **52.825 m** Gross Capacity : **104.69 Mm^3** Spillway capacity: **1924 m^3/ sec** Sr.No.In Large Dam Register 2009: **MH09HH1552**	30.05.2019 08.11.2019	Shri.A.A.Kapole, SE ,PIPC,Pune Shri.P.S. Kolhe SE PIPC Pune	Junction of Earth work with Masonry Abutment Contracts Outlet Gates Crest of Dam Spillway Gates	1. Existence of spring at the junction of earthwork and spillway wing wall. (A3) 2. Presence of spring in vicinity of abutment.(A15) 3. Gates not closed properly. (B5) 4. Minor undulations are observed in the WBM unsealed road section. (B6) 5. There is leakage through vertical adjacent face of both gate (about 5 lpm) (B12)	Necessary repairs should be carried out Necessary repairs should be carried out out in consultation with Mechanical Organization Proper remedial measures to be taken to reduce leakage.

Sr.No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
Superintending Engineer, Sangli Irrigation Circle, Sangli						
(a) Executive Engineer, Sangli Irrigation Division, Sangli						
18	Name : **Morna** **T**al. Shirala Dist.Sangali Year of completion : **1984** Location : Longitude **74^{0}06'30"** Latitude **16^{0}59'20"** Height : **31.20 m** Gross Capacity : 21.18 **Mm^3** Sr.No.In Large Dam Register 2009: **MH09HH1101**	01.06.2019 13.11.19	Shri H.V. Gunale S.E.SIC Sangali		1. Hoist mechanisms is faulty / Emergency gate mechanisms is faulty (B5)	It should be repaired properly in consultation Mechanical organization.
(b) **Executive Engineer , Takari Pump House Division No.1, Devrashtre**						
19	Name : Satpewadi barrage **T**al. Walwa Dist.Sangali Year of completion : 2005 Location : Longitude Latitude Height : 25**.50 m** Gross Capacity : 3.886 **Mm^3** **Proposed for updation in NRLD 2018**	01/06/2019 13/11/19	Shri H.V. Gunale S.E.SIC Sangali		1. Due to River Flood in Aug.2019 both side slope pitching near abutment Eroded and mbankment washed out (B15) 2. There is degradation to access road In Aug.2019 high flood in river Deck Slab and Girder of Barrage sliied over pier so Road is Closed to avoid any hazard. Parapet wall Damaged (B16) 3. The type of the pavement of the access road is bituminous to the barrage from both side But top layer of road is washed out in Aug 2019 (B6)	It should be repaired properly It should be repaired properly It should be repaired properly

Sr.No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
(3) Superintending Engineer, Kolhapur Irrigation Circle, Kolhapur						
(a) Executive Engineer, Kolhapur Irrigation Division, Kolhapur.						
20	Name : **Radhanagari** (Gated) Tal. Radhanagari Dist. Kolhapur Year of completion : **1954** Location : Longitude **73^{0}57'40"** Latitude **16^{0}20'20"** Height : **42.83 m** Gross Capacity : **936.56 Mm^3** Sr.No.In Large Dam Register 2009: **MH09HH0067**	15.04.2019 04.10.2019	Shri R.M. Sankpal SE, KIC Kolhapur	Body wall Outlet gate Foundation W.W. Bar	1. Total seepage observed on the date of inspection is 68 Lit/Sec. (A10) 2. The rubber seal of S.G.No.3,4 & 5 needs replacement.(B12) 3. Overall condition of the power outlet is not satisfactory.(B5) 4. Valves are not functioning proper.(B5) 5. The structural attachment to the counterweight for gate no. 3,4 & 6 is slightly eroded. Rehabilitation work of counter weight is essential. The rubber seals of gate No. 1 to 4 is to be replaced. (A20) 6. Foundation holes are need to be clean.(A9) 7. End of EDA @ RD 30 m. to 150 m is scoured. Stilling basin is to be repaired in tail race channel. End sill & baffle block is damaged. (A14)	It should be repaired properly. It should be repaired properly in consultation Mechanical organization. It should be repaired properly. It should be repaired properly consultation Mechanical organization It should be repaired properly consultation Mechanical organization It should be cleared properly and data of seepage to be maintained. It should be repaired properly. It should kept under observation. It should be repaired properly
21	Name :**Warana** (Gated) Tal. Shirala Dist. Sangli Year of completion : **1989** Location : Longitude **73^{0}05'50** Latitude **17^{0}08'10"** Height : **77.00 m** Gross Capacity **974.18 Mm^3** Sr.No.In Large Dam Register 2009:**MH09HH1542**	11.04.2019 05.10.2019	Shri R.M. Sankpal SE, KIC Kolhapur	Earthen Embankment Body wall	1. 180 No. of surface settlement plugs constructed on U/S & D/S slopes of dam but many of them are not working. Max. settlement of 0.09 m. is observed at RD 600m.(D/S plug No.8) (B3) 2. Maximum leakage on left flank is 709.50 Ltr./sec. & at right flank is 394.70 Ltr. /sec.	Necessary repair in consultation with IRD should be taken. Necessary repairs should be carried out to reduce the leakage. Leakage data should be maintained and to be

Sr.No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
					at lake level 626.250 m. on dated 18/09/2018. Total leakage 1104.20 ltr./sec. Total leakage on the day of inspection(11/04/2019) = 39.20 ltr./sec. (A 10)	monitared.
					3. Sweating is observed on D/S surface between ch.200 to 400 & 1410 to 1565 m. Seepage & leaching is observed through the body of the dam. (A 11)	Necessary repairs should be carried out to reduce the sweating.
					4. Seepage & leaching is observed through the body of the dam (A12)	Necessary repairs should be carried out.
				EDA	5. Partial erosion on left side of channel. (A16)	Necessary repairs should be carried out .
					6. The embedded parts of spillway gates, emergency gates and stop-logs in Is not sound condition and free from corrosion (A20)	Necessary repairs should be carried out.
					7. All instruments including pore water pressure cells are not working. (B9)	
22	Name: **Dudhaganga** (Gated) Tal. Radhanagari Dist. Kolhapur Year of completion : **1989** Location : Longitude **74^0 1'** Latitude **16^{0}21'** Height : **85.30 m** Gross Capacity : **719.12 Mm^3**	13.05.2019 13.12.2019	Shri R.M. Sankpal SE, KIC Kolhapur	Earth dam Section Foundation Inspection gallery EDA	1. The D/S slope at right flank ch.1050 to 1155 & 1239 to 1265 m. indicates concavity. The U/S pitching is damaged partly at RD 1120 m. to 1141 m., RD 1150 m. to 1170 m. & RD 1180 m. to 1215 m. in RL 641 m. to 646 m. Piching should be replaced. (B3)	Necessary action to be taken by authority.
					2. relief well are to be cleaned	Relief well shall be cleaned.

Sr.No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
	Sr.No.In Large Dam Register 2009: **MH09HH1226**			Outlet Gate	and not functioning (A5) 3. The foundation gallery is flooded & hence not easily accessible. Lighting arrangement should be renewed. Foundation holes to be redrilled and should be cleaned. Electrirification in the gallery is damaged. (A8) 4. foundation holes to be redrilled and should be cleaned**,** Some porous pipe are chocked (A9) 5. Seepage on the date of inspection 13/11/2018 was 136 lps at water level 611.16 m.(A11) 6. On D/S face at bucket portion concrete face is damaged at some portion. Some glacious concrete in jump portion (Tangent point) is eroded and steel reinforcement is exposed and ruste. Flaps of trunion girder boxes are eroded. (A14) 7. Measuring devices are not in working condition (B9) 8. Flaps of tunion girder boxes are eroded (A18) 9. Right side guide wall in Prelimnary tilling basin some portion is damaged. (A16) 10. Pointing of End weir of primary stilling basin is damaged. ((A17)	Foundation gallery is to be dewatered and inspected regularly Permanent measures to reduce the leakages should be undertaken. Necessary action to be taken by authority. Drain hole shall be cleaned. The stilling basin should be inspected by draining water. Necessary action to be taken by authority. Necessary repairs should be carried

Sr.No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
					11. Overall condition of river outlet is not satisfactory. There is leakage through CCRS gate. (50Cusecs. approx.) (B10) 12. The steel surface and steel surface paint deteriorated (B11)	out. The repairs to minimise leakages should be carried out through mechanical organization
23	Name: **Kumbhi** (Gated) Tal. Gaganbavda Dist. Kolhapur Year of completion : 2007 Location : Longitude73°51'49" Latitude 16°31'29" Height : 42.58 m Gross Capacity : 76.88 Mm3 Sr.No.In Large Dam Register 2009: MH09HH1671	10/04/2019 30/11/2019	Shri R.M. Sankpal SE, KIC Kolhapur	conduit	1. The conduit structurally sound but minor leakages are observed in conduit (A4)	After necessary investigation, repairs should be carried out to stop the leakage.
24	Name: **Paleshwer** Tal.ShahuwadiDist. Kolhapur Year of completion : 2000 Location : Longitude 73°52'30" Latitude 16°40'30" Height : 42**.15 m** Gross Capacity : **9.11 Mm^3** Sr.No.In Large Dam Register 2009: **MH09HH1546**	15/04/2019 10/10/2019	Shri R.M. Sankpal SE, KIC Kolhapur	W.W.	1. Major breach was there in monsoon and repairs proposed (B7)	Necessary repairs should be carried out.

Sr.No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
25	Name: **Tulshi** Tal. Radhanagari Dist. Kolhapur Year of completion : **1978** Location : Longitude 74°01'00" Latitude 16°31'15" Height : 48**.6 m** Gross Capacity : **96.28 Mm^3** Sr.No.In Large Dam Register 2009: **MH09HH0726**	15/04/2019 04/10/2019	Shri R.M. Sankpal SE, KIC Kolhapur		1. There is signs of water logging, slushy conditions or growth of aquatic weeds on the downstream of the dam (A2)	Necessary remedial measures should be carried out.
b)Executive Engineer , Medium Project Division No2, Kolhapur						
26	Name: **Ghatprabha** (Phatakwadi) Tal. Chandgad Dist. Kolhapur Year of completion : 2009 Location : Longitude 74°04'20" Latitude 15°56'45" Height : 48**.30 m** Gross Capacity : 43**.75 Mm^3** Sr.No.In Large Dam Register 2009: **MH09HH1900**	24.04.2019 09.10.2019	Shri R.M. Sankpal SE, KIC Kolhapur		1. There is major alterations or changes to the dam since the last inspection Right side guide wall is Collapsed due to heay rainfall and land slide some Pitching under side of well bridge is disturbed (40sq.m) (A16) 2. Some Pitching under side of well bridge is disturbed (40sq.m) (B15) 3. Small amount of leakages was observed through waste weir 4. There is obstructions due to excessive rainfall with land slide, large size boulders with soil & guide waa is collapsed in the stilling basin (A14) 5. The service gate vibrates more while operating service gate needs repair. There is	Guide wall shall be get repaired as suggested by Design Dn.(MD2)CDO To avoid land slide obtain the opinion from Sr.Geologist, Geology Dn CDO Nashik and do the needful. Necessary repairs should be carried out. Necessary repairs should be carried out. Guide wall shall be get repaired as suggested by Design Dn.(MD2)CDO To avoid land slide obtain the opinion from Sr.Geologist, Geology Dn CDO Nashik and do the needful. It should be repaired properly consultation Mechanical organization

Sr.No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
					no supply of electricity on dam site Generator is necessary (A20)	
27	Name: **Jambre** Tal.Chandgad Dist. Kolhapur Year of completion : 2013 Location : Longitude 74°06'40" Latitude 15°52'47" Height : **58 m** Gross Capacity : 23**.23 Mm^3** Sr.No.In Large Dam Register 2009: **MH09HH1925**	24.04.2019 09.10.2019	Shri R.M. Sankpal SE, KIC Kolhapur		1. Repairing .Emergency gate is not in plumb line need maintaince (B5)	It should be repaired properly consultation Mechanical organization
28	Name: Jangamhatti Tal.Chandgad Dist. Kolhapur Year of completion : 2005 Location : Longitude 74°17'00" Latitude 15°51'30" Height : 31.40**m** Gross Capacity : 34**.21 Mm^3** Sr.No.In Large Dam Register 2009: **MH09HH1365**	24.04.2019 09.10.2019	Shri R.M. Sankpal SE, KIC Kolhapur	W.W	1. The section of the dam and upstream slope is not structurally sound and stable (B1) 2. Excess amount of leakages was observed through waste weir B7)	Necessary remedial measures should be carried out. Necessary remedial measures should be carried out.

Sr.No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
(b) Executive Engineer, Kolhapur Irrigation Division (South) Kolhapur						
29	Name : **Megholi** (Ungated) Tal. Bhudergad Dist. Kolhapur Year of completion : 2000 Location : Longitude **74^{0}07'00** Latitude **16^{0}11'03"** Height : **34.12 m** Gross Capacity **3.932 Mm^3** Sr.No.In Large Dam Register 2009:**MH09HH1629**	10.05.2019 24.10.2019	Shri R.M. Sankpal SE, KIC Kolhapur	W.W.& Tail Channel	1. Due to peculiar geology condition in foundation of W.W. bar. The dam get self deflected between level RL106.00 to RL 111.50 m. (Leakages could not be measured). Some portion of bar at RD 20 m. Is damaged. (B7)	After necessary investigation, repairs should be carried out to stop the leakage.
(4) Superintending Engineer, Satara Irrigation Circle, Satara						
(a) Executive Engineer, Satara Irrigation Division, Satara						
30	Name :**Dhom** (Gated) Tal. Wai Dist. Satara Year of completion : **1976** Location : Longitude **73^0 40'** Latitude **17^{0}58'** Height : **50.00 m** Gross Capacity : **332.00 Mm^3** Sr.No.In Large Dam Register 2009: **MH09HH0655**	25.05.2019 02.12.2019	Smt. Vaishali Narkar SE SIC, Satara Mr.Doiphode S. L. SE, S.I.C., Satara	Tail Channel. Dam Body End Weir	1. Erosion & retrogression noticed in tail channel but as per in point no.7.2 B (4), 10 (b) & 12(C) of report it is mentioned that there are no scouring, erosion and retrogression in tail channel (on d/s EDA). This discrepancy needs to be rechechked by field authority.(A7) 2. Some sweating observed at D/S face at the portion of redundant well. (A11) 3. Small leakage through dam body at ch. 2530, at RL 742.30m observed. (A11) 4. At left side of end weir some scour & retrogression observed. (A17)	After rechecking of deficiency by competent field authority, Necessary repairs should be carried out in consultation with CDO Nashik. Proper remedial measures shall be taken. Proper remedial measures shall be taken to reduce leakage.

Sr.No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
				General	5. Piezometers: Out of 13 Casagrande piezometers 10 piezometers are not in working condition. (B9)	Necessary repairs shall be done in consultation with IRD, Nashik
					6. Emergency / Stop log gates - Rubber seal hardened, minor leakages. (B12)	The repairs to minimise leakages should be carried out through mechanical organization
				Access Road	7. Asphalt Road needs asphalting. The fencing & gates damaged. (B6)	Necessary action shall be taken.
31	Name :**Dhom Balkavadi** (Gated) Tal. Wai Dist. Satara Year of completion : **2006** Location : Longitude **73^0 42' 30"** Latitude **17^{0}51' 00"** Height : **65.10 m** Gross Capacity : **115.53 Mm^3** Sr.No.In Large Dam Register 2009: **MH09HH1655**	26.05.2019 31.12.2019	Smt. V.G.Narker, S.E., S.I.C,Satara Mr.Doiphode S. L. SE, S.I.C., Satara	Masonry Dam	1. Due to growth of vegetation and water logging the drainage gallery is not easily accessible. (A8)	Necessary work shall be carried out for easily accessible gallery.
					2. The instruments are installed in the body of dam but are not yet connected properly to pressure gauges. So they are not in working condition and needs to rectify. (B9)	Necessary repair should be carried out in consultation with IRD, Nashik.
				Gallery	3. The foundation and porous holes not cleaned periodically. (A9)	
				Water Conveyance Structure	4. Leakage through longitudinal duct of ICPO. (A10)	Necessary repairs should be carried out in consultation with Mechanical Organization.
				Hoists, Cranes	5. Hoist of EG of power house outlet is not working. (A18)	Necessary repairs should be carried out.
				Downstream Slope	6. On the downstream pitching large amount of bushes have grown. (B13)	

Sr.No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
(b) Executive Engineer, Krishna Irrigation Division, Satara						
32	Name **Kanher** (Gated) Tal. Satara Dist. Satara Year of completion : **1986** Location : Longitude **$73^{0}55'$** Latitude **$17^{0}45'$** Height : **50.34 m** Gross Capacity **: 286.00 Mm^3** Sr.No.In Large Dam Register 2009: **MH09HH1141**	21.05.2019 28.11.2019	Smt. Vaishali Narkar SE SIC, Satara Mr.Doiphode S. L. SE, S.I.C., Satara	Outlet gates Relief Well Gallery Body Wall Guide walls/Divide walls End Weir Access Road WW Bar &	1. Emergency gate is under repair (B5) 2. The relief well is not properly surged and cleaned periodically. (A5) 3. Problems of inadequate drainage observed, dewatering pumping station is not fully operational. (A8) 4. The foundation and porous holes not cleaned periodically. (A9) 5. 55 porous pipes are not in function, needs to be cleaned.(A9) 6. Sweating in NOF section, leakage through dam body at monolith no. 2 & 4 (A11) 7. There has been considerable leaching from the seepage water and deposition of lime near the seepage exit spots. (A12) 8. The foundation erosion or scour noticed in d/s side of guide wall of waste weir.(A16) 9. The scour noticed on the immediate downstream - on right side of end weir some scour & retrogression is observed. (A17) 10. Asphalt Road needs asphalting. The fencing &	Necessary repairs be carried out in consultation with Mechanical Organization Necessary repairs should be carried out Quantum of seepage should be monitored monolith wise. Necessary repairs should be carried out Leaching material should be tested and remedial measures should be carried out as per CWPRS,Pune Necessary repairs should be carried out Proper remedial measures shall be

Sr.No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
				TC General Seepage Measurement	gates damaged. (B6) 11. Heavy leakage is observed from left side divide wall. (B7) 12. All piezometers are not working. (B9) 13. The portion of upstream and downstream of dam is not easily accessible due to growth of bushes grass and trees. (B13)	taken to reduce leakage. Necessary repairs should be carried out
33	Name **Urmodi** (Gated) Tal. Satara Dist. Satara Year of completion : **2012** Location : Longitude $73^0$54'40" Latitude $17^0$40' 00" Height : 51.10 m Gross Capacity : 282.14 Mm^3 Spillway Capacity :3840 Cumecs Sr.No.In Large Dam Register 2009: MH09HH1594	21.05.2019 26.12.2019	Smt. Vaishali Narkar SE SIC, Satara Mr.Doiphode S. L. SE, S.I.C., Satara	Masonry Dam Access Road	1. Instrumentation of dam is not in working condition. (B9) 2. Access Road to gallery, instrumentation room needs to construct. (B6)	Necessary repair should be carried out in consultation with IRD, Nashik. Necessary repairs should be carried out
(c) Executive Engineer, Koyana Irrigation Division, Koyananagar						
34	Name: **Kolkewadi**(Gated) Tal. Chiplun Dist. Ratnagiri Year of completion : **1975** Location : Longitude **$73^0$38' 50''** Latitude **17^0 25'** Height : **66.00 m** Gross Capacity : **36.22 Mm^3**	22.05.2019 24.11.2019	Smt. Vaishali Narkar SE SIC, Satara Mr.Doiphode	Masonry Dam	1. Sweating & seepage of water on masonry face have been observed in d/s portion above penstock. (A11) 2. Scour portion is noticed at various locations in O. F. portion of dam. (A16) 3. M.S.Bye-pass pipe of 300m	It should be repaired by suitable remedial measures. It should be repaired by suitable

Sr.No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
	Sr.No.In Large Dam Register 2009:**MH09HH0527**		S. L. SE, S.I.C., Satara	River Sluice	dia. provided for filling of penstock and transfer cooling system have been rusted & leaked near penstock unit no.10 is need to be repaired. (A4)	remedial measures in consulatation with Mechnical organization and CDO,Nashik
				Gallery	4. Leaching in three types i.e. white, red and black was noticed at gallery portion as well as leaching spots was observed at some portion in between D/S side of UCR masonry at dam. (A12)	Leaching material should be tested and remedial measures should be carried out as per CWPRS,Pune
				Masonry Dam	5. Total no. of foundation holes are 119, out of these 109 are in chocked condition. (A9)	Leaching material should be tested and remedial measures should be carried out as per CWPRS,Pune
					6. Excessive leaching has been observed in the monolith No.17A and 17B from the foundation drain indicating presence of excessive cementatious material in the foundation strata due to the curtain grouting carried out during construction of the dam due to presence of shear/weak zones in foundation rock mass below block no.17A & 17B.(A12)	Necessary repairs should be carried out
				Downstream Face	7. Abrasion of the glacious concrete at few locations (especially near upper tangent point of the ogee) is observed. (B8)	

Sr.No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
					8. Excessive seepage/sweating observed on downstream face. (A11)	
35	Name: **Koyana** (Gated) Tal. Patan Dist. Satara Year of completion : **1967** Location : Longitude **73^{0}44' 26''** Latitude **17^0 23' 00''** Height :**103.02m** Gross Capacity : **2980.68 Mm^3** Spillway Capacity : 5742.25cumecs Sr.No.In Large Dam Register 2009:**MH09UH0100**	22.05.2019 09.11.2019	Mrs.V.G.Narkar SE,S.I.C., Satara Mr.Doiphode S. L. SE, S.I.C., Satara	EDA	1. Evidence of abrasion, cavitations or scour on dissipation structure observed - Uneven surface of stilling basin observed. (A14)	Necessary repairs should be carried out
[B] Chief Engineer (S.P.),Water Resources Department, Pune						
(1) Superintending Engineer, Kukadi Irrigation Circle, Pune						
(a) Executive Engineer, Kukadi Irrigation Dn No. 1, Narayangaon, Dist.Pune						
36	Name: **Manikdoh** (Gated) Tal. Junnar Dist. Pune Year of completion : **1984** Location : Longitude : **73^{0}49'** Latitude : **19^0 14'** Height : **57.80 m** Gross Capacity :**308.06 Mm^3** Spillway apacity:**143m^3/sec** Sr.No.In Large Dam Register 2009: **MH09HH1060**	22.05.2019 28.11.2019	Shri H.T. Dhumal SE KIC, Pune	Foundation gallery Body of dam	1. Drainage gallery is not easily accessible. There is no sufficient lighting arrangement in gallery. A leakage in inspection gallery / foundation gallery on the date of inspection is 3.21 cusecs. (A8) 2. The foundation and porous holes not cleaned periodically, with reaming tool and air water jetting. (A9) 3. Excessive seepage/ sweating	Providing proper draining arrangement seepage in the gallery. Leakages to be minimised by suitable treatment on upstream surface. The foundation and porous holes shall be cleaned periodically. Necessary repairs should be carried out

Sr.No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
					along gallery / shaft observed (location - ch. 435 to 600) (A10)	
					4. Leaching observed of left guide wall (A12)	Necessary remedial measures should be carried out. Leached material to be collected and weighed & record of quantity and weight to be maintained. Leaching material should be tested from Lab.
					5. There is considerable leaching from seepage water and deposition of lime near the seepage exist spots. (A12)	
				Outlets Gates	6. The pointing on upstream face of the dam is not in good condition. Guniting provided is damaged at some portions and should be repaired. (B8)	The repairs should be carried out through mechanical organization.
					7. Left bank Irrigation Outlets: E.G. not working satisfactorily and noise observed.	.
				EDA	Operating Mechanism is not in position also not working satisfactorily. (B5)	It should be kept under observation and necessary repairs should be carried out.
					8. The connecting bolts of rubber seals are not properly tightened or damaged. (B12)	Quantum of seepage should be monitored monolith wise.
				General	9. 2.99 Cusecs leakage observed through gate. (B10)	
					10. Excessive seepage/ sweating on monolith 11 to 14 on downstream face (A11)	Necessary repairs should be carried out
					11. Obstructions observed in or immediately downstream of dissipation structure - needs nalla regradation. (A14)	
					12. Bituminous road needs repairs. The degradation to road surface - pot holes observed. (B6)	
					13. Secondary concrete near wall	

Sr.No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
					plate of radial gates is damaged. (B14)	
37	Name: **Wadaj** (Gated) Tal. Junnar Dist. Pune Year of completion : **1982** Location : Longitude : **73^{0}52'30"** Latitude : **19^0 09' 00"** Height : **28.00 m** Gross Capacity :**36 Mm^3** Spillway apacity:**1426m^3/sec** Sr.No.In Large Dam Register 2009: **MH09HH1006**	22.05.2019 28.11.2019	Shri H.T. Dhumal SE KIC, Pune	Body of dam	1. Stand pipe: 16 out of 16 are not in working condition. (B9) 2. Casagrande: 19 out of 19 are not in working condition. (B9) 3. Relief wells are blocked (A5) 4. There is a evidence of seepage or leakage from water conveyance structure at ch. 435m. (A11) 5. D/s portion (NOF) at ch. 430 sweating water comes out. (A13) 6. Smoke is coming out through radial gate no. 1 while operating. (A20)	Necessary repairs should be carried consultation with IRD, Nashik. Necessary repairs should be carried out
				Spillway Gates	7. The condition of the steel surface and the surface paint deteriorated - gate 3 & 5 is leakage through bottom rubber seal (B11) 8. Upstream pitching & collecting drain pitching are disturbed at some places. (B15)	Necessary repairs should be carried out in consultation with Mechanical Organization. Necessary repairs should be carried out
38	Name : **Dimbhe** (Gated) Tal. Junnar Dist. Pune Year of completion : **2002** Location : Longitude **74^{0}44'30"** Latitude **19^{0}5'45"** Height **: 72.10 m** Gross Capacity : **328.22**	22.05.2019	Shri V. G. Rajput, CE, (SP), Pune and Shri H.T. Dhumal SE KIC, Pune	Foundation gallery Body wall	1. Foundation gallery between Ch.250 to 520m is under water, hence inspection is not possible. As the foundation gets flooded no instruments are fitted in gallery. (A8) 2. Drainage holes are not drilled bet ch. 220 tp 500 m VPD &	Seepage in the gallery to be minimised by suitable treatment to upstream portion Porous pipes & drain holes should

Sr.No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
	Mm^3 Spillway capacity: **2870 m^3/ sec** Sr.No.In Large Dam Register 2009: **MH09HH1558**	27.11.2019	Shri H.T. Dhumal SE KIC, Pune		drainage holes cleaning is necessary. (A9) 3. Total seepage in the gallery is 1368 lps at FRL 718.85m on date 05/10/2018 & total seepage on date of inspection in gallery is 34 lps.(22.05.2019) (A10) 4. Seepage, excessive sweating with leaching observed at some locations in d/s face of dam at ch 630 to 650 m. (A11) 5. Excessive seepage & leaching is observed through the body of dam. The location not given report. (A12) 6. Leakage observed through Irrigation outlet conduit. (A4) 7. Obstructions observed in or immediately downstream of dissipation structure (near bridge over river) (A14) 8. Degradation to access road observed (unsealed) (B6) 9. Concrete/masonry deterioration observed (B8) 10. The surface of gates and the paint deteriorated. (B11) 11. Leakage observed through Radial Gates. (B12)	be cleaned for proper functioning. Quantum of seepage should be monitored monolithwise. Leached material to be collected and weighed & record should be maintained. Leaching material to be tested from lab. Necessary repairs should be carried out Necessary repairs should be carried out in consultation with Mechanical Organization
				EDA Crest of dam D/s face Outlet Gates		
39	Name:**Pimpalgaonjoge** Gated Tal. Junnar Dist. Pune Year of completion : **2000**	21.05.2019 28.11.2019	Shri H.T. Dhumal SE KIC, Pune	River Sluice	1. Emergency gate is not in operation. (B5) 2. Some leakage observed in river outlet works/river sluice.	Necessary repairs should be carried out in consultation with Mechanical Organization.

Sr.No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
	Location : Longitude : **75^{0}52'30"** Latitude : **19^{0}18'45"** Height : **34.204 m** Gross Capacity : **235.28 Mm^3** Spillway capacity:**1167.3 cu sec** Sr.No.In Large Dam Register 2009:**MH09MH1520**			Crest of Dam Instrumentation Spillway Gates	(B10) 3. The bituminous road needs repairs. The degradation observed to road surface - pot holes observed (B6) 4. The pan evaporimeter not in working order. (B9) 5. The condition of the steel surface and the surface paint deteriorated. (B11) 6. Leakages observed through radial gates.(B12)	Bituminous road shall be get repaired. Necessary repairs shall be done in consultation with IRD, Nashik. Necessary repairs should be carried out in consultation with Mechanical Organization.
(b)Executive Engineer , Dimbhe Dam Division, Manchar, Dist. Pune						
40	Name : **Chilewad**i (Gated) Tal. Junnar Dist. Pune Year of completion :**2000** Location : Longitude **73^{0}50'00"** Latitude **19^{0}21'00"** Height : **62.56 m** Gross Capacity : **27.17 Mm^3** Spillway capacity: **1686 m^3/ sec** Sr.No.In Large Dam Register 2009:**MH09HH1553**	24.05.2019 28.11.2019	Shri H.T. Dhumal SE KIC, Pune	EG Spillway Waste Weir / End Weir	1. Emergency gates are not in working condition, they are in hanging position at top level. Guide tees are bent, guide tee is absolutely disturbed, and corroded and not functioning. (B5) 2. Casagrande: 19 out of 19 are not in working condition. (B9) 3. Excessive seepage/sweating observed on spillway glacis (A11) 4. The scouring observed on downstream side of the bar and/or EDA. End weir apron erode on right side, hole is observed on end weir wall. (A17) 5. Erosion on surface at d/s side of weir observed. The concrete eroded size - 19x5m. (A17)	Necessary repairs should be carried out in consultation with Mechanical Organization Necessary repairs should be carried consultation with IRD, Nashik. Scouring should be observed and necessary repaires shall be carried out. Necessary repairs should be carried out.

Sr.No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
				Crest of Dam	6. The access road of WBM needs repair. The obstructions along or at entrance to access road observed, river bridge is needed. (B6)	Access road shall be got repaired.
41	Name : **Yedgaon** Tal. Junnar Dist. Pune Year of completion :**1977** Location : Longitude **74^{0}01'30"** Latitude **19^{0}10'30"** Height : **24.60 m** Gross Capacity : **93.43 Mm^3** Spillway capacity: **3844 m^3/ sec** Sr.No.In Large Dam Register 2009: **MH09MH0658**	21.05.2019 28.11.2019	Shri H.T. Dhumal SE KIC, Pune	Crest of Dam Upstream Slope	1. Hairline cracks at some places on crest of dam. (B4) 2. Longitudinal or transverse cracks observed. (B4)	Necessary repairs should be carried out. Necessary repairs should be carried out.
(c)Executive Engineer , Kukadi Irrigation Division No. 2, Shrigonda, Dist. Ahmednagar						
42	Name : **Ghod**(Gated) Tal. Shirur Dist. Pune Year of completion : **1965** Location : Longitude **74^{0}51'50** Latitude **17^0 8'10"** Height : **34.75 m** Gross Capacity : **216.30 Mm^3** Spillway capacity:**7465 m^3/ sec** Sr.No.In Large Dam Register 2009: **MH09MH0117**	23.05.2019 13.11.2019	Shri H.T. Dhumal SE KIC, Pune	Earthen Dam Outlet gate W.W.& T.C	1. Standing pool of water in the downstream of dam in river portion. (A2) 2. Three Service gates of LBC are not working properly. Steam rods of gate are bent and need to be replaced with alignment. Leaf and brass plates of all gates to be replaced. Guide brackets are broken and need to be replaced with alignment. Leakages are observed.(B5) 3. Erosion & retrogression noticed in tail channel. Both flank walls of tail channel are damaged. Erosion in tail channel is observed & check	Quantum of seepage should be monitored monolithwise. Necessary repairs should be carried out. Necessary repairs be carried out in consultation with Mechanical Organization. Necessary repairs should be carried out consultation with CDO Nashik. Scouring should be kept under observation.

Sr.No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
					wall in tail channel are damaged. There is erosion and retrogression noticed in the tail channel next to stilling basin overall width of tail channel. Erosion and scour noticed near the side walls. (A7)	
				End Weir	4. Erosion and damage is observed at R/S portion of check wall. Scour is noticed on immediate downstream of check wall about 70m from end weir. (A17)	Necessary repairs should be carried out in consultation with Mechanical Organization.
				Outlet Gates	5. Wire ropes of Spillway gate no. 9 and 14 are broken. (A18) 6. Rubber seals are not provided. Brass plates completely damaged. Stem rods are bent, only one in operation. Alignment of gates needs to be checked. One gate not in operation. GLBC stem rod bend while operating. (B5)	Necessary repairs should be carried out in consultation with Mechanical Organization. Necessary repairs should be carried out in consultation with Mechanical Organization.
					7. Piezometers: Presently 15 stand pipe piezometers and 5 casagarande piezometers are not in working condition. (B9)	Necessary repairs should be carried consultation with IRD, Nashik.
				Walls	8. The foundation erosion or scour noticed in the vicinity of walls. The erosion and damages observed in r/s portion of check wall. The scour noticed on the	Scouring should be observed and necessary repaires shall be carried out.

Sr.No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
					immediate downstream of check wall. (A16)	
				Outlet Gates	9. The operation of outlet gates is not smooth (A 20)	
				Downstream Drainage	10. Silt, grass is observed in drains, few portion of pitching in toe drain is disturbed. (B2)	Necessary repairs should be carried out in consultation with Mechanical Organization
				Downstream Face	11. The Presence of cracking (structural, thermal, along joints) observed on the few portion. (B4)	
				Access Road	12. Few portion of asphalt road observed the potholes. (B6)	Asphalt road shall be get repaired.
43	Name **: Sina** (Gated) Tal. Karjat, Dist. A'Nagar Year of completion : **1985** Location : Longitude **74°57'00"** Latitude **18°49'00"** Height : **28.5 m** Gross Capacity **: 67.95 Mm^3** Sr.No.In Large Dam Register 2009: **MH09MH1142**	NR 03.11.2019	Shri H.T. Dhumal SE KIC, Pune	D/s Drainage	1. Local ponds at 50m from the toe drain at ch 1500m. (A2)	Necessary repairs should be carried out.
				Concrete dam sections	2. Some minor leakages at spillway of dam are observed. (A 15)	
				End Weir	3. Erosion and damages observed in right side portion of check wall.(A16)	Necessary repairs should be carried out.
					4. Scour noticed immediate downstream of check wall.(A16)	
				Outlet	5. SRBC service gate no. 1 is not properly working. SLBC service gate & emergency gate both are not working properly. EG is rusted and guide channel is damaged.	Necessary repairs should be carried out in consultation with Mechanical Organization.
					6. SLBC & SRBC stem rods bend.	
				Outlet Gates	7. The operation of outlet gates is not smooth.	Necessary repairs should be carried out in consultation with Mechanical Organization.

Sr.No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
(2) Superintending Engineer , Satara Irrigation Project Circle, Satara						
(a) Executive Engineer , Minor Irrigation Division, Satara						
44	Name **: Nagewadi** (Gated) Tal. Wai Dist. Satara Year of completion : **1999** Location : Longitude **$73^0$51'45"** Latitude **$17^0$55'17"** Height : **40.02 m** Gross Capacity **: 6.47 Mm^3** Sr.No.In Large Dam Register 2009:**MH09HH1518**	21.04.2019 30.10.2019	Shri. Vijay S Ghogare SE, SIPC, Satara	Earth dam Outlet	1. There is a leakage from the junction of conduit with surrounding earthwork..(A1) 2. Conduit leakage: There is leakage through gates.(A1) 3. Outlet gate: Wire ropes of hoist are not serviceable condtion and not free from broken strands (A18)	It should be kept under observation and Necessary repairs should be carried out by permission of competent field authority. Necessary repairs should be carried out in consultation with Mechanical Organization.
(b) Executive Engineer, Kanher Canals Division No.2, Karwadi, Karad						
45	Name : **Tarali** (Gated) Tal. Patan Dist. Satara Year of completion : **2007** Location : Longitude **$73^0$54'15"** Latitude **$17^0$32'00"** Height : **73.41 m** Gross Capacity **165.70 Mm^3** Sr.No.In Large Dam Register 2009: **MH09HH1666**	11.04.2019 28.10.2019	Shri. Vijay S Ghogare SE, SIPC, Satara	Body Wall OF & NOF Section Outlet / ICPU Stop Gate	1. Electrification work in gallery is in progress. (A8) 2. Appearance of sweating on the downstream face of dam is observed at monolith no.3, 4, 4A, 15 & 16. (A11) 3. Considerable leaching observed on D/S face of dam (NOF) section.(A12) 4. While operating D/S service gate, some noise is observed as the capacity of hoisting arrangement is less than required, Enhancing of hoist capacity is in progress.(B5) 5. Trash rack: Operating mechanism is not in position. (B5) 6. Stop log gates/EG/SG: Operating mechanism in not in position. Not working satisfactorily. (B5) 7. Hoist capacity of stop log gate	Necessary repairs should be carried out in consultation with Mechanical Organization& CDO, Nashik. Leached material to be collected & recorded of quantity & wait to be maintained. Leaching material should be tested from MERI Nashik. Necessary repairs be carried out in consultation with Mechanical Organization, Nashik. Necessary repairs should be carried out in consultation with Mechanical Organization, Nashik.

Sr.No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
					on u/s side is less than required.(B5) 8. As foundation gallery is flooded hence pressure gauges for 28 pressure cells are not fixed yet. (B9) 9. Pressure gauges for 5 pressure cells in inspection gallery are fixed which are choke up.(B9)	Necessary repairs should be carried consultation with IRD, Nashik. Necessary repairs should be carried consultation with IRD, Nashik.
(3)Superintending Engineer & Administrator, C.A.D.A. Solapur						
(a)Executive Engineer, Ujjani Dam Maintenance Division, Bhimanagar						
46	Name **: Ujjani** (Gated) Tal. Madha Dist Solapur Year of completion : **1980** Location : Longitude **73^{0}7'18''** Latitude **14^{0}08'00'** Height : **56.40 m** Gross Capacity : **332.00 Mm^3** Sr.No.In Large Dam Register 2009:**MH09HH0843**	05.05.2019 26.11.2019	Shri. D.B. Sale SE & Adm. CADA, Solapur.	EarthDam Masonry dam Outlet gate River outlet.	1. Concavity seen on U/S between Ch.2015 to 2040 m. is since last 15 years. However there is no increase in its concavity thereafter. (B1) 2. Most of foundation drain holes are chocked up. The porous pipes are chocked up.(113 nos). (A9) 3. Considerable leaching from the seepage water and deposition (A12) 4. Some rubber seals need to be replaced. (B12) 5. Erosion is observed in the foundation trench on the d/s of weir. (A17) 6. The overall condition of river outlet works/river sluices not satisfactory (B5) 7. Construction morter material is seen deposited in to gallery through poros pipe (A10)	Dam section should be restored to design section. Porous pipes needs cleaning. The repairs should be carried out through mechanical organization. Proper measures should be taken for it. The repairs should be carried out through mechanical organization. Proper measures should be taken for

Sr.No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
(b)Executive Engineer, Solapur Irrigation Division, Solapur						
47	Name **: Ekruk** (Un Gated) Tal. Dist Solapur Year of completion :1871 Location : Longitude **75^{0}54'30"** Latitude **17^{0}43'30"** Height : 21**.45 m** Gross Capacity : 61.160 **Mm^3** Sr.No.In Large Dam Register 2009:**MH09HH0007**	30.04.2019 23.11.2019	Shri. D.B. Sale SE & Adm. CADA, Solapur.	Earth Dam	1. Longitudinal deep cracks observed on u/s crest of dam at ch.0/528 to ch.0/650 similarly deep cracks on dam topch.0/600toch.0/650,ch.0680 to ch.0/700,ch.1/020 to ch.1/050 . (B4)	Dam section should be restored to design section.
(3)Superintending Engineer Osmanabad Irrigation Circle, Osmanabad						
(a)Executive Engineer, SinaKolegaon Project Division, Paranda Dist. Osmanabad						
48	Name **:** SinaKolegaon Tal.Paranda Dist Osmanabad Year of completion : **2007** Location : Longitude **75^{0}24'00'** Latitude **17^{0}18'00'** Height : 36.6**0 m** Gross Capacity : 19**.19 Mm^3** Sr.No.In Large Dam Register 2009:**MH09HH1673**	29.05.2019 04.11.2019	Shri. S.S Pagar. SE OIC Osmanabad	Earth Dam Gallary Gates	1. Drainage Gallery is not accessible , In gallery safety issues arrangement not provided (inadequate handrails, lighting or ventilation) (A8) 2. There is Significant or excessive leakage at along gallery/shaft / porous (A10) 3. The under drainage of the stilling basin (or bucket) not satisfactory the open drain holes are not clear and functioning well (A14) 4. Testing of gantry cranes not carried out yetAt the end of rail stoppers are not fixed (A20) 5. There is the portions of longitudinal toe drain and exposed cross drains beyond the downstream toe of the dam is not in regular	Draibage gallery should be cleaned and proper safety rrabgements should be made. It should be kept under observation and Necessary repairs should be carried out by permission of competent field authority. The repairs should be carried out through mechanical organization. Proper measures should be taken for it Drains should be cleaned. Drain section should be restored as per design.

Sr.No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
					section and freely draining (B2) **6.** Earthen portion near masonry dam have been settled to tune of 90 Cm. in depth for 55 Mtr in length (B3) 7. Instruments are not installed in dam (B9)	Dam section should be restored to design section. Instruments should be installed in dam

Table 2.8

Dam Wise Health Status Report of Class-I Dams with Category-3 Deficiency

Sr. No	Name of Dam	Date of Compl-etion	Location Longitude/ Latitude	Height in m	Gross Capacity Mm^3	Design Spillway Capacity m^3 / sec	Sr.No. in NRLD Register	Gated / Ungated	Date of Inspection Pre & Post	Deficiencies noticed	Total Deficiencies
1	2	3	4	5	6	7	8	9	10	11	12
[A]Chief Engineer(W.R.)Water Resources Department Pune											
(1)Superintending Engineer, Pune Irrigation Circle, Pune											
(a)Executive Engineer , Pune Irrigation division, Pune											
1	Jadhavwadi Tal.Talegaon Dist. Pune	2001	73°43'0 18°47'00"	35.52	1.203	664.14	**MH09HH 1587**	Ungated	25.7.2019 26/11/2019	3.6, 3.31, 3.24, 3.10, 3.13, 3.5, 3.1, 3.35, 3.16, 3.20, 3.21, 3.24, 3.30, 3.7	14
2	Nira devghar Tal.Maval Dist. Pune	2008	73°43'00" 18°06'00"	65.69	337.39	1398	**MH09HH 1554**	Gated	25.05.2019 9.11.2019	3.24, 3.20, 3.9, 3.33, 3.13, 3.36, 3.16, 3.28,3.6 3.1, 3.11, 3.12, 3.19, 3.21, 3.29, 3.30, 3.31, 3.34, 3.35,	19
3	Bhatghar Tal. Bhor Dist.Pune	1926	$73^0$52' $18^0$11'	57.62	672.65	1600	**MH09HH** 0048	Gated	01.06.2019 08.11.2019	3.12, 3.19, 3.16, 3.24, 3.25, 3.28, 3.5, 3.31, 3.23, 3.34 3.1, 3.2,3.6, 3.20,	14
4	Vadivale Tal. Maval Dist.Pune	1999	$73^0$31'16" $18^0$49'20"	29.00	40.87	746.82	**MH09MH** 1517	Gated	22.05.2019 15.12.2019	3.4, 3.35, 3.18, 3.30. 3.1, 3.6, 3.11, 3.19, 3.20, 3.21, 3.24, 3.25, 3.28, 3.29, 3.31, 3.32, 3.33,	17
5	Andravalley Tal.Maval Dist.Pune	2003	$73^0$39'00" $18^0$20'00"	34.50	83.31	3021.00	**MH09HH 1622**	Ungated	17.*05.*2019 26.11.2019	3.20,3.24, 3.16, 3.28 3.6, 3.13,3.18, 3.19, 3.21, 3.23, 3.27, 3.29, 3.30, 3.31,	14
6	Kasarsai Tal. Mulashi Dist.Pune	1995	$73^0$40'00" $18^0$35'30"	36.0	17.38	933.00	**MH09MH 1373**	Gated	22.05.2019 26.11.2019	3.7, 3.3, 3.13, 3.1, 3.31, 3.21, 3.27, 3.22, 3.20, 3.6 3.9, 3.11,3.24, 3.26, 3.28, 3.29, 3.30, 3.33,	18
(b)Executive Engineer , Chaskaman Irrigation division, Pune											
7	Aralakalmodi Tal.Khed Dist. Pune	2009	73°40'30" 19°00'00"	36.80	42.87	963.21	**MH09HH 1672**	Ungated	17.05.2019 07.10.2019	3.1, 3.13, 3.16, 3.20, 3.23, 3.24, 3.29, 3.31, 3.34, 3.35. 3.33. 3.21.3.6. 3.36. 3.28	15

Sr. No	Name of Dam	Date of Compl -etion	Location Longitude/ Latitude	Height in m	Gross Capacity Mm^3	Design Spillway Capacity m^3 / sec	Sr.No. in NRLD Register	Gated / Ungated	Date of Inspection Pre & Post	Deficiencies noticed	Total Deficiencies
1	2	3	4	5	6	7	8	9	10	11	12
8	BhamaAskhed Tal. Khed Dist. Pune	2001	73°43'00" 18°15'00"	51.77	230.47	1118	**MH09HH 1559**	Ungated	17.05.2019 26.11.2019	3.1, 3.2, 3.6, 3.9, 3.17, 3.20, 3.23, 3.24, 3.25, 3.28, 3.30, 3.33, 3.34, 3.35.3.22,3.10,3.13,3.21, 3.19	19
9	Chaskaman Tal. Khed Dist.Pune	1999	$73^0$47' $18^0$57'	46.28	241.69	2860	**MH09HH 1522**	Gated	17.05.2019 07.10.2019	3.1, 3.2, 3.3, 3.9,3.10, 3.13, 3.16, 3.17, 3.19, 3.20, 3.21,3.22 3.23, , 3.24, 3.25, 3.28, 3.31, 3.33, 3.34	19
(d)Executive Engineer , Lift Irrigation Management Division, Pune											
10	Nazare Tal.Sasvad Dist. Pune	1974	74°12'50" 18°17'30"	22.50	223.20	980	**MH09MH 0453**	Gated	01.06.2019 27.11.2019	3.1, 3.2, 3.5, 3.6, 3.7, 3.9, 3.13, 3.16, 3.19, 3.20, 3.21, 3.22, 3.23, 3.24, 3.25, 3.26, 3.29, 3.31, 3.33,3.35	20
(e) Executive Engineer , Khadakwasala Irrigation Division, Pune 11											
11	Panshet Tal. Velhe Dist.Pune	1972	$73^0$37' $18^0$22'	63.56	303	1162.0	**MH09HH 0310**	Gated	21.05.2019 28.11.2019	3.5, 3.25, 3.33, 3.19.3.12, 3.15,3.31,3.18,3.16,3.28, 3.21,3.24, 3.30 ,3.7, 3.34	15
12	Khadakvasala Tal. Haveli Dist.Pune	1879	$73^0$45' $18^0$25'	32.92	86	2755	**MH09HH 0013**	Gated	21.05.2019 28.11.2019	3.1, 3.5, 3.7, 3.9, 3.6, 3.18, 3.19, 3.20, 3.21, 3.22, 3.24, 3.25, 3.28, 3.29, 3.31, 3.33, 3.35.	17
13	Warasgaon Tal. Velhe Dist.Pune	1972	$73^0$37' $18^0$23'	63.40	374.00	1416	**MH09HH 0592**	Gated	21.05.2019 28.11.2019	3.1, 3.5, 3.6, 3.7, 3.9, 3.11, 3.15, 3.16,3.18, 3.19, 3.20, 3.21, 3.22, 3.24, 3.25, 3.26, 3.28, 3.31, 3.33, 3.34,	20
14	Pawana Tal. Bhor Dist.Pune	1972	$73^0$40'30" $18^0$21'30"	42.37	305	1250	**MH09HH** 0311	Gated	21.05.2019 29.11.2019	3.1,3.2, 3.6, 3.7, 3.9, 3.10, 3.13, 3.16, 3.20, 3.21,3.22, 3.24, 3.26, 3.28, 3.29, 3.31, 3.33, 3.34,	18

Sr. No	Name of Dam	Date of Compl -etion	Location Longitude/ Latitude	Height in m	Gross Capacity Mm^3	Design Spillway Capacity m^3 / sec	Sr.No. in NRLD Register	Gated / Ungated	Date of Inspection Pre & Post	Deficiencies noticed	Total Deficiencies
1	2	3	4	5	6	7	8	9	10	11	12
(f)Executive Engineer, Nira Right Bank Canal Division, Phaltan ,Dist. Satara											
15	Veer Tal.Purandar Dist.Pune	1965	74^0 5'55 $18^0$07'05"	39.11	278.49	5154	**MH09HH 0116**	Gated	01.06.2019 27.11.2019	3.1, 3.2, 3.5, 3.7, 3.6, 3.9, 3.10, 3.15, 3.16, 3.18, 3.20, 3.23, 3.28, 3.31. 3.34	15
(2)Superintending Engineer, Pune Irrigation Project Circle, Pune											
(a) Executive Engineer, BhamaAskhed dam division, pune											
16	Temghar Tal. Mulashi Dist.Pune	2000	73^0 32' 18^0 27'	86.67	107.96	626	**MH09HH 1544**	Ungated	21.05.2019 09.11.2019	3.6, 3.13, 3.17, 3.20, 3.22,3.23, 3.24,3.25, 3.26, 3.27, 3.31, 3.33, 3.34,3.35, 3.36,	15
(c)Executive Engineer, Niradevghar Project Division, Sangavi(Bhatghar),Tal.Bhor,Dist.Pune											
17	Gunjavani Tal.Velhe Dist. Pune	2001	73°38'27" 18°18'30"	52.82	104.69	1280.03	**MH09HH 1552**	Gated	30.05.2019 08.11.2019	3.1, 3.5, 3.9, 3.13, 3.22, 3.24, 3.28, 3.31	8
(3)Superintending Engineer Sangli Irrigation circle, Sangli											
(a)Executive Engineer , Sangli Irrigation Division, Sangli											
18	Morna (Shirala) Tal Shirala Dist. Sagli	1984	74°06'30" 16°59'20"	31.20	21.18	1075	**MH09HH 1101**	Ungated	01.06.2019 13.11.2019	3.24,3.1,3.13,3.20,3.30,3. 31, 3.26	7
(b)Executive Engineer , Tembhu Lift Irrigation Project Managementb Division, Ogalewadi											
19	Yevati masoli Tal Karad Dist. Satara	1989	74°11'00" 17°00'00"	36.00	7.30	330	**MH09HH 1218**	Ungated	01.06.2019 13.11.2019	3.1,3.9, 3.24,3.13,3.2, 3.20, 3.30, 3.31, 3.6, 3.26, 3.25, 3.32	12
(c)Executive Engineer , Takari Pump House Division No.1, Devrashtre											
20	**Satpewadi barrage** Tal Walwa Dist. Sangli	2005	- -	25.50	3.886	554.80	**Proposed for updating in NRLD 2018**	Gated	01.06.2019 13.11.2019	3.24, 3.20, 3.31, 3.21, 3.19, 3.30, 3.6, 3.26	8

Sr. No	Name of Dam	Date of Compl-etion	Location Longitude/ Latitude	Height in m	Gross Capacity Mm^3	Design Spillway Capacity m^3 / sec	Sr.No. in NRLD Register	Gated / Ungated	Date of Inspection Pre & Post	Deficiencies noticed	Total Deficiencies
1	2	3	4	5	6	7	8	9	10	11	12
(4)Superintending Engineer Kolhapur Irrigation Circle,Kolhapur											
(a)Executive Engineer , Medium Project Division No2, Kolhapur											
21	Ghatprabha(Phatakwadi) Tal.Chandgad Dist.Kolhapur	2009	74°04'20" 15°56'45"	48.30	43.75	1452	**MH09HH 1900**	Ungated	24.04.2019 09.10.2019	3.19,3.34,3.24,3.9,3.2,3.13.6,3.26,3.13,3.20,3.223.31,3.29,3.30	14
22	Chikotra Tal.Ajara Dist..Kolhapur	2008	74°12'23" 16°13'30"	60.78	43.11	393	**MH09HH 1582**	Gated	10.05.2019 04.11.2019	3.1,3.5,3.11,3.13,3.20,3.23,3.24, 3.30,3.31,3.34	10
23	Jangamhatti Tal.Chandgad Dist..Kolhapur	2005	74°17'00" 15°51'30"	31.40	34.21	567	**MH09MH. 1366**	Ungated	24.04.2019 09.10.2019	3.1,3.2,3.6,3.9,3.10,3.13,3.20,3.24,3.26,3.29,3.30,3.31,3.32	13
24	Keloshi Bk. Tal.Radhanagari Dist..Kolhapur	2010	74°01'00" 16°20'00"	38.10	5.603	228.42	**MH09HH. 1935**	Ungated	15.04.2019 10.10.2019	3.2,3.6,3.9,3.13,3.23,3.243.26,3.30 3.31	9
25	Jambre Tal.Chandgad Dist..Kolhapur	2013	74°06'40" 15°52'47"	58.00	23.23	530.90	**MH09HH. 1925**	Ungated	24.04.2019 09.10.2019	3.1,3.2,3.5,3.6,3.9,3.13,3.16,3.18,3.19,3.20,3.24,3.26,3.27,3.29,3.31,3.32	16
3.13,(b)Executive Engineer, Kolhapur Irrigation Dn.(North) Kolhapur											
26	Kadavi Tal.Shahuwadi Dist..Kolhapur	2000	73°52'30" 17°00'05"	36.05	71.24	506.87	**MH09HH 1541**	Ungated	27.04.2019 16.10.2019	3.6,3.7,3.9,3.10,3.11,3.203.3.21,3.22,3.24,3.26,3.30,3.31,3.32,3.33,3.34	15
27	Kasari Tal Shahuwadi Dist.Kolhapur	1989	73°47'41" 16°51'42"	85.30	709.12	860	**MH09HH 1245**	Ungated	27.04.2019 16.10.2019	3.6,3.11,3.20,3.21,3.24,3.25,3.30,3.31,3.32	9
28	Kumbhi Tal.Gaganbavada Dist..Kolhapur	2007	73°51'49" 16°31'29"	42.58	76.88	416.10	**MH09HH 1671**	Gated	10.04.2019 30.11.2019	3.1, 3.6, 3.9, 3.13, 3.20, 3.22, 3.23, 3.24, 3.25, 3.26, 3.30, 3.31, 3.35	13
29	Paleshwar Tal Shahuwadi Dist..Kolhapur	2000	73°52'30" 16°40'30"	42.15	9.11	635	**MH09HH 1546**	Ungated	15.04.2019 10.10.2019	3.1,3.6,3.7,3.9,3.16,3.20,3.21,3.24,3.26,3.27,3.30,3.31,3.32	13
30	Tulashi Tal:Radhanagari. Dist.Kolhapur	1978	74°01'00" 16°31'15"	48.6	96.28	640	**MH09HH 0726**	Ungated	15.04.2019 04.10.2019	3.1,3.5,3.6,3.9,3.13,3.163.20,3.21,3.22,3.26,3.273.28,3.31	13

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1	2	3	4	5	6	7	8	9	10	11	12
31	Upwade Tal.Karveer Dist..Kolhapur	1996	74°05'00 16°40'00"	32.31	2.86	71	**MH09HH 1385**	Ungated	15.04.2019 16.10.2019	3.1,3.5,3.6,3.9,3.16,3.20 3.21,3.22,3.24,3.30,3.32	11
32	Radhanagari Tal.Radhanagari Dist.Kolhapur	1954	$73^0$57'40" $16^0$20'20"	42.83	936.56	283	**MH09HH 0067**	Gated	15.04.2019 04.10.2019	3.1, 3.6, 3.11, 3.16, 3.20, 3.21, 3.22, 3.24, 3.28, 3.31, 3.32, 3.33, 3.35	13
33	Warana Tal. Shirala Dist. Sangli	1989	$73^0$05'50 $17^0$08'10"	77.00	974.18	974.18	**MH09HH 1542**	Gated	11.04.2019 05.10.2019	3.1,3.2,3.3,3.5,3.6,3.9, 3.13,3.18,3.20,3.21,3.22, 3.25,3.26,3.30,3.31,3.32, 3.35,3.36	18
34	Dudhaganga Tal.Radhanagari Dist. Kolhapur	1989	74^0 1' 0" 16^0 21' 0"	85.30	719.12	1940	**MH09HH 1226**	Gated	13.05.2019 13.12.2019	3.1,3.5,3.6,3.9,3.18,3.20, 3.24,3.25,3.26,3.28,3.30 3.33	12
(c)Executive Engineer, Kolhapur Irrigation Dn.(South) Kolhapur											
35	Patgaon Tal. Chargad Dist..Kolhapur	1989	73°56'15" 16°7'9"	39.19	75.79	499	**MH09HH 1242**	Ungated	10.05.2019 20.12.2019	3.1,3.6,3.7,3.9,3.13,3.20, 3.22,3.24,3.26,3.27,3.30, 3.31	12
36	Ambewadi Tal.Chargadist..Kolhapur	2011	74°15'26" 15°52'49"	33.05	7.11	170.62	**MH09HH . 1889**	Ungated	24.04.2019 05.11.2019	3.1,3.5,3.9,3.13,3.20,3.24 3.26,3.27,3.30,3.31	10
37	Chitri Tal.Ajara Dist..Kolhapur	2001	74°09'30" 16°04'15"	55.11	53.41	571	**MH09HH 1586**	Ungated	24.04.2019 19.10.2019	3.1,3.9,3.11,3.13,3.20, 3.21,3.22,3.24,3.26,3.30, 3.31,3.32,3.34	13
38	Kitwad-2 Tal. Chargad Dist..Kolhapur	2009	75°25'15" 15°45'30"	36.72	5.92	674.34	**- MH09HH 1902**	Ungated	24.04.2019 05.11.2019	3.1,3.6,3.9,3.13,3.16,3.20 3.24,3.26,3.27,3.30,3.31, 3.32,3.33	13
39	KondoshiTal.Bhudargad Dist..Kolhapur	2000	74°01'00" 16°20'00"	31.14	2.73	133.35	**MH09HH 1533**	Ungated	10.05.2019 24.10.2019	3.1,3.6,3.9,3.13,3.19,3.20 3.24,3.26,3.28,3.30,3.31	11
40	Lakikatti Tal. Chandgad Dist..Kolhapur	2000	74°20'00" 15°55'30"	36.34	9.239	231	**MH09HH 1538**	Ungated	24.04.2019 05.11.2019	3.1,3.9,3.13,3.16,3.19 3.20,3.21,3.24,3.27,3.30 3.31,3.32	12

Sr. No	Name of Dam	Date of Compl-etion	Location Longitude/ Latitude	Height in m	Gross Capacity Mm^3	Design Spillway Capacity m^3 / sec	Sr.No. in NRLD Register	Gated / Ungated	Date of Inspection Pre & Post	Deficiencies noticed	Total Deficiencies
1	2	3	4	5	6	7	8	9	10	11	12
41	Megholi Tal. Bhudergad Dist. Kolhapur	2000	$74^0$07'00 $16^0$11'03"	34.12	3.932	238.35	**MH09HH 1536**	Ungated	10.05.2019 24.10.2019	3.1,3.2,3.6,3.7,3.9,3.13 3.16,3.24,3.28,3.30,3.31	11
42	Phaye Tal.Bhudargad Dist..Kolhapur	2005	74°04'15" 16°07'04"	34.12	3.932	190.40	**MH09HH 1629**	Ungated	10.05.2019 24.10.2019	3.2,3.9,3.13,3.22,3.24 3.30,3.31,3.33	8
(5)Superintending Engineer Satara Irrigation Circle, Satara											
(a)Executive Engineer, Koyna Irrigation Division Koynanagar											
43	Koyna Tal.PatanDist. Satara	1967	73°44'21'' 7°23'00''	103.02	2980	5465.8	**MH09VH 0100**	Gated	22.05.2019 19.11.2019	3.10, 3.16, 3.17, 3.18, 3.19,3.20, 3.21, 3.23, 3.28, 3.33, 3.35	11
44	Kolkewadi Tal. Chiplun Dist. Ratnagiri	1975	$73^0$38'50' 17^0 25'	66	36.22	1081	**MH09HH 0527**	Gated	22.05.2019 24.11.2019	3.18, 3.20, 3.22, 3.33, 3.24.	5
(b)Executive Engineer, Satara Irrigation Division Satara											
45	Dhom Tal. Wai Dist. Satara	1976	73^0 40' $17^0$58'	50	332	1778.29	**MH09HH 0655**	Gated	25.05.2019 02.12.2019	3.1, 3.2, 3.6,3.7, 3.26, 3.9,3.10, 3.31, 3.28, 3.11,3.19, 3.20, 3.22, 3.30, 3.24, 3.28, 3.29 , 3.34, 3.36	19
46	Dhombalkawadi	2006	74°42'30" 17°51'00"	65.10`	115.53	1576	**MH09HH 1665**	Ungated	26.05.2019 31.12.2019	3.1, 3.5, 3.6, 3.9, 3.13, 3.19, 3.20,3.22, 3.24, 3.26, 3.28, 3.31, 3.33, 3.35.3.36,	15
(c) Executive Engineer, Krishna Irrigation Division, Satara											
47	Urmodi Tal & Dist. Satara	2000	73°54'40" 17°40'00"	50.10	282.14	2407	**MH09HH 1594**	Gated	21.05.2019 26.12.2019	3.1, 3.9, 3.11, 3.13, 3.18, 3.19, 3.20, 3.21, 3.23, 3.24, 3.28, 3.31,3.33, 3.34, 3.36.	15
48	Kanher Tal. Satara Dist. Satara	1986	$73^0$55' $17^0$45'	50.34	286	3203	**MH09HH 1141**	Gated	21.05.2019 28.11.2019	3.1, 3.2, 3.6, 3.10, 3.12, 3.16, 3.18, 3.19, 3.20, 3.21, 3.23,3.24, 3.25, 3.26, 3.28, 3.31, 3.33, 3.34,3.35,3.36	20

Sr. No	Name of Dam	Date of Compl -etion	Location Longitude/ Latitude	Height in m	Gross Capacity Mm^3	Design Spillway Capacity m^3 / sec	Sr.No. in NRLD Register	Gated / Ungated	Date of Inspection Pre & Post	Deficiencies noticed	Total Deficiencies
1	2	3	4	5	6	7	8	9	10	11	12
[2]Chief Engineer(S.P.) Water Resources Department Pune											
(1)Superintending Engineer Kukadi Irrigation Circle Pune											
(a) Executive Engineer, Kukadi Irrigation Div. 1 Narayangaon											
49	Wadaj Tal.Junnar Dist. Pune	1983	73°52'00" 19°09'00"	28.00	35.90	1426	**MH09HH 1006**	Gated	22.05.2019 28.11.2019	3.1, 3.2, 3.5,3.6,3.7, 3.9, 3.13, 3.18, 3.19, 3.20, 3.21,3.22,3.23, 3.24, 3.25, 3.28, 3.31,3.33	18
50	Yedgaon Tal.Junnar Dist. Pune	1977	74°01'30" 19°10'30"	24..60	93.43	3844	**MH09MH 0658**	Gated	21.05.2019 28.11.2019	3.1, 3.5, 3.6, 3.7, 3.9, 3.13, 3.18, 3.20, 3.24, 3.25,3.28, 3.29,3.31,	13
51	Manikdoh Tal. Junnar Dist. Pune	1984	$73^0$49' 19^0 14'	51.80	308.06	143	**MH09HH 1060**	Gated	22.05.2019 28.11.2019	3.1,3.6, 3.11,3.12, 3.13, 3.15,3.16,3.18, 3.20, 3.21, 3.22,3.23,3.24, 3.28, 3.31, 3.33, 3.34.3.36,	18
52	Pimpalgaonjoge Tal. Junnar Dist. Pune	2000	$75^0$52'30" $19^0$18'45"	34.20	235.28	1167.3	**MH09MH 1520**	Gated	21.05.2019 20.12.2019	3.1, 3.5, 3.7, 3.9, 3.11, 3.13, 3.18, 3.20, 3.21, 3.23, 3.24, 3.25, 3.26, 3.28, 3.31, 3.33,3.37	17
53	Dimbhe Tal. Junnar Dist. Pune	2002	$74^0$44'30" $19^0$5'45"	72.10	328.22	2870	**MH09HH 1558**	Gated	22.05.2019 27.11.2019	3.1, 3.6, 3.15, 3.18, 3.20, 3.23, 3.24, 3.31,3.33, 3.34.	10
(b) Executive Engineer, Kukadi Irrigation Div.2 Shrigonda											
54	Ghod Tal. Shirur Dist. Pune	1965	$74^0$51'50 17^0 8'10"	34.75	216.30	7465	**MH09MH 0117**	Gated	23.05.2019 13.11.2019	3.1, 3.2, 3.7, 3.9, 3.10, 3.13, 3.16, 3.19, 3.20, 3.22, 3.23, 3.24,3.25, 3.26, 3.27,3.28, 3.29, 3.30, 3.31, 3.35.	20
b) Executive Engineer ,Kukadi Irrigation Division No. 2, Shrigonda											
55	**Sina** Tal. Karjat, Dist A. Nagar	1985	74°57'00" 18°49'00"	28.5	67.95	4450	MH09MH 1142		NR 03.11.2019	3.1, 3.5, 3.6, 3.7, 3.9, 3.16, 3.19, 3.20, 3.21, 3.22, 3.23, 3.24, 3.25, 3.26, 3.27, 3.28, 3.29, 3.31, 3.35.	19

Sr. No	Name of Dam	Date of Compl -etion	Location Longitude/ Latitude	Height in m	Gross Capacity Mm^3	Design Spillway Capacity m^3 / sec	Sr.No. in NRLD Register	Gated / Ungated	Date of Inspection Pre & Post	Deficiencies noticed	Total Deficiencies
1	2	3	4	5	6	7	8	9	10	11	12
(c) Executive Engineer, Dimbhe Dam Div. Manchar											
56	Chilewadi Tal. Junnar Dist. Pune	2000	$73^0$50'00" $19^0$21'00"	62.56	27.17	1686	**MH09HH 1553**	Gated	24.05.2019 28.11.2019	3.1, 3.2, 3.6, 3.13, 3.16, 3.18, 3.19, 3.20, 3.21, 3.22, 3.23, 3.24, 3.26, 3.28, 3.29, 3.31, 3.34. 3.35	18
(2)Superintending Engineer Satara Irrigation Project Circle, Satara											
(a)Executive Engineer , Minor Irrigation Division, Satara											
57	Uttarmand Tal.PatanDist. Satara	2001	74°28'00" 17°24'24"	44.45	24.925	1223	**MH09HH 1591**	Ungated	13.04.2019 28.10.2019	3.20,3.24	2
58	Morna(Guregh ar) Tal.PatanDist. Satara	2000	73°50'00" 17°17'30"	47.02	39.55	2247	**MH09HH 1664**	Ungated	13.04.2019 28.10.2019	3.13, 3.24, 3.28,3.20	4
59	Nagewadi Tal. Wai Dist. Satara	1999	$73^0$51'45" $17^0$55'17"	40.02	6.47	326	**MH09HH 1518**	Gated	21.04.2019 30.10.2019	3.7,3.30, 3.2,3.24,3.33	5
(b)Executive Engineer , Kanher Canal Division No.2, Karwadi,Karad.											
60	Tarali Tal. Patan Dist. Satara	2007	$73^0$54'15" $17^0$32'00"	73.41	165.70	1721	**MH09HH 1666**	Gated	11.04.2019 28.10.2019	3.24,3.30,3.28,3.33	4
(b)Executive Engineer, Dhom Canals Division No.2,Satara											
61	Mahu Tal Jawali Dist. Satara	2001	75°48'30" 17°52'30"	54.35	30.80	705	**MH09HH 1588**	Gated	21.04.2019 30.10.2019	3.24	1
62	Hatgeghar Tal Jawali Dist. Satara	Gorge in 2001, Dam under construction	75°49'00" 17°52'30"	38.55	77.371	150	**MH09HH 1568**	Ungated	21.04.2019 30.10.2019	3.24	1

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1	2	3	4	5	6	7	8	9	10	11	12
(3)Superintending Engineer & Administrator, C.A.D.A. Solapur											
(a) Executive Engineer, Solapur Irrigation Division Solapur											
63	Bori Tal. Akkalkot Dist.Solapur	2005	76°04'00" 17°37'00"	15.20	23.292	3653	**MH09MH. 1641**	Gated	30.04.2019 06.12.2019	3.1, 3.2, 3.3, 3.6, 3.7, 3.9, 3.11, 3.16, 3.20, 3.21, 3.24, 3.27, 3.28, 3.29, 3.30, 3.31	16
64	Ekrukh Tal & Dist.- Solapur	1871	75°54'30" 17°43'30"	21.45	61.160	1381	**MH09MH 0007**	Ungated	30.04.2019 23.11.2019	3.1,3.2,3.5,3.6,3.7,3.9, 3.10,3.16,3.20,3.21,3.24 3.27,3.30,3.35	14
(b)Executive Engineer, Ujjani Dam Management Division Bhimanagar Dist. Solapur											
65	Ujjani Tal. Madha Dist Solapur	1980	$73^0$7'18'' $14^0$08'00'	56.40	332	180.10	**MH09HH 0843**	Gated	05.05.2019 26.11.2019	3.1,3.9,3.11,3.13,3.18 3.19, 3.20,3.22,3.31	9
(4)Superintending Engineer Osmanabad Irrigation Circle Osmanabad											
(a)Executive Engineer, Sinakolegaon Project Division Paranda Dist.Osmanabad											
66	Sinakolegaon Tal.Paranda Dist.Osmanabad	2007	75°24'00" 17°18'00"	36.60	19.19	3653	**MH09MH . 1673**	Gated	29.05.2019 04.11.2019	3.2,3.6,3.9,3.10,3.11,3.13 3.18,3.20,3.24,3.26,3.28, 3.30,3.31,3.33,3.34 3.36	16

Table 2.9
Dam Wise Health Status Report of Class-II Dams with Category-1 Deficiency

Sr. No.	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Observation / Significant Deficiencies noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
---------- No Such Dams under this category is reported ----------						

Table 2.10
Dam Wise Health Status Report of Class-II Dams with Category-2 Deficiency

Sr. No.	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
[A]Chief Engineer (W.R.) Water Resources Department, Pune						
(1)Superintending Engineer Pune Irrigation Circle, Pune						
(a)Executive Engineer, Pune Irrigation Division, Pune						
1	Name : **Urawade** Tal. Mulashi Dist. Pune Date of completion:-**1983** Location : Longitude - **74°56'00"** Latitude- **18°30'00"** Height :-**23.48 m.** Gross capacity :- **2.00 Mcum** Sr.No.In Large Dam Register 2012:**MH09MH0964**	14.05.2019 16.11.2019	Shri. Rajendra Dhodapkar E.E PID. Pune	W.W	1. W.W. masonry damaged at some places repair is required. Leakage is observed through waste weir bar at many locations.(B7)	Necessary repairs to be carried out. The exact locations of damage with quantum of leakages should be mentioned in the report to categorise the deficiency properly.
2	Name : **Marnewadi** Tal. Mulashi Dist. Pune Date of completion:-**1998** Location : Longitude - **73°40'00"** Latitude- **18°30'00"** Height :-**18.35 m.** Gross capacity :- **0.87 Mcum** Sr.No.In Large Dam Register 2012:**MH09MH1453**	14.05.2019 16.11.2019	Shri. Rajendra Dhodapkar E.E PID. Pune	Gate	1. Stem Rod is bent (B5)	Necessary repairs to be carried out in consultation with mechanical organization.

Sr. No.	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
3	Name : **Chinchwad** Tal. Mulashi Dist. Pune Date of completion:-**1984** Location : Longitude - **73°40'00"** Latitude- **18°15'00"** Height :-**20.92 m.** Gross capacity :- **1.53 Mcum** Sr.No.In Large Dam Register 2012:**MH09MH1033**	14.05.2019 16.11.2019	Shri. Rajendra Dhodapkar E.E PID. Pune	Outlet	1. Stem rod is bent in small extent.(**B5)**	Necessary repairs should be carried out in consultation with mechanical organization.
4	Name : **Mahakoshi** Tal.Mulashi Dist. Pune Date of completion:- **1998** Location: Longitude :- **73°50'00"** Latitude : -**18°05'00"** Height :-**24.00 m.** Gross capacity :- **2.28 Mcum** Sr.No.In Large Dam Register 2012:**MH09MH1474**	1.06.2019 19.11.2019	Shri. Rajendra Dhodapkar E.E PID. Pune	W.W.Bar	1. Spillway central portion 38.00mtr washed out. (B7)	Necessary repairs should be carried out.
(b)Executive Engineer Khadakwasala Irrigation Division, Pune11						
5	Name : **Bhugaon** Tal. Mulashi Dist. Pune Date of completion:- **1983** Longitude: -**73° 45'00"** Latitude:-**18°30'00"** Height :-**21.19** Gross capacity :-**1.90 Mcum** Sr.No.In Large Dam Register 2012:**MH09MH0963**	04.05.2019 10.12.2019	Shri. P.B.Shelar E.E KID. Pune Shri. V.P.Patil E.E KID. Pune	Earthen Embankment W.W. Bar	1. Sectioning of embankment is necessary(B1) 2. Masonry bar is not constructed. (B7)	Necessary repairs should be carried out. Necessary repairs should be carried out.

Sr. No.	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
6	Name : **Matoba** Tal. Daund Dist. Pune Date of completion:- **1978** Longitude: -**74° 34'00"** Latitude:-**18°00'23"** Height :-**17.50** Gross capacity :-**45.2 Mcum** Sr.No.In Large Dam Register 2012:**MH09MH0721**	08.05.2019 09.11.2019	Shri. P.B.Shelar E.E KID. Pune Shri. V.P.Patil E.E KID. Pune	E. E.	1. Standing pool of water observed on RHS of embankment at some places. (A2)	This area should be well drained so as to avoid any stagnant pools of water.
7	Name : **Malad** Tal. Daund Dist. Pune Date of completion:- **1979** Longitude: -**74° 34'00"** Latitude:-**18°23'00"** Height :-**15.63** Gross capacity :-**1.74 Mcum** Sr.No.In Large Dam Register 2012:**MH09MH0796**	08.05.2019 05.12.2019	Shri. V.P.Patil E.E KID. Pune	Outlet	1.Leakages through outlet well observed.(A6)	Necessary repairs should be carried out.
8	Name : **Palasdeo** Tal. Indapur Dist. Pune Date of completion:- **1953** Longitude: -**74° 34'00"** Latitude:-**18°23'00"** Height :-**18.23** Gross capacity :-**1.09 Mcum** Sr.No.In Large Dam Register 2012:**MH09MH0063**	12.05.2019 25.12.2019	Shri. P.B.Shelar E.E KID. Pune Shri. V.P.Patil E.E KID. Pune	W.W.Bar	1. W. W. Bar is in damaged condition. (B7)	Necessary repairs should be carried out.

Sr. No.	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
9	Name : **Shirsuphal** Tal. Baramati Dist. Pune Date of completion:- **1879** Location: Longitude: -**74° 35'20"** Latitude:-**18°21'00"** Height :-**20.11** Gross capacity :-**10.1 Mcum** Sr.No.In Large Dam Register 2012:**MH09MH0011**	08.05.2019 25.12.2019	Shri. P.B.Shelar E.E KID. Pune Shri. V.P.Patil E.E KID. Pune	Earthen Embankment	1. Crest profile is below by 1.15 m. than design crest and section is disturbed. (B1)	Necessary repairs are to be carried out to proper section after confirmation by competent field authority.
(d) Executive Engineer, Nira Right Bank Canal Division, Phaltan						
10	Name : **Naigaon** Tal.Khandala Dist. Satara Date of completion: **1983** Location: Longitude**: 73° 58' 5"** Latitude: **18° 06' 10"** Height : **18.0 m.** Gross capacity : **1.34 Mcum** Sr.No.In Large Dam Register 2012:**MH09MH.0986**	22.05.2019 26.11.2019	Shri. A.P.Nikam E.E. N.R.B.C. Division Phaltan Shri. S.R.Bodke E.E. N.R.B.C. Division Phaltan	W.W. Bar and tail channel Outlet D/S Drainage U/S Face	1. Waste weir bar is damaged condition. Heavy Leakage is observed through Waste weir bar. (B7) 2. Outlet well collapse. Outlet gate damaged. (A6) 3. Sign of water logging slushy condition and growth of aquatic weeds on downstream of dam (A2) 4. Head regulator on left side is damaged.(B5)	Necessary repairs are to be carried out. Leakage record needs to verify before repair. Necessary repairs are to be carried out in consultation with mechanical organization. Necessary repairs are to be carried out Necessary repairs are to be carried out
11	Name : **Hingangaon** Tal.Phaltan Dist. Satara Date of completion: **1975** Location: Longitude**: 74° 58' 5"** Latitude: **17° 06' 10"** Height : **17.53m.** Gross capacity : **1.47 Mcum**	23.05.2019	Shri. A. P. Nikam, E.E. N.R.B.C. Division Phaltan	Downstream Drainage	1. Sign of water logging slushy condition and growth of aquatic weeds on downstream of dam (A2)	Necessary repairs are to be carried out

Sr. No.	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
	Sr.No.In Large Dam Register 2012:**MH09MH.0986**	17.11.2019	Shri. S. R. Bodke, E.E. N.R.B.C. Division, Phaltan			
12	Name : **Tambave** Tal.Phaltan Dist. Satara Date of completion: **1966** Location: Longitude**: 74° 10' 00"** Latitude: **18° 00' 00"** Height : **18.0 m.** Gross capacity : **1.34 Mcum** Sr.No.In Large Dam Register 2012:**MH09MH.0986**	23.05.2019 27.11.2019	Shri. A.P.Nikam E.E. N.R.B.C. Division Phaltan Shri. S.R.Bodke E.E. N.R.B.C. Division Phaltan	D/S Drainage	1. Sign of water logging slushy condition and growth of aquatic weeds on downstream of dam (A2)	Necessary repairs are to be carried out
(e) **Executive Engineer, Lift Irrigation Management Division , Pune**						
13	Name : **Pilanwadi** Tal.Purander Dist. Pune Date of completion: **1978** Location: Longitude**: 73° 52' 00"** Latitude: **18° 36' 00"** Height : **22.77 m.** Gross capacity : **1.94 Mcum** Sr.No.In Large Dam Register 2012:**MH09MH.0729**	15.06.2019 15.11.2019	Shri. M. B. Kanitkar, EE, L.I.M.D, Pune	Outlet	1. Stem Rod of outlet gate is bent, not working smoothly (B5)	Necessary repairs to be carried out in consultation with mechanical organization.

Sr. No.	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
14	Name : **Virnalla** Tal.Purander Dist. Pune Date of completion: **1956** Location: Longitude**: 74° 05' 00"** Latitude: **18° 10' 00"** Height : **21.81 m.** Gross capacity : **3.585 Mcum** Sr.No.In Large Dam Register 2012:**MH09MH.1415**	15.06.2019 15.11.2019	Shri.M.B. Kanitkar EE LIMD,Pune	Outlet	1. Heavy leakages observed through outlet gate. (A4)	Necessary repairs to be carried out in consultation with mechanical organization.
15	Name : **Malwandi** Tal.Maval Dist. Pune Date of completion: **2000** Location: Longitude**: 73° 31' 00"** Latitude: **18° 39' 30"** Height : **20.45 m.** Gross capacity : **3.68 Mcum** Sr.No.In Large Dam Register 2012:**MH09MH.1415**	24.06.2019 31.10.2019	Shri.M.B. Kanitkar EE LIMD,Pune Shri.Sudhir Vaidya Deputy EE LIMD,Pune	WW Bar	1. Leakages from WW Bar observed (B7)	Necessary repairs to be carried out
16	Name : **Thitewadi** Tal.Shirur Dist. Pune Date of completion: **2003** Location: Longitude**: 74° 02' 30"** Latitude: **18° 26' 30"** Height : **21.10 m.** Gross capacity : **9.86 Mcum** Sr.No.In Large Dam Register 2012:**MH09MH.1623**	22.05.2019 9.12.2019	Shri.M.B. Kanitkar EE LIMD,Pune	WW Bar	1. Guide bund 200 m length is washed out in heavy flood.(B7) 2. Scouring (Aprox. Depth 1.5 m) in tail channel. (A17)	Necessary repairs should be carried out Necessary repairs should be carried out

Sr. No.	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
(f) Executive Engineer, Chaskaman Irrigation Division, Pune						
17	Name : **Nimgaon Mhalungi** Tal.Shirur Dist. Pune Date of completion: **1971** Location: Longitude**: 74° 12' 30"** Latitude: **18° 43' 30"** Height : **17.30 m.** Gross capacity : **3.37 Mcum** Sr.No.In Large Dam Register 2012:**MH09MH.1623**	16.05.2019 06.12.2019	Shri. B. K. Shete, E E CID, Pune	Earthen Embankment	1. Embankment is not as per design section .(B1)	Necessary repairs should be carried out.
(2) Superintending Engineer,Sangli Irrigation Circle Sangli						
Executive Engineer,Sangli irrigation Division, Sangli						
18	Name : **Antri** Tal. Shirala Dist. Sangli Date of completion:-**1991** Location : Longitude -74°05′00 Latitude -17°02′00 Height :-**22.79 m.** Gross capacity - **2.82 Mcum** Sr.No.In Large Dam Register **MH09MH** **1215**	16.06.2019 04.11.2019	Shri. N.S. Kare	Outlet well	1. H.R well is collapsed (A6)	The well should be reconstructed.
19	Name : **Revnal** Tal. Jath Dist. Sangli Date of completion:-**1978** Location : Longitude -75°12′15 Latitude -17°06′30 Height :-**18.60 m.** Gross capacity - **2.37 Mcum** Sr.No.In Large Dam Register **MH09MH1382**	17.05.2019 22.11.2019	Shri. N.S. Kare	Outlet	1. Stem rod is is not straights and not working properly, required to replace (B5)	Necessary remedial measures should be done

Sr. No.	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
20	Name : **Tippehallil** Tal. Jath Dist. Sangli Date of completion:-**1975** Location : Longitude -7404′00 Latitude -17°08′00 Height :-**18.120 m.** Gross capacity - **2.02 Mcum** Sr.No.In Large Dam Register **MH09MH0513**	17.05.2019 20.11.2019	Shri. N.S.Kare	Outlet	1. Outlet gate is completely damaged and stem rod is bent. (B5)	Necessary remedial measures should be done
(a) Executive Engineer,Tembhu Lift Irrigation Project Management Division, Ogalewadi						
21	Name : **Buddhihal** Tal. Mangalwedha Dist. Solapur Date of completion:-**1966** Location : Longitude -**74°59'54''** Latitude -**17°18'30''** Height :-**18.52 m.** Gross capacity - **19.03 Mcum** Sr.No.In Large Dam Register **MH09MH0134**	**6.5.2019** **16.11.2019**	Shri.R.Y. Reddiyar EE,TLIPD Ogalewadi	Outlet	1. Stem rod for lifting gates is not straight. (B5)	Necessary repairs be carried out.
22	Name :**Dighanchi** Tal. Atpadi Dist. Sangli Date of completion:-**1976** Location : Longitude -**74°55'30''** Latitude -**17°24'30''** Height :-**15.80 m.** Gross capacity - **4.0 Mcum** Sr.No.In Large Dam Register **MH09MH0591**	**18.5.2019** **16.11.2019**	Shri.R.Y. Reddiyar EE,TLIPD Ogalewadi	Earthen Embankment	1. Leakage is noticed on d/s slope (A1)	Necessary repairs be carried ou to stop the leakage..

Sr. No.	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
23	Name :**Ghanand** Tal. Atpadi Dist. Sangli Date of completion:-**1986** Location : Longitude -**74°44'00''** Latitude -**17°44'30''** Height :-**15.46 m.** Gross capacity - 1.44 **Mcum** Sr.No.In Large Dam Register **MH09MH1120**	**28.4.2019** 13.11.2019	Shri.R.Y. Reddiyar EE,TLIPD Ogalewadi	Earthen Embankment Outlet	1. There are some boils or wet patches, seepage on downstream of dam (A1) 2. Stem rod for lifting the gate is not straight (B5)	Necessary repairs be carried ou to stop the leakage.. Necessary repairs be carried out.
24	Name :**Karandewadi** Tal Kadegaon Dist. Sangli Date of completion:-**1995** Location : Longitude -**74°17'12''** Latitude -**17°22'00''** Height :-**18.45 m.** Gross capacity - 1.36 **Mcum** Sr.No.In Large Dam Register **MH09MH1348**	**30.4.2019** 24.11.2019	Shri.R.Y. Reddiyar EE,TLIPD Ogalewadi	Outlet	1. Outlet well is not in good condition.. (A6)	Necessary repairs be carried out.
25	Name : **Morale** Tal Tasgaon Dist. Sangli Date of completion:-**1974** Location : Longitude -**74°42'09''** Latitude -**17°11'43''** Height :-**16.10 m.** Gross capacity - 0.65 **Mcum** Sr.No.In Large Dam Register **MH09MH0239**	14.5.2019 28.11.2019	Shri.R.Y. Reddiyar EE,TLIPD Ogalewadi	Earthen Embankment General	1. Standing pools of water are seen on d/s side.. (A2) 2. Approach road is not provided. (B6)	Necessary repairs be carried out. Road should be constructed

Sr. No.	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
26	Name : **Nimbhavade** Tal Atadi Dist. Sangli Date of completion:-**1986** Location : Longitude -**74°52'30''** Latitude -**17°28'00''** Height :-**16.13 m.** Gross capacity - 6.68 **Mcum** Sr.No.In Large Dam Register **MH09MH1187**	18.05.2019 16.11.2019	Shri.R.Y. Reddiyar EE,TLIPD Ogalewadi	Earthen Embankment General	1. Standing pools of water are seen on d/s side.. (A2) 2. Approach road is not provided. (B6)	Necessary repairs be carried out. Road should be constructed
27	Name : **Pare** Tal Khanapur Dist. Sangli Date of completion:-**1973** Location : Longitude -**74°35'00''** Latitude -**17°12'00''** Height :-**18.73 m.** Gross capacity - 34.6 **Mcum** Sr.No.In Large Dam Register **MH09MH0296**	09.05.2019 14.11.2019	Shri.R.Y. Reddiyar EE,TLIPD Ogalewadi	Outlet	1. Upper slab, masonary portion of 1.5 m height completely damaged. (A6)	Necessary repairs be carried out.
28	Name : **Vejegaon** Tal Khanapur Dist. Sangli Date of completion:-**1979** Location : Longitude -**74°36'00''** Latitude -**17°23'00''** Height :-**16.77 m.** Gross capacity - 2.21 **Mcum** Sr.No.In Large Dam Register **MH09MH0296**	01.05.2019 14.11.2019	Shri.R.Y. Reddiyar EE,TLIPD Ogalewadi	Outlet	1. Upper slab, masonary portion of 1.5 m height completely damaged. (A6)	Necessary repairs be carried out.

Sr. No.	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
C) Executive Engineer, Minor Irrigation Division, Sangli.						
29	Name :**Mahadikwadi** Tal Atpadi Dist. Sangli Date of completion:-**2003** Longitude -**74°40'00''** Latitude -**17°11'00''** Height :-**16.02 m.** Gross capacity - 2.10 **Mcum** Sr.No.In Large Dam Register **MH09MH1547**	05.05.2019 28.11.2019	Shri. S.K. Pawar & Shri.R.Y. Reddiyar EE,TLIPD Ogalewadi	Outlet	1. Stem Rod for lifting gate is not straight (**B5**)	Necessary repairs be carried out.
(3)Superintending Engineer, Kolhapur Irrigation Circle, Kolhapur						
(a) Executive Engineer. Kolhapur Irrigation Division, (North) Kolhapur						
30	Name :**Daryachi Vadgaon** Tal. Chandgad Dist. Kolhapur Date of completion:-**1993** Location: Longitude:- **74°00'** Latitude: -**16°36'** Height -:**23.65 m.** Gross capacity-**0.8473 Mcum** Sr.No.In Large Dam Register 2012:**MH09MH1302**	13.06.2019 25.11.2019	Shri.R. B. Bandiwadekar EE. KID (North) Kolhapur	Earth Dam.	1. Leakage through dam body is observed when water level at R.L. 88.00 to 92.70 m. from ch.135 to 195 m, but water is clear.. (A1)	Leakage data should be mainted and reason for leakage should be investigated & treated properly. It should be kept under observation strictly.
31	Name :**Kumbhavade** Tal. Shahuwadi Dist. Kolhapur Date of completion:-**1999** Location: Longitude -**73°46'00''** Latitude -16°**47'00''**Height -:**25.16 m.** Gross capacity-**5.615 Mcum** Sr.No.In Large Dam Register 2012:**MH09MH1499**	27.04.2019 21.11.2019	Shri.R.B. Bandiwadekar EE. KID (North) Kolhapur		1. There are heavy leakages through weir bar. (Quantity of leakage is not given.) **B7**	Necessary repairs should be done to stop the leakage

Sr. No.	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
32	Name :**Padsali** Tal. gandhinglaj Dist. Kolhapur Date of completion:-**1997** Longitude -**74°50'50''** Latitude -16°**48'00''** Height -:**29.15 m.** Gross capacity-**6.90 Mcum** Sr.No.In Large Dam Register 2012:**MH09MH1427**	27.04.2019 21.11.2019	Shri.R.B. Bandiwadekar EE. KID (North) Kolhapur		1. There are heavy leakages through weir bar. (Quantity of leakage is not given.) **B7**	Necessary repairs should be done to stop the leakage
(b) Executive Engineer,Kolhapur Irrigation Circle (South), Kolhapur						
33	Name : **Yenechavandi** Tal. Gadhinglaj, Dist. Kolhapur Date of completion:-**1996** Location: Longitude- **74°20'** Latitude: -**16°11'** Height :-**21.65 m.** Gross capacity **1.545 Mcum** Sr.No.In Large Dam Register 2012:**MH09MH139**	15.04.2019 20.10.2019	Shrimati S.C. Mane E.E. KID (S) Kolhapur	Earth Dam	1. There is leakage noticed on d/s slope. (A1)	It should be kept under observation. Leakage data should be mainted and reason for leakage should be in investigated & treated properly. Necessary repairs be carried out to damage portion.
(4)Superintending Engineer, Satara Irrigation Circle, Satara						
(a) Executive Engineer, Krishna Irrigation Division, Satara						
34	Name : **Kankatrewadi** Tal. Phaltan Dist. Satara Date of completion: **1978** Location: Longitude: **74°35'00"** Latitude:**17°29'00"** Height :**19.51 m.** Gross capacity :**1.24 Mcum** Sr.No.In Large Dam Register 2012:**MH09MH0736**	19.05.2019 04.12.2019	Shri. P.D. Jadhav E.E., KID, Satara	Earthen embankment W.W.Bar	1. Leakage through confluence of earthen and masonry of guide wall observed. (A3) 2. Coping of WW Bar is disturbed. (B7) 3. Pointing to U/S and D/S face bar is damaged. (B7)	This should be kept under observation. Leakage should be measured, monitored and necessary repair to be carried out if necessary. Necessary repairs should be carried out.

Sr. No.	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
35	Name :**Thoseghar** Tal. Satara Dist. Satara Date of completion:-**1989** Location : Longitude- **73°52′00"** Latitude -**17°36′00"** Height :-**18.05 m.** Gross capacity :**1.91 Mcum** Sr.No.In Large Dam Register 2012: **MH09MH1208**	04.05.2019 19.10.2019	Shri. P.D. Jadhav E.E., KID, Satara	Earthen Dam Outlet W.W.Bar	1. Relief wells are not functioning. (A5) 2. Leakage through gate is observed.(A4) 3. Some leakage is observed through w.w. bar. (B7) 4. Tail channel is heavily damaged.(A7)	Necessary repairs should be carried out. Causes of exact leakages should be investigated & treated accordingly. Necessary repairs should be carried out.
36	Name :**Ner** Tal. Khatav Dist. Satara Date of completion:-**1981** Location : Longitude- **74°18′00"** Latitude -**17°44′00"** Height :-**22.50 m.** Gross capacity :**9.12 Mcum** Sr.No.In Large Dam Register 2012: **MH09MH0018**	20.4.2019 26.11.2019	Shri. P.D. Jadhav E.E., KID, Satara	Earthen Embankment	1. Section of embankment is not as per design.(B1)	Necessary repairs shall be carried out.
37	Name :**Pingali** Tal.Man Dist. Satara Date of completion:-**1878** Location : Longitude- **74°33′00"** Latitude -**17°41′00"** Height :-**16.00 m.** Gross capacity :**2.38 Mcum** Sr.No.In Large Dam Register 2012: **MH09MH00731**	05.05.2019 29.11.2019	Shri. P.D. Jadhav E.E., KID, Satara	Earthen Embankment	1. Standing pool of water is observed on D/S side of earthen dam.(A2)	Necessary repairs shall be carried out.

Sr. No.	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
38	Name :**Yeralwadi** Tal.Khatav Dist. Satara Date of completion:-**1973** Location : Longitude- **74°29′35"** Latitude -**17°31′24"** Height :-**19.50 m.** Gross capacity :**32.80 Mcum** Sr.No.In Large Dam Register 2012: **MH09MH00386**	20.04.2019 29.11.2019	Shri. P.D. Jadhav E.E., KID, Satara	Outlet	1. Stem rod of both gates are bent.(B5)	Necessary repairs shall be carried out through mechanical organization.
(b) Executive Engineer, Koyna Irrigation Division, Koynanagar						
39	Name : **Chaphal** Tal. Satara Dist. Satara Date of completion:-**1983** Location : Longitude- **74°00′28"** Latitude -**17°24′24"** Height :-**18.05 m.** Gross capacity :**1.91 Mcum** Sr.No.In Large Dam Register 2012: **MH09MH0966**	14.05.2019 2.12.2019	Shri. K.H. Patil E.E., Koyna Irrigation Division, Koynanagar	Outlet	2. Leakage through gate is observed. (Approx. 5 cusecs) (B5)	Kept under observation leakage quantum should be mentioned in report. Necessary repairs be carried out with consultation of Mechanical organization.
[B] Chief Engineer (S.P) Water Resources Department, Pune						
(1) Superintending Engineer Kukadi Irrigation Circle Pune						
(a) Executive Engineer ,Kukadi Irrigation Division No. 1 Narayangaon						
40	Name : **Ramjewadi** Tal. Junnar Dist. Pune Date of completion:1983 Location: Longitude -**73°41'00''** Latitude - **19°13'00''** Height :- **21.48m.** Gross capacity 1.72 **Mcum** Sr.No.In Large Dam Register 2012:**MH09MH 0965**	NA 22.11.2019	Shri.K.R. Kanade EE KID, Narayngaon Shri.P.P. Kaduskar EE KID, Narayngaon	WW Bar	1. Scouring is obvserved on both side of tail channel (A7) 2. WW bar masonry is collapsed. (B7)	Necessary repairs should be carried out.

Sr. No.	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
41	Name : **Anepemdara** Tal. Junnar Dist. Pune Date of completion:1998 Location: Longitude -**73°14'00''** Latitude - **19°11'00''** Height :- **14.37m.** Gross capacity 2.09 **Mcum** Sr.No.In Large Dam Register 2012:**MH09LH 1473**	NA 12.12.2019	Shri.K.R. Kanade EE KID, Narayngaon Shri.P.P. Kaduskar EE KID, Narayngaon	Outlet WW Bar	1. Operation of outlet gate is not smooth (B5) 2. Stem rod damaged (B5) 3. Heavy leakage between joint of earthwork and flank wall, heavy leakage through WW bar. (B7) 4. Coping over spillway damaged (B7)	Necessary repairs should be carried out. Necessary repairs should be carried out.
(2) Superintending Engineer & Admn. C.A.D.A. Solapur						
(a) Executive Engineer,Solapur Irrigation Division, Solapur						
42	Name : **Kazikunbus** Tal. Akkalkot Dist. Solapur Date of completion:1992 Location: Longitude -**76°10'00''** Latitude - **17°43'00''** Height :- **20.00m.** Gross capacity 4.031**Mcum** Sr.No.In Large Dam Register 2012:**MH09MH 1224**	**27.5.2019** **20.11.2019**	Shri. R.K. Jagtap EE SID Solapur	W.W	1. Gate operation is not working condition due to steam rod problem. (B5)	Necessary repairs be carried out in consultation with Mechanical orgasition.
43	Name : **Rajuri** Tal. Karmala Dist. Solapur Date of completion:**1981** Location: Longitude -**74°58'** Latitude -**18°22'** Height :-**19.29 m.** Gross capacity : **2.520 Mcum** Sr.No.In Large Dam Register 2012:**MH09MH0894**	**14.5.2019** **28.11.2019**	Shri. R.K. Jagtap EE SID Solapur	W.W.	1. Heavy retrogression is noticed on downstream of bar near divide wall. (A7)	Protective measures, as per necessity shall be undertaken to prevent progressive damage.

Sr. No.	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
(b)Executive Engineer Bhima Developement Division No.2, Solapur						
44	Name : **Ashti** Tal. Mohol Dist. Solapur Date of completion:-1883 Location : Longitude - **75°-26' 00''** Latitude - **17°47'30''** Height :-**17.60 m.** Gross capacity :23.01 **Mcum** Sr.No.In Large Dam Register 2012:**MH09MH0014**	14.5.2019 29.11.2019	Shri. N.V. Joshi & Shri. R. N. kshirsagar EE BDD no.2 Solapur	Earthen Embankment	1. Top of embankment not as per design section of dam. (B1)	Necessary repairs should be carried out and dam section should be restored.
Superintending Engineer, Bhima Canal Circle Solapur						
(c)Executive Engineer Minor Irrigaton Division No.1, Solapur						
45	Name : **Babhulgaon** Tal. Mohol Dist. Solapur Date of completion:-1993 Location : Longitude - **75°-46' 55''** Latitude - **18°19'23''** Height :-**16.93 m.** Gross capacity :6.40 **Mcum** Sr.No.In Large Dam Register 2012:**MH09MH1620**	21.5.2019 14.12.2019	Shri. H.V.More & Shri. R.G.Wadkar EE BDD no.2 Solapur	Earthen Embankment	1. Boils, wet patches or water seepage slushiness is seen on d/s slope (**A1**)	Necessary repairs should be done to stop the leakage
(2) Superintending Engineer, SataraProject Irrigation Circle, Satara						
(a) Executive Engineer, Minor Irrigation Division Satara						
46	**Mahind** Tal- Patan Dist- Satara Date of completion: **2000** Location: Longitude **73°54'13''** Latitude **17°22'05''** Height : **21.32 m.** Gross capacity- 2.404**Mcum** Sr.No.In Large Dam Register 2012: **MH09MH1838**	18.04.2019 29.11.2019	Shri.S.J. Hiray EE MID Satara	W.W.Bar and Tail Channel	1. Retrogression and scouring noticed in tail channel towards guide wall in UCR of dam.(A7)	Necessary repairs should be carried out.

Sr. No.	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
47	**Kalgaon** Tal- Patan Dist- Satara Date of completion: **In Progress** Location: Longitude **73°53'30"** Latitude **17°19'03"** Height : **32.26 m.** Gross capacity- 2.692 **Mcum** Sr.No.In Large Dam Register 2012: **MH09MH2416**	18.04.2019 29.11.2019	Shri.S.J. Hiray EE MID Satara	WW Bar	1. Leakage through middle portion of spillway is observed. (B7)	Necessary repairs should be carried out.
[C] Chief Engineer Local - Sector Pune						
(1) Superintending Engineer Small Scale Irrigation (WC) Pune						
(a) Executive Engineer , Small Scale Irrigation Division (WC) Sangali						
48	Name : **Umrani-2** Tal. Jath Dist- Sangli Date of completion: **2005** Location: Longitude **75°00'00"** Latitude **17°00'00"** Height : **14.98 m.** Gross capacity- **21.97 Mcum** Sr.No.In Large Dam Register 2012: **MH09MH1911**	21.05.2019 28.12.2019	Shri. B. M. Teli Sub-divisional W.C. officer Kolhapur	W.W.Bar	1. So many leakages observed at d/s of dam from ch. 0 to 150 m. (B7) 2. Leakages are observed at outlet of dam CH 80 and below d/s of dam CH 60 to 90m. (A1)	Leakage should be monitored & investigated with respect to location & level and proper remedial measures are to be taken up to prevent leakage .Quantity of leakage not reported.
(b) Executive Engineer,Small Scale Irrigation (Water Conservation) Kolhapur						
49	Name :**Chandoli** **Tal. Shahuwadi Dist. Kolhapur** Date of completion: **2001** Location: Longitude **73°51'40"** Latitude - **16°57'** Height :**23.19 m.** Gross capacity :**1.762Mcum** Sr.No.In Large Dam Register 2012:**MH09MH1595**	11.05.2019 19.12. 2019	Y.L.Thorat District W.C. officer Kolhapur	W.W.Bar	1. Masonry bar partially damaged from ch. 476.00 to 486 m and coping over spillway bar is partially damaged from Ch 486 to 476m.(B7) 2. Coping over waste weir bar is damaged throughout the length (B7)	Necessary repairs be carried out. Necessary repairs be carried out.

Sr. No.	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
50	Name :**Barki** **Tal. Shahuwadi Dist.Kolhapur** Date of completion: **2005** Location:Longitude -**73°52'30"** Latitude **- 16°01'30** Height : **23.79m.** Gross capacity : **1.642 Mcum** Sr.No.In Large Dam Register 2012: **MH09MH1641**	11.05.2019 Not provided	Shri. Y.L.Thorat E.E. SSI(WC) Kolhapur	Outlet	1. There is cavitation in in conduit on downstream side of gate. Heavy leakage through these cavitiesd is noticed. (20 lps) (A 4) 2. There is no provision of all weather access road to site. (B6)	Leakages should be kept under observation. Access road should be constructed.
51	Name Nittur **Tal. Shahuwadi Dist.Kolhapur** Date of completion: **2000** Location:Longitude -**74°21'30"** Latitude **- 16°00'30** Height : **19.00m.** Gross capacity : **1.904 Mcum** Sr.No.In Large Dam Register 2012: **MH09MH1528**	29.05.2019 Not provided	Shri. Y.L.Thorat E.E. SSI(WC) Kolhapur	w.w. bar	1. Waste weir bar is not in good condition (B7)	Necessary repairs be carried out.
52	Name **Bhandarwadi** Tal. Shahuwadi Dist.Kolhapur Date of completion: **2013** Location:Longitude -**73°50'39"** Latitude **- 16°51'30** Height : **28.15m.** Gross capacity : **1.20 Mcum** Sr.No.In Large Dam Register 2012: **MH09MH2252**	11.05.2019 Not provided	Shri. Y.L.Thorat E.E. SSI(WC) Kolhapur	Earth embankment General	1. There are some boils, wet patches, water seepage, slushy or boggy ground on downstream of dam within 200m. Excessive leakage through the drains in gorge portion is noticed. (A1) 2. There is no provision of all weather access road. (B6)	Leakage should be monitored and Necessary repairs be carried out. Access road should be constructed.
53	Name **Ijoli** Tal. Shahuwadi Dist.Kolhapur Date of completion: **2005** Location:Longitude -**73°52'30"** Latitude **- 16°45'30** Height : **19.50m.** Gross capacity : **0.809 Mcum** Sr.No.In Large Dam Register 2012: **MH09MH1642**	11.05.2019 14.12.2019	Shri. Y.L.Thorat E.E. SSI(WC) Kolhapur	Earth embankment	1. There is leakage at the joint between flank wall and earthwork. (A3)	Leakage should be monitored and Necessary repairs be carried out.

Sr. No.	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
54	Name **Velavatti** Tal. Ajara Dist.Kolhapur Date of completion: **2013** Location:Longitude -**74°09'52"** Latitude **- 16°06'51** Height : **18.06.** Gross capacity : **0.571 Mcum** Sr.No.In Large Dam Register 2012: **Proposed for updation.**	03.05.2019 10.12.2019	Shri. Y.L.Thorat E.E. SSI(WC) Kolhapur	Earth embankment Tail Channel	1. Wet patches, water seepage, slushy condition observed at gorge portion on d/s side (A1) 2. Scouring is noticed in tail channel and heavy leakages are seen in tail channel (A7)	Leakage should be monitored and Necessary repairs be carried out. Necessary repairs be carried out.
55	Name **Awachitwadi** Tal. Kagal Dist.Kolhapur Date of completion: **2014** Location:Longitude -**74°22'00"** Latitude **- 16°93'08** Height : **30.84.** Gross capacity : **1.413 Mcum** Sr.No.In Large Dam Register 2012: **Proposed for updation.**	17.05.2019 17.12.2019	Shri. Y.L.Thorat E.E. SSI(WC) Kolhapur	Earth embankment Tail Channel	1. At 3 to 4 places leakages were observed on the d/s of dam at Ch 60 m to 75 m. at 3m. from TBL. (A1)	Leakages should be monitored and necessary remedial measures should be taken to stopn the leakage
(c) Executive Engineer Small Scale Irrigation (Water Conservation) Satara						
56	Name : **Naigaon -2** Tal. Kandala Dist. Satara Date of completion:**1996** Location:Longitude -**73°55'00"** Latitude - **18°30'00"** Height : **17.07m.** Gross capacity : **1.217Mcum** Sr.No.In Large Dam Register 2012: **MH09MH0988**	11.05.2019 21.11.2019	Shri. R.S. Otari District WC officer Satara	Outlet W.W	1. The stem rod for lifting gate is not straight.(B5) 2. Outlet well is not in good condition. (A6) 3. Waste weir bar coping is totally damaged. B7)	Neessary repairs should be carried out in consultation with mehanial organization and CDO.
57	Name : **Undale** **Tal. Karad Dist. Satara** Date of completion:**1997** Location: Longitude - **74°03'00"** Latitude - **10°02'00"** Height : **16.60 M** Gross capacity : **886.78 Mcum** Sr.No.In Large Dam Register 2012: **Proposed for updation in NRLD 2018**	07.05.2019 19.11.2019	Shri. R.S. Otari District WC officer Satara	Outlet	1. Outlet well is not in good condition. (A6) 2. The stem rod for lifting gate is bent at some places. (B5) 3. Some portion of w.w. bar is washed away. (B7)	Neessary reapirs should be carried out in consultation with mehanial organization and CDO.

Sr. No.	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
58	Name : **Matekarwadi** Tal. Karad Dist. Satara Date of completion: **2007** Location: Longitude - **74°03'42"** Latitude - **17°06'30"** Height : **21.08 M** Gross capacity : **999.00 Mcum** Sr.No.In Large Dam Register 2012: **MH09MH1925**	02.05.2019 22.11.2019	R.S. Otari District WC officer Satara	Outlet	1. Outlet well not in good condition. (A6) 2. The stem rod is bent at some places.(B5) 3. The coping over spillway bar is not in good condition (B7)	Neessary repairs should be carried out in consultation with mehanial organization.
59	Name : **Kiwal** Tal. Karad Dist. Satara Date of completion: **2007** Location: Longitude -**74°04'14"** Latitude - **17°25'19"** Height : **19.46 M** Gross capacity : **589.2 Mcum** Sr.No.In Large Dam Register 2012: **MH09MH1923**	08.05.2019 14.11.2019	Shri. R.S. Otari District WC officer Satara	EE Outlet W.W	1. There is stagnant water in gorge portion.(A2) 2. Outlet well not in good condition. (A6) 3. The coping over spillway bar is not in good condition.(B7)	Neessary drainage arrangement should be carried out and kept under observation Necessary repairs should be carried out in consultation with CDO and Mechanical organization. It should be repaired.
60	Name : **Jinti** Tal. Karad Dist. Satara Date of completion:**1997** Location:Longitude -**74°03'00"** Latitude - **10°2'00"** Height : **16.60m.** Gross capacity : **Mcum** Sr.No.In Large Dam Register 2012: **Proposed for updation in NRLD 2018**	08.11.2019 19.11.2019	Shri. R.S. Otari District WC officer Satara	Outlet EE WW Outlet	1. General condition of dam is not good. (B1) 2. Longitudinal cracks are observed at 4-5 places for length of 2m. (B4) 3. Portion of w.w. bar is washed out.(B7) 4. Coping over spillway bar is not in good condition (B7) 5. There is seepage through bottom of L/S flank wall (A15) 6. Outlet well not in good condition. (A6)	Neessary repairs should be carried out in consultation with mehanial organization and to be checked by field authority and repairs to be carried out.

Sr. No.	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
61	Name : **Tulsan Sawade** Tal. Karad Dist. Satara Date of completion: **2013** Location: Longitude - **74°02'6"** Latitude - **17°11'29"** Height : **21.31 m.** Gross capacity : **999.0 Mcum** Sr.No.In Large Dam Register 2012: **Proposed for updation in NRLD 2018**	07.05.2019 22.11.2019	Shri. R.S. Otari District WC officer Satara	Outlet	1. Outlet well not in good condition. (A6)	Neessary repairs sh0uld be carried out in consultation with mehanial organization and CDO.
62	Name : **Yenape** Tal. Karad Dist. Satara Date of completion: **2004** Location: Longitude - **74°1'30"** Latitude - **17°0'06"** Height : **28.28 m.** Gross capacity : **1063 Mcum** Sr.No.In Large Dam Register 2012: **Proposed for updation in NRLD 2018**	02.05.2019 19.11.2019	Shri. R.S. Otari E.E. SSI(WC) Satara	Outlet W.W	1. Outlet well is not in good condition. (A6) 2. The coping over spillway bar is removed at some placed about 12 out of 33 m.(B7)	Necessary repair should be carried out. It should be repaired.
63	Name : **Palsawade** Tal. Karad Dist. Satara Date of completion: **2005** Location: Longitude - **73°51'42"** Latitude - **17°37'39"** Height : **26.48 m.** Gross capacity : **1824.45 Mcum** Sr.No.In Large Dam Register 2012: **Proposed for updation in NRLD 2018**	11.05.2019 21.11.2019	Shri. R.S. Otari District WC officer Satara	EE	1. At d/s of toe water pool is observed due to leakage. (A1)	Neessary repairs sh0uld be carried out in consultation with mehanial organization and CDO.

Table 2.11
Dam Wise Health Status Report of Class-II Dams with Category-3 Deficiency

Sr. No	Name of Dam	Date of Compl-etion	Location Longitude/ Latitude	Height in m	Gross Capacity Mm^3	Design Spillway Capacity m^3 / sec	Sr.No. in NRLD Register	Date of Inspection Pre & Post	Deficiencies noticed	Total Deficiencies
1	2	3	4	5	6	7	8	9	10	11
[A]Chief Engineer (W.R.) Water Resources Department Pune										
(1) Superintending Engineer Pune Irrigation Circle, Pune										
(a) Executive Engineer, Pune Irrigation Division, Pune										
1	**Adale** Tal. Mawal Dist .Pune	1985	73°37'00″ 18°39'00	19.17	1.27	330.0	**MH09MH 1086**	22.05.2019 26.11.2019	3.2, 3.7, 3.9, 3.13, 3.20, 3.22	6
2	**Chinchwad** Tal. Pune Dist .Pune	1984	73°40'00″ 18°15'00	20.92	1.53	137.70	**MH09MH 1033**	14.05.2019 16.11.2019	3.1, 3.5, 3.7, 3.9, 3.13, 3.16, 3.19, 3.20, 3.21, 3.32	10
3	**Divale** Tal. Bhor , Dist. Pune	1985	73° 55'00" 18°15'00"	20.83	2.14	273	**MH09MH 1082**	01.06.2019 19.11.2019	3.1, 3.5, 3.6, 3.7, 3.9, 3.13,3.16, 3.20, 3.21, 3.22,3.30	11
4	**Gadadwane** Tal.Mulashi Dist. Pune	2007	73°35'00″ 18°14'00	26.20	1.859	3224	**MH09MH 1668**	14.05.2019 16.11.2019	3.1, 3.2, 3.5, 3.7, 3.9, 3.13, 3.20, 3.21, 3.22	9
5	**Hadashi** Tal. Mulashi Dist. Pune	1991	73° 32'00" 18°36'00"	21.83	3.07	181	**MH09MH 1235**	15.05.2019 16.11.2019	3.1, 3.5, 3.7, 3.9, 3.13, 3.16,3.19, 3.20, 3.21, 3.22	10
6	**Hadashi-2** Tal.Mulashi Dist. Pune	1999	73°52'00″ 18°36'00	20.45	1.41	81.48	**MH09MH 1674**	15.05.2019 16.11.2019	3.1, 3.5, 3.7, 3.9, 3.13,3.16,3.19, 3.20, 3.22, 3.28	10
7	**Mahakoshi** Tal. Bhor Dist .Pune	1998	73° 50'00" 18°05'00"	24.00	2.28	583	**MH09MH 1474**	01.06.2019 19.11.2019	3.1, 3.5, 3.6, 3.7, 3.9, 3.13, 3.16, 3.20, 3.21, 3.22, 3.19, 3.28, 3.6, 3.30	14
8	**Naigaondevgaon** Tal. Bhor Dist .Pune	1979	73° 53'00" 18°17'00"	22.49	1.332	241	**MH09MH 0762**	**01.06.2019** 19.11.2019	3.1, 3.2, 3.5, 3.6, 3.9, 3.7, 3.13, 3.16, 3.20, 3.21, 3.22,3.28,3.30	13
9	**Pimpoli** Tal. Mulashi Dist .Pune	1984	73°30'00″ 18°36'00	22.13	1.53	257.0	**MH09MH 1045**	14.05.2019 26.11.2019	3.1,3.2, 3.5, 3.6, 3.7,3.9, 3.13, 3.16,3.19, 3.20, 3.21, 3.22, 3.28, 3.35,3.33	15

Sr. No	Name of Dam	Date of Compl-etion	Location Longitude/ Latitude	Height in m	Gross Capacity Mm^3	Design Spillway Capacity m^3 / sec	Sr.No. in NRLD Register	Date of Inspection Pre & Post	Deficiencies noticed	Total Deficiencies
1	2	3	4	5	6	7	8	9	10	11
10	**Rihe** Tal. Mulashi Dist .Pune	1977	73°39'00″ 18°34'00	21.95	1.58	698.90	**MH09MH 0642**	14.05.2019 16.11.2019	3.2, 3.5, 3.7, 3.9, 3.13, 3.16, 3.19, 3.20, 3.21, 3.22, 3.28, 3.31, ,3.33,3.35	14
11	**Shere** Tal. Puner Dist .Pune	1998	73°52'00″ 18°36'00	22.98	1.72	123.20	**MH09MH 1458**	14.05.2019 16.11.2019	3.1, 3.2, 3.5, 3.6, 3.7, 3.9, 3.13, 3.16, 3.19, 3.20, 3.22, 3.28, 3.35,3.33	14
12	**Shetphal** Tal. Indapur Dist .Pune	1901	75°00'30″ 18°01'00	20.11	17.36	No Spillway	**MH09MH 0021**	22.05.2019 08.11.2019	3.1, 3.2, 3.6, 3.9, 3.13, 3.25	6
13	**Walen** Tal. Pune Dist .Pune	1989	73°30'00″ 18°35'00	20.75	1.51	90.0	**MH09MH 1216**	15.05.2019 16.11.2019	3.1, 3.2, 3.5, 3.7, 3.9, 3.13, 3.16, 3.19 3.20, 3.21, 3.22, 3.28, 3.35,3.33	14
14	**Urawade** Tal.Mulashi Dist. Pune	1983	74°56'00″ 18°30'00	23.48	2.00	203.50	**MH09MH 0964**	14.05.2019 16.11.2019	3.1, 3.2, 3.5, 3.7, 3.9, 3.13, 3.16, 3.19, 3.20, 3.21, 3.22, 3.28, 3.35, 3.33	14
15	**Khamboli** Tal.Mulashi Dist. Pune	2000	73°35'00" 18°35'00"	25.36	2.065	227.50	**MH09HH 1535**	14.05.2019 26.11.2019	3.1, 3.5, 3.7, 3.10, 3.13, 3.16, 3.19, 3.20,3.21, 3.22, 3.28	11
16	**Marnewadi** Tal.Mulashi Dist. Pune	1998	73°40'00″ 18°30'00	18.35	0.87	64.06	**MH09MH 1453**	14.05.2019 16.11.2019	3.1, 3.2, 3.5, 3.7, 3.9, 3.13, 3.16, 3.20, 3.21, 3.22, 3.25, 3.28, 3.35	13
17	**Waghajwadi** Tal.Bhor Dist. Pune	2001	73°50'00″ 18°15'00	20.57	1.66	215	**MH09MH 1574**	01.06.2019 19.11.2019	3.1, 3.2, 3.5, 3.6, 3.7, 3.9, 3.13, 3.16, 3.20, 3.21, 3.22, 3.25, 3.30, 3.31	14
18	**Bhongavali** Tal.Bhor Dist. Pune	2015	74°00'00″ 18°15'00	25.00	3.32	239.96	**Proposed for NRLD**	01.06.2019 19.11.2019	3.1, 3.2, 3.6, 3.21, 3.9, 3.13, 3.16, 3.20, 3.22, 3.30, 3.34, 3.6	12

Sr. No	Name of Dam	Date of Compl-etion	Location Longitude/ Latitude	Height in m	Gross Capacity Mm^3	Design Spillway Capacity m^3 / sec	Sr.No. in NRLD Register	Date of Inspection Pre & Post	Deficiencies noticed	Total Deficiencies
1	2	3	4	5	6	7	8	9	10	11
(b) Executive Engineer, Lift Irrigation Management Division Pune										
19	**Ghorwadi** Tal. Purandar Dist. Pune	1996	74°18'00" 18°10'00"	19.81	1.912	104.50	**MH09MH. 1413**	15.6.2019 13.11.2019	3.4,3.9,3.13,3.20,3.31,3.6,3.1	7
20	**Mahur** Tal.Purandar Dist. Pune	1978	74°10'00" 18°04'00"	22.99	2.36	563	**MH09MH. 0732**	15.06.2019 15.11.2019	3.9,3.10,3.13,3.16,3.31,3.5,3.2,3.20,3.22,	9
21	**Malwandi** Tal.Maval Dist. Pune	2000	73°31'00" 18° 39'30"	20.45	3.68	282.80	**MH09MH 1529**	24.06.2019 31.10.2019	3.1,3.2,3.5,3.7,3.9,3.10,3.13,3.16,3.19,3.20,3.22,3.31,3.33	13
22	**Pilanwadi** Tal. Saswad Dist .Pune	1978	73°52'00″ 18°36'00	22.77	1.94	771.20	**MH09MH 0729**	15.06.2019 15.11.2019	3.2,3.5,3.7,3.9,3.10,3.13,3.16, 3.19,3.20,3.22,3.31,3.34	12
23	**Pingori** Tal. Purandar Dist. Pune	1969	74°07'00" 18°13'00"	22.13	1.54	191	**MH09MH. 0178**	15.06.2019 15.11.2019	3.5,3.7,3.13,3.20,3.2,3.6	6
24	**Virnalla** Tal. Purandar Dist. Pune	1956	74°05'00" 18°10'00"	21.81	3.585	925.75	**MH09MH. 1415**	15.06.2019 15.11.2019	3.1,3.2,3.13,3.16,3.19,3.20	6
25	**Garade** Tal. Purandar Dist. Pune	1979	73°55'00" 18°15'00"	18.82	1.869	3224	**MH09MH. 0794**	15.06.2019 13.11.2019	3.2, 3.5, 3.6, 3.7, 3.9, 3.13, 3.16, 3.19, 3.20, 3.31,3.34	11
26	**Thitewadi** Tal. Shirur Dist. Pune	2003	74°02'30" 18°48'00"	21.10	9.86 Mcum	1623.64	**MH09MH 1623**	22.05.2019 9.12.2019	3.1, 3.2, 3.7, 3.9, 3.10, 3.13, 3.16, 3.19, 3.21.	9
(c) Executive Engineer, Khadakwasla Irrigation Division Pune										
27	**Ambegaon** Tal. Haweli Dist. Pune	1979	73°50′30" 18°26′30"	21.78	1.93	230	**MH09MH 0758**	04.05.2019 10.12.2019	3.1, 3.2, 3.5, 3.7, 3.9, 3.13, 3.19, 3.20, 3.22, 3.31	10
28	**Bhugaon** Tal. Mulashi Dist. Pune	1983	73°45'00" 18° 30'00"	21.19	1.90	208	**MH09MH 0963**	04.05.2019 10.12.2019	3.2, 3.13, 3.16, 3.19, 3.20, 3.22.	6

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1	2	3	4	5	6	7	8	9	10	11
29	**Malad** Tal. Daund Dist. Pune	1979	74°34'00" 18° 23'00"	15.63	1.74	800	**MH09MH 0796**	08.05.2019 05.12.2019	3.2, 3.9, 3.10, 3.13, 3.16, 3.22	6
30	**Palasdeo** Tal. Shirur Dist. Pune	1953	74°34'00" 18°23'00"	18.23	1.09	383.0	**MH09MH 0063**	12.05.2019 25.12.2019	3.1, 3.5, 3.6, 3.9, 3.13, 3.16, 3.19, 3.20, 3.25, 3.28, 3.34	11
31	**Matoba** Tal. Daund Dist. Pune	1978	74° 34'00" 18°00'23	17.50	45.2	476	**MH09MH 0721**	08.05.2019 09.11.2019	3.1, 3.2, 3.7, 3.9, 3.13, 3.16, 3.19, 3.22, 3.28.	9
32	**Shirsuphal** Tal. Baramati Dist. Pune	1879	74° 35'20" 18°21'00"	20.11	10.1	112	**MH09MH 0011**	08.05.2019 25.12.2019	3.1,3.6,3.7,3.9	4
(d) Executive Engineer, Nira Right Bank Canal Division, Phaltan										
33	**Banganga** Tal.Phaltan Dist. Satara	1955	74° 25'00" 17°40'00"	16.76	6.50	1110	**MH09MH. 0071**	23.05.2019 Not Received	3.1, 3.2, 3.5, 3.7, 3.9, 3.13, 3.16, 3.20, 3.22	9
34	**Girzani** Tal.Malshiras Dist. Solapur	1989	74° 59'00" 17°52'00"	17.98	2.07	663	**MH09MH. 1223**	29.05.2019 NA	3.2, 3.10, 3.13, 3.20, 3.21, 3.25	6
35	**Hingangaon** Tal. Khatav Dist. Satara	1975	74° 58'05" 17°06'10"	17.53	1.47	465.80	**MH09MH 0473**	23.05.2019 27.11.2019	3.1, 3.6, 3.7, 3.9, 3.10, 3.13, 3.15, 3.20, 3.21, 3.34	10
36	**Mhaswad** Tal. Man Dist. Satara	1876	74° 53'00" 17°35'00"	24.00	46.13	4321.41	**MH09MH 0017**	30.05.2019 NA	3.1, 3.2, 3.5, 3.7, 3.9, 3.10, 3.13, 3.20,3.33	9
37	**Nimgaon** Tal. Malshiras Dist. Solapur	1986	74° 59'00" 17°52'00"	20.30	6.958	909	**MH09MH. 0247**	29.05.2019 03.10.2019	3.1, 3.5, 3.7, 3.9, 3.10, 3.13, 3.20, 3.22	8
38	**Phondshiras** Tal. Malshiras Dist. Solapur	1991	74°49'00" 18°08'00"	16.68	2.92	725	**MH09MH. 1277**	29.05.2019 03.10.2019	3.1, 3.5, 3.7, 3.10, 3.13, 3.21	6
39	**Sangvi Shirwal** Tal.Khandala Dist. Satara	1993	73° 58'00" 18°07'00"	18.00	1.335	1371	**MH09MH. 1318**	22.05.2019 26.11.2019	3.1, 3.5, 3.7, 3.9, 3.1, 3.13, 3.16, 3.20, 3.21, 3.22, 3.28	11

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1	2	3	4	5	6	7	8	9	10	11
40	**Tambave** Tal.Phaltan Dist. Satara	1966	74°10'00″ 18°00'00	16.80	5.42	961.0	**MH09MH 0167**	23.05.2019 27.11.2019	3.1, 3.5, 3.6, 3.9, 3.10, 3.13, 3.15, 3.20, 3.21, 3.22, 3.28	11
41	**Tisangi** Tal. P'pur Dist. Solapur	1966	74° 10'05" 17°35'00"	19.00	2.446	300	**MH09MH. 0124**	30.05.2019 NA	3.1, 3.5, 3.6, 3.7, 3.9, 3.13, 3.16, 3.19, 3.20, 3.21, 3.22, 3.28.	12
42	**Wadgaon** Tal.Khandala Dist. Satara	1980	75°55'00" 18°15'00"	21.70	2.97	638.45	**MH09MH. 0835**	22.05.2019 26.11.2019	3.1, 3.5, 3.7, 3.9, 3.13, 3.15, 3.20, 3.16, 3.19, 3.21, 3.28	11
43	**Naigaon** Tal.Khandala Dist. Satara	1983	73°58'05" 18°06'10"	18.0	1.34	396.29	**MH09MH. 0986**	22.05.2019 26.11.2019	3.1, 3.6, 3.7, 3.9, 3.13, 3.15, 3.19, 3.20, 3.21	9
(e) Executive Engineer, Chaskaman Irrigation Division, Pune										
44	**Alegaonpaga** Tal. **Shirur**, Dist.Pune	1961	74° 20'30" 18°38'00"	15.24	2.03	695	**MH09MH 0264.**	16.05.2019 06.12.2019	3.1, 3.2, 3.9, 3.13, 3.19, 3.20, 3.21, 3.22	8
45	**Dahiwadi** TalShirur Dist .Pune	1973	74°18'00" 18°42'00"	13.74	1.35	567.0	**MH09MH 0371**	16.05.2019 06.12.2019	3.6, 3.7, 3.9, 3.13, 3.19, 3.20, 3.25, 3.34	8
46	**Kadus** Tal. Khed Dist .Pune	1986	73°55'00″ 18°56'00	16.65	2.63	607.30	**MH09MH 1126**	25.05.2019 26.11.2019	3.1, 3.7, 3.9, 3.13, 3.16, 3.19, 3.20, 3.22, 3.25	9
47	**Nimgaon Mhalungi** Tal. Shirur Dist. Pune	1971	74° 12'30" 18° 43'30"	17.30	3.37	980	**MH09MH 0993**	16.05.2019 06.12.2019	3.5, 3.7, 3.9, 3.10, 3.13, 3.16, 3.20, 3.22, 3.33.	8
(2)) Superintending Engineer, Pune Irrigation Project Circle, Pune										
(a) Executive Engineer ,Bhama Askhed Dam Division, Pune										
48	Palsaunde Tal.Akole Dist.A.Nagar	2018	74°02′00" 19°50′00"	25.00	2.442	300.16	Proposed for NRLD	27.06.2019 08.01.2020	3.1, 3.20, 3.21	3

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1	2	3	4	5	6	7	8	9	10	11
(3) Superintending Engineer, Sangli Irrigation Circle, Sangli										
(a)Executive Engineer Sangli Irrigation Division, Sangli										
49	**Antri** Tal. Shirala Dist. Sangli	1991	74°05′00” 17°02′00”	22.79	2.82	235	**MH09MH 1215**	16.06.2019 04.11.2019	3.1, 3.13, 3.20, 3.28	4
50	**Bassappawadi** Tal. K’mahankal Dist. Sangli	1981	74° 00’00” 17°02’00”	16.90	7.78	1386	**MH09MH. 0900**	04.05.20180 1.11.2019	3.1, 3.2, 3.13, 3.6, 3.20	5
51	**Bhiwargi** Tal. Jath Dist. Sangli	2001	73°31′50” 17°25′00”	15.85	11.2	22.35	**MH09MH. 1597**	28.06.20192 2.11.2019	3.1, 3.2, 3.7, 3.19, 3.13, 3.6, 3.9	7
52	**Bhose** Tal. Miraj Dist Sangli	1974	74°44′00” 16°57′00”	15.18	1.03	160	**MH09MH. 0404**	17.05.2019 01.11.2019	3.1, 3.2, 3.13, 3.20, 3.21, 3.22	6
53	**Birnal** Tal. Jath Dist. Sangli	1977	75°20′00” 17°4′50”	18.60	2.433	528	**MH09MH. 0637**	17.05.2019 20.11.2019	3.1,3.2, 3.7,3.13,3.20, 3.21	6
54	**Daribadachi** Tal. Jath Dist. Sangli	2010	75°24′00” 17°02′28”	15.38	1.87	674.79	**MH09MH 2254**	28.06.20192 2.11.2019	3.1, 3.2, 3.6, 3.7, 3.13, 3.16	6
55	**Doddanalla** Tal. Jath Dist. Sangli	1986	75°30′32” 17°13′00”	16.20	6.50	1211	**MH09MH. 1136**	11.05.20192 0.11.2019	3.1, 3.2, 3.5,3.9,,3.13,3.20,3.34	7
56	**Dudhebhavi** Tal. Kavathemahankal Dist. Sangli	1983	75°15′00” 17°09′37”	19.33	3.98	568	**MH09MH. 0996**	04.05.2019 01.11.2019	3.2,3.6 3.7,3.13, 3.20, 3.21, 3.22	7
57	**Karve** Tal. Walawa Dist. Sangli	1974	74°11′00” 16°57′04”	16.86	1.64	90	**MH09MH. 0395**	16.06.2019 04.11.2019	3.1, 3.2, 3.6, 3.13, 3.20, 3.22	6
58	**Nangole** Tal. Kavathemahankal Dist. Sangli	1978	74°35′45” 17°01′00”	15.45	1.85	280	**MH09MH. 0700**	05.06.20190 1.11.2019	3.2, 3.5, 3.13, 3.20	4

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1	2	3	4	5	6	7	8	9	10	11
59	**Pratappur** Tal. Jath Dist. Sangli	1987	75°04′00” 17°09′25”	16.90	1.66	657.09	**MH09MH. 1165**	05.06.20192 0.11.2019	3.1,3.2, 3.13, 3.20,	4
60	**Raywadi** Tal. Kmahankal Dist. Sangli	1976	74° 54’00” 17°17’00”	20.35	2.16	523	**MH09MH. 0586**	05.06.20190 1.11.2019	3.1,3.2, 3.5, 3.13, 3.16, 3.20	6
61	**Revnal** Tal. Jath Dist. Sangli	1978	75°12′15” 17°06′30”	18.60	2.37	174	**MH09MH. 0679**	17.05.20192 2.11.2019	3.2, 3.5,3.7, 3.13, 3.16, 3.20,3.21, 3.34, 3.35.	9
62	**Sankh** Tal. Jath Dist. Sangli	1995	75°32′00” 17°15′00”	17.66	19.93	3228	**MH09MH. 1382**	17.05.20192 1.11.2019	3.1, 3.2, 3.9, 3.13, 3.22, 3.34, 3.35	7
63	**Sanmadi** Tal. Jath Dist. Sangli	1979	74°20′00” 17°16′00”	17.46	1.98	529	**MH09MH. 0796**	17.05.20192 0.11.2019	3.1, 3.2, 3.13, 3.19, 3.20, 3.34	6
64	**Shegaon** Tal. Jath Dist. Sangli	1975	75°09′15” 17°09′02”	19.82	8.08	1274	**MH09MH. 0529**	17.05.20192 0.11.2019	3.1, 3.2 3.5, 3.6, 3.9, 3.13, 3.20,3.21, 3.22	9
65	**Shivani** Tal. Shirala Dist. Sangli	1991	74°05′30” 17°00′00”	16.23	1.69	132	**MH09MH. 1263**	16.06.20190 4.11.2019	3.1, 3.2, 3.13, 3.22, 3.20,	5
66	**Siddhnath** Tal. Jath Dist. Sangli	1981	75°20′25” 16°45′30”	18.96	8.58	1530	**MH09MH. 0654**	11.05.20192 1.11.2019	3.2, 3.5, 3.7, 3.13, 3.21, 3.20, 3.22	7
67	**Soardi** Tal. Jath Dist. Sangli	1983	75°22′30” 17°03′05”	18.08	4.40	921	**MH09MH. 1002**	11.05.20192 2.11.2019	3.2, 3.5, 3.9, 3.13, 3.16, 3.20	6
68	**Takave** Tal. Shirala Dist. Sangli	1989	74°07′00” 17°05′00”	24.81	2.97	283.50	**MH09MH. 1217**	16.06.2019 04.11.2019	3.2, 3.5, 3.13, 3.20, 3.22, 3.28	6
69	**Tippehalli** Tal. Jath Dist. Sangli	**1975**	74°4’00’’ 17°8’00’’	18.12	2.02	578	**MH09MH 0513**	17.05.20192 0.11.2019	3.1, 3.2, 3.5, 3.6, 3.9, 3.13, 3.16, 3.21, 3.34	9

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1	2	3	4	5	6	7	8	9	10	11
70	**Umrani** Tal. Jath Dist. Sangli	1999	75°30′00" 17°30′00"	15.33	4.23	509	**MH09MH. 1512**	28.6.2019 22.11.2019	3.1, 3.2, 3.13, 3.16,3.20	6
71	**Wakurde** Tal. Shirala Dist. Sangli	1985	70°02′00" 17°03′30"	19.25	1.61	156.10	**MH09MH. 1073**	16.06.20190 4.11.2019	3.2, , 3.13,	2
72	**Walekhind** Tal. Jath Dist. Sangli	1973	75°07′32" 17°13′32"	16.18	4.13	41	**MH09MH. 0322**	17.05.2019 20.11.2019	3.1, 3.2, 3.5, 3.9, 3.13, 3.22, 3.20	7
73	**Yelavi** Tal. Khanapur Dist. Sangli	**1975**	74°20'00'' 17°30'00''	**15.90**	**2.26**	639	**MH09MH 0514**	28.06.2019 20.11.2019	3.1, 3.2, 3.5, 3.13, 3.20,	5
(b) Executive Engineer Tembhu Lift Irrigation Project Management Division Ogalewadi										
74	**Anjani** Tal.Tasgaon Dist. Sangli	1970	74°02′00" 17°04′00"	15.00	2.09	14.27	**MH09MH. 0230**	16.4.2019 23.11.2019	3.1, 3.5, 3.7, 3.9, 3.13, 3.34, 3.35	7
75	**Arjunwadi** Tal. Atpadi Dist. Sangli	2005	74°51′00" 17°17′00"	17.94	2.352	739.0	**MH09MH 1609**	28.4.2019 13.11.2019	3.7, 3.20	2
76	**Atpadi** Tal. Atpadi Dist. Sangli	1972	74°55′00" 17°24′00"	16.50	8.67	1727	**MH09MH. 0314**	18.5.2019 13.11.2019	3.1, 3.5, 3.7, 3.9, 3.20, 3.22	6
77	**Bhakuchiwadi** Tal Khanapur Dist. Sangli	1989	74°23′00" 17°21′00"	19.20	7.40	150	**MH09MH. 1211**	1.5.2019 27.11.2019	3.5, 3.7, 3.9, 3.10, 3.13, 3.20, 3.21,3.34, 3.35	9
78	**Bhambarde** Tal.Khanapur Dist. Sangli	1972	74°35′00" 17°19′00"	22.00	1.32	391	**MH09MH. 0295**	1.5.2019 27.11.2019	3.5, 3.7, 3.35, 3.20,3.21, 3.35	6
79	**Buddhihal** Tal.Mangalwedha Dist. Solapur	1966	74°59'54" 17°18'30''	18.52	19.03	2510	**MH09MH 0134**	6.5.2019 16.11.2019	3.1, 3.2,3.5, 3.7, 3.9, 3.13, 3.20, 3.22	8

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1	2	3	4	5	6	7	8	9	10	11
80	**Dighnchi** Tal. Atpadi Dist. Sangli	1976	74°55′30” 17°24′30”	15.80	4.00	1301	**MH09MH. 0591**	18.5.2019 16.11.2019	3.20	1
81	**Ghanand** Tal. Atpadi Dist. Sangli	1986	74°44′00” 17°44′30”	15.46	1.44	341	**MH09MH. 1120**	28.4.2019 13.11.2019	3.1, 3.2, 3.5, 3.7, 3.9, 3.13, 3.20, 3.35	8
82	**Hingangaon** Tal.KadegaonDist. Sangli	1998	74°12′00” 17°55′00”	16.02	2.01	156	**MH09MH. 1462**	30.4.2019 14.11.2019	3.2, 3.5, 3.9, 3.13,3.19, 3.20 , 3.22, 3.34	8
83	**Jambhulani** Tal. Atpadi Dist. Sangli	1975	74°60′00” 17°34′00”	15.87	2.85	668	**MH09MH. 0517**	28.4.2019 13.11.2019	3.2, 3.5, 3.9, 3.13, 3.20, , 3.31, 3.35	7
84	**Kacharewasti** Tal. Jath Dist. Sangli	1974	75°51′00” 17°21′20”	18.75	3.13	973	**MH09MH. 0447**	28.4.2019 13.11.2019	3.2, 3.5, 3.13, 3.35, 3.20, 3.21	6
85	**Kadegaon** Tal. Kadegaon Dist. Sangli	1975	74°16′00” 17°16′00”	17.54	2.36	508.70	**MH09MH. 0510**	30.4.2019 24.11.2019	3.1, 3.2, 3.5, 3.7, 3.9, 3.13, 3.35, 3.20	8
86	**Karandewadi** Tal. Kadegaon Dist. Sangli	1995	74°17′12” 17°22′00”	18.45	1.36	39.45	**MH09MH. 1348**	30.4.2019 24.11.2019	3.1, 3.2, 3.5, 3.7, 3.13, 3.9 , 3.35, 3.20	8
87	**Lodhe** Tal.Tasgaon Dist. Sangli	1996	74°40′00” 17°05′00”	16.76	4.63	1593	**MH09MH. 1412**	16.4.2019 23.11.2019	3.5, 3.6, 3.20, 3.9, 3.13, 3.35	6
88	**Morale** Tal. Tasgaon Dist. Sangli	1974	74°42′09” 17°11′43”	16.10	0.65	141.0	**MH09MH. 0239**	14.5.2019 28.11.2019	3.2, 3.7,3.9, 3.13, 3.19, 3.20, 3.21, 3.35,	8
89	**Nhavi** Tal. Kadegaon Dist. Sangli	1981	74°15′20” 17°15′20”	17.48	2.19	314.0	**MH09MH. 1050**	30.4.2019 14.11.2019	3.1, 3.2, 3.7, 3.9, 3.13, 3.16, 3.19, 3.20, 3.22, 3.34, 3.35	11
90	**Nimbawade** Tal. Atpadi Dist. Sangli	1986	74°52′30” 17°28′00”	16.13	6.68	1233	**MH09MH. 1187**	18.5.2019 16.11.2019	3.1, 3.2, 3.5, 3.6, 3.7, 3.9, 3.13, 3.20, 3.21, 3.31	10

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1	2	3	4	5	6	7	8	9	10	11
91	**Pare** Tal. Khanapur Dist. Sangli	1973	74°35′00" 17°12′00"	18.73	34.16	4081.0	**MH09MH 0296**	9.5.2019 14.11.2019	3.2, 3.13, 3.19, 3.21, 3.20 , 3.34, 3.35	7
92	**Ped** Tal. Tasgaon Dist. Sangli	1972	74°40′08" 17°12′05"	19.04	1.57	158	**MH09MH. 0272**	14.5.2019 28.11.2019	3.2, 3.5, 3.7, 3.9, 3.13, 3.16, 3.20, 3.31, 3.35	9
93	**Punadi** Tal. Tasgaon Dist. Sangli	1987	74°37′00" 17°30′00"	17.00	1.414	225	**MH09MH. 1156**	16.4.2019 23.11.2019	3.5, 3.7,3.9, 3.13, 3.16, 3.20, 3.34	7
94	**Shalgaon** TalKadegaon Dist. Sangli	1976	74°00′00" 17°07′00"	15.00	2.287	406	**MH09MH. 0578**	30.4.2019 24.11.2019	3.2, 3.5, 3.16, 3.20, 3.34	5
95	**Siddhewadi** Tal. Tasgaon Dist. Sangli	1977	74°06′00" 17°60′00"	18.81	6.43	1571	**MH09MH. 0902**	16.4.2019 23.11.2019	3.9, 3.13, 3.19, 3.22,3.20, 3.34, 3.35	7
96	**Vejegaon** Tal.Khanapur Dist. Sangli	1979	74°36′00" 17°23′00"	16.77	2.21	426	**MH09MH. 0782**	1.5.2019 27.11.2019	3.2, 3.5, 3.7, 3.9, 3.16, 3.20,3.21	7
97	**Vibhutewadi** Tal. Atpadi Dist. Sangli	1983	73°30′00" 17°28′30"	16.21	1.32	16.62	**MH09MH. 1013**	18.5.20191 6.11.2019	3.2, 3.5, 3.13, 3.16, 3.21, 3.22, 3.20, 3.34	8
98	**Walunj** Tal. Jath Dist. Sangli	1977	74°00′37" 17°00′19"	17.81	1.69	475	**MH09MH. 0635**	1.5.2019 27.11.2019	3.5, 3.7, 3.9, 3.35, 3.21, 3.20,	6
99	**Talgaon Ghogaon** Tal. Khanapur Dist. Sangli	1984	74°11'00" 17°00'00"	21.18	56.26	475	**MH09MH 0635**	31.5.2019 29.11.2020	3.1, 3.2, 3.5, 3.7, 3.9, 3.13, 3.16, 3.19, 3.20, 3.22, 3.31	11
(c) Executive Engineer, Minor Irrigation Division, Sangali										
100	**Mahadikwadi** Tal. Atpadi Dist. Sangli	2003	74°40′00" 17°11′00"	16.02	2.10	789.38	**MH09MH 1547**	5.5.2019 28.11.2019	3.1, 3.5, 3.9, 3.16, 3.20, 3.21	6

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1	2	3	4	5	6	7	8	9	10	11
(d) Executive Engineer Takari Pump House Division No.1, Devarashtra										
101	**Chinchani** Tal.Kadegaon Dist. Sangli	1989	73°31′50” 17°20′00”	17.46	4.31	628	**MH09MH. 1222**	31.05.2019. 24.11.2019	3.1, 3.2, 3.5,3.7, 3.9, 3.13, 3.20, 3.22, 3.23, 3.34	10
(4) Superintending Engineer, Kolhapur Irrigation Circle, Kolhapur										
(a) Executive Engineer, Kolhapur Irrigation Division (North), Kolhapur										
102	**Andur** Tal. Gadhinglaj Dist. Kolhapur	1982	73°58′00” 16°36′00”	24.51	5.75	98.0	**MH09MH. 0914**	3.6.2019 22.11.2019	3.2, 3.7, 3.10, 3.34, 3.20, 3.31, 3.16	7
103	**Kandalgaon** Tal. Gadhinglaj Dist. Kolghapur	1980	74°20′00” 16°40′00”	19.41	1.70	98	**MH09MH. 0811**	13.6.2019 21.11.2019	3.2, 3.5, 3.7, 3.9, 3.13, 3.20, 3.21, 3.34, 3.31.	9
104	**Kaneriwadi** Tal. Gadhinglaj Dist. Kolhapur	1974	74°17′05” 16°37′47”	17.5	2.60	182	**MH09MH. 0408**	13.6.2019 25.11.2019	3.2, 3.9, 3.13, 3.20, 3.22,	5
105	**Kasarde** Tal.Gadhinglaj Dist. Kolhapur	2009	74°51′00” 16°55′30”	29.85	4.416	268.8	**MH09MH 1908**	10.5.2019 26.11.2019	3.13,3.20, 3.22	3
106	**Keaskarwadi** Tal. Shahuwadi Dist. Kolhapur	1998	73°30′00” 16°49′00”	26.28	5.67	52.85	**MH09MH. 1452**	27.4.2019 16.11.2019	3.7, 3.13, 3.16, 3.20, 3.21	5
107	**Khandwan** Tal.Shahuwadi Dist. Kolhapur	2000	73°32′30” 17°02′45”	29.86	5.59	119	**MH09MH. 1548**	10.5.2019 26.11.2019	3.1,3.2 3.13, 3.16, 3.20	5
108	**Kode** Tal. Gadhinglaj Dist. Kolhapur	1989	73°52′00” 16°28′00”	24.77	6.06	234	**MH09MH. 1224**	3.6.2019 22.11.2019	-3.7, 3.9, 3.19, 3.20, 3.21,3.25	6
109	**Kumbhawade** Tal. Shahuwadi Dist. Kolhapura	1999	73 °46’00” 16 °47’00”	25.16	5.615	141	**MH09MH. 1499**	27.4.2019 21.11.2019	3.7, 3.13, 3.16,3.20, 3.21, 3.25	6
110	**Manpadale** Tal. Gadhinglaj Dist. Kolhapur	1971	74°13′00” 16°48′00”	20.80	1.43	37	**MH09MH. 0234**	13.6.2019 25.11.2019	3.5, 3.7, 3.20,3.31	4

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1	2	3	4	5	6	7	8	9	10	11
111	**Nandari** Tal. Shahuwadi Dist. Kolhapur	1999	73°57′00” 16°47′00”	26.40	3.208	99.5	**MH09MH. 1497**	27.4.2019 26.11.2019	3.5, 3.13, 3.16	3
112	**Olwan** Tal. Gadhinglaj Dist. Kolhapur	1996	74°52′00” 16°23′00”	24.740	1.875	157	**MH09MH. 1389**	21.5.2019 23.11.2019	3.7, 3.9, 3.13, 3.16, 3.20, 3.21, 3.22	7
113	**Padsali** Tal. Gadhinglaj Dist. Kolhapur	1997	74°50′50” 16°42′00”	29.15	6.90	186	**MH09MH. 1427**	27.4.2019 21.11.2019	3.1, 3.2, 3.6, 3.7, 3.13, 3.16, 3.21, 3.20, 3.22	9
114	**Pombre** Tal. Panhala Dist. Kolhapur	1985	73°50′15” 18°42′35”	24.11	6.50	235	**MH09MH. 1078**	27.4.2019 21.11.2019	3.7, 3.13, 3.16, 3.20, 3.21, 3.22,	6
115	**Vesraf** Tal. Gaganbavda Dist. Kolhapur	1984	73°52′00” 16°35′00”	19.21	3.37	106	**MH09MH. 1026**	3.6.2019 22.11.2019	3.2, 3.7, 3.9, 3.10,3.16, 3.13, 3.20, 3.21, 3.22,	9
116	**Manoli** Tal. Gadhinglaj Dist. Kolhapur	2000	74 ° 45’ 30” 16° 55’ 30”	29.50	5.196	222.35	**MH09MH 1537**	10.5.201926 .11.2019	3.1, 3.13, ,3.31	3
117	**Daryachi Vadgaon** Tal. Chandgad Dist. Kolhapur	1993	74°00’ 16°36’	23.65	0.8473	59.22	**MH09MH 1302**	13.6.2019 28.11.2019	3.13, 3.31	2
(b) Executive Engineer, Kolhapur Irrigation Division (South), Kolhapur										
118	**Benekre** Tal. Gadhinglaj Dist. Kolhapur	1973	74°14′00” 16°24′00”	20.99	1.82	No spilway	**MH09MH 0320**	9.4.2019 15.11.2019	3.1,3.13, 3.20	3
119	**Dhangarwadi** Tal. Ajara, Dist. Kolhapur	1999	74°05’ 09” 16°02’30”	18.22 m	2.64	301	**MH09MH 1506**	24.4.2019 19.10.2019	3.13, 3.20, 3.21, 3.22	4

Sr. No	Name of Dam	Date of Compl-etion	Location Longitude/ Latitude	Height in m	Gross Capacity Mm^3	Design Spillway Capacity m^3 / sec	Sr.No. in NRLD Register	Date of Inspection Pre & Post	Deficiencies noticed	Total Deficiencies
1	2	3	4	5	6	7	8	9	10	11
120	**Dindalkop** Tal. Gadhinglaj Dist. Kolhapur	*2014*	74°25′30” 15°45′45”	27.61	2.625	183.76	**MH09MH. 1925**	20.4.2019 05.11.2019	3.2, 3.5, 3.6 3.7, 3.9, 3.13, 3.20, 3.21, 3.22, 3.28	10
121	**Erandol** Tal.MangalwedhaDist. Solapur	1999	74°11′00” 16°03′00”	30.55	4.210	586.34	**MH09MH. 1514**	11.5.2019 19.10.2019	3.1, 3.2, 3.5, 3.6, 3.7, 3.13, 3.20	7
122	**Hanbarwadi** Tal.Kagal Dist. Kolhapur	1998	74°16′00” 16°18′00”	26.65	2.67	207	**MH09MH. 1465**	9.4.2019 15.11.2019	3.1, 3.2, 3.13, 3.20, 3.23	5
123	**Here** Tal. Gadhinglaj Dist. Kolhapur	1998	74’10′00” 15°52′30”	27.32	3.926	72	**MH09MH. 1456**	22.4.2019 06.11.2019	3.1, 3.2, 3.6, 3.13, 3.16, 3.19, 3.21	7
124	**Jelugade** Tal.Chandgad Dist. Kolhapur	2000	74°13′40” 15°52′30”	29.25	4.86	140.35	**MH09MH. 1534**	22.4.2019 06.11.2019	3.1, 3.9, 3.13, 3.20, 3.21, 3.22	6
125	**Kalasgade** Tal.Gadhinglaj Dist. Kolhapur	2000	74°13′30” 16°49′30”	16.46	1.91	119	**MH09MH. 1532**	22.4.2019 06.11.2019	3.1,3.2, 3.13, 3.20,	4
126	**Karambali** Tal. Gadhinglaj Dist. Kolghapur	2007	74°17′30” 16°12′00”	27.44	2.91	90.72	**MH09MH. 1667**	10.4.2019 26.11.2019	3.2, 3.5, 3.7, 3.9, 3.13, 3.20	6
127	**Karanjgaon** Tal. Chandgad Dist. Kolhapur	1998	74°14’00” 16°54’00”	29.81	3.50	64	**MH09MH. 1454**	22.4.2019 06.11.2019	3.1, 3.2, 3.13, 3.20, 3.21, 3.22	6
128	**Karanjwane** Tal. Kagal Dist. Kolhapur	1989	74°14’00” 16°21’00”	21.00	1.51	124	**MH09MH. 1209**	9.4.2019 15.11.2019	3.1, 3.20	2
129	**Khadakohol** Tal. Chandgad Dist. Kolhapur	1999	74° 16’00” 15° 54’00”	16.42	1.82	157	**MH09MH. 1502**	22.4.2019 06.11.2019	3.1, 3.2, 3.5, 3.13, 3.20, 3.22 3.21, 3.28	8
130	**Khanapur** Tal. Gadhinglaj Dist. Kolhapur	1988	74°10′00” 16°05′00”	21.35	0.84	38	**MH09MH. 1177**	24.4.2019 19.10.2019	3.20, 3.22, 3.28	3

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1	2	3	4	5	6	7	8	9	10	11
131	**Kitwad** Tal.Chandgad Dist. Kolhapur	2000	75°25′00” 15°58′00”	29.59	5.53	611	**MH09MH. 1543**	20.4.2019 05.11.2019	3.2, 3.19, 3.13, 3.20, 3.21	5
132	**Kumari** Tal. Gadhinglaj Dist. Kolhapur	1998	74°18′00” 15°30′00”	23.64	2.59	94	**MH09MH. 1457**	20.4.2019 26.11.2019	3.1, 3.2, 3.13, 3.20, 3.22	5
133	**Narewadi** Tal. Gadhinglaj Dist. Kolhapur	1981	74°08′30” 16°25′30”	23.75	2.22	282	**MH09MH. 0871**	15.4.2019 20.10.2019	3.5, 3.7, 3.13, 3.21, 3.28	5
134	**Nittur-2** Tal. Gadhinglaj Dist. Kolhapur	2000	74°22′30” 15°44′54”	28.04	4.38	90.65	**MH09MH. 1530**	20.4.2019 05.11.2019	3.1, 3.13, 3.20, 3.21, 3.28	5
135	**Patane** Tal. Chandgad Dist. Kolhapur	2001	73°13′30” 15°51′15”	26.82	4.55	78.7	**MH09MH. 1563**	22.4.2019 06.11.2019	3.1, 3.13, 3.20, 3.21, 3.22	5
136	**Shendri** Tal. Gadhinglaj Dist. Kolhapur	1981	74°21′00” 16°16′00”	21.14	1.81	130	**MH09MH. 0853**	10.4.2019 17.10.2019	3.1, 3.7, 3.16, 3.13, 3.28	5
137	**Sundi** Tal. Chandgadj Dist. Kolhapur	2009	74°22′00” 15°16′00”	27.00	2.594	169.05	**MH09MH. 1910**	20.4.2019 05.11.2019	3.1, 3.13, 3.19, 3.20, 3.21, 3.22	6
138	**Terani** Tal. Gadhinglaj Dist. Kolhapur	1996	74°28’00” 16°8’00”	20.66	3.476	516	**MH09MH. 1399**	15.4.2019 20.10.2019	3.1, 3.7, 3.9, 3.13, 3.16, 3.20, 3.28, 3.22	8
139	**Vairagwadi** Tal. Gadhinglaj Dist. Kolghapur	1984	74°20′30” 16°09′30”	20.34	1.50	96	**MH09MH. 1022**	15.4.2019 20.10.2019	3.5, 3.9, 3.13, 3.20, 3.28, 3.22	6
140	**Yenechavandi** Tal.Gadhinglaj, Dist. Kolhapur	1996	74°20’ 16° 11’	21.65	1.545	182	**MH09MH 1339**	15.4.2019 20.10.2019	3.5, 3.7, 3.13, 3.16, 3.20, 3.22, 3.28.	7

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1	2	3	4	5	6	7	8	9	10	11
(5)Superintending Engineer, Satara Irrigation Circle, Satara										
(a) Executive Engineer, Krishna Irrigation Division, Satara										
141	**Andhali** Tal. Man Dist. Satara	1997	74° 30'00" 17° 45'00"	18.60	9.273	1422.0	**MH09MH. 1443**	23.04.2019 04.12.2019	3.1,3.5,3.7,3.10,3.13,3.16, 3.19,3.20,3.22	9
142	**Arabwadi** Tal.Koregaon Dist.Satara	1977	74°04' 50" 17°50' 07"	17.35	1.89	246	**MH09MH. 0621**	15.04.2019 19.11.2019	3.1,3.5,3.7,3.10,3.13,3.16, 3.20,3.21,3.22	9
143	**Daruj** Tal. Khatav Dist. Satara	1956	74° 25'00" 17°40'00"	16.46	2.88	364	**MH09MH. 0074**	20.04.2019 09.12.2019	3.2,3.5,3.7,3.9,3.10,3.13,3.16, 3.19,3.20,3.28,3.21	11
144	**Dhakani** Tal. Man Dist. Satara	1994	74° 41'00" 17°35'00"	18.50	3.05	602	**MH09MH. 1335**	05.05.2019 23.11.2019	3.1,3.2,3.9,3.10,3.13,3.16, 3.19, 3.20,3.28	9
145	**Hiware** Tal.Koregaon Dist. Satara	1974	74° 11'00" 17°50'00"	18.14	2.74	657	**MH09MH. 0443**	15.04.2019 19.11.2019	3.1,3.5,3.4,3.9,3.13,3.16,3.20, 3.21,3.28	9
146	**Jambhulani** Tal. Man Dist. Satara	1981	74° 60'00" 17° 34'00"	15.21	2.41	514.00	**MH09MH. 0516**	19.05.2019 04.12.2019	3.1,3.5,3.7,3.9,3.10,3.13,3.19, 3.20	8
147	**Kumathe** Tal.Satara Dist. Satara	2001	73°52′00" 17°26′00"	27.13	2.86	143.00	**MH09MH. 1682**	11.05.2019 16.11.2019	3.1,3.7,3.9,3.10,3.13,3.19, 3.20, 3.22,3.23	9
148	**Mandawe** Tal.Koregaon Dist. Satara	1994	73°59′00" 17°34′00"	19.50	1.15	229	**MH09MH. 1323**	11.05.2019 16.11.2019	3.1,3.5,3.10,3.7,3.13,3.16, 3.19,3.20,3.22	9
149	**Mashalwadi** Tal. Man Dist. Satara	1975	74° 50'30" 17°40'00"	14.30	2.41	839.94	**MH09MH. 0377**	19.05.2019 04.12.2019	3.5,3.7,3.10,3.13,3.19,3.20, 3.28,3.34	8
150	**Mayani** Tal. Khatav Dist. Satara	1872	74° 34'00" 17°26'00"	18.00	1.46	1384	**MH09MH. 0008**	20.4.2019 23.11.2019	3.1, 3.5, 3.9, 3.10, 3.13, 3.16, 3.19, 3.20, 3.28.	9

Sr. No	Name of Dam	Date of Compl-etion	Location Longitude/ Latitude	Height in m	Gross Capacity Mm^3	Design Spillway Capacity m^3 / sec	Sr.No. in NRLD Register	Date of Inspection Pre & Post	Deficiencies noticed	Total Deficiencies
1	2	3	4	5	6	7	8	9	10	11
151	**Nandwal** Tal. Koregaon Dist. Satara	2008	74° 11'00" 16°37'10"	18.78	0939	39.2	**MH09MH. 1640**	20.4.2019 19.11.2019	3.5,3.6,3.7,3.10,3.16,3.20, 3.21,3.22,3.28	9
152	**Ner** Tal. Khatabv Dist. Satara	1981	74° 18'00" 17°44'00"	22.50	9.12	1478	**MH09MH. 0018**	20.4.2019 26.11.2019	3.1,3.5,3.7,3.9,3.10,3.13,3.16, 3.19,3.21,3.22,3.25,3.34	12
153	**Pingali** Tal. Man Dist. Satara	1878	74° 33'00" 17°41'00"	16.00	2.38	811	**MH09MH. 0731**	05.05.2019 29.11.2019	3.2,3.6,3.7,3.10,3.13, 3.19,3.20,3.25,3.28	10
154	**Ranand** Tal. Man Dist. Satara	1956	74° 40'00" 17° 43'00"	19.32	7.12	1168.7	**MH09MH. 0078**	23.04.2019 04.12.2019	3.5,3.7,3.13,3.20,3.22,3.28	6
155	**Yeralwadi** Tal.Khatav Dist.Satara	1973	74°29′35" 17°31′24"	19.50	32.80	2083	**MH09MH. 0386**	20.04.2019 29.11.2019	3.5,3.9,3.13,3.16,3.22,3.34	6
156	**Kankatrewadi** Tal. Phaltan Dist. Satara	1978	74°35′00" 17°29′00"	19.51	1.24	1283	**MH09MH0 736**	19.05.2019 04.12.2019	3.2,3.5,3.7,3.9,3.10,3.13,3.16, 3.20	8
157	Name :**Thoseghar** Tal. Satara Dist. Satara	1989	73°52′00" 17°36′00	18.05	1.91	113	**MH09MH 1208**	04.05.2019 19.10.2019	3.5,3.6,3.7,3.10,3.13,3.16, 3.19, 3.20,3.21,3.22,3.34	11
158	**Deur** Tal Koregaon Dist. Satara	1994	74°08′00" 17°54′00"	18.60	1.856	475	**MH09MH. 1329**	15.04.2019 07.12.2019	3.1,3.2,3.5,3.7,3.9,3.13,3.20, 3.30	8
159	**Kusawade** Tal Satara Dist. Satara	2010	73°57'00" 17°34'46''	30.90	3.495	155.02	**MH09HH 2411**	29.04.2019 16.11.2019	3.1,3.2,3.5,3.6,3.21,3.34	6
(b) Executive Engineer, Koyna Irrigation Division Koynanagar										
160	**Chalkewadi** Tal. Patan Dist. Satara	1991	74°05′00" 17°11′00"	21.53	0.80	39	**MH09MH. 1258**	14.05.2019 10.12.2019	3.7,3.10,3.13,3.16,3.20,3.22, 3.31,3.35	8
161	**Chaphal** Tal.Koregaon Dist. Satara	1983	74°00′28" 17°24′24"	21.50	1.45	229	**MH09MH. 0966**	14.05.2019 02.12.2019	3.1,3.2,3.5,3.6,3.13,3.16,3.20, 3.22	8

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1	2	3	4	5	6	7	8	9	10	11
[A] Chief Engineer (S.P) Water Resources Department Pune										
(1) Superintending Engineer Kukadi Irrigation Circle Pune										
(a) Executive Engineer ,Kukadi Irrigation Division No. 1 Narayangaon										
162	**Anepemdara** Tal. Junnar, Dist. Pune	1998	73° 14'00" 19° 11'00"	14.34	2.09	545	**MH09LH. 1473**	NA 12.12.2019	3.2,3.7,3.9,3.10,3.13,3.16, 3.20,3.21,3.34	9
163	**Ballalwadi** Tal. Junnar, Dist. Pune	1996	73° 55'30" 19° 15'00"	20.16	1.95	1968	**MH09MH. 1414**	NA 12.12.2019	3.1,3.2,3.5,3.7,3.9,3.10,3.13, 3.16, 3.19,3.20,3.22,3.34	12
164	**Ghangaldara** Tal. Junnar, Dist. Pune	2009	74° 00'00" 18° 20'00"	26.34	2.34	152.88	**MH09MH. 1906**	NA 22.11.2019	3.5,3.7,3.9,3.10,3.13,3.20, 3.25	7
165	**Gohe** Tal. Ambegaon, Dist. Pune	1996	73° 44'00" 19° 04'00"	17.49	1.28	338	**MH09MH. 1397**	NA 27.11.2019	3.2,3.5,3.7,3.9,3.10,3.13,3.16, 3.19,3.20,3.22	10
166	**Otur - waghadara** Tal. Junnar Dist. Pune	1992	74° 02'00" 19° 05'00"	20.16	0.953	137.3	**MH09MH. 1262**	NA 12.12.2019	3.2,3.5,3.7,3.9,3.10,3.13,3.20, 3.16,3.19,3.33,3.34	11
167	**Parunde** Tal. Junnar, Dist. Pune	1989	73° 47'30" 19° 09'45"	20.02	1.92	146	**MH09MH. 1210**	NA 12.12.2019	3.7,3.10,3.13,3.16,3.20, 3.33,3.34,3.9	8
168	**Ramjewadi** Tal. Junnar, Dist. Pune	1983	73° 41'00" 19° 13'00"	21.48	1.72	209	**MH09MH. 0965**	NA 22.11.2019	3.5,3.7,3.9,3.10,3.13,3.20, 3.21 3.22,3.34	9
169	**Ucchil** Tal. Junnar, Dist. Pune	2001	73° 41'00" 19° 13'00"	13.01	3.12	201.0	**MH09MH. 1572**	NA 22.11.2019	3.2,3.5,3.7,3.9,3.10,3.13,3.16, 3.20,3.21	9
170	**Yenere** Tal. Junnar, Dist. Pune	1979	73° 47'00" 19° 10'00"	19.50	2.07	281	**MH09MH. 0768**	NA 12.12.2019	3.2,3.5,3.10,3.13,3.16,3.20, 3.33,3.34	8

Sr. No	Name of Dam	Date of Compl-etion	Location Longitude/ Latitude	Height in m	Gross Capacity Mm^3	Design Spillway Capacity m^3 / sec	Sr.No. in NRLD Register	Date of Inspection Pre & Post	Deficiencies noticed	Total Deficiencies
1	2	3	4	5	6	7	8	9	10	11
171	**Shivdoh** Tal. Parner, Dist. A.Nagar	2003	74° 16'45" 19° 01'06"	12.70	1.16	295	**MH09LH 2031**	18.05.2019 19.11.2019	3.2,3.5,3.7,3.9,3.13,3.16,3.20, 3.21,3.22	9
172	**Devibhoyare** Tal. Parner, Dist. A.Nagar	2002	74° 17'38" 19° 00'45"	15.70	2.77	330	**MH09LH 2032**	18.05.2019 19.11.2019	3.5,3.7,3.9,3.13,3.16,3.20, 3.21,	7
173	**Jhadhavwadi** Tal. Parner, Dist. A.Nagar	2001	74° 20'59" 19° 02'21"	15.70	1.39	440.60	**MH09LH 2033**	18.05.2019 19.11.2019	3.2,3.5,3.9,3.13,3.16,3.20, 3.21,3.34	8
(2) Superintending Engineer Administrator, C.A.D.A. Solapur										
(a) Executive Engineer ,Solapur Irrigation Division Solapur										
174	**Chare** Tal. Barshi Dist. Solapur	1983	75°45'00" 18°35'42"	16.30	1.50	286	**MH09MH. 0973**	19.5.2019 26.11.2019	3.1, 3.5, 3.7, 3.9, 3.13, 3.16, 3.20, 3.21, 3.23, 3.22, 3.33	11
175	**Hingani(k)** Tal. Karmala Dist Solapur	1974	75°24'30" 18°16'00"	16.15	2.22	571	**MH09MH. 0441**	14.5.2019 28.11.2019	3.9, 3.34, 3.13, 3.16, 3.20, 3.22,3.28	7
176	**Hingani(p)** Tal. Barshi Dist. Solapur	1977	75°50'00" 18°07'00"	21.87	45.51	2435	**MH09MH. 0657**	18.5.2019 22.11.2019	3.10, 3.13, 3.16, 3.19, 3.20, 3.21, 3.22	7
177	**Jawalgaon** Tal. Barshi Dist. Solapur	1985	75°54'00" 18°01'00"	21.71	34.92	1837	**MH09MH. 1340**	18.5.2019 22.11.2019	3.3, 3.13, 3.16, 3.19, 3.20, 3.21, 3.22	7
178	**Kari** Tal. Barshi Dist. Solapur	1973	75°00'20" 18°55'00"	15.72	1.70	364.8	**MH09MH. 0363**	19.5.2019 26.11.2019	3.2, 3.9, 3.13, 3.16, 3.19, 3.20, 3.33, 3.34, 3.35	9
179	**Koregaon** Tal. Barshi Dist.Solapur	1985	75 °45'00" 18 °25'00"	21.64	1.96	335	**MH09MH. 1200**	19.5.2019 26.11.2019	3.5, 3.7, 3.1, 3.13	4
180	**Mangi** Tal. Karmala Dist Solapur	1966	75°17'00" 17°17'00"	22.95	30.92	2237	**MH09MH. 0131**	14.5.2019 28.11.2019	3.13, 3.20, 3.21,3.23	4

Sr. No	Name of Dam	Date of Compl-etion	Location Longitude/ Latitude	Height in m	Gross Capacity Mm^3	Design Spillway Capacity m^3 / sec	Sr.No. in NRLD Register	Date of Inspection Pre & Post	Deficiencies noticed	Total Deficiencies
1	2	3	4	5	6	7	8	9	10	11
181	**Pathari** Tal. Barshi Dist. Solapur	1905	75°50'00" 18°19'00"	19.43	11.87	512	**MH09MH. 0025**	19.5.2019 22.11.2019	3.2, 3.5, 3.7, 3.9, 3.16, 3.21	6
182	**Shirwalwadi** Tal.Akkalkot Dist Solapur	1978	76°18'00" 17°02'20"	16.10	3.26	461.56	**MH09MH 0720**	27.5.2019 20.11.2019	3.1, 3.2, 3.5, 3.6, 3.7, 3.9, 3.13, 3.16, 3.19, 3.20, 3.21,3.28	12
183	**Kazikunbus** Tal. Akkalkot Dist. Solapur	1992	76°10'00'' 17°43'00''	20.00	4.031	692.15	**MH09MH 1224**	27.5.2019 20.11.2019	3.2, 3.5, 3.7,3.9, 3.22, 3.13, 3.16, 3.19, 3.20, 3.21, 3.28	11
184	**Rajuri** Tal. Karmala Dist. Solapur	1981	74°58' 18°22'	19.29	2520	694.33	**MH09MH 0894**	14.5.2019 28.11.2019	3.1, 3.2, 3.5, 3.7, 3.9, 3.10, 3.13, 3.16, 3.19,3.21	8
(b) Executive Engineer ,Bhima Irrigation Division Pandharpur										
185	**Chikhalgi** Tal.Mangalwedha Dist. Solapur	1990	75°25'20" 17°17'30	18.37	8.74	1966	**MH09MH. 0251**	21.5.2019 26.11.2019	3.13	1
186	**Chincholi** Tal. Sangola Dist. Solapur	1966	75°28'00" 17°24'00	15.24	2.74	991	**MH09MH. 0128**	21.5.2019 26.11.2019	3.1, 3.5, 3.9	3
187	**Padwalkarwadi** Tal.Mangalwedha Dist. Solapur	1973	75°22'00" 17°12'45"	15.17	2.99	483	**MH09MH. 0378**	21.5.2019 26.11.2019	3.7	1
188	**Talsangi** Tal.Mangalwedha Dist. Solapur	1896	75°26'00" 17°01'20''	15.24	2.43	411.7	**MH09MH. 0579**	03.11.2018 26.11.2019	3.5, 3.7, 3.13, 3.16	4
(c) Executive Engineer Bhima Developement Division No.2, Solapur										
189	Name : **Ashti** Tal. Mohol Dist. Solapur	1883	75°26' 00'' 17°47'30''	17.60	23.01	1359.21	**MH09MH 0014**	14.5.2019 29.11.2019	3.2, 3.5, 3.6, 3.7, 3.9, 3.13, 3.16, 3.20, 3.25	9

Sr. No	Name of Dam	Date of Compl-etion	Location Longitude/ Latitude	Height in m	Gross Capacity Mm^3	Design Spillway Capacity m^3 / sec	Sr.No. in NRLD Register	Date of Inspection Pre & Post	Deficiencies noticed	Total Deficiencies
1	2	3	4	5	6	7	8	9	10	11
(3) Superintending Engineer ,Bhima Canal Circle, Solapur										
(a) Executive Engineer ,Minor Irrigation Division No 1 Solapur										
190	**Babhulagaon** Tal.Barshi Dist. Solapur	1993	75°46'55" 18°19'23"	16.93	6.40	1046.89	**MH09MH. 1620**	21.5.2019 14.12.2019	3.1, 3.2, 3.9, 3.34, 3.13,3.21, 3.33	7
191	**Pimpalgaon Dhale** Tal.Mangalwedha Dist. Solapur	2008	75°47'40" 18°10'10''	18.70	12.66	2242	**MH09MH 1840**	21.5.2019 14.12.2019	3.2, 3.5, 3.7, 3.9, 3.10, 3.13,3.20, 3.33	8
192	**Gholasgaon Tal. Akkalkot. Dist-Solapur**	2004	76°15'18" 17°30'50''	16.24	2.08	496.25	**Proposed for updation in NRLD 2020**	09.07.2019 01.12.2019	3.1, 3.7, 3.2, 3.9, 3.34, 3.21, 3.20, 3.13	8
(4) Superintending Engineer, Satara Project Irrigation Circle, Satara										
(a) Executive Engineer ,Minor Irrigation Division Satara										
193	Mahind Tal. Patan Dist. Satara	2000	73°54'13" 17°22'05"	21.32	2.404	750.00	**MH09MH 1838**	18.04.2019 29.11.2019	3.1,3.2,3.5,3.7,3.9,3.16,3.19, 3.22	7
194	Kalgaon Tal. Patan Dist. Satara	Work in progres s	73°53'30" 17°19'03"	32.26	2.692	199.64	**MH09HH 2416**	18.04.2019 29.11.2019	3.2,3.9	2
195	Chiteghar Tal. Patan Dist. Satara	2010	73°53'20" 17°25'15"	23.4	3.90	1015.00	**MH09MH 2409**	21.04.2019 29.11.2019	3.2,3.7,3.20,3.21	4
[A] Chief Engineer, Small Scale Irrigation (WC) , Pune										
(1) Superintending Engineer ,Small Scale Irrigation Circle (WC), Pune										
(a) Executive Engineer , Small Scale Irrigation Division (WC) Sangali										
196	Billur(A) Tal. Jath Dist. sangli	1995	75°58'00" 17°37'00"	16.255	2.07	634	**MH09MH. 1372**	22.05.20192 8.12.2019	3.20, 3.13	2
197	Umrani-2 Tal. Maval Dist Pune	2005	75°00'00" 17°00'00"	14.98	21.97	225.72	**MH09MH 1911**	21.05.2019 28.12.2019	3.20, 3.21	2

Sr. No	Name of Dam	Date of Compl-etion	Location Longitude/ Latitude	Height in m	Gross Capacity Mm^3	Design Spillway Capacity m^3 / sec	Sr.No. in NRLD Register	Date of Inspection Pre & Post	Deficiencies noticed	Total Deficiencies
1	2	3	4	5	6	7	8	9	10	11
(b) Executive Engineer , Small Scale Irrigation Division (WC) Kolhapur										
198	Asane Tal. Radhanagari Dist. Kolhapur	2008	73°51'40" 16°10'30	20.50	1.95	157.00	**MH09MH. 1570**	07.05.2019 24.12.2019	3.1,3.7,3.2, 3.13, 3.9, 3.20	6
199	Nandwal Tal. Karveer Dist. Kolhapur	2005	74°11'40" 16°37'10	18.78	0.939	39.20	**MH09MH. 1640**	07.05.2019 24.12.2019	3.2, 3.13, 3.20, 3.21	4
200	Gavase Tal. Shahuwadi Dist. Kolhapur	2004	74°21'00" 16°00'30"	22.87	1.205	99.75	**MH09MH. 1657**	03.05.2019 10.12.2019	3. 3.1, 3.7, 3.13, 3.20	4
201	Kudnur Tal. Shahuwadi Dist. Kolhapur	2005	74°14'00" 15°45'00"	20.69	1.19	58	**MH09MH. 1639**	29.05.2019 18.12.2019	3.1, 3.20, 3.21, 3.22.	4
202	Nittur Tal. Shahuwadi Dist. Kolhapur	2000	74°21'30" 16°00'30"	19.00	1.904	70.7	**MH09MH. 1528**	29.05.2019 18.12.2019	3.1, 3.13, 3.20, 3.21, 3.22.	5
203	Khamkarwadi	2004	74°05'00" 16°33'00"	26.34	1.087	144.9	**MH09MH1 628**	07.05.2019 24.12.2019	3.5, 3.1, 3.7, 3.9, 3.20, 3.21, 3.22.	7
204	Ghatakarwadi Tal. Shahuwadi Dist. Kolhapur	2008	74°21'00" 16°03'00"	21.87	1.65	204.5	**MH09MH1 907**	03.05.2019 10.12.2019	3.1, 3.5, 3.7, 3.9, 3.13, 3.22, 3.20.	7
205	Kalamwadi Tal. Gadhinglaj Dist. Kolhapur	2010	74°19'00" 15°59'00"	22.18	0.52	28	**Proposed for updation in NRLD 2018**	28.05.2019 10.12.2019	3.1, 3.2, 3.13, 3.22.	4
206	Gavadi Tal. Shahuwadi Dist. Kolhapur	2009	74°45'30" 15°10'30"	21.87	2.457	51.60	**MH09MH1 905**	11.05.2019 19.12.2019	3.1,3.13, 3.22, 3.20.	4
207	Burambal Tal. Shahuwadi Dist. Kolhapur	2013	73°53'09" 16°49'24"	28.88	1.232	54.95	**MH09MH 2253**	11.05.2019 14.12.2019	3.1, 3.22, 3.16, 3.9	4
208	Bhandarwadi Tal. Shahuwadi Dist. Kolhapur	2013	73°50'39" 16°51'30"	28.15	1.20	80.84	**MH09MH 2252**	11.05.2019Not Provided	3.1, 3.13,3.20, 3.22, 3.19	5

Sr. No	Name of Dam	Date of Compl-etion	Location Longitude/ Latitude	Height in m	Gross Capacity Mm^3	Design Spillway Capacity m^3 / sec	Sr.No. in NRLD Register	Date of Inspection Pre & Post	Deficiencies noticed	Total Deficiencies
1	2	3	4	5	6	7	8	9	10	11
209	Ijoli Tal. Shahuwadi Dist. Kolhapur	2005	73°52'30" 16°45'30"	19.50	0.809	215.16	**MH09MH 1642**	11.05.2019 14.12. 2019	3.5, 3.7, 3.13, 3.19, 3.16	5
210	Velavati Tal. Ajara Dist. Kolhapur	2013	74°09'52.3" 16°06'51.4"	18.06	0.571	48.78	**Proposed for updation in NRLD 2018**	03.05.20191 0.12.2019	3.1, 3.2, 3.13.	3
211	Chandoli Tal. Shahuwadi Dist. Kolhapur	2001	73°51'40'' 16°57'	23.19	1.762	823	**MH09MH 1595**	11.05.2019 19.12. 2019	3.16, 3.5,3.7, 3.9, 3.13, 3.20, 3.22, 3.19	8
212	Malatwadi Tal. Shahuwadi Dist. Kolhapur	2004	74°21'40'' 15°55'	19.07	1.524	105	**MH09MH 1626**	29.05.2019 07.11.2019	3.1, 3.9, 3.20, 3.22.	4
213	Name :Barki Tal. Shahuwadi Dist. Kolhapur	2005	73°52'30" 16°01'30	23.79	1.642	188	**MH09MH. 1641**	11.05.2019 Not Provided	3.5, 3.1,3.2, 3.13, 3.9, 3.22, 3.16.	7
214	Name :Halkarni Tal. Chandgad Dist. Kolhapur	2012	74°18'00" 15°52'00	16.67	1.041	43.05	**Proposed for updation in NRLD 2020**	29.05.2019 07.11.2019	3.1,3.5, 3.20, 3.13.	4
215	Name :Vakoli Tal. Shahuwadi Dist. Kolhapur	2018	73°51'00" 17°00'00	29.35	1.58	115.15	**Proposed for updation in NRLD 2020**	16.07.2019 19.12.2019	3.13, 3.22	2
216	Name :Yelvanjugai Tal. Shahuwadi Dist. Kolhapur	2018	73°49'47" 16°47'28	25.43	0.681	44.80	**Proposed for updation in NRLD 2020**	16.07.2019 19.12.2019	3.2, 3.13	2

Sr. No	Name of Dam	Date of Compl-etion	Location Longitude/ Latitude	Height in m	Gross Capacity Mm^3	Design Spillway Capacity m^3 / sec	Sr.No. in NRLD Register	Date of Inspection Pre & Post	Deficiencies noticed	Total Deficiencies
1	2	3	4	5	6	7	8	9	10	11
217	Name :Airewadi Tal. Shahuwadi Dist. Kolhapur	2019	--	23.55	0.55	67.20	**Proposed for updation in NRLD 2020**	**16.07.2019 14.12.2019**	3.13	1
218	Name :Pimpalwadi Tal. Radhanagari Dist. Kolhapur	2015	74°05'10" 16°30'12	25.8	0.504	31.50	**Proposed for updation in NRLD 2020**	**16.07.2019 Not provided**	3.1, 3.9, 3.13	3
219	Name :Awachitwadi Tal. Kagal Dist. Kolhapur	2014	74°22'00" 16°93'08	30.84	1.413	150.34	**Proposed for updation in NRLD 2020**	**17.05.2019 17.12.2019**	3.5, 3.1,3.2, 3.9, 3.13	5
220	Name :Palshivane Tal.Bhudargad Dist. Kolhapur	2016	73°11'53" 16°20'47	30.1	0.758	84	**Proposed for updation in NRLD 2020**	**17.05.2019 17.12.2019**	3.5, 3.2,3.1, 3.9, 3.13, 3.19	6
(b) Executive Engineer ,Small Scale Irrigation Division (WC) Satara										
221	Yelgaon Tal. Karad Dist. Satara	2003	73°36'00" 18°38'00"	16.67	1.447	520.66	Proposed for updation in NRLD 2018	08.05.2019 14.11.2019	3.1, 3.7, 3.9. 3.13	4
222	Naigaon -2 Tal. Kandala Dist. Satara	1996	73°55'00" 18°30'00"	17.07	1.217	595.55	MH09MH. 0988	11.05.2019 21.11.2019	3.1,3.2, 3.16, 3.20, 3.21, 3.7	6
223	Undale Tal. Karad Dist. Satara	1997	74°03'00" 10°02'00"	16.60	886.78	835.00	Proposed for updation in NRLD 2018	07.05.2019 19.11.2019	3.5, 3.1, 3.7, 3.16, 3.9,3.13, 3.22, 3.20, 3.21	9

Sr. No	Name of Dam	Date of Compl-etion	Location Longitude/ Latitude	Height in m	Gross Capacity Mm^3	Design Spillway Capacity m^3 / sec	Sr.No. in NRLD Register	Date of Inspection Pre & Post	Deficiencies noticed	Total Deficiencies
1	2	3	4	5	6	7	8	9	10	11
224	Matekarwadi Tal. Karad Dist. Satara	2007	74°03'42" 17°06'30"	21.08	999.00	47.04	MH09MH 1925	02.05.2019 22.11.2019	3.7, 3.9, 3.13, 3.16, 3.20, 3.21, 3.22, 3.25, 3.16, 3.19.	10
225	Name : Kiwal Tal. Karad Dist. Satara	2007	74°04'14" 17°25'19"	19.46	589.26	64.51	MH09MH 1923	08.05.2019 14.11.2019	3.1, 3.5, 3.9,3.13, 3.22,3.25, 3.20, 3.16, 3.19	9
226	Jinti Tal. Karad Dist. Satara	1998	74°04'56" 17°09'13"	18.19	1037.00	317.52	Proposed for updation in NRLD 2018	08.11.20191 9.11.2019	3.5, 3.7,3.1,3.13, 3.9, 3.22, 3.21, 3.20, 3.19, 3.16.	10
227	Tulsan Sawade Tal. Karad Dist. Satara	2013	74°02'6" 17°11'29"	21.31	999.00	55.54	Proposed for updation in NRLD 2018	07.05.20192 2.11.2019	3.1, 3.7, 3.9, 3.13, 3.20, 3.21, 3.16, 3.25	8
228	Palaswade Tal. Karad Dist. Satara	2005	73°51'42" 17°37'39"	26.48	1824.45	77.02	MH09MH1 928	11.05.20192 1.11.2019	3.7, 3.2, 3.13, 3.22, 3.19.	5
229	Name : Yenape Tal. Karad Dist. Satara	2004	74°1'30" 17°0'06"	28.28	1063	70.34	Proposed for updation in NRLD 2018	02.05.2019 19.11.2019	3.5, 3.7, 3.13, 3.9, 3.22, 3.16.	6
(a) Executive Engineer (Local sector) Division, Pune										
230	Pusane Tal. Mawal Dist. Pune	2003	73°36'00" 18°38'00"	16.67	1.447	520.66	Proposed for updation in NRLD 2018	22.05.2019 06.11.2019	3.5, 3.1,3.20, 3.22, 3.13, 3.35	6
231	Bhode Tal. Mulshi Dist. Pune	2001	70°55'00" 18°25'00"	18.68	1.083	174.16	Proposed for updation in NRLD 2018	Not Provided 06.11.2019	3.1, 3.2, 3.5, 3.9, 3.13, 3.19, 3.20.	7
232	Varve Tal. Mulshi Dist. Pune	2005	73°52'19" 18°19'10"	20.87	0.646	868	Proposed for updation in NRLD 2018	Not Provided 05.11.2019	3.1, 3.13	2
233	Pasure Tal. Mulshi Dist. Pune	2005	73°52'19" 18°19'10"	20.87	0.646	868	Proposed for updation in NRLD 2018	Not Provided 05.11.2019	3.9, 3.20, 3.1, 3.13	4

Table 2.12

Damwise Health status report of Private Class-I dams with category-1 deficiency

Sr. No.	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
---------- No Such Dams under this class ----------						

Table 2.13
Dam Wise Health Status Report of Private Class-I Dams with Category-2 Deficiency

Sr. No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
	(1) Sahara India (Ambey Valley)Limited Pune					
1	Name : Ambavane(Gated) Tal. Mulashi Dist. Pune Year of completion : 2000 Location : Longitude 73°25'00" Latitude 18°40'00" Height : 38.76 m Gross Capacity : 8.575 Mcum Spillway capacity: 738 m^3/sec Sr.No. in Large Dam Register : MH09MH1898	29.03.2019 18.09.2019	Shri.S.L.Doiphode, S.E. D.S.O, Nashik Shri P.R.Shirsath EE,DSD1,Nashik	Main dam Body	1. Heavy leakages were observed on downstream side of NOF masonry surface. At many places major water jets and fountains were also observed on NOF section near right side guide wall (A11) 2. Sweating and leaching observed on downstream side of overflow section (A12)	1. It was also suggested to treat upstream side by adopting suitable remedial measures such as raking out joints and filling the voids by using suitable concrete or cement grouting or epoxy grouting etc 2. This leach material should be collected and should be completely removed and its weight should be measured and tested at frequent interval and its record should be maintained
2	Name : Kolawali (Ungated) Tal. Mulashi Dist. Pune Year of completion : 2000 Location : Longitude 73°25'00" Latitude 18°40'00" Height : 43.50 m Gross Capacity : 2.17 Mcum Spillway capacity: 90 m^3/sec Sr. No. in Large Dam Register : **MH09MH1903**	29.03.2019 18.09.2019	Shri.S.L.Doiphode, S.E. D.S.O, Nashik Shri P.R.Shirsath EE,DSD1,Nashik	Earth Dam section	1. Slushy,muddy and boggy ground on d/s of right flank was observed with thick vegetation on it & the open C/S drains and toe drains were filled with silt and vegetation.Stagnant water observed on d/s &"v" notches should be provided to measure leakage quantity through drains.(A2)	All drains should be cleaned from vegetation & silt.Drainage arrangement should be done to drain out water from stilling basin. & it is drained out by channeling the river bed to proper gradient. It is should be repaired to

Sr. No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
						designed section.
					2. Disturbed pitching on u/s side@ 70-80 m length was observed. (B1)	It should be provided.The approach road should be constructed on top priority as it is essential in emergency situation and routine inspection of dam.
					3. Approach road up to dam is not available for inspection It is difficult to inspect the dam .This issue raised in every inspection but approach road not constructed yet.(B6)	It should be made to design section.
					4. The section of dam should be got checked with design section.(B1)	
					5. Heavy bushesh & trees observed on d/s slope & in toe drain.(B1)	It should be uprooted properly.

Table 2.14
Dam Wise Health Status Report of Private Class-I Dams with Category-3 Deficiency

Sr. No	Name of Dam	Date of Completion	Location Longitude/ Latitude	Height in m	Gross Capacity Mm^3	Design Spillway Capacity m^3 / sec	Sr.No. in NRLD Register	Gated / Ungated	Date of Inspection Pre & Post	Deficiencies noticed	Total Deficiencies
1	2	3	4	5	6	7	8	9	10	11	12
(1)The Tata Power Co. Ltd. Lonavala											
1	Thokarwadi Tal.Maval Dist. Pune	1922	73°30'34" 18°54'00''	59.44	363.70	546.00	**MH09HH 0043**	Ungated	28.03.2019 17.09.2019	3.1, 3.33, 3.16, 3.26, 3.13	6
2	Shirwatta Tal.Maval Dist. Pune	1920	73°28'41" 18°47'59''	38.70	186.84	593	**MH09HH 0041**	Ungated	28.03.2019 17.09.2019	3.1, 3.33, 3,13, 3.12	4
3	Mulashi Tal.Mulashi Dist. Pune	1927	73°30'50" 18°31'31''	50.60	794.95	1892	**MH09HH 0049**	Gated	22.04.2019 30.09.2019	3.1, 3.19	2
4	Walwan Tal.Maval Dist. Pune	1916	73°25'25" 18°45'51''	26.37	72.50	171	**MH09MH. 0036**	Ungated	28.03.2019 17.09.2019	3.1, 3.9, 3.2,3.13,3.19, 3.33	6
(2)Sahara India (Ambey Valley)Limited Pune											
5	Vishakhar Tal. mulashi Dist. Pune	2006.	73°25'00" 18°40'00''	38.00	4.22	245	**MH09MH 1904**	Ungated	29.03.2019 18.09.2019	3.1,3.2, 3.13, 3.21,	4

Sr. No	Name of Dam	Date of Completion	Location Longitude/ Latitude	Height in m	Gross Capacity Mm^3	Design Spillway Capacity m^3 / sec	Sr.No. in NRLD Register	Gated / Ungated	Date of Inspection Pre & Post	Deficiencies noticed	Total Deficiencies
1	2	3	4	5	6	7	8	9	10	11	12
6	Ambavane Tal. Mulashi Dist. Pune	2000	73°25'00" 18°40'00"	38.76	8.575	738	**MH09MH 1898**	Gated	29.03.2019 18.09.2019	3.1, 3.13, 3.21, 3.2, 3.19,	5
7	Kolawali Tal. Mulashi Dist. Pune	2000	73°25'00" 18°40'00"	43.50	2.17	90	**MH09MH 1903**	Ungated	29.03.2019 18.09.2019	3.6,3.1,3.7,3.21,3.2,3.13, 3.24	7

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Table 2.15
Dam Wise Health Status Report of Private Class-II Dams with Category-1 Deficiency

Sr. No.	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
---------- No Such Dams under this category is reported ----------						

Table 2.16
Dam Wise Health Status Report of Private Class-II Dams with Category-2 Deficiency

Sr. No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
(1) Commissioner,Municipal Corporation Kolhapur						
1.	Name :**Kalamba** Tal. Karveer Dist.Kolhapur Date of completion:**1983** Location: Longitude **74°21'27″** Latitude **16°55'41″** Height :**16.26. m.** Gross capacity **2.75 Mcum** Sr.No.In Large Dam Register 2012:**MH09MH1015**	14.01.2019	Shri D.T.Phalak, SDE, DSD1,Nashik	Earth Dam	1. Section of dam not as per design.(B1) 2. Dam alignment was shifted at few points.(B1)	Necessary repairs to be carried out. Dam alignment should be checked as per design. .
2.	Name : **Jaisingrao Talao** Tal. Karveer Dist.Kolhapur Date of completion: 1923 Location: Longitude Latitude Height : Gross capacity **Mcum** Sr.No.In **MH09MH1912**	14.01.2019	Shri D.T.Phalak, SDE, DSD1,Nashik		1. Unauthorized residential quarters were seen in tail channel. (A7) 2. The earth filling was observed in W.W. portion .This reduces the length of W.W.(A17)	Necessary actions should be taken Remove the earth filling.
3.	Name : **New Shivsagar** Tal. **Mawal** Dist. **Pune** Date of completion:**1989** Location: Longitude- **73°52'00″** Latitude **18°45'00** Height :**2570 m** Gross capacity **1.81 Mcum** Sr.No.In Large Dam Register **MH09MH1230**	29.03.2019 17.09.2019	Shri N.K. Tayade SE,DS,Nashik	Body of dam Gallery	1. Dry patches of leaching and sign of leakages were observed on downstream side of dam at many locations (A11) (A12) 2. Heavy leakage observed at	i. The mapping of these downstream surface leached/leaked location w.r.t. reservoir level should be prepared. It needs to be kept under observation. Record of leakages should be maintained. Necessary records should be maintained and remedial should be taken. Porous pipes should be cleaned.

Sr. No	Dam Features	Date of Inspection	Inspecting Officer	Main Component of Dam	Significant Deficiencies Noticed	Remedial Measures Suggested
1	2	3	4	5	6	7
					gallery walls and floors. (A12) 3. Porous pipes and foundation drains are choked in gallery in most places (A9) 4. Lightening arrangement in gallery is not satisfactory Gallery not accessible for drain inspection. (A8)	Gallery should be accessible with proper lightinh arrangement

Table 2.17

Damwise Health status report of Private Class-II dams with category-3 deficiency

Sr. No	Name of Dam	Date of Compl-etion	Location Longitude/ Latitude	Height in m	Gross Capacity Mm^3	Design Spillway Capacity m^3 / sec	Sr.No. in NRLD Register	Date of Inspection Pre & Post	Deficiencies noticed	Total Deficiencies
1	2	3	4	5	6	7	8	9	10	11
(1)The Tata Power co. Ltd. Lonavala										
1	Lonavala Tal. Maval Dist. Pune	1916	73°24'07" 18°44'40"	15.35	11.50	129	**MH09MH. 0035**	28.03.2019 16.09.2019	3.33, 3.12, 3.1, 3.26	4
2	Kundali Tal. Maval Dist. Pune	1998	73°51'24" 18°31'13"	39.26	6.34	746	**MH09MH. 1589**	28.03.2019 17.09.2019	3.1, 3.26, 3.12, 3.19, 3.2	5
(2) Commissioner, Municipal Corporation Kolhapur										
3	Rankala Tal.KarveeDist. Kolhapur	1883	73°40' 00" 16°43'00"	15.00	4.30	116	**MH09MH 0010**	- 14.01.2019	3.1, 3.2, 3.29	3
4	Kalamba Tal. Karveer Dist.Kolhapur	1983	74°21'27″ 16°55'41″	16.26	2.75	11.50	**MH09MH1015**	14.01.2019	3.1,3.2,3.5,3.26	5
5	Jaisingrao Talao Tal. Karveer Dist.Kolhapur	1923	74°12'30" 16°22'45"	12.68	2810	38	**MH09MH1912**	14.01.2019	3.1, 3.29, 3.2,	3
(3) Kagal Nagar Parishad (**Shri Vikramsingh Ghatge Kolhapur)**										
6	Sir Pirajirao Talav Tal. Kagal. Dist. Kolhapur	1923	74°03'00" 17°41'29''	21.95	2.91	30.0	**MH09MH. 0046**	14.01.2019	3.1,3.2, 3.27,3.24,3.9, 3.29	6
(4)INSShivaji, Indian Navy ,Lonawala Dist – Pune										
7	New Shivsagar Tal. Mawal Dist .Pune	1989	73°52'00″ 18°45'00	25.70	1.81	70.0	**MH09MH 1230**	29.03.2019 17.09.2019	3.1,3.13, 3.12, 3.2, 3.26	5
8	INS Shivaji (Old) (Shivsagar) Tal. Mawal Dist .Pune	-	-	-	-	-	**Proposed for updation in NRLD 2018**	29.03.2019 17.09.2019	3.1, 3.33, 3.26, 3.35, 3.2	5

Table 2.18

Significant Category 2 Deficiency wise List of Class-I Dams

Sr. No	Deficiency	Names of dams	Total number of dams
1	2	3	4
1	**A.1**: Boil leakage/ seepage/ wet patches/ slushiness, in Earthen Dam.	Kasarsai,Veer,Nagewadi	3
2	**A 2**: Standing pool / Ponding / Water Logging / Slushy condition on D/S of Dam	Tulshi, Kasarsai, Khadakwasla, Ghod, Sina	5
3	**A 3** : Leakages in vicinity of junction between earthen dam & masonry dam portion.	Gunjawani	1
4	**A 4**: Major leakages through outlet conduit/ pipe joints / Gates.	Kumbhi, Kasarsai, Andhra Valley, Vadivale, Kolkewadi, Dimbhe	7
5	**A 5:** Relief wells not functioning properly./ Abnormal rise in water level in wells.	Dudhganga, Veer, Kanher, Vadaj	4
6	**A 6**: Outlet well is damaged/not in good condition /cracks observed/jets of water in well.	Vadivale	1
7	**A 7:** Retrogression /scouring in tail channel.	Radhanagari, Nira Devghar, Vadivale, Khadakwasla,Panshet, Pavana, Varasagaon, Dhom, Ghod	9
8	**A 8**: Drainage gallery inaccessible/No adequate lighting./ No dewatering arrangement or failure.	Warna, Dudhganga, Sina Kolegaon, Bhatghar, Andhra Valley, Aralakalmodi, Dhombalakwadi, Kanher, Temghar, Manikdoh, Dimbhe, Tarali	12
9	**A 9:** Foundation drains / holes/ porous pipes/chocked/ no seepage through foundation drain holes.	Warna, Dudhganga, Ujjani, Nira Devghar, Andhra Valley, Pavana, Varasagaon, Dhombalakwadi, Kolkewadi, Kanher, Temghar, Manikdoh, Dimbhe	13
10	**A 10**: Heavy leakages through porous pipes/ through dam body in gallery /monolith joints.	Radhanagari, Warna, ujjani, Sina Kolegaon, Andhra Valley, Varasagaon, Aralakalmodi, Dhombalakwadi, Manikdoh, Dimbhe	10
11	**A 11** : Sweating / seepages through D/S of masonry dam	Radhanagari, Warna, Dudhganga, Andhra Valley, Vadivale, Khadakwasla, Pavana, Varasagaon, Dhom, Kolkewadi, Kanher, Temghar, Dimbhe, Vadaj, Chillewadi, Tarali	16
12	**A 12**: Excessive considerable leaching from seepage water.	Warna, Ujjani, Bhatghar, Nira Devghar, Panshet, Varasagaon, Kolkewadi, Kanher, Temghar, Manikdoh, Dimbhe, Tarali	12
13	**A 13**: Swelling / minor cracking observed on body of dam.	Vadaj	1
14	**A 14**: EDA / Stilling basin damaged/Hydraulic performance not good.	Radhanagari, Dudhganga, Ghataprabha, Sina Kolegaon, Bhatghar, Nira Devghar, Vadivale, Khadakwasla, Aralakalmodi, Nazare,Koyna, Manikdoh, Dimbhe	13

Sr. No	Deficiency	Names of dams	Total number of dams
1	2	3	4
15	**A 15**: Leakages through spillway /piers//junction of flank wall.	Kasarsai, Nira Devghar, Vadivale, Varasagaon, Gunjawani, Sina	6
16	**A 16**: Damages / foundation erosion/ scour/undermining observed in vicinity of flank walls/ guide walls/ junction walls/return walls.	Warna, Dudhganga, Ghataprabha, Nira Devghar, Varasagaon, Kolkewadi, Kanher, Ghod, Sina	9
17	**A 17** :End weir not in good condition / scouring noticed on immediate D/S.	Dudhganga, Ujjani, Bhatghar,Jadhavwadi, Khadakwasla, Pavana, Nazare, Dhom, Kanher, Ghod, Chillewadi	11
18	**A 18**: Wire ropes of hoist not in good condition / hoisting structure damaged / cracked.	Radhanagari, Dudhganga, Jadhavwadi, Dhombalakwadi, Ghod, Nagewadi	6
19	**A 19**: Alternative power system Generator for gate operation not working properly.	Pavana	1
20	**A 20**: Operation of gates not smooth needs repair.	Radhanagari, Warna, Ghataprabha, Sina Kolegaon, Jadhavwadi, Vadaj, Ghod	7
21	**B 1** Dam section is not as per design	Jangamhatti, Ujjani,	2
22	**B 2**: Cross and toe drains not working properly/ drains silted or vegetated causing stagnant pool of water.	Sina Kolegaon, Pavana, Varasagaon, Ghod	4
23	**B 3**: Considerable settlement of embankment / Rock toe/Pitching/ U/S & D/S slops, bulging/concavity of slopes.	Warna, Dudhganga, Sina Kolegaon, Jadhavwadi, Panshet	5
24	**B 4**: Longitudinal / Transverse cracks/ low area/sink holes/gully formation on top side slope of earthen dam.	Ekruk,Yadgaon, Ghod	3
25	**B 5:** Outlet gates not functioning properly. Stem rod is bent(Service gate/Emergency gate/Stop log gate/sluice gate)	Morna, Radhanagari, Jambre, Ujjani, Bhatghar, Jadhavwadi, Andhra Valley, Khadakwasla, Panshet, Aralakalmodi, Bhamaaskhed, Veer, Nazare, Kanher, Temghar, Gunjawani, Manikdoh, Pimpalgaonjoge, Ghod, Sina, Chillewadi, Tarali	22
26	**B 6**: Approach to dam through all weather road not constructed/maintained properly.	Satpewadi Barrage, Aralakalmodi, Dhom, Kanher,Urmodi, Gunjawani, Manikdoh, Dimbhe, Pimpalgaonjoge, Ghod, Chillewadi	11
27	**B 7**: Waste weir/waste weir bar not in good condition/coping damaged/leakage through waste weir.	Paleshwar, Ghataprabha, Jangamhatti, Jadhavwadi, Vadivale, Khadakwasla, Kanher, Ghod	8
28	**B 8**: Pointing on U/S face of dam not in good condition./deterioration spalling of concrete surface.	Bhatghar, Vadivale, Pavana, Kolkewadi, Manikdoh, Dimbhe	6
29	**B 9**: Instruments not in working condition.	Warna, Dudhganga, Sina Kolegaon,	19

Sr. No	Deficiency	Names of dams	Total number of dams
1	2	3	4
		Bhatghar, Nira Devghar, Khadakwasla, Panshet, Varasagaon, Bhamaaskhed, Dhom, Dhombalakwadi, Kanher, Urmodi, Pimpalgaonjoge, Vadaj, Ghod, Sina, Chillewadi, Tarali	
30	**B 10**: Leakages through River sluice.	Dudhganga, Vadivale, Pimpalgaonjoge	3
31	**B 11**: Surface paint/steel surface of spillway gates deteriorated.	Dudhganga, Kasarsai, Andhra Valley, Veer, Dimbhe, Vadaj , Pimpalgaonjoge	7
32	**B 12**: Damage to Rubber seals/ considerable Leakages through gates.	Radhanagari, Ujjani, Bhatghar, Panshet, Pavana, Bhamaaskhed, Dhom, Gunjawani, Manikdoh, Dimbhe, Pimpalgaonjoge	11
33	**B 13**: Heavy vegetation/big trees on embankment top/slope making dam portion not accessible.	Dhombalakwadi, Kanher	2
34	**B 14**: Deck bridge slab/ pier / damaged cracked/ alignment disturbed.	Satpewadi Barrage, Manikdoh	2
35	**B 15**: Major portion of Pitching damaged/washed away.	Satpewadi Barrage, Ghataprabha, Jadhavwadi, Vadaj	4

Table 2.19

Significant category 2 deficiency wise list of class-II dams

Sr. No	Deficiency	Names of dams	Total number of dams
1	2	3	4
1	**A.1**: Boil leakage/ seepage/ wet patches/ slushiness, in Earthen Dam.	Dighanchi, Ghanand, Daryachi Vadgaon, Yenechevandi, Babhulgaon, Umrani-2, Velavatti, Awachitwadi, Palsawade.	9
2	**A 2**: Standing pool / Ponding / Water Logging / Slushy condition on D/S of Dam	Morale, Nimbhavade, Kiwal,Matoba, Hingangaon, Naigaon,Tambave,Pingali	8
3	**A 3** : Leakages in vicinity of junction between earthen dam & masonry dam portion.	Ijoli,Kankatrewadi	2
4	**A 4**: Major leakages through outlet conduit/ pipe joints / Gates.	Barki,Virnalla,Thoseghar	3
5	**A 5:** Relief wells not functioning properly./ Abnormal rise in water level in wells.	Thoseghar	1
6	**A 6**: Outlet well is damaged/not in good condition /cracks observed/jets of water in well.	Antri, Karandewadi, Pare, Vegegaon, Naigaonn-2, Undale, Matekarwadi, Kiwal, Jinti, Tulsan Sawade, Yenape,Malad	12
7	**A 7:** Retrogression /scouring in tail channel.	Rajuri, Velavatti, Ramjiwadi,Mahind	4
8	**A 15**: Leakages through spillway /piers/ junction of flank wall.	Jinti	1
9	**A 16**: Damages / foundation erosion/ scour/undermining observed in vicinity of flank walls/ guide walls/ junction walls/return walls.	Naigaon	1
10	**A 17** :End weir not in good condition / scouring noticed on immediate D/S.	Thitewadi	1
11	**B 1** Dam section is not as per design	Ashti, Jinti, Bhugaon, Shirsuphal, Nimgaon Mhalungi, Ner	7
12	**B 4**: Longitudinal / Transverse cracks/ low area/sink holes/gully formation on top side slope of earthen dam.	Jinti	1
13	**B 5:** Outlet gates not functioning properly. Stem rod is bent(Service gate/Emergency gate/Stop log gate/sluice gate)	Revnal, Tippehalli, Ghanand, Mahadikwadi, Kazikambas, Naigaonn-2, Undale, Matekarwadi,Chinchwad, Marnewadi, Pilanwadi, Naigaon, Yeralwadi, Chaphal, Annepemdara	15
14	**B 6**: Approach to dam through all weather road not constructed/maintained properly.	Morale, Nimbhavade, Barki	3
15	**B 7**: Waste weir/waste weir bar not in good condition/coping damaged/leakage through waste weir.	Kumbhavade, Padsali, Nittur, Umrani-2, Chandoli, Naigaonn-2, Undale, Matekarwadi, Kiwal, Jinti, Thoseghar Yenape, Mahakoshi, Urawade, Malawandi, Thitewadi, Bhugaon, Palasdeo, Naigaon, Kankatrewadi, Annepemdara, Ramjiwadi, Kalgaon	23

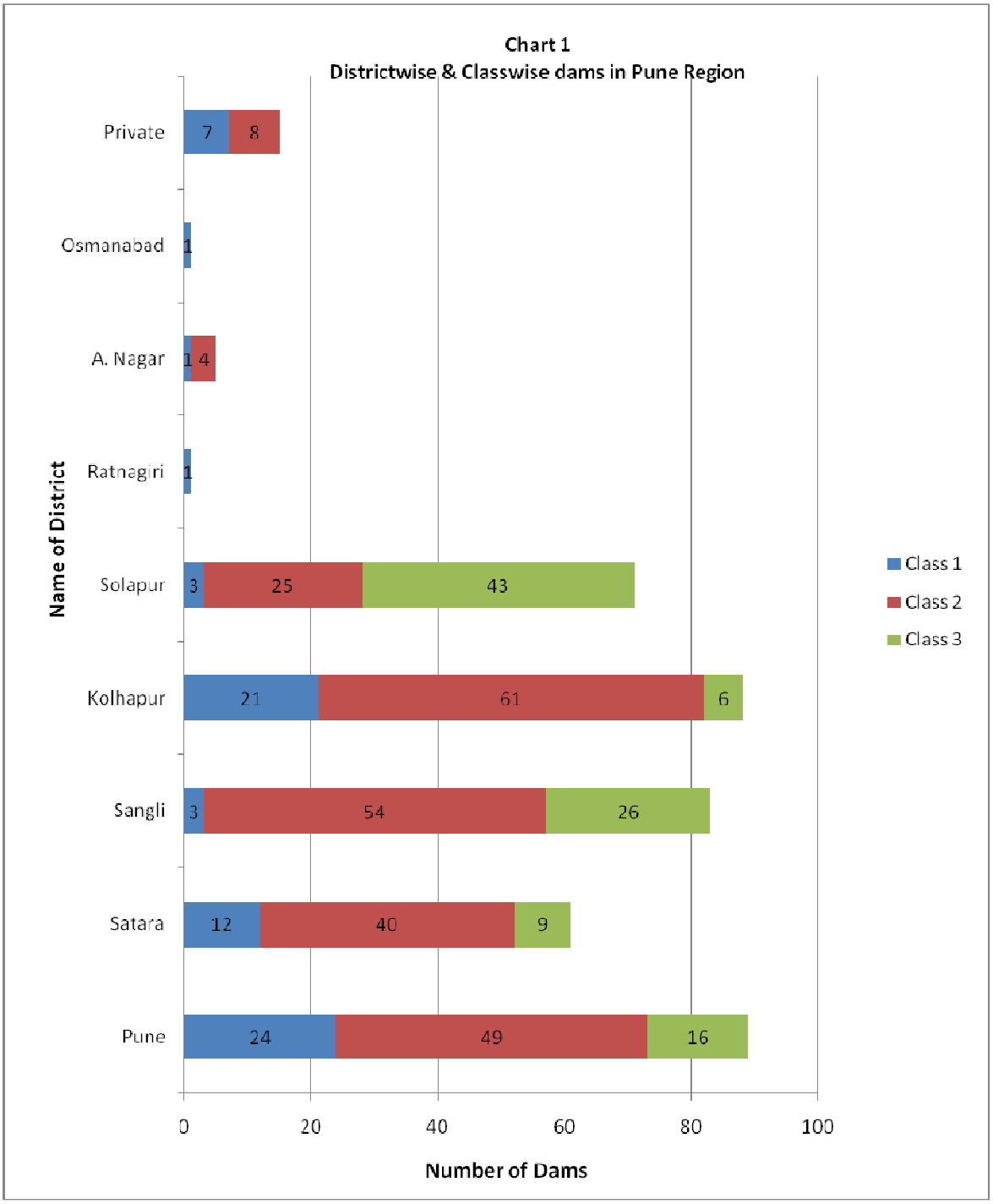
Chart 1
Districtwise & Classwise dams in Pune Region
Private
Osmanabad
A. Nagar
Ratnagiri
Solapur
Kolhapur
Sangli
Satara
Pune
7
8
1
1
4
1
3
25
43
21
61
6
3
54
26
12
40
9
24
49
16
Name of District
0
20
40
60
80
100
Number of Dams
Class 1
Class 2
Class 3

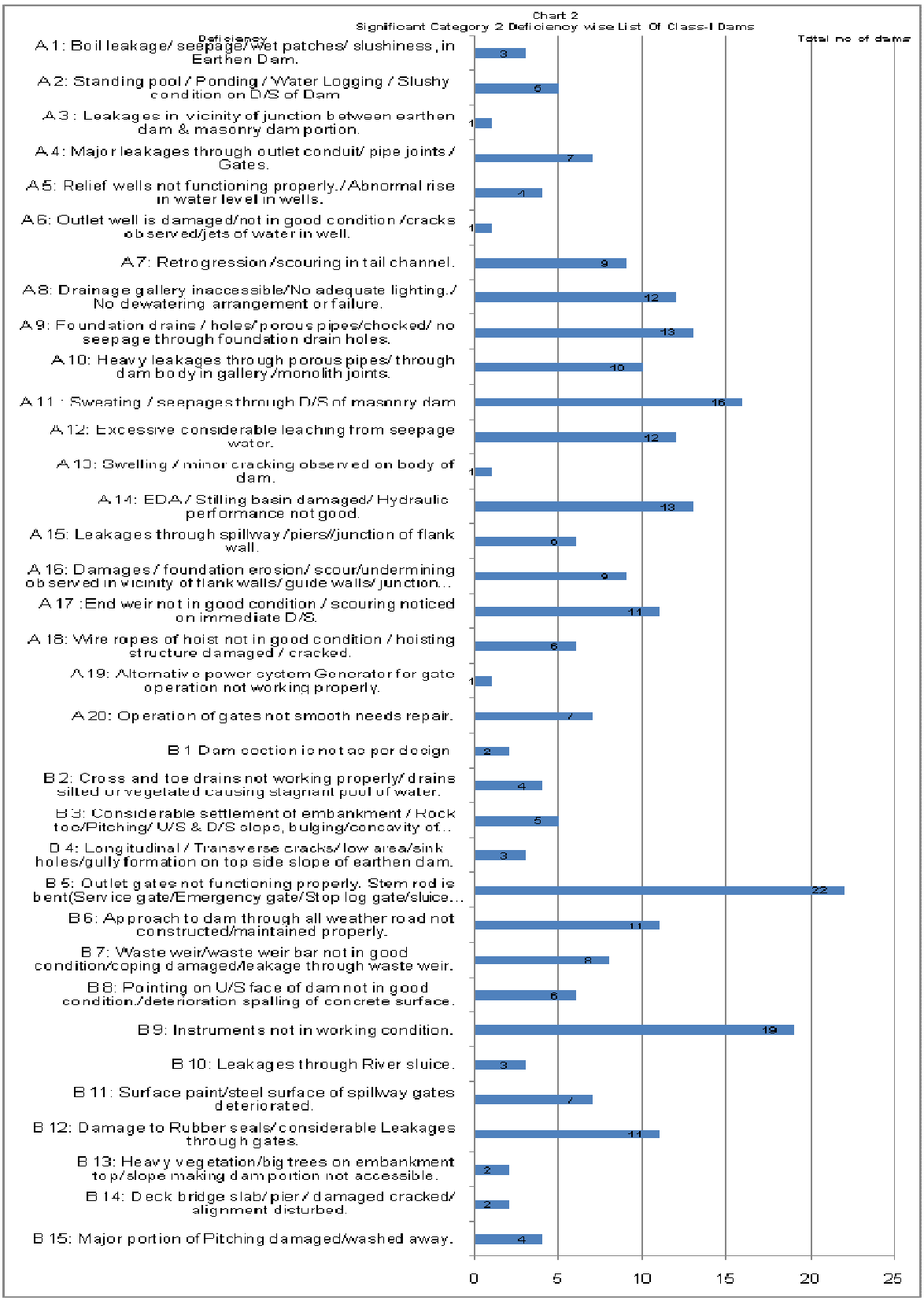
Chart 2
Significant Category 2 Deficiency wise List Of Class-I Dams
Deficiency
Total no of dams
A 1: Boil leakage/ seepage/wet patches/ slushiness, in Earthen Dam. 3
A 2: Standing pool / Ponding / Water Logging / Slushy condition on D/S of Dam 6
A 3 : Leakages in vicinity of junction between earthen dam & masonry dam portion. 1
A 4: Major leakages through outlet conduit/ pipe joints / Gates. 7
A 5: Relief wells not functioning properly./Abnormal rise in water level in wells. 4
A 6: Outlet well is damaged/not in good condition /cracks observed/jets of water in well. 1
A 7: Retrogression /scouring in tail channel. 9
A 8: Drainage gallery inaccessible/No adequate lighting./ No dewatering arrangement or failure. 12
A 9: Foundation drains / holes/"porous pipes/chocked/ no seepage through foundation drain holes. 13
A 10: Heavy leakages through porous pipes/ through dam body in gallery /monolith joints. 10
A 11 : Sweating / seepages thrrugh D/S of masonry dam 16
A 12: Excessive considerable leaching from seepage water. 12
A 13: Swelling / minor cracking observed on body of dam. 1
A 14: EDA / Stilling basin damaged/ Hydraulic performance not good. 13
A 15: Leakages through spillway /piers/junction of flank wall. 6
A 16: Damages / foundation erosion/ scour/undermining observed in vicinity of flank walls/ guide walls/ junction... 9
A 17 :End weir not in good condition / scouring noticed on immediate D/S. 11
A 18: Wire ropes of hoist not in good condition / hoisting structure damaged / cracked. 6
A 19: Alternative power system Generator for gate operation not working properly. 1
A 20: Operation of gates not smooth needs repair. 7
B 1 Dam section is not as per design 2
B 2: Cross and toe drains not working properly/ drains silted or vegetated causing stagnant pool of water. 4
B 3: Considerable settlement of embankment / Rock toe/Pitching/ U/S & D/S slope, bulging/concavity of... 5
B 4: Longitudinal / Transverse cracks/ low area/sink holes/gully formation on top side slope of earthen dam. 3
B 5: Outlet gates not functioning properly. Stem rod is bent(Service gate/Emergency gate/Stop log gate/sluice... 22
B 6: Approach to dam through all weather road not constructed/maintained properly. 11
B 7: Waste weir/waste weir bar not in good condition/coping damaged/leakage through waste weir. 8
B 8: Pointing on U/S face of dam not in good condition./deterioration spalling of concrete surface. 6
B 9: Instruments not in working condition. 19
B 10: Leakages through River sluice. 3
B 11: Surface paint/steel surface of spillway gates deteriorated. 7
B 12: Damage to Rubber seals/considerable Leakages through gates. 11
B 13: Heavy vegetation/big trees on embankment top/slope making dam portion not accessible. 2
B 14: Deck bridge slab/pier / damaged cracked/ alignment disturbed. 2
B 15: Major portion of Pitching damaged/washed away. 4
0
5
10
15
20
25

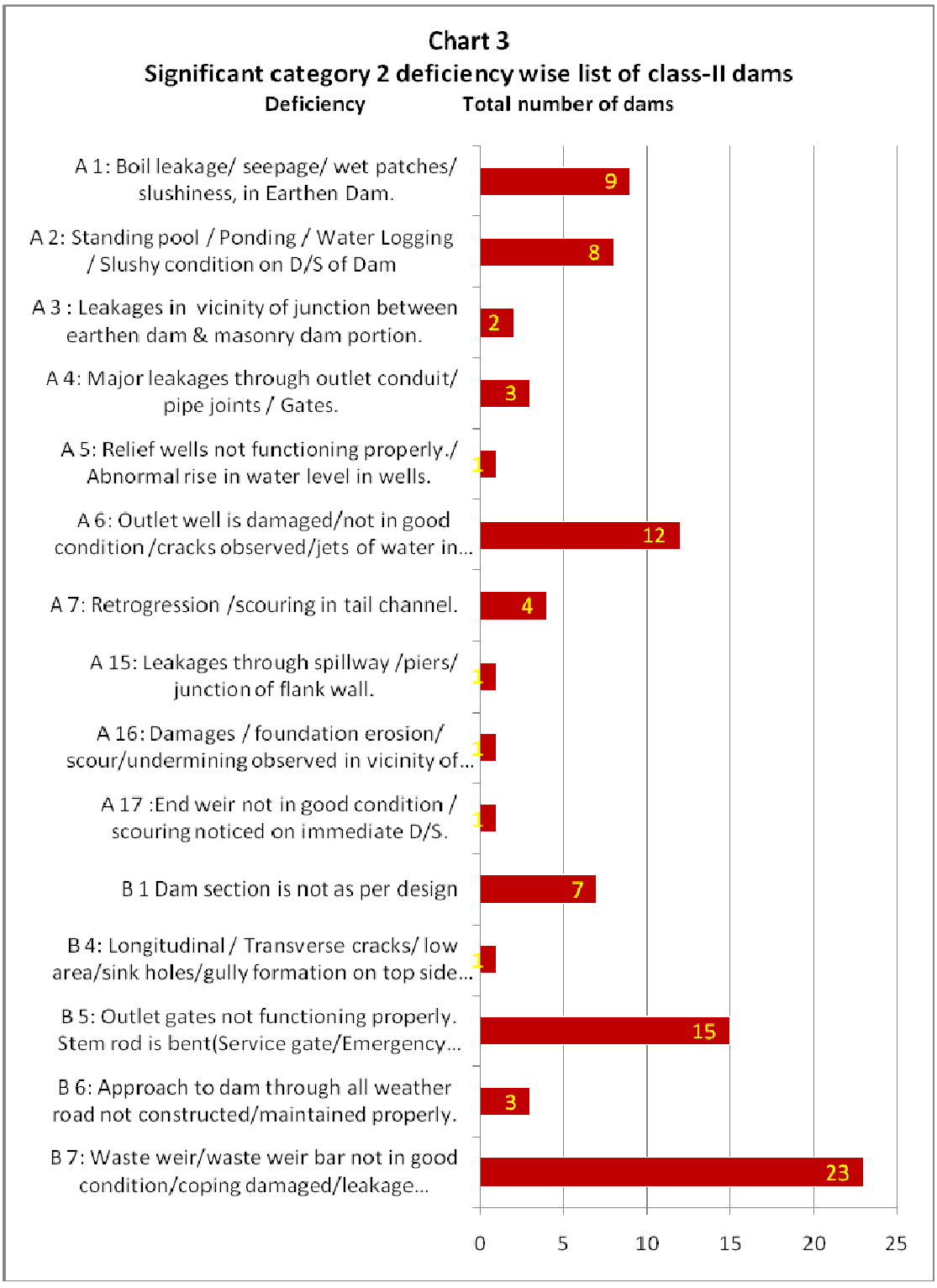
Chart 3
Significant category 2 deficiency wise list of class-II dams
Deficiency
Total number of dams
A 1: Boil leakage/ seepage/ wet patches/ slushiness, in Earthen Dam.
9
A 2: Standing pool / Ponding / Water Logging / Slushy condition on D/S of Dam
8
A 3 : Leakages in vicinity of junction between earthen dam & masonry dam portion.
2
A 4: Major leakages through outlet conduit/ pipe joints / Gates.
3
A 5: Relief wells not functioning properly./ Abnormal rise in water level in wells.
1
A 6: Outlet well is damaged/not in good condition /cracks observed/jets of water in...
12
A 7: Retrogression /scouring in tail channel.
4
A 15: Leakages through spillway /piers/ junction of flank wall.
1
A 16: Damages / foundation erosion/ scour/undermining observed in vicinity of...
1
A 17 :End weir not in good condition / scouring noticed on immediate D/S.
1
B 1 Dam section is not as per design
7
B 4: Longitudinal / Transverse cracks/ low area/sink holes/gully formation on top side...
1
B 5: Outlet gates not functioning properly. Stem rod is bent(Service gate/Emergency...
15
B 6: Approach to dam through all weather road not constructed/maintained properly.
3
B 7: Waste weir/waste weir bar not in good condition/coping damaged/leakage...
23
0
5
10
15
20
25

Annexure- 1

General Information for Dam Safety Inspections

1.0 TIME SCHEDULE OF INSPECTIONS

The Government of Maharashtra has designed systematic approach for monitoring each and every dam. The periodical inspection of dams must be completed as per following schedule.

Type of Inspection	Last dates for	
	Completion of inspection	Sending of inspection reports to concerned authorities.
(1) Pre Monsoon	15th May	30th June
(2) Post Monsoon	30th November	31st December
(3) Special inspection before the first filling (Report need not be sent to Dam safety Organization)	30th April	31st May
(4) Special inspection after the first filling	Within one week after the lake attains the intended storage level.	Within one week from the date of inspection.
(5) Special inspection after a severe distressing event or accident or incident.	Immediately after the event is noted.	Within one week form the date of inspection?

2.0 CLASSIFICATION OF DAMS

The dams are categorized into three types based on their component and features as below.

Sr. No.	Type of Dam	Height from general level of deepest foundation in meter	Impounded gross storage capacity Up to FRL in MCum	Spillway Capacity	Type of Spillway
1	2	3	4	5	6
1	Large Dam (Class-I)	Above 30 m	Above 60 M Cum	Above 3,000 Cumecs	Gated Spillway
2	Large Dam (Class-II)	15 m to 30 m	15 MCum upto 60 MCum	2,000 to 3,000 Cumecs	Ungated Spillway
3	Large Dam (Class-III)	10 m.to15m	1.0 MCum upto 15 MCum	2,000 to 3,000 Cumecs	Ungated Spillway

3.0 FIELD INSPECTION AUTHORITIES

The designated inspection authority for periodical inspection of dam depending upon the classification of type of dam is as below:-

Sr. No	Type of Dam	Inspection authority	Inspection Reports to be sent to	Test Inspection
1	2	3	4	5
1	Large Dam (Class-I)	Superintending Engineer/ Administrator	1) Chief Engineer 2) Superintending Engineer, Dam Safety Organization.	Test Inspection by the Regional Chief Engineer / Chief Administrator for the dams having height more than 60 m or storage capacity more than 1000 MCum or spillway capacity 10000 Cumecs or more
2	Large Dam (Class-II)	Executive Engineer	1) Superintending Engineer / Administrator 2) Superintending Engineer, Dam Safety Organization	
3	Large Dam (Class-III)	Sub-Divisional Eng./Sub Divisional Officer	1) Superintending Engineer / Administrator 2) Executive Engineer	

4.0 PREPARATION OFANNUAL HEALTH STATUS REPORTS OF CLASS-I AND CLASS-II DAMS

Dam safety Organization takes over view of the periodical inspection reports of Class-I & Class-II dams received from field officers, and significant deficiencies are immediately reported to concern authorities to carry out remedial measures. Also based on all periodical inspection reports from field officers and test inspections by DSO officers, the Region wise Annual Health Status Report has been prepared and sent to government, CWC and all concerned Chief Engineers.

5.0 PREPARATION OF ANNUAL HEALTH STATUS REPORT OF CLASS-III DAMS

The responsibility of Health and Safety monitoring of class-III dams lies with the respective Chief Engineer. Hence for Class-III Dams based on periodical inspection reports, Annual Health Status Report of Class-III dams should be prepared by Chief Engineers and sent to DSO for record.

6.0 GUIDELINES REGARDING PREPARATION OF ANNUAL HEALTH STATUS REPORT OF IDENTIFIED LARGE DAMS

AHSR is prepared in DSO as per the guidelines received from Central Water Commission, New Delhi vide letter No. 3 / 19 / NCDS / HS / DSM / 2001 / 627-56, dated 28 August 2002. As per

this letter the CWC has requested all states / organizations to send the AHSR for all large dams in prescribed proforma in the month of 'April' every year.

7.0 CATEGORIZATION OF DEFICIENCIES

The deficiencies observed are categorized as per CWC, New Delhi's letter no.3 /19/ NCDS/ HS/ DSM/ 2007 / 627-56, dated 28 August 2002, as below -

Deficiency Category -1- Dams with major deficiencies which may lead to dam failure.

Deficiency Category -2- Dams with major rectifiable deficiencies needing immediate attention.

Deficiency Category -3- Dams having minor/nil deficiencies.

For further detailing of deficiencies based on the nature and priority of deficiency, DSO has standardized all the three types of deficiencies. These standardized deficiencies are appended as the Annexure -2

8.0 NATIONAL REGISTER OF LARGE DAMS

NRLD is compilation of the large dams (Height above 10 meter) in the country as per information received from the owner of dams. In NRLD the definition of "Large Dams" has been adopted as per the norms of International Commission on Large Dams (ICOLD).

NRLD is the Proforma which consist of 20 columns giving information regarding salient features of Large Dams. Field officers need to submit the information of new dams to DSO every year upto December. The DSO compiles the information required for NRLD from field officer. The response regarding submission of NRLD information from field officer is very poor. After regular follow up / correspondence from DSO office, incomplete information receives from field officers. In every January the NRLD register is updated. As per NRLD Register-2017 Maharashtra State comprises of total 2354 dams (2069 completed dams and 285 under construction dams)

9.0 MONITORING OF DEFICIENCY REMOVAL PROGRAM AS PER ANNUAL HEALTH STATUS REPORT

As per Water Resources Department Marathi letter No.2014 dt.12/02/2015 Director General, Design, Training, Hydrology, Research and Safety MERI Nashik has been entrusted to monitor the deficiency removal program. For this a meeting has been held with all concern Chief Engineers and the program has been prepared for removal of deficiencies as per AHSR.

10.0 SUGGESTION FOR INSPECTION BY FIELD OFFICERS

1) Due care shall be taken while filling the salient features of dam and information regarding N.C.D.S. documents.
2) It is observed that the information regarding number of instruments installed does not tally for pre & post monsoon inspection report of the same dam. In some cases it is observed that the list of instruments given in previous year do not appears in the current year. These discrepancies should be avoided.
3) The periodical inspection reports of all the dams shall be sent in original instead of carbon or xerox copy.

4) Ambiguous or incomplete replies shall be avoided. It is necessary to check point wise replies, which should clear and self explanatory.

5) The deficiencies observed frequently since long shall be deleted only after rectification work is completed and reported to Dam Safety Organization, Nashik- 4.

6) The inspecting officer is advised to write the word “special attention” in inspection report against all such items wherever immediate attention is necessary from concerned field officer in charge of dam from safety point of dams and life & property on the downstream & would be useful for identifying categorisation of deficiencies in Dam Safety Organization, Nashik- 4.

7) The extent of embankment settlement shall be furnished with its measurement & Reduced Distance (R.D.) and it shall be with compared designed cross section.

8) If the existing dam section is found under section as compared to the design section during inspection then the work of resectioning shall be carried out and opinion of inspecting officer shall be stated in inspection report.

9) The quantum of retrogression/scouring in tail channel shall be given in inspection report.

10) The monolith wise quantum of leaching in galleries and all type of leakages in dam shall be noted in inspection report.

11) The trial of spillway gates shall be carried out before monsoon every year & observed condition shall be mentioned in inspection report.

12) The information in Appendix II (Performance of meteorological instruments installed) and Appendix III (performance of taking observation of instruments installed in large dams) shall be filled properly and complete.

13) The compliance of rectification work of deficiencies of each dam mentioned in status report shall be communicated to Dam Safety Organization, Nashik every year so that this can be included in the Action Taken Report Part-I of status report.

14) Date of inspections is not mentioned in some pre / post inspection reports. This is mandatory since it will reflect in the Annual health status report.

11.0 STANDARD PROCEDURE FOR CONFIRMATION AND REMOVAL OF CATEGORY-I DEFICIENCY OF DAM

A systematic approach and working methodology is very essential to monitor the safety aspects of the dams. Hence in order to avoid any havoc among the stakeholders of dam, the standard procedure for confirmation of category-I deficiency has been circulated by DSO vide Marathi letter No.1491 dt.25/11/2014.

During the scrutiny of Pre and Post Monsoon report or during DSO test Inspection whenever it is found that the deficiency is of Category-I it will be immediately communicated to concern SE and CE. Concerned CE/SE should immediately visit the dam and should satisfied himself that the deficiency pointed out is a major deficiency which may lead to failure of dam, and should confirm to the DSO regarding the classification of deficiency as per his opinion. If it is confirmed then it will be finalised as Category-I deficiency and accordingly it will be appear in AHSR .

As per government directions, Category-I deficiency should be removed immediately on top priority and after completion of physical work of deficiency removal, Concern Chief Engineer should communicate this to DSO.

Annexure 2

Standardized Deficiencies

Standard Deficiencies Category- 1

1 E - Earthen Dam.

- **1E.1** Seepage water has created an open pathway or pipe through dam,which may lead to failure of dam by piping.
- **1E.2** Heavy seepage with muddy or turbid water is observed through any part of dam.
- **1E.3** Seepage water flooding from a boil in the foundation or from relief well on downstream side of dam.
- **1E.4** Outlet well / Head regulator well and hoisting structure is collapsed/completely damaged.
- **1E.5** Outlet pipe in the body of the dam is damaged/failed and uncontrolledoutlet-releases eroding Toe of dam.
- **1E.6** Debris stuck under gate or gate leaf is cracked / failed resulting uncontrolled flow through outlet.

1 M - Masonry Dam.

- **1M.1** Downstream movement or tilting of dam.
- **1M.2** Differential movement of dam blocks/monoliths.
- **1M.3** Vertical Displacement with visible cracking in the body of dam.
- **1 M.4** Spillway gate damaged / not working.

Annexure-2 (Cont...)

Standard Deficiencies Category – 2

Deficiency Cat II (A)	**Deficiency Cat II (B)**
Earthen Dam	
A.1: Boil leakage/ seepage/ wet patches/ slushiness,in Earthen Dam.	**B 1:** Dam section is not as per design
A 2: Standing pool / Ponding / Water Logging / Slushy condition on D/S of Dam	**B 2**: Cross and toe drains not working properly/ drains silted or vegetated causing stagnant pool of water.
A 3 : Leakages in vicinity of junction between earthen dam & masonry dam portion.	**B 3** : Considerable settlement of embankment / Rock toe/Pitching/ U/S & D/S slops, bulging/concavity of slopes.
A 4 : Major leakages through outlet conduit/pipe joints/Gates.	**B 4**: Longitudinal / Transverse cracks/ low area/sink holes/gully formation on top side slope of earthen dam.
A 5 ; Relief wells not functioning properly./ Abnormal rise in water level in wells.	**B 5 :** Outlet gates not functioning properly. Stem rod is bent(Service gate/Emergency gate/Stop log gate/sluice gate)
A 6 : Outlet well is damaged/not in good condition /cracks observed/jets of water in well.	**B 6** : Approach to dam through all weather road not constructed/maintained properly.
A 7 : Retrogression /scouring in tail channel.	**B 7**: Waste weir/waste weir bar not in good condition/coping damaged/leakage through waste weir.
Masonry / Concrete Dam	
A 8 : Drainage gallery inaccessible/No adequate lighting./ No dewatering arrangement or failure.	**B 8** : Pointing on U/S face of dam not in good condition./deterioration spalling of concrete surface.
A 9 : Foundation drains / holes/ porous pipes/chocked/ no seepage through foundation drain holes.	**B 9**: Instruments not in working condition.
A 10 : Heavy leakages through porous pipes/ through dam body in gallery /monolith joints.	**B 10** : Leakages through River sluice.
A 11 : Sweating / seepages through D/S of masonry dam	

A 12: Excesssive considerable leaching from seepage water.	
A 13: Swelling / minor cracking observed on body of dam.	
A 14: EDA / Stilling basin damaged/Hydraulic performance not good.	
A 15: Leakages through spillway /piers//junction of flank wall.	
A 16: Damages / foundation erosion/ scour/undermining observed in vicinity of flank walls/ guide walls/ junction walls/return walls.	
A 17 :End weir not in good condition / scouring noticed on immediate D/S.	
Spillway gates.	
A 18: Wire ropes of hoist not in good condition/hoisting structure damaged/cracked.	**B 11**: Surface paint/steel surface of spillway gates deteriorated.
A 19: Alternative power system Generator for gate operation not working properly.	**B 12** : Damage to Rubber seals/ considerable Leakages through gates.
A 20: Operation of gates not smooth needs repair.	
Other structures	
Deficiency Cat II (A)	**Deficiency Cat II (B)**
Masonry / **Concrete Dam**	
	B 13: Heavy vegetation/big trees on embankment top/slope making dam portion not accessible.
	B 14: Deck bridge slab/ pier / damaged cracked/ alignment disturbed.
	B 15: Major portion of Pitching damaged/washed away.

Annexure 2 (Cont..)

Standard Deficiencies Category – 3

3.1 Profuse growth of bushes and trees over dam portion.

3.2 Guard stones/ chainage stones and parapet wall not provided / damaged.

3.3 Growth of aquatic weeds in reservoir of dam is observed.

3.4 Ant hills or crab holes/holes made by rodents/animals**.**

3.5 Minor undulation/ settlement/slightly less top width/ Rain cuts / pot holes observed on dam top & slopes.

3.6 Access road/Dam top road surface/ slab joints damaged needs repair.

3.7 Pitching on embankment of dam is dislocated /disturbed at some places.

3.8 Breaching section is not accessible/ Instruction board showing operation of breaching section is not available.

3.9 Section of Toe drain/cross drain/ out fall drain/rock toe damaged at some places.Pitching of drains disturbed.Some weed,vegetation growth/ siltation in nalla/drains. Nalla needs regradation.

3.10 Surface drain/ Catch water drains for berms are silted /damaged.

3.11 Electric cable & wiring are damaged/not in good condition.

3.12 Minorleaching in the gallery/ body of dam.

3.13 V – notches/ measuring devices are not in working condition/ silted / damaged/ not provided.

3.14 Mosquito net door is to be provided to avoid entry of reptiles in the gallery.

3.15 Damage to natural slope protection works, guniting damaged / washed out / Wire mesh exposed.

3.16 Guide wall/Divide wall/Guide bund/End Sill wall damaged/ Pointing is not in good condition/weep holes not functioning. At some places w.w bar/coping is damaged.

3.17 Provision of access to stilling basin/ladder not provided.

3.18 EDA ponding with water not possible to Inspect.

3.19 Minor erosion / Scouring / Retrogression / pot holes in tail channel. Ponding / standing water in EDA / Tail channel.

3.20 Lubrication/painting/minor repairs required for parts of Gates / hoisting Structure /Rubber seal damaged/ replacement.

3.21 Approach bridge to intake well / spillway gates railing /flooring plates damaged / need repairs. Need of ladder for inspection well/EDA.

3.22 Minor leakages through river sluice/outlet/ gates.

3.23 Air vent not periodically cleaned / damaged / closed.

3.24 EAP / ROS /GOS /Record drawings/ not provided / not prepared at dam site.

3.25 The record of periodical measurements of leakage discharge from dam / relief well is not maintained.

3.26 Street light on dam top is not provided/not working.

3.27 Security / CC TV camera/entry gate not provided/not working.

3.28 Sufficient staff arrangement is not available for security, instrument readings and measurements and maintenance on dam site.

3.29 Fencing around dam is not provided/ damaged due to which unauthorized trespassers are seen.

3.30 Communication facilities like mobile wireless, warning devices, telephone is not available at dam site.

3.31 Sufficient stock of spares/stationary required is not available at dam site. Storage arrangement not provided at site.

3.32 Security cabin at dam entrance/Irrigation outlets not provided/damaged/needs repair.

3.33 Minor leakages through masonary/ concrete dam body/gallery of dam/outlet well

3.34 Approach channel silted.Trash rack need to be cleaned/ damaged/not provided.

3.35 Minor damages to spillway / masonary/ concrete portion of dam/outlet well.

3.36 Porous pipes/foundation drains / holes not periodically cleaned.

Annexure – III

Photographs taken during DSO inspection

Name of Dam-Kankatrewadi
Class-2 Dam
Taluka-Khatav, Dist-Satara
Defeciency-Leakage through W.W.Bar
Date-20.11.2019

Name of Dam-Ghod
Class-1 Dam
Taluka-Shirur, Dist-Pune
Deficiency-Leakage through Spillway gate
Date-08.01.2020

Annual Consolidated Health Status Report Of Identified Large Dams In Pune Region 2019-20

PART – 3

Annual Performance Report of Instruments Installed in Large Dams Based on Pre & Post Monsoon- 2019 Inspection Report

PART – 3

Annual performance Report of Instruments installed on large dams

3.1 General.

The main purpose of instrumentation in dam is to monitor the safety of the dam and to warn of any changes that could in danger the safety of a dam, as well as to provide a confirmatory check in design assumptions and methods of computation.

Instruments embedded in or installed at the surface of the dam keeps a constant watch over the performance and indicate the distress spots for which remedial measures may be taken. Thus, instruments play an important role in checking the safety of dams and helps in monitoring and evaluating the performance of the dams during the construction as well as during the operation.

Instruments installed on dams are “Eyes and Ears” of dam’s performance vis-à-vis parameters adopted during its design. The field officers in charge of dams have not been able to upkeep and monitor/maintain instruments installed on dams. Efforts should be taken by all field officers to repair / replace instruments at the earliest. Monitoring of vital parameters like seepage, uplift, settlement and timely remedial measures will go long way in extending the life of the dam.

3.2 Instrumentation in Earthen Dams

Commonly used instrument in earthen dam are as below.

1) Pore Pressure Meter

They are installed in bore holes drilled below the foundation or through already completed embankment. Hence cannot be repaired or replaced.

2) Casagrande/standpipe piezometers

These are used for measuring pore water pressure in soil. These instruments can be installed at any time after completion of construction of the dam at desired location.

3) Twin Tube Piezometers

These are also used for measuring pore water pressure in earthen dam. These are installed in foundation and embankment during construction of dam. If PVC pipes are found chocked due to leached material then it can be cleaned with CuSo4. If pipes are cut / broken then it cannot be replaced as those are in body of dam. Outside measuring assembly can be repaired. Periodical maintenance, periodical reading and periodical calibration are utmost important.

4) Earth pressure cells

These are installed in the foundation. The cables which are outside the body can be replaced if damaged. The sensor cannot be repaired or replaced.

5) Settlement Gauges (surface settlement gauges/vertical cross arms)

These are used for measuring settlement in earth fill dam, rock fill dam and high embankment. Initially when the dam is under construction these instruments are installed.

Settlement of dam is more in initial period, which gradually decreases and it is almost nil after certain period. As such these gauges also do not show settlement after few years.

6) Slope Indicator

This is installed in foundation with one end at bottom and other at top of the dam. It measures horizontal and vertical movement of the dam. This can be replaced.

3.3 Instrumentation in Concrete / Masonry Dams

Commonly used instruments in concrete / masonry dams are as below.

1) Stress meters

The stress meters measure stresses inside the dam body. These instruments are embedded in concrete/masonry during construction stage hence cannot be repaired or replaced.

2) Strain meter/ No stress strain meter

The strain meters measures the deformation in the structure at the particular location due to strain, creep, temperature etc. The main purpose is to determine the stress distribution in the concrete dam during and after construction of dam. Since instrument is installed in the body of the dam it cannot be repaired or replaced.

3) Uplift pressure cells

The bowl type uplift pressure cells are provided in the foundation of dam. Uplift pressure cell is used for monitoring uplift pressure of water in the foundation of dam and concrete structure. The pressure cell pipes can be cleaned if choked. The pressure gauges can be repaired or replaced.

4) Plumb bob /Co-ordimeter

Conventional/inverted plumb bob is used to measure deflection of the dam body. It measures the horizontal displacement in dam's foundation and abutment. Plumb bob can be repaired or replaced.

5) Thermocouples/ Thermometers

These are used to measure the temperature variations in the body of concrete dam. These are installed in layers at various levels and cannot be replaced or repaired after construction.

6) Long gauge extensometer

It is used to measure the deformation/displacement in the foundation of the concrete dam. Once it fails to function cannot be repaired.

7) Joint meters

The joint meters measure the opening of the joints across which they are embedded. As such they are located near the joints.

3.4 Status of Dam Instrumentation in the Region.

Considering the fact that most of the instruments were non-functional from many years, Govt.of Maharashtra appointed a committee to study these instruments. The recommendations of the committee were accepted and incorporated in G.R. धसुसं २०१४(६२१/१४)/ सिं.व्य.(कामे) dated 31.12.2015. Accordingly to every dam owner, it is informed by Dam Safety Organisation to update the list of instruments at the dam site. In this report the updated details of instruments are considered.

The status of dam instrumentation in the region is given in table No,3.1.Similarly the details of mortality of instruments is given in table No.3.2 and comparison of mortality rate with respect to previous year is given in Table No. 3.3.

3.5 Observations

1) There are 27 dams in the region where instruments were installed.

2) Various instruments numbering 1576 have been installed on these 27 dams. Out of which 381 were functioning and 1195 were not functioning i.e. 76.01 % instruments are in non-functioning condition.

3) As compared to last year, the percentage of instruments functioning decreasing as previous year.

4) In this region the instrument readings from Koyna, Kolkewadi were received for analysis. Hence Instrumentation data analysis report of only these 2 dams has been prepared.

5) The observations of the instruments should be taken regularly and need to be sent to D.S.O. Nashik for analysis.

Table No. 3.1
Dam wise Status of Dam Instruments Installed on Large Dams (Pune)

Sr. No.	Dam Name	Instrument Name	Date of Installation	Total	Functional Status (F/N.F)	
					Functional	Non Functional
1	2	3	4	5	6	7
CHIEF ENGINEER (W.R), PUNE						
1	Bhatghar Dam	Uplift pressure cell	-	4	0	4
		Plumb bob	-	1	0	1
2	Pawana Dam	Twin tube Piezometer	-	48	0	48
		Uplift pressure cell	-	8	0	8
3	Panshet Dam	Twin tube Piezometer	-	51	0	51
4	Varasgaon	Plumb bob	-	2	0	2
5	Veer	Casagrande piezometer	-	3	0	3
6	Nira deodhar	Casagrande piezometer	2005	6	6	0
		Twin tube piezometers	2005	75	0	75
		Uplift pressure cells	2005	18	9	9
		Settlement plug	2005	158	158	0
		Plumb bob	2011	1	0	1
7	Kasari Dam	Casagrande Piezometer	-	10	0	10
8	Dudhganga	Joint meters	-	0	0	0
		Pore pressure cells	81-86	26	0	26
		Uplift pressure cells	81-85	32	4	28
		Casagrande piezometers	1998	26	19	7
9	Chilewadi	Casagrande piezometers	-	8	2	6
10	Bhama Askhed	Stand pipe piezometers	-	7	7	0
		Casagrande piezometers	-	7	7	0
		Twin tube Piezometers	-	59	0	59
		Uplift pressure cells	-	11	0	11
		Strain meters	-	0	0	0

Sr. No.	Dam Name	Instrument Name	Date of Installation	Total	Functional Status (F/N.F)	
					Functional	Non Functional
1	**2**	**3**	**4**	**5**	**6**	**7**
11	Warna	Foundation piezometers	-	12	0	12
		Embankment piezometers	-	71	0	71
		Casagrande piezometer	-	17	0	17
		Earth pressure cells	-	0	0	0
		Slope Indicator	-	0	0	0
		Pore pressure cells	-	38	0	38
		Uplift Pressure cells	-	22	0	22
12	Koyna Dam	Thermometers	2006	20	20	0
		Stress meters	2006	3	3	0
		Strain meters	2006	24	24	0
		Joint meters Mon 17	1972	5	0	5
			2006	3	3	0
		Uplift pressure cells	1961	42	9	33
			1972	4	0	4
			2006	18	18	0
		Plumb bob Co-ordimeter Mon 22 & 25	1961	2	0	2
		Piezometer	2006	4	4	0
		Dial Guages		0	0	0
		Tilt meter	2006	2	2	0
13	Kolkewadi	Pore pressure mo 9	1972	7	0	7
		Extentiometer Joint meter Special long	73-75	8	6	2
		Joint meter	72-74	14	11	3
		Uplift pressure cell	1976	30	0	30
		Plumb bob Co-ordimeter	-	1	0	1
		Reverse pendulum	-	1	0	1
	CE Wise Total for 13 Dams			**909**	**312**	**597**
	CHIEF ENGINEER (S. P), PUNE					
14	Dhom	Casagrande piezometer	1982	7	0	7
		Twin tube piezometers	1982	6	0	6
		Uplift pressure cells	1976	7	5	2

Sr. No.	Dam Name	Instrument Name	Date of Installation	Total	Functional Status (F/N.F)	
					Functional	Non Functional
1	2	3	4	5	6	7
15	Manikdoh	Plumb bob	1986	1	0	1
		Uplift Pressure Cells	1986	9	0	9
			1986	7	0	7
			1986	6	0	6
16	Wadaj	Casagrande piezometers	1982	7	1	6
			1982	7	0	7
			1982	5	0	5
		Stand pipe piezometers	1982	6	6	0
			1982	10	0	10
17	Yedgaon	Casagrande piezometers	1985 2014	40	4	36
		Stand pipe piezometers	1985	0	0	0
			1985	8	0	8
18	Dimbhe	Plumb bob	N.A.	1	0	1
			N.A.	0	0	0
		Uplift Pressure cell	N.A.	11	0	11
19	Kanher	Casagrande piezometer	1982	10	0	10
		Twin tube piezometers	1982	47	0	47
		Uplift pressure cells	1984	18	0	18
		Plumb bob	1989	1	0	1
20	Dhom balkawadi	Foundation piezometers	2006	6	0	6
		Embankment piezometers	2006	70	0	70
		Casagrande piezometer	2006	8	0	8
		Uplift pressure cells	2006	3	0	3
21	Urmodi	Foundation Piezometers	1998	8	0	8
			2000	17	0	17
			2000	8	0	8
		Embankment Piezometers	1998	23	0	23
			2000	19	0	19
			2000	22	0	22
		Casagrande piezometers		5	5	0
		Uplift pressure cells		27	0	27

Sr. No.	Dam Name	Instrument Name	Date of Installation	Total	Functional Status (F/N.F)	
					Functional	Non Functional
1	**2**	**3**	**4**	**5**	**6**	**7**
22	Ujjani	Plumb bob	Mar-83	1	1	0
		Uplift pressure cells	Mar-83	22	16	6
		Casagrande piezometers	81-82	27	26	1
23	Mahu (u/c)	Twin Tube piezometers	2013	16	0	16
		Foundation piezometers	2013	12	0	12
		Earth Pressure cell	2013	4	0	4
24	Ghod	standpipe piezometer	-	5	5	0
25	Tarali (2008) Dist :- Satara	Uplift pressure cells	2000	33	0	33
		Stress meters	May-08	5	0	5
		Strain meters	May-08	5	0	5
		Thermometers	Dec-09	11	0	11
		Plumb bob	Jan-15	1	0	1
26	Morna Gurheghar (2010)	Foundation Piezometers	2000	14	0	14
		Embankment piezometers	2000	36	0	36
		Earth Pressure Cells	2000	6	0	6
27	Uttarmand (2010)	Foundation Piezometers	2000	24	0	24
		Embankment piezometers	2000	11	0	11
		Earth Pressure Cells	2000	4	0	4
CE Wise Total for 14 Dams				**667**	**69**	**598**
PUNE Region Total for 27 Dams				**1576**	**381**	**1195**

TABLE NO 3.2

Mortality Status of Instruments installed on Large Dams (Pune)

Sr. No.	Type of Instruments	Number Of Instruments			
		Total	Working	Non-Working	Mortality (%)
1	2	3	4	5	6
(A) Earth Dams					
1	Casagrande / Stand pipe Piezometers /Vibrating	233	92	141	60.52
2	Twin tube piezometers	655	0	655	100.00
3	Horizontal/Vertical device / Cross arm surface settlement plug	158	158	0	0.00
4	Earth pressure cells	14	0	14	100.00
5	Slope indicator	-	-	-	-
Total		**1060**	**250**	**810**	**76.42**
(B) Masonry Dams					
1	Pore pressure meters	71	0	71	100.00
2	Stress meter	8	3	5	62.50
3	Strain meter/ No stress-strain meter	29	24	5	17.24
4	Uplift pressure cells	332	61	271	81.62
5	Plumb bob/ Inverted Plumb Bob / co-ordimeter	13	1	12	92.31
6	Long Gauge extensometer, Multiple Bore hole extensometer	8	6	2	25.00
7	Thermometers	31	20	11	35.48
8	Joint meters / Dial Gauge	22	14	8	36.36
9	Tiltmeter	2	2	0	0.00
Total		**516**	**131**	**385**	**74.61**

	Instruments in	Total	Working	Non Working	Mortality
A)	Earth Dams	1060	250	810	76.42
B)	Masonry Dams	516	131	385	74.61
	Grand Total	1576	381	1195	75.82

Table No. 3.3
Comparative Statement for Status of Instruments in Dams
Pune Region

Year		HSR 2018					HSR 2019				
Sr.No	Name of Chief Engineer	Total Dams	Total Instruments	Functioning	Not-Functioning	% functioning	Total Dams	Total Instruments	Functioning	Not-Functioning	% functioning
1	Chief Engineer (WR) Pune	13	953	405	548	42.49	13	**909**	**312**	**597**	34.32
2	Chief Engineer (SP) Pune	14	667	219	448	32.83	14	**667**	**69**	**598**	10.34
	Total	**27**	**1620**	**624**	**996**	**38.51**	**27**	**1576**	**381**	**1195**	**24.17**

Annual Consolidated Health Status Report of Identified Large Dams In Pune Region 2019 – 20

PART – 4

Annual Performance Report Of Meteorological Instruments Installed On Dams Based On Pre & Post Monsoon- 2019 Inspection Report

PART - 4

Annual performance Report of Meteorological instruments installed on dams

4.1 General

Hazard potential of dam depends upon the possible hazard it poses to population on the downstream during flood. In case of gated spillways, generally flood is considered to impinge when reservoir is at F.R.L. If flood forecasting and warning systems are in place, flood impingement can be considered at lower when F.R.L. considering prior depletion.

The establishment of hydro-meteorological stations in the vicinity of every Class-I dam and rain gauge network in its catchments assumes vital importance due to its role in flood forecasting and warning. The hydro-meteorological station shall be capable of recording data relating to, among other parameters, rainfall, atmospheric pressure, maximum & minimum temperature and humidty,wind speed, wind direction, height of waves and reservoir water temperature. It is important that a representative proportion of the rain gauge network is linked to flood forecasting and warning control centre by telemetry.

4.2 Observations

From Pre/Post Monsoon Reports, it is seen that the ANNEXURE-IV which is "**Checklist of Various Meteorological Instruments installed on Dams**" is not filled properly and quantity of number of instruments varies from year to year. As, this status of instruments is submitted to C.W.C., New Delhi, field authorities need to make sure that correct information is filled. Table 4.1 gives the dam wise status of the meteorological instruments, and Table 4.2 gives the status of morality of meteorological instruments installed in the region.

1. As per Pre/Post Monsoon reports of Pune region it is seen that 219 various meteorological instruments installed on dams out of which 179 are working and 40 are not working. The non-working instruments should be repaired / replaced on priority.
2. As per the government circular CDA-1013/(207/13)/CAD(works)/ August-2013. It is mandatory to install **Pan Evaporimeter** to measure evaporation on all major and medium projects.

Efforts should be taken by field officers to establish automatic flood warning systems which will help in saving lives, livestock and property and will invariantly contribute to lessening of the overall impact of floods.

Table - 4.1

Dam wise status of Meteorological instruments Installed on Large Dams

(Pune region)

Sr. No.	Name of dam Dam	Name of instruments	No. of instruments	Performance		remark
				Working	Not Working	
1	2	3	4	5	6	7
1	Bhatghar	1)Rain Gauge on dam (ordinary)	1	1	0	
		2)Rain Gauge on dam (Self recorder)	1	1	0	
		3) Rain Gauge in the catchment (Self Recorder)	3	3	0	
2	Nazare	1)Rain Gauge on dam (Ordinary)	1	1	0	
		2)Rain Gauge on dam (Self recorder)	1	1	0	
		3) Rain Gauge in catchment (Self recorder)	1	1	0	
3	Khadakwasala	1)Rain Gauge on dam (Ordinary)	1	1	0	
		2)Rain Gauge on dam (Self recorder)	1	1	0	
		3)Pan evaporimeter	1	1	0	
4	Pawana	1)Rain Gauge on dam (ordinary)	1	1	0	
		2)Pan evaporimeter	1	1	0	
5	Panshet	1)Rain Gauge on dam (ordinary)	1	1	0	
		2)Pan evaporimeter	1	1	0	
		3)Wind velocity recorder	1	0	1	
		4)Wind direction recorder	1	0	1	
		5)Reservoir Level Gate	1	1	0	
6	Kasarsai	1) Rain Gauge on dam (ordinary)	1	1	0	

1	2	3	4	5	6	7
7	Varasgaon	1)Rain Gauge on dam (ordinary)	1	1	0	
		2)Rain Gauge on dam (self recorder)	1	1	0	
		3)Pan evaporimeter	1	0	1	
		4) Rain Gauge in catchment (Self recorder)	1	1	0	
8	Veer	1) Rain Gauge on dam (ordinary)	1	0	1	
		2) Rain Gauge in catchment(ordinary)	2	2	0	
		3) Rain Gauge in catchment (Self recorder)	1	1	0	
		4) Pan evaporimeter	1	1	0	
9	Yedgaon	1) Rain Gauge on dam (Ordinary)	1	1	0	
		2) Pan evaporimeter	1	0	1	
		3)Wind velocity recorder	1	0	1	
		4)Wind direction recorder	1	0	1	
		5) Rain Gauge on dam (ordinary)	1	1	0	
10	Andra valley	1) Rain Gauge on dam (ordinary)	1	1	0	
		2) Rain Gauge on dam (self recorder)	1	1	0	
11	Bhama Askhed	1) Rain Gauge on dam (ordinary)	1	0	1	
		2) Rain Gauge in catchment(ordinary)	1	0	1	
		3) Pan evaporimeter	1	0	1	
		4) Rain Gauge on dam (self recorder)	1	1	0	
		5) Rain Gauge in catchment(self recorder)	2	2	0	

1	2	3	4	5	6	7
12	Nira Deoghar	1) Rain Gauge on dam (ordinary)	1	1	0	
		2) Rain Gauge in catchment (ordinary)	1	1	0	
		3) Pan Evaporimeter	1	1	0	
		4) Wind direction recorder	1	1	0	
		5) Wet & Dry bulb thermometer	1	1	0	
		6) Barometer	1	1	0	
13	Temghar	1) Rain Gauge on dam (ordinary)	1	1	0	
14	Vadivale	1) Rain Gauge on dam (ordinary)	1	1	0	
		2) Rain Gauge on dam (Self Recorder)	1	1	0	
15	Ghod	1) Rain Gauge on dam (ordinary)	1	1	0	
		2) Rain Gauge on dam (Self Recorder)	1	1	0	
		3) Pan evaporimeter	1	0	1	
		4) Wind direction recorder	1	1	0	
16	Dimbhe	1)Rain Gauge ion dam(ordinary)	2	2	0	
		2) Pan Evaporimeter	1	1	0	
		3) Rain Gauge in Catchment	3	3	0	
17	Chaskaman	1) Rain Gauge on dam (ordinary)	1	1	0	
		2) Rain Gauge in catchment(ordinary)	6	6	0	
18	Manikdoh	1) Rain Gauge on dam (ordinary)	1	1	0	
		2) Rain Gauge in catchment(ordinary)	1	1	0	
		3) Pan evaporimeter	1	1	0	
		4) Wind Velocity recorder	1	1	0	
		5) Wind Direction Recorder	1	1	0	
19	Arala Kalmodi	1) Rain Gauge on dam (ordinary)	1	1	0	
20	Wadaj	1) Rain Gauge on dam (ordinary)	1	1	0	
		2) Pan evaporimeter	1	1	0	

1	2	3	4	5	6	7
21	Chilewadi	1) Rain Gauge on dam (ordinary)	1	1	0	
		2) Rain Gauge in catchment (self recorder)	1	1	0	
22	Mulshi	1) Rain Gauge on dam (ordinary)	1	1	0	
		2) Rain Gauge in catchment(ordinary)	2	2	0	
		3) Wet & Dry Bulb Thermometer	1	1	0	
		4) Thermometer for reservoir water temp.	1	1	0	
		5) Pan evaporimeter	1	1	0	
23	Pimpalgaon Joge	1) Rain Gauge on dam (ordinary)	2	2	0	
		2) Rain Gauge in catchment	1	1	0	
		3) Pan evaporimeter	1	0	1	

1	2	3	4	5	6	7
24	Adale	1) Rain Gauge on Dam (ordinary)	1	1	0	
25	Marnewadi	1) Rain Gauge on Dam (ordinary)	1	0	1	
26	Thitewadi	1) Rain Gauge on Dam (ordinary)	1	1	0	
27	Kadus	1) Rain Gauge on Dam (ordinary)	1	0	1	
28	Alegaon Paga	1) Rain Gauge on Dam (ordinary)	1	0	1	
29	Dahiwadi	1) Rain Gauge on Dam (ordinary)	1	0	1	
30	Kolkewadi	1) Rain Gauge on Dam (ordinary)	1	1	0	
		2) Rain Gauge in catchment	1	1	0	
31	Ballalwadi	1) Rain Gauge on Dam (ordinary)	1	0	1	
32	Shere	1) Rain Gauge on Dam (ordinary)	1	1	0	
33	OturWaghdara	1) Rain Gauge on Dam (ordinary)	1	0	1	
34	Gohe	1) Rain Gauge on Dam (ordinary)	1	1	0	
35	Ramjewadi	1) Rain Gauge on Dam (ordinary)	1	0	1	
36	Yenere	1) Rain Gauge on Dam (ordinary)	1	0	1	
37	Jadhavwadi	1) Rain Gauge on Dam (ordinary)	1	1	0	
38	Koyna	1) Rain Gauge on Dam (ordinary)	6	6	0	
		2) Pan Evaporimeter	1	1	0	
		3) Wind velocity recorder	1	1	0	
		4) Wind direction recorder	1	1	0	
		5) Wet/dry bulb thermometer	1	1	0	
		6) Thermometer for air Temp	2	2	0	
39	Dhom	1) Rain Gauge on dam (ordinary)	1	1	0	
		2) Rain Gauge on dam (self recorder)	1	1	0	
		3) Pan Evaporimeter	1	1	0	
		4) Water level recorder	1	1	0	
		5)Rain Gauge in the catchment (Ordinary)	1	1	0	
		6)Rain Gauge in the catchment (self recorder)	1	1	0	
		7) wind velocity recorder	1	1	0	

1	2	3	4	5	6	7
40	Morna Guheghar	1) Rain Gauge on dam (ordinary)	1	1	0	
41	Uttaramand	1) Rain Gauge on dam (ordinary)	1	1	0	
42	Dhom Balkawadi	1) Rain Gauge on dam (ordinary)	1	1	0	
		2) Pan Evaporimeter	1	1	0	
43	Kanher	1) Rain Gauge on dam (ordinary)	1	1	0	
		2) Rain gauge on dam (self recorder)	1	1	0	
		3) Rain Gauge in the catchment (Ordinary)	5	4	1	
		4) Pan evaporimeter	1	1	0	
		5) Thermometer	1	1	0	
		6) Wind velocity recorder	1	1	0	
		7) Wind direction recorder	1	1	0	
		8) Wet/dry bulb thermometer	1	1	0	
		9) Water stage recorder	1	1	0	

1	2	3	4	5	6	7
44	Mahu	1) Rain Gauge on dam (ordinary)	1	1	0	
45	Hatgeghar	1) Rain Gauge on dam (ordinary)	1	1	0	
46	Wang	1) Rain Gauge on dam (ordinary)	1	1	0	
47	Tarali	1) Rain Gauge on dam (ordinary)	1	1	0	
		2) Rain Gauge on dam (Self Recorder)	1	0	1	
		3) Pan Evaporimeter	1	0	1	
48	Nagewadi	1) Rain Gauge on dam (ordinary)	1	1	0	
49	Urmodi	1) Rain Gauge on dam (ordinary)	1	1	0	
		2) Rain Gauge on dam (self recorder)	1	1	0	
		3) Rain Gauge in catchment (ordinary)	2	2	0	
		4) Rain Gauge in catchment (self recorder)	1	1	0	
		5) Pan evaporimeter	1	1	0	
		6) Wind velocity recorder	1	1	0	
		7) Wind direction recorder	1	1	0	
		8) Wet/dry bulb thermometer	1	1	0	
		9) Sunshine recorder	1	1	0	
		10) Max. & Min. thermometer	1	1	0	
		11) Thermograph/Thermohydrograph	1	1	0	
50	Dudhganga	1) Rain Gauge on dam (ordinary)	1	1	0	
		2) Rain Gauge on dam (Self Recorder)	1	0	1	
		3) Rain Gauge in catchment(ordinary)	2	2	0	
		4) Rain Gauge in catchment (self recorder)	1	0	1	
		5) Pan evaporimeter	1	1	0	
51	Chitri	1) Rain Gauge on dam (ordinary)	1	1	0	
52	Kumbhi	1) Rain Gauge on dam (ordinary)	1	1	0	

1	2	3	4	5	6	7
53	Radhanagari	1) Rain Gauge on dam (ordinary)	1	1	0	
54	Tulshi	1) Rain Gauge on Dam (ordinary)	1	1	0	
55	Patgaon	1) Rain Gauge on Dam (ordinary)	1	1	0	
56	Chikotra	1) Rain Gauge on Dam (ordinary)	1	1	0	
		2) Rain Gauge on Dam (self recorder)	1	0	1	
57	Kadavi	1) Rain Gauge on Dam (ordinary)	1	1	0	
		2) Rain Gauge in Catchment	2	2	0	
58	Sina kolegaon	1) Rain Gauge on Dam (ordinary)	1	1	0	
		2) Pan evaporimeter	1	1	0	
		3) Wind velocity recorder	1	1	0	
		4) Wind direction recorder	1	1	0	
		5) Wet/dry bulb thermometer	1	1	0	

1	2	3	4	5	6	7
59	Ghatprabha	1) Rain Gauge on Dam (ordinary)	1	1	0	
60	Kasari	1) Rain Gauge on Dam (ordinary)	1	1	0	
61	Ujjani	1) Rain Gauge on dam (self recorder)	1	1	0	
		2) Rain Gauge in catchment (ordinary)	1	1	0	
		3) Pan evaporimeter	1	1	0	
		4) Wind velocity recorder	1	0	1	
		5) Wind direction recorder	1	0	1	
		6) Wet/Dry bulb thermometer	1	0	1	
		7) Wave height recorder	1	0	1	
62	Bori	1) Automated fully climatalogical station	1	1	0	
		2) Wind velocity recorder	1	1	0	
		3) Wind direction recorder	1	1	0	
63	Ekrukh	1) Rain Gauge on dam (Ordinary)	1	1	0	
64	Chikhalgi	Rain Gauge on Dam (ordinary)	1	1	0	
65	Jawalgaon	1) Rain Gauge on Dam (ordinary)	1	0	1	
66	Shirwalwadi	1) Rain Gauge on Dam (ordinary)	1	0	1	
67	Kazikanbus	1) Rain Gauge on Dam (ordinary)	1	0	1	
68	Mangi	1) Rain Gauge on Dam (ordinary)	1	1	0	
69	Koregaon	1) Rain Gauge on Dam (ordinary)	1	0	1	
70	Chincholi	1) Rain Gauge on Dam (ordinary)	1	1	0	
71	Budhihal	1) Rain Gauge on Dam (ordinary)	1	0	1	
72	Talasangi	1) Rain Gauge on Dam (ordinary)	1	1	0	
73	Padawalkarwadi	1) Rain Gauge on Dam (ordinary)	1	1	0	
74	Ashti	1) Rain Gauge on Dam (ordinary)	1	0	1	
75	Pathari	1) Rain Gauge on Dam (ordinary)	1	0	1	
76	Hingani (k)	1) Rain Gauge on Dam (ordinary)	1	1	0	
77	Hingani (p)	1) Rain Gauge on Dam (ordinary)	1	0	1	

1	2	3	4	5	6	7
78	Rajuri	1) Rain Gauge on Dam (ordinary)	1	0	1	
79	Morna Shirala	1) Rain Gauge on dam (ordinary)	1	1	0	
80	Pratapur	1) Rain Gauge on dam (ordinary)	1	0	1	
81	Banganga	1) Rain Gauge on dam (ordinary)	1	1	0	
82	Warna	1) Rain Gauge on dam (ordinary)	1	1	0	
		2) Rain Gauge in catchment (ordinary)	2	2	0	
		3) Rain Gauge on dam (self recorder)	1	1	0	
		4) Rain Gauge in catchment (self recorder)	3	3	0	
TOTAL			**216**	**176**	**40**	

Table No. 4.2
Mortality status of Meteorological Instruments Installed on Dams

Sr. No.	Type of Instruments	Number Of Instruments			
		Total	Working	Non-Working	Mortality (%)
1	2	3	4	5	6
1	Rain gauge on dam (Ordinary)	88	68	20	22.72
2	Rain gauge on dam (Self Recorder)	16	13	3	18.75
3	Rain gauge in catchment (Ordinary)	33	31	2	06.06
4	Rain gauge in catchment (Self Recorder)	15	14	1	06.66
5	Pan Evaporimeter	23	17	6	26.08
6	Wind velocity recorder	10	7	3	30.00
7	Wind direction recorder	11	8	3	27.27
8	Wet/dry bulb thermometer	7	6	1	14.28
9	Thermometer for air Temp	2	2	0	0.00
10	Thermometer for reservoir water temp	1	1	0	0.00
11	Water state recorder/ Water level Recorder	2	2	0	0.00
12	Barometer	1	1	0	0.00
13	Sun shine recorder	1	1	0	0.00
14	Max & Min thermometer	2	2	0	0.00
15	Wave height recorder	1	0	1	100.00
16	Hydrometer	0	0	0	0.00
17	Humidity Meter	0	0	0	0.00
18	Automatic fully climatological station	1	1	0	0.00
19	Stevenmeter	0	0	0	0.00
20	DWLL	0	0	0	0.00
21	Other Instruments	2	2	0	0.00
Total		**216**	**176**	**40**	**18.51**

Annual Consolidated Health Status Report of Identified Large Dams In Pune Region 2019 – 20

PART – 5

Status of NCDS Documents Submitted to DSO

Part 5

National Committee on Dam Safety (NCDS) Documents

(PUNE REGION)

Importance of National Committee on Dam Safety (NCDS) Documents:

Central Water Commission (CWC) has laid down various guidelines covering the standardized dam safety practices-essentially guiding the dam owners in preparation of Emergency Action Plans, Periodical Dam Safety inspections, comprehensive dam Safety evaluation and appropriate institutional framework for dam safety. Their implementation is emphasized during the meetings of National Committee on Dam Safety (NCDS) and through the communications sent in this regard.

During the 34th meeting held at Chennai in March 2015, it was requested to all the Dam owners to take necessary steps for preparation of EAP, other documents & report to NCDS Secretariat.

The documents to be prepared as per National Committee on Dam Safety are as under & these shall be properly maintained and kept up to date by including latest information available.

1. EAP
2. R.O.S & G.O.S.
3. Data Book
4. O & M manual
5. Record Drawing & Completion Report,

1. EAP: Emergency Action Plan:

An Emergency action plan is a formal plan that identifies potential emergency conditions at a dam. It prescribes the procedures to be followed to minimize property damage and loss of life. The EAP contains procedures and information to assist the dam owner in taking necessary actions in time to moderate or alleviate the problems, in addition to issuing early warning & notification messages to responsible emergency management authorities,viz.,District Magistrate/Collector, Armed Forces, Paramilitary forces, Project Authorities & other Central/State Agencies. It also contains inundation maps to show the emergency management authorities of the critical areas for necessary relief and rescue actions in case of an emergency. In a nutshell, it outlines “who does, what, where, when and how” in an emergency situation or unusual occurrence affecting the Dams. The Emergency Action Plan has to be prepared as per Guidelines circulated by C.W.C., New Delhi’s vide letter no. 3/19/NCDS/Guidelines EAP/DSM/2004/233-67, Dtd. 17 May 2006.CWC Guidelines are available on http://www.cwc.gov.in/main/ downloads /cwc/EAP chapters.pdf

2. R.O.S. (Reservoir Operation Schedule) and G.O.S. (Gate Operation Schedule):

It is very necessary to lay down operating procedures of all storage reservoirs with the objective to limit the flood stages in the river downstream and with maximum feasible utilization of the flood capacity of the river channel downstream of reservoirs, consistent with the safety of the dam. A proper reservoir operation schedule should be in place.

For this purpose a schedule of opening and closing the gates to limit the reservoir levels to preset gauges should be laid down. Schedule for the dam as per operation & maintenance manual should be strictly adhered. The entire capacity of reservoir is used for active conservation. When the reservoir rises above active conservation, operation will be in accordance with the standing operation procedures. Inflow forecasting arrangement should be made for easy operation of gates. The Engineer in charge should inform immediately to the flood maintenance engineer downstream and flood –fighting center of the releases from the reservoir.

3. Data book:

Proper assessment of dam safety involves a thorough review of design, construction and performance records prior to conducting a field examination. The Data book is an unpublished document which is prepared before the initial safety inspection of each dam. This book is abbreviated. Convenient source of information, summarizing all pertinent records and history related to the safety of a dam and is a reference for the evaluation team. This Data book should answer most questions about the dam. A list of reference is included if additional information is needed. Continual updating of the Data book will be required as future inspections are made, new problems arise, new investigations are undertaken and remedial treatments performed. Documentation of all projects may be done in the Data book format which is the primary data base for the team evaluating the safety of a dam. (Guidelines on standardized Data book format are available at http://www.cwc.gov.in/ Dam_safety.html)

4. O & M Manual:

It is desirable that a separate manual is available with the officers .The officers Incharge of such works are requested to personally go through the manual and maintain the records from time to time in such a manner as to give their successors complete and correct idea of the state of each of the several storage works in their charge and the different standing orders on all matters concerning the works. This will enable them to tackle problems as they arise, by quickly referring to the manual as far as possible without having to depend on the office to give information. The complete set of manual for each of the storage works should be personally handed over to successor by each concerned officer.

Copies of the maintenance manual shall be maintained at all offices right from sectional office to Circle office.

It is also necessary that the manuals are inspected at the time of inspection by the superior officers. Record of handing over and inspection should be maintained.

5. Record Drawing and Completion Report:

The importance of record drawings and completion report as an archival data need not be emphasized. All efforts should be made by field engineers to prepare Record Drawing & Completion Report and store them for future reference.

Table 5.1
Position of receipt in DSO of Emergency Action Plan (EAP) for Pune Region

	Total Class - I dams = 73			
Sr.No.	**Name of C.E.**	**Total**	**Received**	**Not received**
1	C.E. (W.R.) Pune	**48**	**24**	**24**
2	C.E. (S.P.) Pune	**18**	**5**	**13**
3	Private Dams	7	0	7
	Total For Pune Region	**73**	**29**	**44**

Position of receipt in DSO of Reservoir Opearation Schedule (ROS) in Pune Region

	Total gated dams = 40			
Sr.No.	**Name of C.E.**	**Total**	**Received**	**Not received**
1	C.E. (W.R.) Pune	**24**	**22**	**2**
2	C.E. (S.P.) Pune	**14**	**12**	**2**
3	Private Dams	2	1	1
	Total For Pune Region	**40**	**35**	**5**

Position of receipt in DSO of Gate Opearation Schedule (GOS) for Pune Region

	Total gated dams = 40			
Sr.No.	**Name of C.E.**	**Total**	**Received**	**Not received**
1	C.E. (W.R.) Pune	**24**	**22**	**2**
2	C.E. (S.P.) Pune	**14**	**12**	**2**
4	Private Dams	2	1	1
	Total For Pune Region	**40**	**35**	**5**

Table – 5.2
Dam wise receipt of NCDS Documents for Pune Region, in DSO
(Class – I Dams)

NR - Not Recived R - Received

Sr.No.	Name of Dam (Corporation /C.E./S.E.)	E.A.P.	ROS	GOS
1	2	3	4	5
	M.K.V.D.C., Pune			
	A) C. E. (W.R.), Pune			
	1) S.E. (PIC) Pune			
1	Bhatghar(AG)	R(2006)	AG	AG
2	Vadivale	R(2006)	R(2009)	R(2002)
3	Jadhavwadi(UG)	NR	-	-
4	Kasarsai	NR	R(2007)	NR
5	Niradevghar	R(2007)	R(2006)	NR
6	Pavana	NR	R(2015)	NR
7	Panshet	NR	R(2015)	NR
8	Khadakwasala	NR	R(2015)	NR
9	Varasgaon	NR	R(2015)	NR
10	Chaskaman	NR	R(2015)	NR
11	Bhamaaskhed	R(2014)	R(2015)	NR
12	Aralakalmodi(UG)	R(2014)	-	-
13	Andravalley(UG)	R(2014)	-	-
14	Veer	R(1993)	R(2010)	R(1990)
15	Nazare(AG)	NR	AG	AG
	2) S.E.(S.I.C.)Satara			
16	Dhom	R(2001)	R(2007)	R(1984)
17	Kanher	R(2001)	R(2015)	R(1984)
18	Koyna	R(2010)	R(2009)	R (2006)
19	Kolkewadi	R(2011)	R(2009)	R (1990)
20	Uramodi	R(2008)	R(2015)	NR
21	Dhombalakwadi	R(2008)	R(2007)	R(2016)
	3) S.E. (PIPC) Pune			
22	Temghar(UG)	R(2006)	-	-
23	Gunjavani	R(2004)	NR	NR
	4) S.E.(S.I.C.)Sangali			
24	Yevatimasoli(UG)	NR	-	-
25	Morana(Shirala)(UG)	NR	-	-
26	Satpewadi Barrage	NR	NR	NR
	5)S.E.(KIC)Kolhapur			
27	Chitri(UG)	NR	-	-
28	Kadavi(UG)	NR	-	-

Sr.No.	Name of Dam (Corporation /C.E./S.E.)	E.A.P.	ROS	GOS
1	2	3	4	5
29	Kasari	NR	R(2015)	NR
30	Kumbhi	NR	R(2008)	NR
31	Megholi(UG)	R(2010)	_	_
32	Radhanagari(AG)	NR	AG	AG
33	Tulasi	R(1998)	R(2007)	R(1998)
34	Upavade(UG)	NR	_	_
35	Warana	R(2007)	R(2007)	R(1999)
36	Dudhaganga	R(2007)	R(2009)	R(1997)
37	Ambewadi(UG)	NR	_	_
38	Chikotra	NR	R(2015)	NR
39	Ghatprabha(Phatakwadi)(UG)	NR	_	_
40	Jambre(UG)	NR	-	-
41	Jangamhatti(UG)	NR	_	_
42	Keloshi Bk.(UG)	NR	_	_
43	Patgaon(UG)	NR	_	_
44	Kitwad-2(UG)	R(2014)	_	_
45	Kondoshi(UG)	R(2014)	_	_
46	Lakikatti(UG)	R(2014)	_	_
47	Paleshwar(UG)	R(2014)	_	_
48	Phaye(UG)	R(2014)	_	_
	CE WR PUNE Total	**48**	**24**	**24**
	(R)Received	**24**	**22**	**10**
	(NR) Not Received	**24**	**02**	**14**
	(AG)Automatic Gate,	**3**	_	_
	B) C.E.(SP) Pune			
	1) S.E. KIC ,Pune			
1	Manikdoh	NR	R(2007)	R(1990)
2	Vadaj	NR	R(2015)	R(1990)
3	Yedgaon	R(1983)	R(2015)	R(1989)
4	Dimbhe	R(2014)	R(2007)	R(2007)
5	Pimalgaonjoge	NR	R(2015)	NR
6	Ghod	NR	R(2015)	R(1997)
7	Chilewadi	R(2014)	R(2015)	R(2014)
8	Sina (UG)	NR	-	-
	3) S.E. S. I.P.C., Satara			
9	Nagewadi(UG)	NR	_	_
10	Uttarmand	NR	R(2015)	NR
11	Morana(Gureghar)	NR	R(2016)	NR
12	Tarali	R(2008)	R(2016)	NR
13	Mahu	NR	NR	NR
14	Hatgeghar(UG)	NR	_	_
	4) S.E. CADA, Solapur			_
15	Ekrukh (UG)	NR	_	_
16	Bori	NR	R(2007)	R(2007)

Sr.No.	Name of Dam (Corporation /C.E./S.E.)	E.A.P.	ROS	GOS
1	**2**	**3**	**4**	**5**
17	Ujjani	R(2007)	R(2015)	R(1990)
	SE OIC Osmanabad			
18	Sina Kolegaon	NR	NR	NR
	CE SP PUNE Total	**18**	**14**	**14**
	(R)Received	**5**	**12**	**8**
	(NR) Not Received	**13**	**2**	**6**

PRIVATE DAMS				
	Tata Power Co, Ltd. Khopoli			
1	Mulsi	NR	R(2016)	NR
2	Shirvata(AG)	NR	-	-
3	Thokarwadi	NR	NR	NR
4	Walvan(AG)	NR	-	-
	Ambevally (SAHARA)			
5	Ambewane (UG)	NR	-	-
6	Visakhar (UG)	NR	-	-
7	Koliwali (UG)	NR	-	-
	Private Pune Total	**7**	**2**	**2**
	(R) Received	**0**	**1**	**0**
	(NR) Not Received	**7**	**1**	**2**

Table – 5.3
Position of Completion Report, Record Drg., Data Book, O&M Mannual Documents
(Class - I)

Sr. No.	Name of Dam (Corporation /C.E./S.E.)	Completion Report	Record Drawing	Data Book	O & M Manual
1	2	3	4	5	6
1	**M.K.V.D.C., Pune**				
A1)	**A) C. E. (W.R.), Pune**				
	1) S.E. (PIC) Pune				
1.	Bhatghar(AG)	R	R	NR	R
2.	Vadivale	NR	NR	NR	NR
3.	Jadhavwadi	NR	NR	NR	NR
4.	Kasarsai	NR	NR	NR	NR
5.	Niradevghar	NR	NR	NR	NR
6.	Pavana	NR	R	NR	NR
7.	Panshet	NR	R	R	NR
8.	Khadakwasala	NR	NR	NR	NR
9.	Varasgaon	NR	R	NR	NR
10	Chaskaman	NR	R	NR	NR
11	Bhamaaskhed	NR	NR	NR	NR
12	Aralakalmodi	NR	NR	NR	NR
13	Andravalley	NR	NR	NR	NR
14	Veer	R	R	R	R
15	Nazare(AG)	R	R	R	R
	2) S.E. (SIC) Satara				
16	Dhom	NR	R	NR	NR
17	Kanher	NR	R	NR	NR
18	Koyna	R	R	R	R
19	Kolkewadi	R	R	R	R
20	Uramodi	NR	NR	NR	NR
21	Dhombalakwadi	NR	NR	NR	NR
	2) S.E. (PIPC) Pune				
22	Temghar	NR	NR	NR	NR
23	Gunjavani	NR	NR	NR	NR
	4) S.E.(S.I.C.)Sangali				
24	Yevatimasoli	NR	NR	NR	NR
25	Morana(Shirala)	NR	NR	NR	NR
26	Satpewadi barrage	NR	NR	NR	NR
	5)S.E.(KIC)Kolhapur				
27	Chitri	NR	NR	NR	NR
28	Kadavi	NR	NR	NR	NR
29	Kasari	NR	R	NR	NR
30	Kumbhi	NR	NR	NR	NR

	Name of Dam (Corporation /C.E./S.E.)	Completion Report	Record Drawing	Data Book	O & M Manual
31	Megholi(UG)	NR	NR	NR	NR
32	Radhanagari(AG)	NR	R	NR	NR
33	Tulasi	NR	R	NR	NR
34	Upavade	NR	NR	R	NR
35	Warana	NR	R	R	NR
36	Dudhaganga	NR	NR	R	NR
37	Ambewadi	NR	NR	NR	NR
38	Chikotra	NR	R	NR	NR
39	Ghatprabha(Phatakwadi)	NR	NR	NR	NR
40	Jambre(UG)	NR	NR	NR	NR
41	Jangamhatti	NR	NR	NR	NR
42	Keloshi Bk.	NR	NR	NR	NR
43	Patgaon	NR	R	NR	NR
44	Kitwad-2	NR	NR	NR	NR
45	Kondoshi	NR	NR	NR	NR
46	Lakikatti	NR	NR	NR	NR
47	Paleshwar	NR	NR	R	NR
48	Phaye	NR	NR	NR	NR
	CE WR PUNE Total	**48**	**48**	**48**	**48**
	(R)Received	**5**	**17**	**9**	**5**
	(NR) Not Received	**43**	**31**	**39**	**43**
	(AG)Auto Gates				
B1)	**B) C.E.(SP) Pune**				
	1) S.E. KIC ,Pune				
1.	Manikdoh	NR	NR	NR	NR
2.	Vadaj	NR	NR	NR	NR
3.	Yedgaon	NR	NR	NR	NR
4.	Dimbhe	NR	NR	NR	NR
5.	Pimalgaonjoge	NR	NR	NR	NR
6.	Ghod	NR	NR	NR	NR
7.	Chilewadi	NR	NR	NR	NR
8.	Sina				
	2) S.E.Satara I.P.C., Satara				
9.	Nagewadi	NR	NR	NR	NR
10	Uttarmand	NR	NR	NR	NR
11	Morana(Gureghar)	NR	NR	NR	NR
12	Tarali	NR	NR	NR	NR
13	Mahu	NR	NR	NR	NR
14	Hateghar	NR	NR	NR	NR
	4) S.E. CADA, Solapur				
15	Ekrukh (UG)	NR	NR	NR	NR

	Name of Dam (Corporation /C.E./S.E.)	Completion Report	Record Drawing	Data Book	O & M Manual
16	Bori	NR	NR	NR	NR
17	Ujjani	NR	NR	R	R
	5) SE OIC Osmanabad				
18	Sina Kolegaon	NR	NR	NR	NR
	CE SP PUNE Total	**18**	**18**	**18**	**18**
	(R)Received	0	0	1	1
	(NR) Not Received	18	18	17	17

P1)	PRIVATE DAMS				
	Tata Power Co, Ltd. Khopoli				
	1) Mulsi	NR	NR	NR	NR
	2) Shirvata(AG)	NR	NR	NR	NR
	3) Thokarwadi	NR	NR	NR	NR
	4) Walvan(AG)	NR	NR	NR	NR
	Ambevally				
	5)Ambewane	NR	NR	NR	NR
	6)Visakhar	NR	NR	NR	NR
	7)Koliwali	NR	NR	NR	NR
	Private Pune Total	**7**	**7**	**7**	**7**
	(R) Received	**0**	**0**	**0**	**0**
	(NR) Not Received	**7**	**7**	**7**	**7**

Annual Consolidated Health Status Report of Identified Large Dams In Pune Region 2019 – 20

PART – 6

Status of DHARMA: Dam Health And Rehabilitation Monitoring Application

Part – 6

DHARMA: Dam Health And Rehabilitation Monitoring Application

6.1 Introduction-

Dam health & Rehabilitation Monitoring application (DHARMA) is a web based asset management software to support the effective collection and management of authentic asset and health data for all large dams in India and address key dam safety challenges of-

i. Insuring Completeness of information.
ii. Bring stake holders together
iii. Effectively managing asset inventory.
iv. Assess soundness of dame health.

6.2 Design and Development-

DHARMA software will consist of seven modules. -

i. Project features
ii. Project portfolio
iii. Engineering features.
iv. Asset health.
v. Asset rehabilitation.
vi. Stake holders and
vii. Document library.

The first three modules (i to iii consist of mostly static data, to be enter once and rarely undergo a change where as modules iv) and v) will be dynamic and requires regular updating with information associated with inspections investigations, instrumentation and rehabilitation works. Modules vi) and vii)contain information useful for reference.

DHARMA

Integrated Approach for Asset Management of Dams in India

Information Bulletin No.4 January 2019

INSIDE

The Dam Health and Rehabilitation Monitoring Application (DHARMA)

is being developed as a part of the institutional strengthening component of the Dam Rehabilitation and Improvement Project (DRIP). DRIP is an initiative undertaken by the Ministry of Water Resources, River Development and Ganga Rejuvenation, Government of India with the financial assistance of The World Bank.

DHARMA has been designed and developed to enhance the capacity of individuals and organisations throughout India to manage their dam assets scientifically and professionally so as to sustain advantages of dams. This Information Bulletin No.4 has been prepared by the Central Project Management Unit (CPMU) to present an overview of the purpose and content of the software.

Project DRIP Dam Rehabilitation & Improvement Project

Financial Assistance THE WORLD BANK IBRD • IDA | WORLD BANK GROUP

Technical Assistance egis

What is DHARMA?

Introduction

There are 5264 large dams in operation in India and 437 are under construction. In addition, there are several thousand smaller dams. All these dams are vital for ensuring the water security of the country in a sustainable manner and regulating water during the rainy season to prevent floods.

Today, many of these dams are facing various structural deficiencies as well as shortcomings in the operation and monitoring facilities. There are also inefficiencies in the monitoring of real-time information regarding dam health and ongoing rehabilitation measures. These conditions affect the safety of the structures and pose risks to life and properties of people downstream of dam.

In April 2012, the six-year **Dam Rehabilitation and Improvement Project (DRIP)** was launched at an estimated cost of 2100 Crore INR for assisting dam-owning agencies in rehabilitating selected dams across selected states.

In 2017, the project has been extended by two years, until June 2020, to finish all of the programmed rehabilitation works on 223 dams in 7 states, with a revised cost of 3466 Crore INR.

In this context, the **Dam Health and Rehabilitation Monitoring Application (DHARMA)** has been designed and developed *to enhance the capacity of individuals and organisations throughout India to manage their dam assets* scientifically and professionally so as to sustain advantages of dams (irrigation and water supply, flood control, hydropower etc.) and prevent disasters.

Figure 1: DHARMA capturing information

Why is it needed ?

Managing the Dam Safety of over five thousand dams entails a number of obstacles to overcome. The prime challenge is to deliver the precious dam health information collected during the site inspection to the State and Central **Dam Safety Organisations (DSOs)** in a timely and secure manner. Improving this transmission of information thanks to data analysis will generate a more precise monitoring of the dams' health in DSOs as well as a more informed prioritization of rehabilitation works. To accomplish this goal, the four main challenges listed below must be overcome; it is DHARMA's goal to address these challenges.

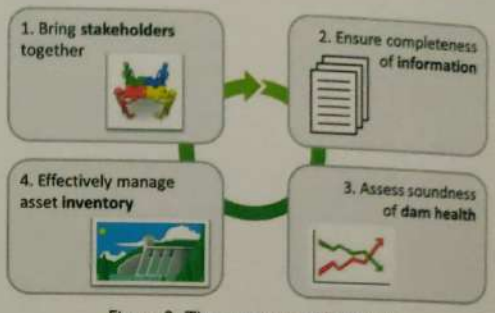

Figure 2: The purposes of DHARMA

1. Bring Stakeholders Together

DHARMA will ensure that details of all stakeholders are recorded and maintained. Such details may pertain to individuals as well as organisational entities associated with dam planning and design, construction, operation and maintenance, and rehabilitation.

2. Ensure Completeness of Information

DHARMA will enable gathering and updating of dam asset information in a centralised and structured manner so as to overcome limitations of multiplicity of agencies, wide geographical spread, voluminous data, varied terminologies and units, unknown and mismatched time reference and inconsistent formats.

3. Assess Soundness of Dam Health

DHARMA will ensure prompt capturing of inspection and investigation data directly by the 'Dam Health Engineers' and provide tools for correct analysis and interpretation of this time dependent data.

4. Effectively manage Asset Inventory

DHARMA will provide a complete data collection and management platform for assimilation of varied information for every dam component across all dam projects, also thereby benefiting from the insights and learning curves of a wider stakeholder spectrum.

The Users of DHARMA

DHARMA User Types

DHARMA has been designed for individuals and organisations at **Dam, State and Central level**. Owing to the large number of dams, several thousand individuals are expected to use the software; they will be assigned to seven main user roles across three tiers, as presented below:

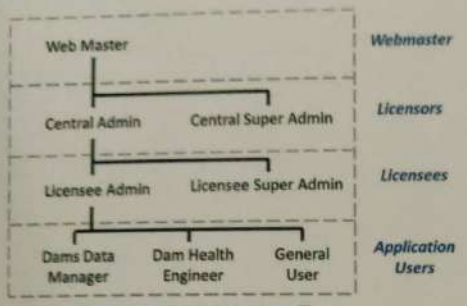

Figure 3: DHARMA User Types

The highest tier **'Licensors'** includes the 'Central Admin' and 'Central Super Admin' roles — these are based in the Central Dam Safety Organisation (in Central Water Commission) and are responsible for administrative control and distribution of the DHARMA software. One of the responsibilities of the 'Licensors' is to grant licenses to the second **'Licensees'** tier which includes the 'Licensee Admin' and 'Licensee Super Admin' roles. These are typically members of Central or State dam owning organisations (eg. State Water Resources Departments). Licensees, in turn, can add three types of **'Application Users'** namely 'Dams Data Manager', 'Dam Health Engineer' and 'General User' who are responsible for managing and updating the data in DHARMA.

A clear distinction is made between the 'Dams Data Manager' (DDM) and 'Dam Health Engineer' (DHE). The **Dams Data Manager**'s role is to manage the static information of dams, i.e. information that is entered once into the software and rarely changes (such as Spillway Capacity, Location of Dam, Access…). He/she is authorized to manage the data of the first three modules, presented in the next page. The **Dam Health Engineer**'s role is to manage dynamic data of a Dam, i.e. data that requires regular updates such as inspection report, investigations, instrumentation data…

DHEs are able to enter their inspection report directly on the software. A mobile application will also be developed for them to enter and upload their inspection report directly from dam site. An option to upload geo-referenced data and photos of each deficiency will be included so as to report deficiencies as precisely as possible.

	Dams Data Manager (DDM)	Dam Health Engineer (DHE)
Type of Data handled	**Static Data**	**Dynamic Data**
Modules	**Modules 1 to 3**: Project Features, Project Portfolio, Engineering Features	**Modules 4 to 7**: Asset Health, Asset Rehabilitation, Stakeholders, Document Library
Tasks assigned	• Entering **high level information** of the dam (Height, location, access, ...) • Creating the **Portfolio** of the Dam by assembling the different DHARMA **components** to match the physical layout of the dam • **Geo-referencing** of each component on Google Maps and adding **photos** • Entering the **technical details** of each **component** (Dam Block, Spillway, Gallery...)	• Entering the regular **pre** and **post monsoon inspection reports** • Entering and updating the **O&M**, **Investigations, Instrumentation, and EAP** data of the dam • Entering the details of **rehabilitation works** implemented at the dam • Entering the **contact** details of the dam's staff and suppliers in the **Stakeholders** Module • Uploading all important **dam documents** in pdf format into the Document Library Module

Figure 4: Distinction between DDM and DHE

DHARMA Modules

DHARMA consists of the **7** modules and **2** additional data analysis tools presented below:

Static Modules

1. Project Features

This module gives the static, high-level details of a dam project, such as the Dam's Height, Location, Access details… The General, Location and Financial information will be stored for all projects as well as the details of specific benefits provided by each dam: Irrigation, Hydropower, Navigation, Water Supply, Industrial, Tourism, Flood Control, Fishing, and Other Benefits.

2. Project Portfolio

It allows the Dams Data Manager to describe the make-up of his/her dam project using seventeen building blocks, the DHARMA components (Figure 6). Each component is added and organized in layers, similar to the MS Windows Explorer menu. For each component, the user can locate its exact position on Google Maps, upload pictures and schematics.

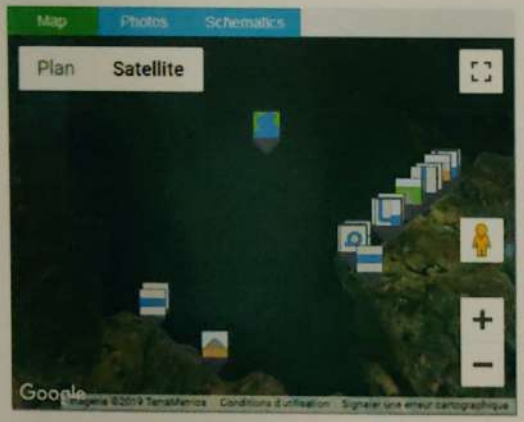

Figure 5: DHARMA Project Portfolio Map

3. Engineering Features

This module contains the technical details associated with each of the components entered in the Project Portfolio module. For example, whereas the name, location, photos and schematics of a storage reservoir would be entered in the Project Portfolio module, it is in Engineering Features that the volumes, elevations and dimensions are provided.

Dynamic Modules

4. Asset Health

This module supports the creation of regular pre and post-monsoon inspections and specific inspections. In this module, the Dam Health Engineers can also upload Instrumentation, Operation & Maintenance (O&M) and Emergency Action Plan (EAP) data, which is attached to the components from the Project Portfolio.

5. Asset Rehabilitation

Also to be administered by designated Dam Health Engineers, it captures the details of any rehabilitation works (minor or major) at the dam project. The need for future rehabilitation works should be identified in the inspection forms of the asset health module however, previous or historic rehabilitation works (pre-DHARMA) can also be entered into the module independently.

6. Stakeholders

The purpose of this module is to capture details of all individuals and organizations involved with each dam project including dam owners, operators, designers, consultants, contractors, and suppliers. Simple forms are provided explaining the nature and duration of involvement of each party and their contact details.

7. Document Library

The last module enables users to upload important designs and documents into a user-friendly database from where they can be easily retrieved using filters and other search criteria. An additional functionality will allow users to tag the documents such that they can be retrieved from other relevant sections of the software using hyperlinks.

Data Analysis Tools

The **Dashboard** enables Dam Safety Organisations to monitor the data-entry for each dam and to pinpoint dams with critical deficiencies.

Figure 6: DHARMA Static Dashboard

The **Report Generator** creates lists of dams responding to selected criteria. (State, Purpose, Completion Year…)

Implementation of DHARMA

The success of DHARMA particularly depends on its uptake by Dam Data Managers and Dam Health Engineers around the country (cf. page 2, the users of DHARMA) as they will be in charge of entering all the data. The implementation of the DHARMA application is therefore as important as its design and development.

The first two modules were launched in May 2016 then, the team of designers, which gathers both software developing and civil engineering skills, started to perform training sessions around India in order to make the users familiar with the application.

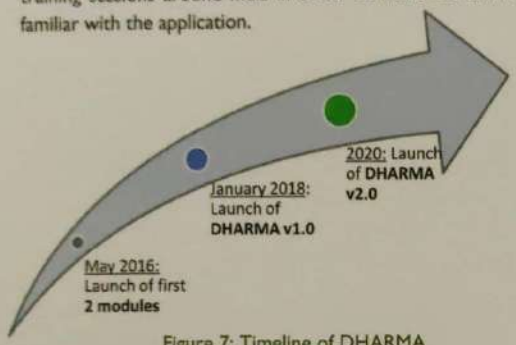

Figure 7: Timeline of DHARMA

DHARMA v1.0 was launched nationally in January 2018, during the previous International Dam Safety Conference in Trivandrum and following the successful migration of the National Register of Large Dams (NRLD) in 2017. Since then 24 trainings were held for 865 participants including 4 trainings in non-DRIP Sates (Rajasthan, Maharashtra & Gujarat). Thanks to these trainings sessions, today 600 people use DHARMA actively and 1546 dams are assigned (out of 5236 large dams in India).

The trainings take place in the State Capitals, they are arranged by the Implementing Agencies which are part of the Dam Rehabilitation and Improvement Project (DRIP). Participants of the trainings (ranging from 30 to 90 for each session) receive hands-on sessions for each module and tool, interactive quizzes and presentations on the purpose and benefits of DHARMA.

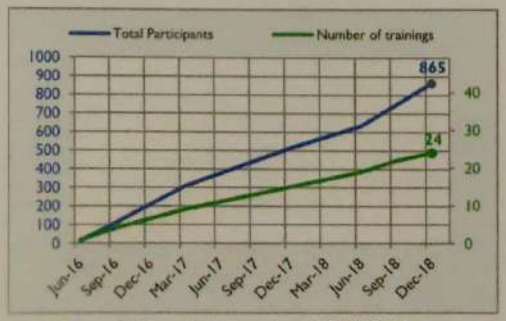

Figure 8: Cumulative number of DHARMA users

The **version 2.0** of DHARMA is to be implemented by December 2020. This version is currently under design and is likely to consist of 4 additional "sub-modules" and 3 additional tools.

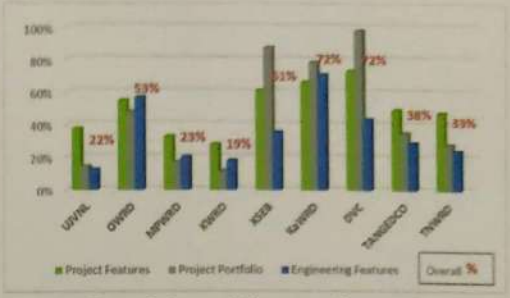

Figure 9: Status of data entry Agency-wise

Here is a list of all Implementing Agencies already using DHARMA:

	Implementing Agencies	Dams assigned to agency	Dams with entered data	Total Users
Agencies in DRIP	Odisha Water Resources Department	204	182	204
	Karnataka Water Resources Department	231	184	122
	Tamil Nadu Water Resources Department	84	84	91
	Madhya Pradesh Water Resources Dpt	887	42	85
	Kerala Water Resources Department	20	20	63
	Uttarakhand Jal Vidyut Nigam Limited	6	4	33
	Kerala State Electricity Board	36	36	25
	Tamil Nadu Elec Gen & Distrib Corp	38	38	15
	Damodar Valley Corporation	4	4	8
Agencies not in DRIP	Rajasthan Water Resources Department	211	131	90
	Maharashtra Water Resources Department	2354	60	49
	Gujarat Engineering Research Institute	631	21	31
	Punjab Water Resources Department	15	14	16
	Bhakra Beas Management Board	4	4	7
	Uttar Pradesh Irrigation and WRD	133	1	3
	National Hydroelectric Power Corporation	22	22	3
	Bihar Water Resources Department	26	1	3
	Meghalaya Power Gen Corp Limited	7	-	2
	Narmada Hydroelec Dvpt Corporation Ltd	-	-	2
	Telangana Irrigation and CAD Department	174	-	2
	Himachal Pradesh State Electricity Board	2	-	2
	Karnataka Engineering Research Station	-	-	2
	Chhattisgarh Water Resources Department	258	-	1
	Goa Water Resources Department	6	-	1
	Jammu and Kashmir Water Resources Dpt	1	-	1
TOTAL		5354	848	861

Who can I contact to know more?

This is the fourth information bulletin on DHARMA. Development of updated versions of DHARMA and implementation of the software will continue to be taken up in a phased manner under the guidance of the **DHARMA Development Group (DDG)** and **DHARMA Implementation Group (DIG)**. All DRIP dams are expected to be incorporated into DHARMA before the completion of DRIP.

In the meantime, further information on the Dam Rehabilitation and Improvement Project (DRIP) can be found at www.damsafety.in. For further information on DHARMA, please also visit our dedicated website '**damsafety.in/dharma**.' where you can download the latest **User Manual**.

For any other queries, the DHARMA team can be contacted through the details provided below.

For further information please contact:

Project Director, DRIP and DSR Director, Central Water Commission

3rd Floor, New Library Building, R.K. Puram, New Delhi—110066

Telefax: +91-11-26192633

Email: dir-drip-cwc@nic.in Website: www.damsafety.in

DRIP

Dam Rehabilitation & Improvement Project

TABLE – 6.4

Data filling status on Dam Health and Rehabilitation Monitoring Application (DHARMA) portal of Pune Region. (Class-1 Dams)

Sr. No	Name of Dam	NRLD registration number	Dharma data filling status (%)	Remarks
[A]Chief Engineer(W.R.)Water Resources Department Pune				
(1)Superintending Engineer, Pune Irrigation Circle, Pune				
(a)Executive Engineer , Pune Irrigation division, Pune				
1.	Jadhavwadi	MH09HH1587	10	
2.	Nira devghar	MH09HH1554	10	
3.	Bhatghar	MH09HH0048	41	
4.	Vadivale	MH09MH1517	11	
5.	Andravalley	MH09HH1622	11	
6.	Kasarsai	MH09MH1373	11	
(b)Executive Engineer , Chaskaman Irrigation division, Pune				
7.	Aralakalmodi	MH09HH1672	9	
8.	BhamaAskhed	MH09HH1559	10	
9.	Chaskaman	MH09HH1522	10	
(c)Executive Engineer , Lift Irrigation Management Division, Pune				
10.	Nazare	MH09MH0453	10	
d) Executive Engineer , Khadakwasala Irrigation Division, Pune 11				
11.	Panshet	MH09HH0310	10	
12.	Khadakvasal	MH09HH 0013	11	
13.	Warasgaon	MH09HH0592	10	
14.	Pawana	MH09HH0311	10	
(e)Executive Engineer, Nira Right Bank Canal Division, Phaltan ,Dist. Satara				
15.	Veer	MH09HH0116	10	
(2)Superintending Engineer, Pune Irrigation Project Circle, Pune				
(a) Executive Engineer, BhamaAskhed dam division, pune				
16.	Temghar	MH09HH1544	10	
(c)Executive Engineer, Niradevghar Project Division, Sangavi(Bhatghar),Tal.Bhor,Dist.Pune				
17.	Gunjavani	MH09HH1552	11	
(3)Superintending Engineer Sangli Irrigation circle, Sangli				
(a)Executive Engineer , Sangli Irrigation Division, Sangli				
18.	Morna (Shirala)	MH09HH1101	11	
(b)Executive Engineer , Tembhu Lift Irrigation Project Managementb Division, Ogalewadi				
19.	Yevati masoli	MH09HH1218	10	
(c)Executive Engineer , Takari Pump House Division No.1, Devrashtre				
20.	Satpewadi barrage	MH09MH2406	07	
(4)Superintending Engineer Kolhapur Irrigation Circle,Kolhapur				
(a)Executive Engineer , Medium Project Division No2, Kolhapur				
21.	Ghatprabha(Phatakwadi	MH09HH 1900	11	
22.	Chikotra	MH09HH1582	10	
23.	Jangamhatti	MH09MH1366	10	
24.	Keloshi Bk.	MH09HH1935	09	
25.	Jambre	MH09HH1921	11	
(b)Executive Engineer, Kolhapur Irrigation Dn.(North) Kolhapur				
26.	Kadavi	MH09HH1541	10	
27.	Kasari	MH09HH1245	11	
28.	Kumbhi	MH09HH1671	10	
29.	Paleshwar	MH09HH1546	11	
30.	Tulashi	MH09HH0726	03	
31.	Upwade	MH09HH1385	03	
32.	Radhanagari	MH09HH0067	10	
33.	Warana	MH09HH1542	14	
34.	Dudhaganga	MH09HH1226	10	

Sr. No	Name of Dam	NRLD registration number	Dharma data filling status (%)	Remarks
(c)Executive Engineer, Kolhapur Irrigation Dn.(South) Kolhapur				
35.	Patgaon	MH09HH1242	10	
36.	Ambewadi	MH09HH1899	11	
37.	Chitri	MH09HH1586	11	
38.	Kitwad-2	-MH09HH1902	11	
39.	Kondoshi	MH09HH1533	10	
40.	Lakikatti	MH09HH1538	11	
41.	Megholi	MH09HH1536	10	
42.	Phaye	MH09HH1629	11	
(5)Superintending Engineer Satara Irrigation Circle, Satara				
a)Executive Engineer, Koyna Irrigation Division Koynanagar				
43.	Koyna	MH09VH0100	50	
44.	Kolkewadi	MH09HH0527	27	
(b)Executive Engineer, Satara Irrigation Division Satara				
45.	Dhom	MH09HH0655	56	
46.	Dhombalkawadi	MH09HH1665	10	
(c) Executive Engineer, Krishna Irrigation Division, Satara				
47.	Urmodi	MH09HH1594	08	
48.	Kanher	MH09HH1141	50	
[B]Chief Engineer(S.P.) Water Resources Department Pune				
(1)Superintending Engineer Kukadi Irrigation Circle Pune				
(a) Executive Engineer, Kukadi Irrigation Div. 1 Narayangaon				
49.	Wadaj	MH09HH1006	11	
50.	Yedgaon	MH09MH0658	11	
51.	Manikdoh	MH09HH1060	51	
52.	Pimpalgaonjoge	MH09MH1520	11	
53.	Dimbhe	MH09HH1558	52	
(b) Executive Engineer, Kukadi Irrigation Div.2 Shrigonda				
54.	Ghod	MH09MH0117	11	
c) Executive Engineer ,Kukadi Irrigation Division No. 2, Shrigonda				
55.	Sina	MH09MH1142	11	
(d) Executive Engineer, Dimbhe Dam Div. Manchar				
56.	Chilewadi	MH09HH1553	11	
(2)Superintending Engineer Satara Irrigation Project Circle, Satara				
(a)Executive Engineer , Minor Irrigation Division, Satara				
57.	Uttarmand	MH09HH1591	10	
58.	Morna(Gureghar)	MH09HH1664	11	
59.	Nagewadi	MH09HH1518	11	
(b)Executive Engineer , Kanher Canal Division No.2, Karwadi,Karad.				
60.	Tarali	MH09HH1666	09	
(c)Executive Engineer, Dhom Canal Division No.2,Satara				
61.	Mahu	MH09HH1588	10	
62.	Hatgeghar	MH09HH1568	11	
(3)Superintending Engineer & Administrator, C.A.D.A. Solapur				
(a) Executive Engineer, Solapur Irrigation Division Solapur				
63.	Bori	MH09MH1650	11	
64.	Ekrukh	MH09MH0007	11	
(b)Executive Engineer, Ujjani Dam Management Division Bhimanagar Dist. Solapur				
65.	Ujjani	MH09HH0843	66	
(4)Superintending Engineer Osmanabad Irrigation Crcle Osmanabad				
(a)Executive Engineer, Sinakolegaon Project Division Paranda Dist.Osmanabad				
66.	Sinakolegaon	MH09HH1673	55	

Annual Consolidated Health Status Report Of Identified Large Dams In Pune Region 2019-20

PART – 7

Status Report of Gates of Various Gated Dams in Pune Region (Including Private Dams)

Part- 7
Status Report of Gates of Various Gated Dams in Pune Region (Including Private Dams)

7.1 General

As per GR.NO.ID/1078/23/8/IMP/2 Dtd.10/09/1980, Dam Safety Organization has been established by Government of Maharashtra for effective monitoring the safety aspects of dam.

As per Maharashtra Government Guidelines and regulation, Chief Engineer (Mechanical), Water Resources Dept. Nashik assigned Dams gate Inspection work to Superintending Engineer, Mechanical Circle, Nashik to assure proper operation and maintenance of Dam gates

Under Superintending Engineer, Mechanical Circle, Nashik Executive Engineer, Inspection unit, Aurangabad and Executive Engineer, Sluice Gate Mfg. Division, Dapodi, Pune are looking after all the inspection works.

Division offices Conduct all Pre monsoon & Post Monsoon Gate Inspection work of Government, Semi Government, & Private Dams and send Reports to related authorities for same.

After Inspection work the observed points or deficiencies are classified into various categories as given below.

Def. Category 1	Dams with Major Deficiencies which may lead to dam failure	Very Serious Defects
Def. Category 2 (2 A)& (2B)	Dams with rectifiable Deficiencies needs immediate attention	Serious Defects (2A)
		Require immediate attention (2B)
Def. Category 3	General Defects	General Defects

In the year of 2019 pre and post monsoon inspection of total 38 gated dams have been carried out by Mechanical Organisation. It is to be noted that Chief Engineer (Mechanical) W.R.D Nashik, prepares independently the detail Health Status Report of all Gated dams inspected by Mechanical Organisation. This report is published and submitted to WRD and circulated to all Concern Chief Engineers.

In this Health Status Report only the dam wise number of deficiencies noted by Mechanical Organisation are given in this part of AHSR. For details regarding the actual deficiencies Health Status Report circulated by Mechanical Organisation shall be referred.

7.2 Overall Health Statues of Gated Dams

38 Class-I Gated dams in the Pune region are inspected by Mechanical Organisation. Category -1 deficiency is not observed on any dam. Category -2 & 3 deficiencies are observed on all the 38 dams. Total 702 Category -2 deficiencies and 1781 Category -3 deficiencies are observed on the dams in the region.

Table No.5.1 shows the dam wise and category wise deficiencies identified in the region.

Table 7.1
Dam wise and Category wise number of Deficiencies identified on Gated Dams in the Pune Region

Sr. No.	Region & Name of Dam	Number of Gated Dams (As per Dam Category)			Report Taken into Account	Dam Category I Deficiencies			Remarks
		Cat-I	Cat-II	Total		Cat-I	Cat-II (2A)&(2B)	Cat-III	
1	2	3	4	5	6	7	8	9	10
1	Wadivale	1		1	Yes	0	40	70	
2	Kasarsai	1		1	Yes	0	18	110	
3	Niradevghar	1		1	Yes	0	20	61	
4	Pawana	1		1	Yes	0	16	35	
5	Panshet	1		1	Yes	0	25	65	
6	Khadakwasla	1		1	Yes	0	47	103	
7	Varasgaon	1		1	Yes	0	43	60	
8	Chaskaman	1		1	Yes	0	30	73	
9	Bhama Askhed	1		1	Yes	0	33	57	
10	Veer	1		1	Yes	0	19	34	
11	Gunjawani	1		1	Yes	0	7	26	
12	Dhom	1		1	Yes	0	10	33	
13	Kanher	1		1	Yes	0	9	24	
14	Koyana Dam	1	--	1	Yes	0	23	7	
15	Kolakewadi	1	--	1	Yes	0	20	11	
16	Kasari	1		1	Yes	0	22	57	
17	Kumbhi	1		1	Yes	0	19	36	
18	Tulshi	1		1	Yes	0	8	30	
19	Warna	1		1	Yes	0	15	43	
20	Dudhganga	1		1	Yes	0	16	55	
21	Chikotra	1		1	Yes	0	11	37	
22	Manikdoh	1		1	Yes	0	63	115	
23	Wadaj	1		1	Yes	0	16	32	
24	Yedgaon	1		1	Yes	0	16	61	
25	Dimbhe	1		1	Yes	0	33	68	
26	Pimpalgaon Joge	1		1	Yes	0	13	118	

Sr. No.	Region & Name of Dam	Number of Gated Dams (As per Dam Category)			Report Taken into Account	Dam Category I Deficiencies			Remarks
		Cat-I	Cat-II	Total		Cat-I	Cat-II (2A)&(2B)	Cat-III	
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
27	Ghod	1		1	Yes	0	2	23	
28	Chilhewadi	1		1	Yes	0	32	60	
29	Uttarmand	1		1	Yes	0	4	25	
30	Morna Gureghar	1		1	Yes	0	3	23	
31	Tarali	1		1	Yes	0	5	33	
32	Mahu	1		1	Yes	0	5	10	
33	Urmodi	1		1	Yes	0	3	27	
34	Dhom Balakawadi	1		1	Yes	0	4	27	
35	Bori	1		1	Yes	0	15	53	
36	Ujani	1		1	Yes	0	21	42	
37	Mulashi	1		1	Yes	0	2	9	
38	Radhanagari	1		1	Yes	0	14	28	Not in list of DSO
39	Thokarwadi	1		1	No				
40	Bhatghar	1		1	No				
41	Satapewadi	1		1	No				
42	Nazare	1		1	No				
	Total -	**42**	**0**	**42**		**0**	**702**	**1781**	

Out of 42 Cat. 1 Gated Dams, total 38 dams are inspected by Mechanical Orgnization.

BHATGHAR DAM