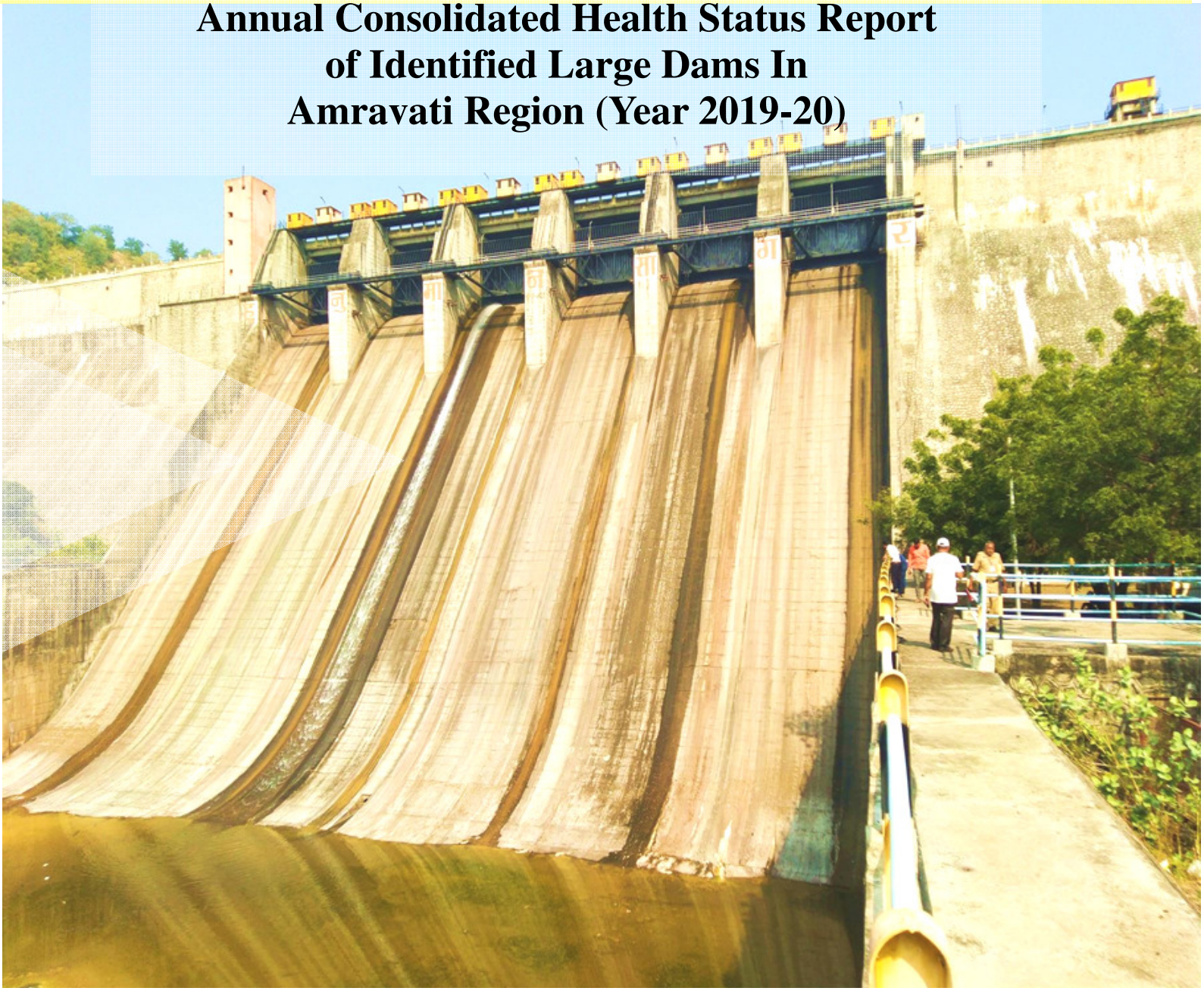
Government of Maharashtra
Water Resources Department

Annual Consolidated Health Status Report of Identified Large Dams In Amravati Region (Year 2019-20)



Wan Dam

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सत्यमेव जयते

महाराष्ट्र शासन
जलसंपदा विभाग

GOVERNMENT OF MAHARASHTRA
WATER RESOURCES
DEPARTMENT

अधीक्षक अभियंता,
धरण सुरक्षितता संघटना,
दिंडोरी मार्ग, नाशिक - ४२२ ००४.
दूरध्वनी (ऑ.): ०२५३ - २५३००३०
फॅक्स : ०२५३ - २५३००३०.
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जा.क्र.धसुसं/धसुविक्र.२ /अमरावती प्रदेश/ धरण स्थिती अहवाल २०१९-२०/९५७/२०२० दिनांक :११/०५/२०२०

प्रति,

१) मुख्य अभियंता , (वि.प्र.) जलसंपदा विभाग,
सिंचनभवन, अप्पर वर्धा कॉलनी, शिवाजीनगर, अमरावती ४४४६०३

२) मुख्य अभियंता , जलसंपदा विभाग,
सिंचनभवन, अप्पर वर्धा कॉलनी, शिवाजीनगर, अमरावती ४४४६०३

विषय :- अमरावती विभागातील पुर्ण झालेल्या वर्ग १ व २ धरणांचा धरण स्थिती अहवाल २०१९- २०

संदर्भ :- महाराष्ट्र शासनाचे इंग्रजी पत्र क्र .पा.वि.१०७७ / २४०२/ १८६७/२ दिनांक १९.१.८२

संदर्भिय शासन पत्रानुसार आपले अधिनस्त अधीक्षक अभियंता व कार्यकारी अभियंत्याकडून हया कार्यालयात प्राप्त झालेल्या अमरावती विभागातील पावसाळा पूर्व व उत्तर २०१९ धरण निरिक्षण अहवालांची छाननी करुन तसेच धरण सुरक्षितता संघटनेकडुन करण्यात आलेल्या Test Inspection नुसार धरण स्थिती अहवाल तयार करण्यात आलेला आहे.

धरण स्थिती अहवालावरुन असे निदर्शनास येते की ; अमरावती विभागातील वर्ग-१ व वर्ग-२ च्या धरणांमध्ये संवर्ग-१ च्या त्रुटी आढळून आल्या नाहीत. मात्र वर्ग -१ मधील **२२** पैकी **९** धरणांमध्ये (४० %) आणि वर्ग - २ मधील **१९०** पैकी **४०** धरणांमध्ये (२१ %) संवर्ग-२ च्या त्रुटी आढळून आल्या आहेत .

धरण सुरक्षिततेसंबंधी क्षेत्रिय स्तरावर उदासिनता दिसुन येते. धरणस्थिती अहवाल २०१८-१९ मध्ये वर्ग- २ च्या त्रुटी आढळुन आलेल्या धरणांचे बाबतीत Action Taken Report मार्च २०२० अखेर पर्यंत प्राप्त झालेत. प्राप्त अहवालांची तपासणी केल्यावर दिसुन येते की ; HSR २०१८ – १९ मध्ये ४४ प्रकल्पांवर १४३ वर्ग – २ च्या त्रुटी आढळुन आल्या होत्या. त्यापैकी फक्त १७ प्रकल्पांवरील वर्ग – २ च्या काही त्रुटींबाबत कार्यवाही प्रस्तावित केल्याचे दिसुन येते. वरीलप्रमाणे वर्ग - २ च्या त्रुटी निराकरणात दुर्लक्ष झाल्याने महाराष्ट्राला तिवरे धरण फुटीस सामोरे जावे लागले. भविष्यात याची पुनरावृत्ती होवु नये म्हणुन धरण सुरक्षिततेसाठी Dam Safety - Action Taken Reports बाबत प्रादेशिक कार्यालयात वेळोवेळी होणा-या मासिक बैठकीत हा विषय अंतर्भुत करुन निदान त्रैमासिक आढावा घेतला जावा ही विनंती. **दोष व त्रुटीं बद्दल त्वरीत कार्यवाही करुन सदर त्रुटींचे निवारण करण्यात यावे आणि अनुपालन / पुर्तता अहवाल या कार्यालयास त्वरीत पाठविण्याबाबत संबधित अधिक्षक अभियंता यांना आपले स्तरावरुन सुचना देणेस विनंती आहे.**

धरण निरीक्षण अहवाल क्षेत्रिय अधिकाऱ्यांकडून प्राप्त होण्यास सर्वसाधारणपणे दिरंगाई होते .त्यामुळे या संघटनेस धरण स्थिती अहवाल तयार करण्यात विलंब लागतो .**तरी कृपया यापुढे धरणाचे निरीक्षण अहवाल विहित नमुन्यात व विहित कालावधीत या संघटनेस पाठविण्याविषयी क्षेत्रिय अधिकाऱ्यांना आपले स्तरावर सुचना निर्गमित व्हाव्यात ही विनंती.** धरण स्थिती अहवाल सर्व संबंधीत मंडळ व विभागीय कार्यालयांना ई-मेल व्दारे पाठविण्यात येत आहे.

११/०५/२०२०
(य. का. भदाणे)
अधीक्षक अभियंता,
धरण सुरक्षितता संघटना,नाशिक ०४

सहपत्र : धरण स्थिती अहवालाची प्रत.

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, विदर्भ पाटबंधारे विकास महामंडळ, नागपूर 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, अकोला पाटबंधारे मंडळ, अकोला
२. अधीक्षक अभियंता, वाशिम पाटबंधारे मंडळ, वाशिम
३. अधीक्षक अभियंता, अमरावती पाटबंधारे प्रकल्प मंडळ, अमरावती
४. अधीक्षक अभियंता, यवतमाळ पाटबंधारे मंडळ,यवतमाळ
५. अधीक्षक अभियंता, यवतमाळ पाटबंधारे मंडळ (व्यवस्थापन), यवतमाळ
६. अधीक्षक अभियंता, उर्ध्व वर्धा पाटबंधारे मंडळ, अमरावती
७. अधीक्षक अभियंता, बुलडाणा पाटबंधारे प्रकल्प मंडळ, बुलडाणा
८. अधीक्षक अभियंता, महाराष्ट्र जीवन प्राधिकरण मंडळ, अमरावती
९. अधीक्षक अभियंता, यात्रिकी मंडळ, , नाशिक

यांना माहितीसाठी व पुढील योग्य त्या कार्यवाहीसाठी अहवालासह सस्नेह अग्रेषित.

२/- कृपया वरील अहवालाची प्रत मिळाल्याची पोहच या कार्यालयास पाठवावी हि विनंती.

प्रत,

१. कार्यकारी अभियंता, बुलडाणा पाटबंधारे विभाग, बुलडाणा
२. कार्यकारी अभियंता, अकोला पाटबंधारे विभाग, अकोला
३. कार्यकारी अभियंता,यवतमाळ पाटबंधारे विभाग,यवतमाळ
४. कार्यकारी अभियंता, लघु पाटबंधारे विभाग ,अकोला
५. कार्यकारी अभियंता, वाशिम पाटबंधारे विभाग , वाशिम
६. कार्यकारी अभियंता, लघु पाटबंधारे विभाग, (बांधकाम),वाशिम
७. कार्यकारी अभियंता, लघु पाटबंधारे विभाग, कारंजा लाड,जि.वाशिम
८. कार्यकारी अभियंता,यवतमाळ प्रकल्प बांधकाम विभाग,यवतमाळ
९. कार्यकारी अभियंता, उर्ध्व वर्धा धरण विभाग, अमरावती
१०. कार्यकारी अभियंता, अमरावती मध्यम प्रकल्प विभाग, अमरावती
११. कार्यकारी अभियंता, अमरावती प्रकल्प बांधकाम विभाग अमरावती
१२. कार्यकारी अभियंता, पाटबंधारे प्रकल्प व जलसंपत्ती अन्वेषण विभाग, अमरावती
१३. कार्यकारी अभियंता, लघु पाटबंधारे विभाग , बुलडाणा
१४. कार्यकारी अभियंता, अरुणावती प्रकल्प विभाग,दिग्रस जि.यवतमाळ
१५. कार्यकारी अभियंता, बेंबळा प्रकल्प विभाग,यवतमाळ
१६. कार्यकारी अभियंता,लघु पाटबंधारे विभाग,पुसद जि.यवतमाळ
१७. कार्यकारी अभियंता, मध्यम व लघु पाटबंधारे प्रकल्प विभाग, अचलपूर जि. अमरावती
१८. कार्यकारी अभियंता, महाराष्ट्र जीवन प्राधिकरण व्यवस्थापन विभाग ,यवतमाळ

दोष व त्रुटी बद्दल त्वरीत कार्यवाही करुन अनुपालन / पुर्तता अहवाल या कार्यालयास त्वरित पाठवावा ही विनंती.

२/- सदर अहवालाची प्रत ई-मेल व्दारे पाठविण्यात आलेली आहे.

प्रत -

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

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 Amravati 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 this Organisation 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 of Class-I Dams in Amravati Region.

Part-VI: Data filling status on DHARMA Portal.

Part-VII: Annual Report of Inspections done by Mechanical Organisation. Deficiency Category-I & II from Health Status Report made available by Mechanical.

3. This report provides condensed summary of dam deficiencies noticed during inspection carried out by field officer and dam safety organisation 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 persused 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 **212** Class-I & II dams owned by WRD and also covers all private dams inspected by DSO twice in the year.

7. In Amravati region 22 Class- I & 188 Class-II dams of Government & 2 Class-II private dams are in existence. Pre & post monsoon inspection reports of all the dams have been received. & scrutinised 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 numbers 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	Cat-III	Cat-I	Cat-II	Cat-III
1	W.R.D	2018	22	181	203	00	09	22	00	34	175
		2019	22	188	210	00	09	22	00	39	172
2	Private										
	M.J.P	2018	00	02	02	00	00	00	00	01	02
		2019	00	02	02	00	00	00	00	01	02
Grand Total		2018	22	183	205	00	09	22	00	35	177
		2019	22	190	212	00	09	22	00	40	174

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	W.R.D	2018	00	00	00	30	111	141	122	689	811
		2019	00	00	00	29	120	149	132	725	857
2	Private										
	M.J.P	2018	00	00	00	00	02	02	00	15	15
		2019	00	00	00	00	02	02	00	15	15
Grand Total		2018	00	00	00	30	113	143	122	704	826
		2019	00	00	00	29	122	151	132	740	872

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

Sr. 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	Total	Cl I	Cl II	Cl I	Cl II	Total	Cl I	Cl II	Ttl	Cl I	Cl II	Total
1	WRD	2018	17	00	17	17	00	00	00	00	390	00	390	802	00	802
		2019	17	00	17	17	00	00	00	00	284	00	284	1016	00	1016
2	Private															
	M.J.P	2018	00	00	00	00	00	00	00	00	00	00	00	00	00	00
		2019	00	00	00	00	00	00	00	00	00	00	00	00	00	00
Grand Total		2018	17	00	17	17	00	00	00	00	390	00	390	802	00	802
		2019	17	00	17	17	00	00	00	00	284	00	284	1016	00	1016

9. Observations / Findings in HSR-2019

9.1 It is seen that in Amravati Region, there is no dam having Category-I deficiency. It is observed that 49 Class-I & II dams (23.11 %) are having major deficiencies of Category- 2.

9.2 As per HSR 2018, in 44 dams (Class-I & II dams), 143 numbers of deficiencies were observed. Field officers sent all action taken reports but after scrutiny it is observed that, only in 17 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.) 17 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 organisation. As such, the deficiencies and action taken thereof is the sole responsibility of the field officers.

10. 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 intiate 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 are 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: 08 /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
Amravati Region 2019-20

PART – 1

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

PART – 1 : Action Taken Report on Annual Health status Report 2018 of Identified Large Dams

Amravati Region

1.0 General

The Annual Health Status Report of Amravati Region for the year 2018 was prepared, submitted and circulated to all field officers and same was submitted to Government of Maharashtra vide letter No. DSO/DSD-2/Amaravati/StatusReport-2018-19/237 Dtd. 31/05/2019 by Dam Safety Organisation. 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 be sent to DSO only after careful scrutiny at the level of Chief Engineer. The agency wise no of dams having major deficiencies as per HSR 2018 and status of compliance is given in Table 1.1

In Amravati region there are 205 (Class-I 22& Class-II 183) large dams.out of these dams,44 (Class-I 9 & Class-II 35) dams have major deficiencies.Action taken reports of27 dams are not received from field officers. Agencywise list of these 27 dams is given in Table 1.2

1.1 Action Taken Report on Defeciencies of Large Dams Class I

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

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

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

Only in 05 dams some deficiency of Category-II were attended by field officers.

Agencywise list of dams is given in Table 1.4

1.2 Action Taken Report on Defeciencies of Large Dams Class II

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

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

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

Only in 12 dams some deficiency of Category-II were attended by field officers.

Agencywise list of dams is given in Table 1.6

1.3 Action Taken Report on Defeciencies of Private Large Dams

In Amravati region, there are 02 private dams. All these dams are classified as Class-II type.

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

This region does not have Class-I private dam. (Table 1.7)

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

This region does not have Class-I private dam. (Table 1.8)

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

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

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

No such dams under this category is reported. 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 –2019 inspection reports.

Table - 1.1

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

Sr. No	Agency	Major deficiencies reported in Large Dams			Status of Deficiencies removal as per compliance report received in DSO											
					Physically fully completed			Physically partly completed			Administrative action initiated			Dames whose Deficiencies not Complied.		
		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] C.E (S.P.),W.R,Amaravati																
(1)	A.I.C. Akola	5	20	25	0	1	1	0	1	1	1	3	4	4	15	19
(2)	W.I.C. Washim	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2
(3)	A.I.P.C. Amravati	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[B] C.E W.R,Amaravati`																
(1)	Y.I.C.(M) Yavatmal	2	7	9	0	0	0	0	1	1	2	4	6	0	2	2
(2)	B.I.P.C. Buldana	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(3)	Y.I.C. Yavatmal	0	3	3	0	0	0	0	0	0	0	0	0	0	3	3
(4)	U.W.I.C	2	2	4	0	0	0	1	1	2	1	1	2	0	0	0
Govt.Total		**09**	**34**	**43**	00	01	01	01	03	04	04	08	12	**04**	**22**	**26**
Private																
(1)	M.J.P.Circle. Amravati	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
Private Total		**0**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**
Grand Total		**9**	**35**	**44**	**0**	**01**	**01**	**01**	**03**	**04**	**04**	**08**	**12**	**04**	**23**	**27**

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 awaited**	**Total no of dams**	**Division Office**	**Compliance report awaited**	**Total no of dams**
Govt. Dams [A] Chief Engineer (S.P.) Amravati				**Govt. Dams [A] Chief Engineer (S.P.) Amravati**		
1	**2**	**3**		4	5	6
1	**A.I.C. Akola**	1)Katepurna 2)Dagadparva 3)Mun 4) Pentakli	04	B.I.D. Buldhana	1) Mas 2) Godada 3) Rajura 4)Haralkhed 5)Mandwa 6)Savangimali-1 7)Savangimali-2 8) Shivani Armal 9)Kardi 10) Bramhanwada	10
				A.I.D. Akola	1) Nirguna 2) Uma 3)Pimpalgaon chambhare 4) Sisa Udegaon 5) Ghota	05
2	**W.I.C. Washim**	--	00	E.E.WID Washim	1) Rui 2) Waigoul	02
				E.E. MID Karanjalaad	--	00
[B] Chief Engineer (Water Resources), Amravati				**[B] Chief Engineer (Water Resources), Amravati**		
1	**Y.I.C.(M) Yavatmal**	--	00	Y.I.D. Yavatmal	1) Nignoor 2) Deogaon	02
				Arunavati P.D. Digras	--	-
2	**Y.I.C. Yavatmal**	--	00	YPCD Yavatmal	--	-
				MID. Pusad	1) Kali (D) 2) Amadapur 3) Pimpalgaon	03
3	**U.W.I.C. Amravati**	--	00	M&MID Achalpur	—	00
		Total..	**04**		Total..	22
Private Dams				**Private Dams**		
(1)	**M.J.P.Circle. Amravati**	---	00	M.J.P. Yavatmal	1) Nilona	01
		Total..	00		Total..	01
		Grand Total	**04**		**Grand Total**	**23**

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 is reported ----------						

Table 1.4

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

Sr. No	Dam Features	Date of Inspection	Main component of Dam	Observations / Significant Deficiencies Noticed	Remedial Measures Suggested	Implimentation Status
1	2	3	4	5	6	7
[A]CHIEF ENGINEER (S.P), AMRAVATI (1) SUPERINTENDING ENGINEER A.I.C.AKOLA. (a) EXECUTIVE ENGINEER, BULDANA IRRIGATION DIVISION, BULDANA						
1	Name :- **Gyanganga** Dist ;- Buldhana Year of Completion: **1971** Location Longitude:: **78° 03' 00"** Latitude: **20° 32' 30"** Height: **42.11** m Gross capacity: **36.264 Mm³** Designed Spillway capacity: 1742 **m³/sec** **(Ungated)** Sr. No. in National register oflarge Dams 2009) :- **MH09HH0267**	15/05/2018 17/01/2019	W.W.bar	1) On D/S of concrete apron there is scouring noticed and is in progress.(A17) 2) Foundation to guide wall damaged.Some erosion observed(A16) 3) Approach road to dam site as well as HR portion is heavily damaged.(B6)	If erosions are close to the EDA of spillway or waste weir bar, protective measures shall be undertaken to prevent progressive damage. ----------do---------- Repairs to road shall be done.	Repair work is proposed in DRIP-II ------ do ------ ------ do ------

Sr. No	Dam Features	Date of Inspection	Main component of Dam	Observations / Significant Deficiencies Noticed	Remedial Measures Suggested	Implimentation Status
1	2	3	4	5	6	7
[A]CHIEF ENGINEER (WATER RESOURCE), AMRAVATI (1) SUPERINTENDING ENGINEER Y.I.C.(M) YAVATMAL (a) EXECUTIVE ENGINEER, ARUNAVATI PRO.DN. DIGRAS						
2	Name :- **ARUNAVATI** Dist.:- Yawatmal. Year of Completion:**1994** Location Longitude: **77° 48' 00"** Latitude: **20° 07' 00"** Height**: 29.58 m** Gross capacity: **198.39 Mm^3** Spillway capacity: **5563m^3/sec** **(Gated)** Sr. No. in National register oflarge Dams 2009) :- **MH09MH1343**	22/05/2018 27/12/2018	Earthen Dam Outlet	1)Relief wells are found blocked(A5) 2)Leakages are observed in service gate of RBC outlet. (A4) 3) Stem rod for lifting RBC gate is not straight. (B5) Operation of outlet gate of RBC is not smooth. (B5)	Necessary repairs to be done. Itshould be cleaned and surge immediately Necessary repairs to be done. Refer to Mech. Wing. ---------- do ----------	Relief wells surging, Jetting & some new wells are proposed in DRIP- II Refered to Mechnical wing for necessary repair. ----- do ------

Sr. No	Dam Features	Date of Inspection	Main component of Dam	Observations / Significant Deficiencies Noticed	Remedial Measures Suggested	Implimentation Status
1	2	3	4	5	6	7
(b) EXECUTIVE ENGINEER, Y.I.D. YAVATMAL						
3	Name :- **LOWER PUS** Dist ;- Yavatmal. Year of Completion: **1983** Location Longitude: **77° 40' 00"** Latitude: **19° 49' 00"** Height: **28. 00** m Gross capacity: **81.16 Mm³** Designed Spillway capacity: **5437 m³/sec** **(Gated)** Sr. No. in National register oflarge Dams 2009) :- **MH09MH1012**	19/06/2018 10/01/2019	Earth Dam. Spillway gate EDA Wall	1)Relief wells are not functioning.(A5) 2)Leakages appear from gate no 1 to 7.Rubber seals should be replaced. (B12) 3) Concrete surface of stilling basin and apron not in good condition. (A14) 4) There is tendency of water to undercut the end of wall.Foundation erosion or scour noticed in vicinity of wall.Surface erosion /damaged cause to face of body of wall. Wall shows symtoms unusual settlement development of crack & tilting. (A16)	Cleaning and surging of relief wells to be done immediately for ensuring effective functioning of wells. Refer to mechanical wing. Need tobe repaired. Necessary repairs to be carried out & precaution to be taken to avoid scouring. Refer to S.E. M,D CDO Nashik for getting remedial measures.	Special repair estimate submitted to Chief Engineer & is under compliance. ------ do -------- ------ do -------- ------ do --------

Sr. No	Dam Features	Date of Inspection	Main component of Dam	Observations / Significant Deficiencies Noticed	Remedial Measures Suggested	Implimentation Status
1	2	3	4	5	6	7
(2) SUPERINTENDING ENGINEERUWIC YAVATMAL (a) EXECUTIVE ENGINEER, Med& Mnor Irr. Pro.Dn .Achalpur						
4	Name :- **Chandrabhaga** Dist.:- Amarawati. Year of Completion: **2005** Location Longitude: Latitude: Height**: 55.35m** Gross capacity: **41.427Mm^3** Spillway capacity: **1239 m^3/sec** **(Gated)** Sr. No. in National register oflarge Dams 2009) :- **MH09HH1801**	29/04/2018 16/12/2018	Body wall Outlet	1) Leakages observed in outlet conduit & well staining. Leakage from condute pipe is observed at D/S of HR (ICPO). (A4) 2) Vibratation & noise noticed during service gate operation and service gate aligment (B5)	Necessary repairs to be done. Refer to Mech. Wing.	Repair work is proposed in DRIP-II ------ do --------
5	Name :-**Purna Medium proj.** Dist.:- Amarawati. Year of Completion: **2006** Location Longitude: Latitude: Height**: 52.00 m** Gross capacity: **41.759 Mm^3** Spillway capacity: **5450m^3/sec** **(Gated)** Sr. No. in National register oflarge Dams 2009) :- **MH09HH1319**	30/04/2018 27/12/2018	Earth Dam Spillway gate River Outlet	1) U/S Pitching has settled in between RD 400m to 800m.& RD1300m to 2500m.(B3) 2)U/S slope between RD 730m to 847m. andRD1350m to 1395m is showing bulging & pitching in this portion has setteled. (B3) 3) 90% porous pipes are chocked .(A9) 4) Leakages through spillway radial gate no. 4 (B12) 5) Emergency gateis not in working condition. (B5)	Section needs to be stored at designed profile. Section needs to be stored at designed profile. Necessary repairs to be done. Necessary repairs to be done. ----------do---------- ----------do----------	Proposed in special repair estimate ------ do -------- Work is completed Refered to Mechnical wing for necessary repair. ------ do --------

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	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
[A] CHIEF ENGINEER (S.P.) AMRAVATI **(1) SUPERINTENDING ENGINEER A.I.C AKOLA** (a) **EXECUTIVE ENGINEER, A.I.D. ,Akola.**						
1	Name:-**Tuljapur** Year of completion :- **1975** Location : - Longitude :- **77° 55' 00"** Latitude :- **20° 27' 00"** Height :-**15.00 m.** Gross capacity :- **0.90 Mm^3** Design Spillway capacity :- **102 cumecs** Sr. No. in National register oflarge Dams 2009) :- **MH09MH0467**	18/04/2018 07/12/2018	Earth Dam W.W. & T.C.	1) 1 to 2 cusec leakages noticed near hill on D/S slope @ RD 04m to 50m . (A1) 2) Coping of W.W. bar is damaged at some places(B7) 3).Dislocation of pitching on U/S of many places noticed (B3)	Necessary repairs shall be carried out to stop the leakage. Necessary repairs shall be carried. Necessary repairs shall be carried.	Provision made in estimate under DRIP-II scheme further process is in progress --------do-------- --------do--------

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
(b) EXECUTIVE ENGINEER, B.I.D.Buldana.						
2	Name:-**Paldhag** Year of completion :- 1974 Longitude :- 76o 18' 03" Latitude :- 20o 35' 45" Height :- 24.06 m. Gross capacity :- 9.09 Mm3 Design Spillway capacity :- 1095 cumecs Sr. No. in National register oflarge Dams 2009) :- MH09MH0449	06/06/2018 30/11/2018 17/01/2019	Earth Dam W.W & T.C.	1) Dam section is under section (B1) 2) Settlement & disturbed pitching between RD 90 to 120m,225 to 360 m. (B3) 3) There is scouring on D/S side of EDA (A7) 4) End sill wall towards left bank collapsed between RD 0 to 60 m & coping in full length is washed away. (A17)	Dam section to be brought to correct design section and level by adding earthwork duly compacted properly. Pitching on U/s & D/s to be reset, by using stones of adequate weight and size laid over properly graded filter. Proper remedial measure be taken and scouring be monitored Repairs to End sill wall shall be done to avoid progressive deterioration.	Admistrative approval granted to special repair estimate. Work will be carried out as per tender process.
3	Name:- **Pimpalner** Year of completion :- 1979 Location : - Longitude :- 76o 34' 00" Latitude :- 19o 57' 00" Height :- 16. 30 m. Gross capacity :-2.09 Mm3 Design Spillway capacity :- 453 cumecs Sr. No. in National register oflarge Dams 2009) :- MH09MH0784	21/05/2018 21/01/2019	Earth Dam W.W. & T.C.	1) Dam section is not as per designed in respect of top width & Slopes(B1) 2) U/S &D/S face of bar needs pointing. (B8) 3) Scouring observed on D/S of bar(A17) 4) Retrogression in tail channel. (A7)	Dam section to be brought to correct design section and level by adding earthwork duly compacted properly. Needs to be repair. Proper remedial measure be taken and scouring be monitored. If retrogression and erosion is closer to the E.D.A. of spillway or waste weir bar, protective measures shall be under taken to prevent progressive damage. Extent of retrogression should be ascertained and monitored every year by mapping.If the problem of retrogression is moving upstream and serious,and for geological investigation, the problem shall be refered to respective organisation for under taking investigation and studies for evolving suitable solution to the problem.	Included in RRR Estimate and submitted to C.E office.

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
4	Name**:- Vidrupa** Year of completion :- 1990 Location : - Longitude :- 76o 19' 56" Latitude :- 19o 59' 42" Height :- 17.85 m. Gross capacity :- 4.56 Mm3 Design Spillway capacity :- 920 cumecs Sr. No. in National register oflarge Dams 2009) :- MH09MH1278	20/05/2018 02/01/2019	Earth dam Outlet	1) Settlement of pitching at three places between ch. 60 to 460m(B3) 2) Outlet gate does not open & close smoothly. Stem rod is bend. (B5) 3) Stem rod is bent. (B5)	Pitching to be reset by using stones of adequate weight and size laid over properly graded filter.1. The proper repairs shall be carried out with the help of Mechanical organisation. -------do-------	Included in 2019-20 maintanance and repairs. Work completed. -------do-------
5	Name:- **Utawali** Year of completion :- 2005 Location : - Longitude :- 76o 41' 10" Latitude :- 20o 25' 17" Height :- 25.83 m. Gross capacity :- 20.80 Mm3 Design Spillway capacity :- 3740cumecs Sr. No. in National register oflarge Dams 2009) :- MH09MH1800	07/05/2018 17/01/2019 16/01/2019	Earth dam W.W. & T.C.	1) Settlement of pitching is observed from RD 2040 to 2100 m. (B3) 2) Dam section is not as per design. (B1) 3) D/S of bar erosion in tail channel is observed as a pit after removal of soft material Also erosion near fall @ ch. 165 m. and at sides of check walls @ ch. 340 & 525 m. (A7)	Pitching to be reset by using stones of adequate weight and size laid over properly graded filter.1. Dam section to be brought to correct design section and level by adding earthwork duly compacted properly. Proper remedial measure be taken and scouring be monitored.	Work executed by Jigaon lift Irrigation Division, Khamgaon. -------do------- -------do-------

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
[B] CHIEF ENGINEER (WATER RESOURCES) AMRAVATI (1) SUPERINTENDING ENGINEER Y.I.C (M) YAVATMAL (b) EXECUTIVE ENGINEER, Y.I.D. YAVATMAL						
6	Name:- **Anji** Year of completion :- 1984 Location : - Longitude :- 78o 34' 00" Latitude :- 20o 10' 00" Height :- 20.32m. Gross capacity :- 2.80 Mm3 Design Spillway capacity :- 210 Sr. No. In National register oflarge Dams 2009) :- MH09MH1117	23/05/2018 29/11/2018	W.W.& T.C.	1) Bed concrete of fall is damaged(A7)	Necessary repairs shall be carried out.	Special repair estimate is Administrative approved & Furthur process is in progress.
				2) Heavy retrogression in tail channel between first second and third fal. (A7)	If retrogression and erosion is closer to the E.D.A. of spillway or waste weir bar, protective measures shall be under taken to prevent progressive damage. Extent of retrogression should be ascertained and monitored every year by mapping.If the problem of retrogression is moving upstream and serious,and for geological investigation, the problem shall be refered to respective organisation for under taking investigation and studies for evolving suitable solution to the problem	------ do --------
				3) End sill wall of 1st fall,masonry of 2nd fall is damaged.About 50 m length masonry of 3rd fall & end sill wall is washed out. (A16)	Neccesary repairs shall be carried out.	------ do --------

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
7	Name:- **Singandoh** Year of completion :- 1993 Location : - Longitude :- 78o 58' 00" Latitude :- 20o 24' 06" Height :- 17m. Gross capacity :- 3.13 Mm3 Design Spillway capacity :- 686 Sr. No. In National register oflarge Dams 2009) :- MH09MH1310	13/05/2018 30/11/2018	Earth Dam W.W.& T.C.	1) Settlement of dam top by 30 cm through out dam length. (B3) 2) Leakages are observed at 15m from right flank wall. (B7) 3) End sill wall is damaged and washout in 30m lenght. (A17) 4) Stilling basin is damaged. (A14)	Dam section to be brought to correct design section and level by adding earthwork on dam top compacted properly. Necessary repairs shall be done after locating the leakage spots. Necessary repairs shall be carried out. Need to be repaired immediately.	Special repair estimate is approved Nimayak Mandal & Furthur process is in progress. ------ do -------- ------ do -------- ------ do --------
8	Name:- **Waghadi** Year of completion :- 1978 Location : - Longitude :- 78o 18' 10" Latitude :- 20o 15' 30" Height :- 26.00 m. Gross capacity :- 41.11 Mm3 Design Spillway capacity :- 1815 cumecs Sr. No. in National register oflarge Dams 2009) :- MH09MH0739	06/05/2018 18/01/2019	Earth Dam	1) Settlement of pitching from RD 1215 to 1470 & 1500 to 1600 m is observed(B3)	Pitching to be reset by using stones of adequate weight and size laid over properly graded filter.	Special repair estimate is approved Nimayak Mandal & Furthur process is in progress.

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
9	Name:- **Vihirgaon** Year of completion :- 1992 Location : - Longitude :- 78o 30' 00" Latitude :- 20o 38' 00" Height :- 15.54m. Gross capacity :- 3.17 Mm3 Design Spillway capacity :- 226 Sr. No. In National register oflarge Dams 2009) :- MH09MH1289	23/05/2018 17/11/2018	OUTLET W.W.& T.C.	1) Leakage of water through pipe joint. (A4) 2) Stem rod is bent .unsual noise during operation. (B5) 3) .Bed concrete of fall is damaged(A7) 4) Retrogression in tail channel on D/S of fall and foundation of end sill wall is opened. (A7) 5) Wet patches are observed on D/S of dam @30m from rock toe (A1)	The proper repairs shall be carried out with the help of Mechanical organisation. The proper repairs shall be carried out with the help of Mechanical organisation Necessary repairs shall be carried out If retrogression and erosion is closer to the E.D.A. of spillway or waste weir bar, protective measures shall be under taken to prevent progressive damage. Extent of retrogression should be ascertained and monitored every year by mapping.If the problem of retrogression is moving upstream and serious,and for geological investigation, the problem shall be refered to respective organisation for under taking investigation and studies for evolving suitable solution to the problem . Check whether this has any connection with storage. Study the foundation details for possible under seepage and necessary repairs i.e. proper drainage of D/S area shall be done.	Special repair estimate is approved Nimayak Mandal & Furthur process is in progress. ------ do -------- ------ do -------- ------ do --------

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
EE.Arunavati Dn. Digras						
10	Name:- **Satpalli** Year of completion :- **2000** Location : - Longitude :- **78° 31' 50" .** Latitude :- **29° 19' 25"** Height :- **16.05 m.** Gross capacity :-**2.86 Mm^3** Design Spillway capacity :- **185.97 cumecs** Sr. No. in National register oflarge Dams 2009) :- **N.A**	17/06/2018 19/12/2018	Earth Dam W.W.& T.C	1) Two longitudinal cracks of width 30mm,length 2.5m observed near left HR of dam on both side of it. (B4) 2) Spill channel guide bund is damaged to very large extent. (A7) 3) End sill wall of W.W. is damaged. (A17)	Cracked portion should be excavated in the form of trench up to bottom of cracks and trench filled by well compacted proper soil & sandy murum & this portion shall be reguraly moniterd. Repairs to guide bund shall be done to avoid further deterioration. Needs to be repair immediately.	Crack portion excavated in the form of trench upto bottom of cracks & trench has been filled. This portion is reguraly monitored. Proposed in special repair estimate. ------ do --------
SUPERINTENDING ENGINEER, UPPER WARDHA PROJECT CIRCLE, AMRAVATI **E.E.M&M.I.D. Achalpur**						
11	Name:- **Basalapur** Year of completion :- **1972** Location : - Longitude :- **77° 50' 00"** Latitude :- **20° 50' 00"** Height :- **17.85 m.** Gross capacity :- **1.53 Mm^3** Design Spillway capacity :- **193cumecs** Sr. No. In National register oflarge Dams 2009) :- **MH09MH0275**	22/05/2017 11/12/2017	Outlet	1) Nearly 1.2 m deep half upper part of well from central cross gizec is dislog from down masonry. (A6)	Necessary repairs shall be done immediatly.	This Work included in tendor no. B1/01/DL/MAR/ 2018-19.Project has a 70% water storage. Repair work will be carried out in summer after decreasing water level.

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
12	Name:- **Mandwa (AMT)** Year of completion :- **1973** Location : - Longitude :- **76° 47' 00"** Latitude :- **21° 45' 00"** Height :- **17.52 m.** Gross capacity :- **1.37 Mm^3** Design Spillway capacity :- **154 cumecs** Sr. No. In National register oflarge Dams 2009) :- **MH09MH0573**	19/05/2018 19/12/2018	Outlet W.W. & T.C	1) Outlet gate does not open & close smoothly. (B5) 1. 2) Leakage through gate or from slots in closed position(A4) 3) Coping on W.W.bar is washed out. (B7) 4) Scouring on d/s side of bar (A17) 5) U/S & D/S/ face of W.W. bar need pointing. (B8) 6) Retrogression observed in tail channel near curtain wall. (A7)	The proper repairs shall be carried out with the help of Mechanical organisation ------do-------- Necessary repairs shall be done. Proper remedial measure be taken and scouring be monitored. Necessary repairs shall be done If retrogression and erosion is closer to the E.D.A. of spillway or waste weir bar, protective measures shall be under taken to prevent progressive damage. Extent of retrogression should be ascertained and monitored every year by mapping.If the problem of retrogression is moving upstream and serious,and for geological investigation, the problem shall be refered to respective organisation for under taking investigation and studies for evolving suitable solution to the problem	Done by Mechanical wing. ------do-------- Proposed in special repair estimate ------do-------- ------do-------- ------do--------

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
----------This region does not have Class-I private dam ----------						

Table 1.8

Action Taken Report on Deficiency Category-2 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
----------This region does not have Class-I private dam ----------						

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 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
----------Action Taken Report not receive in DSO----------						

Annual Consolidated Health Status Report
of Identified Large Dams In
Amravati Region 2019-20

PART – 2

Annual Health Status Report of Identified Large Dams Based on Pre & Post Monsoon 2019 Inspection Reports (Year 2019-20)

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 Organisation, 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 Organisation have Standardiized the categorywise 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 Organisation for further action.

Dam Safety Organisation, 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 Organisation as a third party inspection. The annual Dam inspection programme of Dam safety organisation is prepared and is sanctioned by Director General ,(D.T.H.R.S.) M.E.R.I., Nashik. In Maharashtra, there are about 49private dams owned by Tata Power, Sahara India Pvt.Ltd.etc. and by Urban Local bodies and Power generation companies. Dam Safety Organisation carries out pre and post monsoon inspections of private dams on consultancy basis

For Amravati region following officers were inspected dams and taken efforts to prepare this report.

1)Shri.Y.K.Bhadane, Superintending Engineer

2)Shri.N.K. Tayade, Executive Engineer

3)Shri.S.B.Khairnar ,Sub Divisional Engineer

4)Shri.S.S.Sangle,Junior Engineer

2.2.1 Dam inspection by field officers

There are 22 no. of Class-IGovt. dams & 188 nos. Class-IIGovt dams in Amaravati region. All the Pre & Post Monsoon Inspection Reports for all Class-I&Class-IIdams were received and have been incorporated in this status report. The circle office wise breakup of dams and status of inspection report received 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 Organisation.

As per Annual inspection programme, DSO has inspected**04** nos. Class-I dams, 22 nos. of Class-II damsand**01** century old dam.Also the Pre & Post Monsoon Inspection of 02 no.s of Private Class-IIdams was carried out. List ofdams inspected is given in Table 2.3and the Photographs of some of inspections by Dam Safety Organisation are appended as
Annexure – 3

2.3 Overall health status of large dams

Circlewise number of large dams in Amravati region where deficiencies are noticed are summarized and given in table no.-2.4. Damwise number of category – II deficiencies noticed are given in table no 2.5. Over all there are 212 dams including private dams and there are 49dams where category –II deficiencies are noticed.Agencywise, damwise and categorywise detailed status is given in next sections.

2.4 Health status report of Class-I dams

2.4.1 Health status report of Class-Idams with Category-1 deficiency.

Out of 22 dams **Nil**dams are reported under this category.

Details of Class-I dams with category 1 deficiency are given in table 2.6

2.4.2 Health status report of Class-I dams with Category-2 deficiency.

Out of 22 dams, 09dams have been identifiedcategory- 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 22 dams, 13 dams have been identified category-3 deficiencies.

Details ofclass-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 188 dams **Nil**dams are reported under this category.

Details of class-IIdams, with category – 1 deficiencies are given in table 2.9.

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

Out of 188 dams, 39damshave been identifiedcategory- 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 188 dams,133dams have been identifiedcategory-3 deficiencies and

16 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 Organisation 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	Large Dam Class- I	Large Dam Class- II	Large Dam Class- III	Grand Total
BULDANA	06	42	29	77
AKOLA	04	14	17	35
WASHIM	01	50	40	91
AMRAVATI	07	35	19	61
YAVATMAL	04	47	30	81
TOTAL	22	188	135	345
PRIVATE	--	02	--	02
GRAND TOTAL	22	190	135	347

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.

There is **no** class-I Private dams in this region. 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.

There is **no** class-I Private dams in this region. 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.

There is **no** class-I Private dams in this region. 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.

There are 02 nos. of private Class-II dams. Out of 02 dams, **Nil** dams are reported under this category. Details of class-II Private dams with category 1 deficiency given Table 2.15.

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

Out of 02 dams only 01 dam have been identified 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 02 dams only 01 dam have been identified category-3 deficiencies. Details of class-II Private dams with category 3 deficiency given in Table 2.17.

2.9 Observations

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.

2.9.1 Top five major deficiencies found in Class-I dams in Amravatiregion are as follows –

1) **A16:** Damages / foundation erosion/ scour/undermining observed in vicinity of flankwalls/ guide walls/ junction walls/return walls**.-** (04 Dam)
2) **A 5:** Relief wells not functioning properly./ Abnormal rise in water level in wells – (03 Dams)
3) **A 17:**End weir not in good condition / scouring noticed on immediate D/S.– (03 Dam)
4) **B 12 :** Damage to Rubber seals/ considerable Leakages through gates-(03 Dams)
5) **A 4 :** Major leakages through outlet conduit/pipe joints/Gates.- (02 dams)

2.9.2 Likewise top five major deficiencies found in Class-II dams are –

1) **A 7 :**Retrogression /scouring in tail channel**.** (18Dam)
2) **B 3:**Considerable settlement of embankment / Rock toe/Pitching/ U/S & D/S slops, bulging/concavity of slopes. **(**16 Dam)
3) **A 17:**End weir not in good condition / scouring noticed on immediate D/S**.**(11 dam)
4) **B 7:** Waste weir/waste weir bar not in good condition/coping damaged/leakage throughwaste weir. (10 dam)
5) **A16:**Damages / foundation erosion/ scour/undermining observed in vicinity offlank wall/guide wall/ junction walls/ return walls (09dams)

Table 2.1

Status of receipt of Pre / Post monsoon inspection reports (Pre & Post monsoon 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
	[1] C.ES.P., (W.R.),Amravati												
1	A.I.CAkola	11	54	65	11	54	65	00 00	00 00	00	00	00	00
2	W.I.C.Washim	00	50	50	00	50	50	00 00	00 00	00	00	00	00
3	A.I.P.C.Amaravati	00	08	08	00	08	08	00 00	00 00	00	00	00	00
	[2] C.E., W.R., Amravati												
4	B.I.P.C. Buldana	00	01	01	00	01	01	00 00	00 00	00	00	00	00
5	Y.I.C.(M) Yavatmal	05	39	44	05	39	44	00 00	00 00	00	00	00	00
6	Y.I.C. Yavatmal	00	09	09	00	09	09	00 00	00 00	00	00	00	00
7	U.W.I.C. Amravati	06	27	33	06	27	33	00 00	00 00	00	00	00	00
	PRIVATE DAMS												
8	M.J.P.C.Yavatmal	00	02	02	00	02	02	00 00	00 00	00	00	00	00
	Grand Total	**22**	**190**	**212**	**22**	**190**	**212**	**00**	**00**	**00**	**00**	**00**	**00**

Table 2.2
List of Dams of which Inspection Reports were not received

Sr. No	Name of office	Name of Dam of which inspection reports not received					
		Both for Pre & Post-2019		Either for 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	**C.E (S.P) Amravati**	--	---	---	---	--	---
	A.I.CAkola	--	---	---	---	--	---
	W.I.C.Washim	--	---	---	---	--	---
	A.I.P.C.Amaravati	--	---	---	---	--	---
2	**C.E .(W.R) Amravati**	--	---	---	---	--	---
	B.I.P.C. Buldana	--	---	---	---	--	---
	Y.I.C.(M) Yavatmal	--	---	---	---	--	---
	Y.I.C. Yavatmal	--	---	---	---	--	---
	U.W.I.C. Amravati	--	---	---	---	--	---
3	**M.J.P.C. Yavatmal**	--	---	---	---	--	---

Note-All Pre/ Post inspection reports of all dams are received

Table 2.3

List of dams inspected by Dam Safety Organisation, Nashik

Officers from Dam Safety Organisation 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
Class-I Dams			
1	Wan	I	09/12/2019
2	Khirkund	I	09/12/2019
3	Popatkhed	I	10/12/2019
4	Adan	I	01/01/2020
Class-II Dams			
5	Kardi	II	22/08/2019
6	Masrul	II	22/08/2019
7	Kali(D)	II	26/09/2019
8	Nignoor	II	26/09/2019
9	Chinchpani	II	10/12/2019
10	Patur	II	31/12/2019
11	Pimpalgaon chambhare	II	31/12/2019
12	Ghota	II	31/12/2019
13	Uma	II	31/12/2019
14	Wathood	II	01/01/2020
15	Ratanwadi	II	01/01/2020
16	Amdari	II	01/01/2020
17	Borwah	II	01/01/2020
18	Asola (Gawa)	II	01/01/2020
19	Gid	II	02/01/2020
20	Rohana	II	02/01/2020
21	Rui	II	02/01/2020
22	Fulumbri	II	02/01/2020
23	Giroli	II	02/01/2020
24	Asola (Ingale)	II	02/01/2020
25	Sonal	II	03/01/2020
26	Kalmeshwar	II	03/01/2020
Century old Dams			
27	Rushi	III	01/01/2020
Private Dams, Class-II Dams			
28	Chapdoh	II	28/07/2019 (Pre) 27/09/2019(Post)
29	Nilona	II	28/07/2019(Pre) 27/09/2019(Post)

Table 2.4

Circle wise no. of large dams where deficiencies are noticed

Sr. No	Name of Circle	Total No. of Dams			Large Dam Class-I				Large Dam Class-II			
		Class-I	Class-II	Total	Def. Cat-1	Def. Cat-2	Def. Cat-3(without Cat-2 def.)		Def. Cat-1	Def. Cat-2	Def. Cat-3 (without Cat-2 def.)	
							Minor	Nil			Minor	Nil
[1] CE(S.P). Amravati												
(1)	**A.I.C Akola**	11	54	65	--	05	06	--	--	22	30	02
(2)	**W.I.C. Washim**	--	50	50	--	--	--	--	--	03	40	07
(3)	**A.I.P.C. Amravati**	0	08	08	--	--	--	--	--	01	02	05
[2] CE(WR). Amravati												
(1)	**B.I.P.C. Buldana**	--	01	01	--	--	--	--	--	--	01	--
(2)	**Y.I.C (M) Yavatmal**	05	39	44	--	02	03	--	--	08	31	--
(3)	**Y.I.P.C Yavatmal**	--	09	09	--	--	--	--	--	03	05	01
(4)	**U.W.I.C. Amravati**	06	27	33	--	02	04	--	--	02	24	01
	Total	**22**	**188**	**210**	**---**	**09**	**13**	**---**	**---**	**39**	**133**	**16**
Private												
(1)	**M.J.P. Yavatmal**	--	02	02	--	--	---	---	---	01	01	--
	Total	--	02	02	--	--	--	--	--	01	01	--
	Grand Total	**22**	**190**	**212**	**---**	**09**	**13**	**---**	**---**	**40**	**134**	**16**

Table 2.5

Damwise number of Category-2 deficiencies noticed

Sr. No	Name of Dam	No. of deficiencies noticed
1	2	3
Class-I Dams		
1) C.E. (S.P) Amravati.		
I) S.E .A.I.C.Akola		
1	Katepurna	05
2	Gyanganga	03
3	Pentakali	02
4	Mun	04
5	Dagadparwa	03
2)C.E (W.R) Amravati		
I) S.E Y.I.C.(M) Yavatmal		
6	Lower Pus	04
7	Arunawati	03
II) S.E U.W.I.C Amravati		
8	Chandrabhaga	02
9	Purna	03
Class-II Dams		
1) C.E (S.P). Amravati		
I)S.E A.I.C. Akola.		
1	Godada	02
2	Rajura	03
3	Haralkhed	03
4	Mandwa (Bld)	04
5	Mas	10
6	Paldhag	04
7	Pimpalner	04
8	Sawangimali-1	04
9	Sawangimali-2	03
10	Shivani Armal	04
11	Bramhanwada	01
12	Kardi	04
13	Vidrupa	03
14	Utawali	03
15	Masrul	02
16	Nirguna	04
17	Ghota	06
18	Tuljapur	03
19	Uma	02
20	Pimpalgaon Chambhare.	04
21	Sisa udegaon	01
22	Chinchpani	02

Sr. No	Name of Dam	No. of deficiencies noticed
1	2	3
II) S.E W.I.C Washim.		
23	Rui	03
24	Waigoul	02
25	Fulumbri	03
III) S.E A.I.P.C. Amravati		
26	Bordinalla	01
2) C.E (W.R) Amravati		
I) S.E. Y.I.C (M) Yavatmal.		
27	Nignoor	02
28	Deogaon	02
29	Anji	03
30	Singandoh	04
31	Waghadi	01
32	Vihirgaon	05
33	Satpalli	03
34	Kapara	02
II)S.E. Y. I. P. C,Yavatmal		
35	Kali (D)	02
36	Amadapur	02
37	Pimpalgaon	02
III) S.E., U. W. I. C. Amravati		
38	Basalapur	01
39	Mandwa (Amt)	06
3) Private Dams		
40	Nilona	02

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
I) SUPERINTENDING ENGINEER, AKOLA IRRIGATION CIRCLE,AKOLA E.E. A.I.D. Akola						
1	Name :- **Katepurna** Dist ;- Akola Year of Completion: **1974** Location Longitude: **77° 09' 00"** Latitude: **20° 28' 30"** Height: **29.5** m Gross capacity: **97.67 Mm^3** Designed Spillway capacity: 2783**m^3/sec (Gated)** Sr. No. in National register oflarge Dams 2009) :- **MH09MH455**	15/05/2019 28/09/2019	Shri,A.K. Desai S.E. A.I.C.,Akola Shri S.S.Awashti S.E. A.I.C.,Akola	Earth dam Masonry dam Outlets	1)The relief wells are not in working condition & not functioning properly (A5) 2) The foundation drain holes are chocked up (A9) 3) Scouring is observed at D/S of end sill wall(A17) 4) The foundation of D/S End sill wall & foundation of guide wall is opened due to scouring (A 16) 5) Leakages are observed through outlet gates, rubber seals of side and bottom need replacement. (B12)	Cleaning and surging of relief wells to be done immediately for ensuring effective functioning of wells Proper remedial measure shall be taken. Proper remedial measure be taken and scouring be monitored. . Proper remedial measure shall be taken Necessary repairs shall be carried out by mechanical unit.

SR NO	DAM FEATURES	DATE OF INSPECTION	INSPECTING OFFICER	MAIN COMPONENT OF DAM	SIGNIFICANT DEFICIENCIES NOTICED.	REMEDIAL MEASURES SUGGESTED
E.E. B.I.D. Buldhana						
2	Name :- **Gyanganga** Dist ;- Buldhana Year of Completion: **1971** Location Longitude:: **78° 03' 00"** Latitude: **20° 32' 30"** Height: **42.11** m Gross capacity: **36.264 Mm^3** Designed Spillway capacity: 1742 **m^3/sec (Ungated)** Sr. No. in National register oflarge Dams 2009) :- **MH09HH0267**	04/06/2019 19/10/2019	Shri,A.K. Desai S.E. A.I.C.,Akola Shri S.S.Awashti S.E. A.I.C.,Akola	EDA Road	1) On D/S concrete apron, there is scouring noticed and is in progress. (A17) 2) Foundation of guide wall damaged. Some erosion observed.(A16) 3) Approach road to dam site and Head Regulator was heavily damaged.(B6)	If erosions are close to the EDA of spillway protective measures shall be undertaken to prevent progressive damage. ----------do---------- Repairs to road shall be done immediately.
3	Name :- **Pentakli** Dist ;- Buldhana Year of Completion: **2003** Location Longitude::**76° 28' 26"** Latitude: **20° 16' 17"** Height: **27.50** m Gross capacity: **67.33Mm^3** Designed Spillway capacity: 6426**m^3/sec (Ungated)** Sr. No. in National register oflarge Dams 2009) :- **MH09MH1624**	17/06/2019 27/09/2019	Shri,A.K. Desai S.E. A.I.C.,Akola Shri S.S.Awashti S.E. A.I.C.,Akola	Masonry dam River Outlet	1) All foundation drain holes are chocked and Porous pipes are also chocked & need to be cleaned (A9) 2) There is leakage through river sluice gate, Stem rod is bent & Gate slot Is silted (B10)	It should be cleaned. Neccesary repaire should be done with the help of mechanical organisation.

SR NO	DAM FEATURES	DATE OF INSPECTION	INSPECTING OFFICER	MAIN COMPONENT OF DAM	SIGNIFICANT DEFICIENCIES NOTICED	REMEDIAL MEASURES SUGGESTED
4	**Name :-Mun** Dist:-Buldhana Year of Completion: **1991** Location Longitude: **76° 39' 48¢¢** Latitude: **22° 27' 40¢¢** Height: **39.7 m** Gross capacity: **42.48 Mm^3** Spillway capacity: **2220 m^3/sec** **(Gated)** Sr. No. in National register oflarge Dams 2009) :- **MH09HH1492**	23/04/2019 28/09/2019	Shri,A.K. Desai S.E. A.I.C.,Akola Shri S.S.Awashti S.E. A.I.C.,Akola	Spillway E.D.A. Wall foundation Tail Channel	1) Pointing on U/s face of spillway was damaged. (B8) 2) Concrete at D/s of End sill wall, for 15 to 20 m length was washed away.(A17) 3) Left side and right side guide bund were washed away.(A16) 4) Retrogression / Erosion noticed in tail channel at R.D. 60 to 120m. (A7)	Pointing to be done immediately. Needs to be repaired by rich concrete filling suitably. Earth work of guide bund needs rectification If retrogression and erosion is to the E.D.A. of spillway or waste weir bar, protective measures shall be under taken to prevent progressive damage. Extent of retrogression should be ascertained and monitored every year by mapping.If the problem of retrogression is moving upstream and serious,and for geological investigation, the problem shall be refered to respective organisation for under taking investigation and studies for evolving suitable solution to the problem.

SR NO	DAM FEATURES	DATE OF INSPECTION	INSPECTING OFFICER	MAIN COMPONENT OF DAM	SIGNIFICANT DEFICIENCIES NOTICED.	REMEDIAL MEASURES SUGGESTED
5	**Name :-Dagadparwa** Dist:-Akola Year of Completion:**2006** Longitude:**77° 10' 29"** Latitude:**20° 01' 09"** Height: **14.20 m** Gross capacity: **23.48 Mm^3** Spillway capacity: **1055.44 m^3/sec (Gated)** Sr. No. in National register oflarge Dams 2009) :- **MH09LH2184**	04/06/2019 18/10/2019	Shri,A.K. Desai S.E. A.I.C.,Akola Shri S.S.Awashti S.E. A.I.C.,Akola	Earth dam	1) Settlement of earthwork is observed between RD 2200 m to 2550m.(B3) 2) Top width of dam between RD 1935 to 3440m is reduced in effective width.(B3) 3) Earthwork between RD 2720 to 2737 m is damaged due to continuous use by famers.(B3)	Section needs to be Restored for designed profile. ----------do---------- ----------do----------
II) SUPERINTENDING ENGINEER, Yavatmal Irrigation Clircle (M), Yavatmal E.E. Y.I.D, Yavatmal						
6	Name :- **Lower Pus** Dist ;- Yavatmal. Year of Completion: **1983** Location Longitude: **77° 40' 00"** Latitude: **19° 49' 00"** Height: **28. 00** m Gross capacity: **81.16 Mm^3** Designed Spillway capacity: **5437 m^3/sec (Gated)** Sr. No. in National register oflarge Dams 2009) :- **MH09MH1012**	26/04/2019 27/12/2019	Shri A.N. Bahadure S.E.Y.I.C.(M) Yavatmal	Earth Dam. Spillway gate EDA Wall	1)Relief wells are not functioning.(A5) 2) Leakages observed through rubber seals of all gates. (B12) 3) Concrete surface of stilling basin apron not in good condition. (A14) 4) There is tendency for water to undercut the end of wall. Right side guide wall is collapsed. Walls show symptons of unusalsettelements, development ofcracks & tilting. Settlement of right side straight wall (A16)	Cleaning and surging of relief wells to be done immediately for ensuring effective functioning of wells. Neccesary repaire should be done with the help of mechanical organisation. Necessaryrepaires shall be carried out. Necessary repairs to be carried out & precaution to be taken to avoid scouring.

SR NO	DAM FEATURES	DATE OF INSPECTION	INSPECTING OFFICER	MAIN COMPONENT OF DAM	SIGNIFICANT DEFICIENCIES NOTICED.	REMEDIAL MEASURES SUGGESTED
E.E. Arunawati Pro. Dn.Digras, Yavatmal						
7	Name :- **Arunawati** Dist.:- Yawatmal. Year of Completion:**1994** Location Longitude: **77° 48' 00"** Latitude: **20° 07' 00"** Height**: 29.58 m** Gross capacity: **198.39 Mm^3** Spillway capacity: **5563m^3/sec** **(Gated)** Sr. No. in National register oflarge Dams 2009) :- **MH09MH1343**	03/05/2019 27/12/2019	Shri A.N. Bahadure S.E.Y.I.C.(M) Yavatmal	Earthen Dam Outlet	1)Relief wells are found blocked (A5) 2)Leakages are observed in service gate of LBC &RBC outlet. (A4) 3) Stem rod for lifting RBC gate is not straight.Operation of outlet gate of RBC is not smooth. (B5)	Cleaning and surging of relief wells to be done immediately for ensuring effective functioning of wells Neccesary repaire should be done with the help of mechanical organisation. . ---------- do ----------
III) S.E.,Upper Wardha Irrigation Circle,Amravati **E.E. Med & Mnor Irr. Pro.Dn .Achalpur**						
8	Name :- **Chandrabhaga** Dist.:- Amarawati. Year of Completion: **2005** Location Longitude: Latitude: Height**: 55.35m** Gross capacity: **41.427Mm^3** Spillway capacity: **1239 m^3/sec** **(Gated)** Sr. No. in National register oflarge Dams 2009) :- **MH09HH1801**	18/05/2019 30/11/2019	Shri R. K. Dhavle S.E. U.W.I.C. Amarawati Shri R.S. Deshmukh U.W.I.C. Amarawati	Body wall Outlet	1)Leakages observed in outlet conduit & well staining, Leakages from conduit pipe are observed at D/S of HR (ICPO).(A4) 2) Vibratation & noise noticed during service gate operation and service Gate alignment need to be checked & repaird (B5)	Necessary repairsshal be carried out immediately. Neccesary repaire should be done with the help of mechanical organisation.

SR NO	DAM FEATURES	DATE OF INSPECTION	INSPECTING OFFICER	MAIN COMPONENT OF DAM	SIGNIFICANT DEFICIENCIES NOTICED.	REMEDIAL MEASURES SUGGESTED
9	Name :-**Purna Medium proj.** Dist.:- Amarawati. Year of Completion: **2006** Location Longitude: Latitude: Height**:** **52.00 m** Gross capacity: **41.759 Mm^3** Spillway capacity: **5450m^3/sec (Gated)** Sr. No. in National register oflarge Dams 2009) :- **MH09HH1319**	19/05/2019 29/11/2019	Shri R. K. Dhavle S.E. U.W.I.C. Amarawati Shri R.S. Deshmukh U.W.I.C. Amarawati	Earth Dam Spillway gate	1)U/S pitching of dam has been settled in between Rd 400 m.to Rd 800 m &Rd 1300 m. to Rd 2500 m. (B3) 2)U/S Slope between Rd.730m to Rd 847m & Rd 1350 to 1395m is showing bulging& pitching in this portion has settled. (B3) 3)Leakages through spillway radial gate no. 4 (B12)	Section needs to be restored for designed profile. Section needs to be restored for designed profile. Neccesary repaire should be done with the help of mechanical organisation.

Table 2.8

Damwise Health status report of **Class-I dams** with **category-3 deficiency**

Sr. No	Name of Dam	Year of Compl -etion	Location Longitude/ Latitude	Height in m	Gross Capacity Mm^3	Design Spillway Capacity m^3 / sec	Sr.No. in NRLD Register of Large Dams 2009	Gated / Ungated	Date of Inspection	Deficiencies noticed	Total Deficiencies
1	2	3	4	5	6	7	8	9	10	11	12
CHIEF ENGINEER, S.P. Amarawati Superintending Engineer, Akola Irrigation Circle, Akola											
1	**Nalganga**	1963	78° 03' 00" 20° 32' 30"	35.14	71.86	2302	MH09HH0152	Gated	23/04/2019 17/10/2019	3.1,3.5,3.6,3.9,3.20,3.36	06
2	**Gyanganga**	1971	78° 03' 00" 20° 32' 30"	42.11	36.26	1742	MH09HH0267	Ungated	04/06/2019 19/10/2019	3.1,3.7,3.9,3.16,3.20,3.22	06
3	**Dongarshewali**	2010	76° 20' 09" 20° 28' 08"	30.93	2.35	405.36	MH09MH2136	Ungated	17/06/2019 19/10/2019	3.5,3.6,3.7,3.13,3.16,3.19, 3.21	07
4	**Pentakli**	2003	76° 28' 26" 20° 16' 17"	27.5	67.33	6426	MH09MH1624	Gated	17/06/2019 27/09/2019	3.7,3.9,3.11,3.12,3.13,3.28	06
5	**Mun**	1991	76° 39' 48" 22° 27' 40"	39.7	42.48	2220	MH09HH1492	Gated	23/04/2019 28/09/2019	3.1,3.6,3.9,3.18,3.20	05
6	**Khadakpurna (Buldana)**	2008	76° 40' 30" 20° 09' 30"	42.60	12.19	652	MH09HH2137	Gated	24/04/2019 27/09/2019	3.9,3.11,3.12,3.13,3.20,3.22 ,3.36	07
7	**Katepurna**	1974	77° 09' 00" 20° 28' 30"	29.5	97.67	2783	MH09MH455	Gated	15/05/2019 28/09/2019	3.1,3.6,3.9,3.12,3.18,3.36	06
8	**Dagadparwa**	2006	77° 10' 29" 20° 01' 09"	14.20	23.48	1055.44	MH09LH2184	Gated	04/06/2019 18/10/2019	3.1,3.9,3.13,3.18	04
9	**Wan(Akola)**	2001	76° 46' 25" 21° 11' 08"	68.39	83.465	3434.1	MH09HH1560	Gated	15/05/2019 06/10/2019 09/12/2019	3.12,3.28,3.36	03
10	**Khirkund**	1999	77° 13' 00" 21° 14' 09"	33.3	5.6	652.4	MH09HH1516	Ungated	15/05/2019 26/11/2019 10/12/2019	3.1,3.5,3.6,3.13,3.20,3.27	06
11	**Popatkhed**	2005	77° 05' 00" 21° 12' 09"	37.73	12.19	1186	MH09HH1656	Gated	15/05/2019 26/11/2019 10/12/2019	3.1,3.6,3.18,	03

Sr. No	Name of Dam	Year of Com pl-etion	Location Longitude/ Latitude	Height in m	Gross Capacity Mm^3	Design Spillway Capacity m^3 / sec	Sr.No. in NRLD Register of Large Dams 2009	Gated / Ungated	Date of Inspection	Deficiencies noticed	Total Deficiencies
CHIEF ENGINEER, (W.R.),Amarawati Superintending Engineer, Yavatmal Irrigation Circle (M) Yavatmal											
12	**Lower Pus**	1983	77° 40' 00" 19° 49' 00"	28.00	81.16	5437	MH09MH1012	Gated	26/04/2019 27/12/2019	3.1,3.9,3.11,3.16,3.18,3.19, 3.20,3.26,3.27,3.28,3.36	11
13	**Pus**	1971	77° 27' 00" 29° 15' 00"	43.29	113.92	4007	MH09HH0268	Ungated	26/04/2019 27/12/2019	3.6,3.9,3.18,3.24,3.28	05
14	**Adan**	1977	77° 33' 00" 20° 24' 00"	30.29	78.32	4623	MH09HH0660	Gated	03/05/2019 20/12/2019 01/01/2020	3.6,3.9,3.20,3.22,3.28,3.36	06
15	**Arunawati**	1994	77° 48' 00" 20° 07'00"	29.58	198.39	5563	MH09MH1343	Gated	03/05/2019 27/12/2019	3.1,3.5,3.6,3.9,3.20,3.21	06
16	**Bembla**	2007	78° 8' 08" 20° 37'10""	35.80	322.068	17224	MH09MH2138	Gated	30/04/2019 26/11/2019	3.5,3.6,3.9,3.12,3.18,3.19, 3.20,3.22,3.28,3.36	10
Superintending Engineer, U.W.I.C.Amravati											
17	**Shahanoor**	1989	77° 28' 00" 21° 22' 00"	58.5	47.85	170	MH09HH1212	Gated	18/05/2019 30/11/2019	3.1,3.6,3.9,3.18,3.20,3.33	06
18	**Chandrabhaga**	2005	77° 23' 30" 21° 20' 30"	55.35	41.427	1239	MH09HH1801	Gated	18/05/2019 30/11/2019	3.5,3.11,3.18,3.36	04
19	**Purna**	2006	77° 46' 00" 21° 22' 30"	52.00	41.759	5450	MH09HH1803	Gated	19/05/2019 29/11/2019	3.5,3.6,3.11,3.12,3.13,3.36	06
20	**Chargad**	2013	77° 81' 00" 21° 20' 30"	35.38	12.00	1107.5	MH09HH1621	UnGated	19/05/2019 29/11/2019	3.18,3.20,3.31,3.34,3.36,	05
21	**Sapan**	2010	77° 28' 00" 21° 22' 00"	55.27	39.26	2289	MH09HH2139	Gated	18/05/2019 30/11/2019	3.5,3.6,3.9,3.12,3.18,3.20,3.28,3.33,3.36.	09
22	**Upper Wardha**	1993	78° 03' 00" 21° 16' 18"	53.5	646.86	19457	MH09HH1319	Gated	26/05/2019 03/12/2019	3.1,3.6,3.9,3.12,3.36.	05

Table 2.9

Damwise 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

Damwise 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
I)SUPERINTENDING ENGINEER, AKOLA IRRIGATION CIRCLE,AKOLA E.E.B.I.D., Buldana.						
1	Name:-**Godada.** Year of completion :-**1973** Location : - Longitude :-**76o 31' 00"** Latitude :- 21o 05' 45" Height :- 15.64 m. Gross capacity :- 1.89 Mm3 Design Spillway capacity :-**129 cumecs** Sr. No. in National register oflarge Dams 2009) :- **MH09MH0328** **Dist-Buldana.** **Tal- Jalgaon jamod.**	25/05/2019 20/12/2019	Shri. A.N.Kanna E.E.B.I.D Buldana	W.W & T.C.	1) Scouring on 0 to 50 m D/sof W.W.bar. (A17) 2) Standing pool of water on D/S of dam at chainage 450m to 850m. (A2)	Proper remedial measure be taken and scouring be monitored. The d/s area at least up to above 200m. from toe, shall be free from Stagnation. The area should be well drained so as to avoid any stagnant pools of water.
2	Name:- **Rajura** Year of completion :- 1978 Location : - Longitude :- 76o 29' 00" Latitude :- 20o 44' 20" Height :- 17. 73 m. Gross capacity :-3.70 Mm3 Design Spillway capacity :- 532 cumecs Sr. No. in National register oflarge Dams 2009) :- **MH09MH0725** **Dist-Buldana.** **Tal- Jalgaon jamod.**	25/05/2019 20/12/2019	Shri. A.N.Kanna E.E.B.I.D Buldana	Earth Dam Outlet W.W.& T.C.	1) Standing pool of water is observed in gorge portion. (A2) 2) Guide bund is damaged. (A16) 3) Heavy scouring observed in tail channel 30 m. From W.W. (A7)	The d/s area at least up to above 200m. from toe, shall be free from Stagnation. The area should be well drained so as to avoid any stagnant pools of water. Repairs to guide bunds shall be done to avoid progressive deterioration. Proper remedial measure be taken and scouring be monitored.

SR NO	DAM FEATURES	DATE OF INSPECTION	INSPECTING OFFICER	MAIN COMPONENT OF DAM	SIGNIFICANT DEFICIENCIES NOTICED.	REMEDIAL MEASURES SUGGESTED
3	Name:-**Haralkhed.** Year of completion :- 1994 Location : - Longitude :- 76o 28' 00" Latitude :- 20o 22' 00" Height :- 16.37 m. Gross capacity :- 1.24 Mm3 Design Spillway capacity :- 189 cumecs Sr. No. in National register oflarge Dams 2009) :- **MH09MH1326** **Dist-Buldana.** **Tal- Chikhali.**	05/01/2019 22/12/2019	Shri. A.N.Kanna E.E.B.I.D Buldana	Earth dam. W.W & T.C	1) Dam section is not as per designed (B1) 2) Scouring in tail channel D/s of spillway. (A16) 3) Series of falls constructed are fully damaged (A7)	Dam section to be brought to correct design section and level by adding earthwork duly compacted properly. Proper remedial measure be taken and scouring be monitored. Reconstruction of falls shall be done after reviewing the design
4	Name:-**Mandwa (Bld)** Year of completion :- 1995 Longitude :- 76o 20' 00" Latitude :- 20o 01' 20" Height :- 18052 m. Gross capacity :- 4.10 Mm3 Design Spillway capacity :- 725 cumecs Sr. No. in National register oflarge Dams 2009) :- **MH09MH1374** **Dist-Buldana.** **Tal- Sindkhed Raja.**	02/01/2019 05/11/2019	Shri. A.N.Kanna E.E.B.I.D Buldana	Earth Dam Outlet W.W & T.C.	1) Dam section is not as per designed in respect of top width & level at ch.0 to 120m ,450 to510m.(B1) 2)Dislocation of pitching through out dam length(B3) 3). Outlet well is damaged. (A6) 4). Stilling basin is damaged. (A14)	Dam section to be brought to correct design section and level by adding earthwork duly compacted properly. Pitching to be reset by using stones of adequate weight and size laid over properly graded filter Repairs to outlet well shall be done. Damaged portion to be repaired by concrete filling suitably.

SR NO	DAM FEATURES	DATE OF INSPECTION	INSPECTING OFFICER	MAIN COMPONENT OF DAM	SIGNIFICANT DEFICIENCIES NOTICED.	REMEDIAL MEASURES SUGGESTED
5	Name:- **Mas** Year of completion :- 1992 Location : - Longitude :- 76o 39' 45" Latitude :- 20o 36' 15" Height :- 17.71 m. Gross capacity :-17.50 Mm3 Design Spillway capacity :- 942 cumecs Sr. No. in National register oflarge Dams 2009) :- **MH09MH0051** **Dist-Buldana.** **Tal- Khamgaon.**	26/05/2019 01/12/2019	Shri. A.N.Kanna E.E.B.I.D Buldana	Earth Dam Outlet W.W. & T.C.	1) Dam section is not as per designed in respect of top width & U/s slope at some places. (B1) 2) Throughout length of dam some patches of pitching are heavily disturbed (B3) 3) Heavy raincuts observed in embankment. (B4) 4) Jet of water appearing in both well (A6) 5). Spillway bar mosonary is not in good condition. (B7) 6). Bed concrete of E.D.A. is damaged. (A14) 7) Guide wall & Devide wall are damaged (A16) 8) Guide bund & pitching is heavily disturbed. (B3) 9) Retrogression in tail channel. (A7) 10. Stilling basin is damaged. (A14)	Dam section to be brought to correct design section and level by adding earthwork duly compacted properly. Pitching on U/s & D/s to be reset, by using stones of adequate weight and size laid over properly graded filter. These shall be filled with good drainable material. Necessary repairs be done from outside & inside of outlet Repairs Spillway bar shall be done to avoid progressive deterioration. Repairs to bed concrete of E.D.A. shall be done Repairs to Guide wall & Divide shall be done to avoid progressive deterioration. Pitching to be reset by using stones of adequate weight and size. If retrogression and erosion is closer to the E.D.A. of spillway or waste weir bar, protective measures shall be under taken to prevent progressive damage. Extent of retrogression should be ascertained and monitored every year by mapping.If the problem of retrogression is moving upstream and serious,and for geological investigation, the problem shall be refered to respective organisation for under taking investigation and studies for evolving suitable solution to the problem. Need to be repair.

SR NO	DAM FEATURES	DATE OF INSPECTION	INSPECTING OFFICER	MAIN COMPONENT OF DAM	SIGNIFICANT DEFICIENCIES NOTICED.	REMEDIAL MEASURES SUGGESTED
6	Name:-**Paldhag** Year of completion :- 1974 Longitude :- 76o 18' 03" Latitude :- 20o 35' 45" Height :- 24.06 m. Gross capacity :- 9.09 Mm3 Design Spillway capacity :- 1095 cumecs Sr. No. in National register oflarge Dams 2009) :- **MH09MH0449** **Dist-Buldana.** **Tal- Buldana.**	11/05/2019 04/11/2019	Shri. A.N.Kanna E.E.B.I.D Buldana	Earth Dam W.W & T.C.	1) Dam section is under section (B1) 2) Settlement & disturbed pitching between RD 90 to 120m,225 to 360 m. (B3) 3) There is scouring on D/S side of EDA (A7) 4) End sill wall towards left bank collapsed between RD 0 to 60 m & coping in full length is washed away. (A17)	Dam section to be brought to correct design section and level by adding earthwork duly compacted properly. Pitching on U/s & D/s to be reset, by using stones of adequate weight and size laid over properly graded filter. Proper remedial measure be taken and scouring be monitored Repairs to End sill wall shall be done to avoid progressive deterioration.
7	Name:- **Pimpalner** Year of completion :- 1979 Location : - Longitude :- 76o 34' 00" Latitude :- 19o 57' 00" Height :- 16. 30 m. Gross capacity :-2.09 Mm3 Design Spillway capacity :- 453 cumecs Sr. No. in National register oflarge Dams 2009) :- **MH09MH0784.** **Dist-Buldana.** **Tal- Lonar.**	08/05/2019 06/11/2019	Shri. A.N.Kanna E.E.B.I.D Buldana	Earth Dam W.W. & T.C.	1) Dam section is not as per designed in respect of top width & Slopes(B1) 2) U/S &D/S face of bar needs pointing. (B8) 3) Scouring observed on D/S of bar(A17) 4) Retrogression in tail channel. (A7)	Dam section to be brought to correct design section and level by adding earthwork duly compacted properly. Needs to be repair. Proper remedial measure be taken and scouring be monitored. If retrogression and erosion is closer to the E.D.A. of spillway or waste weir bar, protective measures shall be under taken to prevent progressive damage. Extent of retrogression should be ascertained and monitored every year by mapping.If the problem of retrogression is moving upstream and serious,and for geological investigation, the problem shall be refered to respective organisation for under taking investigation and studies for evolving suitable solution to the problem.

SR NO	DAM FEATURES	DATE OF INSPECTION	INSPECTING OFFICER	MAIN COMPONENT OF DAM	SIGNIFICANT DEFICIENCIES NOTICED.	REMEDIAL MEASURES SUGGESTED
8	Name:- **Sawangimali-1** Year of completion :- 1991 Location : - Longitude :- 76o 26' 75" Latitude :- 20o 10' 30" Height :- 18.65 m. Gross capacity :-1.73 Mm3 Design Spillway capacity :- 214 cumecs Sr. No. in National register oflarge Dams 2009) :- **MH09MH1270** **Dist-Buldana.** **Tal- Mehakar.**	07/05/2019 07/11/2019	Shri. A.N.Kanna E.E.B.I.D Buldana	Earth Dam W.W. & T.C.	1) Dam section is not as per designed Slopes shows concavity in gorge portion. (B1) 2) Settlement of U/s pitching @ some places in gorge portion. (B3) 3) couring near end sill wall of fall no.1& 2 (A17) 4) Retrogression noticed in Tail channel at some locations. (A7)	Dam section to be brought to correct design section and level by adding earthwork duly compacted properly. Pitching to be reset by using stones of adequate weight and size laid over properly graded filter. Proper remedial measure be taken and scouring be monitored. If retrogression and erosion is closer to the E.D.A. of spillway or waste weir bar, protective measures shall be under taken to prevent progressive damage. Extent of retrogression should be ascertained and monitored every year by mapping.If the problem of retrogression is moving upstream and serious,and for geological investigation, the problem shall be refered to respective organisation for under taking investigation and studies for evolving suitable solution to the problem
9	Name**:- Sawangimali-2** Year of completion :- 1993 Location : - Longitude :- 76o 26' 30" Latitude :- 20o 10' 15" Height :- 20.67 m. Gross capacity :-1.56 Mm3 Design Spillway capacity :- 334 cumecs Sr. No. in National register oflarge Dams 2009) :- **MH09MH1307**	07/05/2019 07/11/2019	Shri. A.N.Kanna E.E.B.I.D Buldana	Earth Dam W.W. & T.C.	1) Dam section is not as per designed Slopes shows concavity in gorge portion(B1) 2) Scouring observed at end sill wall of stilling basin. (A17) 3) Scouring noticed in Tail channel @ some places. (A7)	Dam section to be brought to correct design section and level by adding earthwork duly compacted properly. Proper remedial measure be taken and scouring be monitored. ---------- do ----------

SR NO	DAM FEATURES	DATE OF INSPECTION	INSPECTING OFFICER	MAIN COMPONENT OF DAM	SIGNIFICANT DEFICIENCIES NOTICED.	REMEDIAL MEASURES SUGGESTED
10	Name:- **Shivani Armal** Year of completion :- 1995 Location : - Longitude :- 76o 15' 30" Latitude :- 20o 07' 30" Height :- 17.70 m. Gross capacity :-4.28 Mm3 Design Spillway capacity :- 823 cumecs Sr. No. in National register oflarge Dams 2009) :- **MH09MH1096** **Dist-Buldana.** **Tal- Deaulgaon Raja.**	01/05/2019 19/12/2019	Shri. A.N.Kanna E.E.B.I.D Buldana	Earth Dam W.W. & T.C.	1) Settlement observed on U/s slope of dam @ RD 600 to750 m, 870 to 900 m(B3) 2) Heavy scouring is observed at D/S of E.D.A. (A14) 3) Scouring is observed in tail channel.(A7)	Dam section to be brought to correct design section and level by adding earthwork duly compacted properly. The area should be well drained so as to avoid any stagnant pools of water. Proper remedial measure be taken and scouring be monitored.
11	Name:- **Bramhanwada** Year of completion :- 1995 Location : - Longitude :- 76o 29' 30" Latitude :- 20o 22' 30" Height :- 23.70 m. Gross capacity :- 6.85 Mm3 Design Spillway capacity :- 1186 cumecs Sr. No. in National register oflarge Dams 2009) :- **MH09MH1378** **Dist-Buldana.** **Tal- Chikhali.**	07/04/2019 22/12/2019	Shri. A.N.Kanna E.E.B.I.D Buldana	W.W. & T.C.	1) Retrogression in tail channel by 0.60 to 1.00 m. depth. (A7)	If retrogression and erosion is closer to the E.D.A. of spillway or waste weir bar, protective measures shall be under taken to prevent progressive damage. Extent of retrogression should be ascertained and monitored every year by mapping.If the problem of retrogression is moving upstream and serious,and for geological investigation, the problem shall be refered to respective organisation for under taking investigation and studies for evolving suitable solution to the problem

SR NO	DAM FEATURES	DATE OF INSPECTION	INSPECTING OFFICER	MAIN COMPONENT OF DAM	SIGNIFICANT DEFICIENCIES NOTICED.	REMEDIAL MEASURES SUGGESTED
12	Name:- **Kardi** Year of completion :- 1997 Location : - Longitude :- 75o 58' 30" Latitude :- 20o 22' 00" Height :- 15.06 m. Gross capacity :- 5.89 Mm3 Design Spillway capacity :- 1085 cumecs Sr. No. in National register oflarge Dams 2009) :- **MH09MH1450** **Dist-Buldana.** **Tal- Buldana.**	06/04/2019 22/12/2019 22/08/2019	Shri. A.N.Kanna E.E.B.I.D Buldana Shri. N.K. Tayde EE DSD2 Nashik.	W.W. & T.C.	1)In stilling basin between gate No.8 & 10 concrete is eroded (10 X 5 m) (A14) 2) Heavy leakages observed through foundation of w.w. & side of guide wall. (B7) Same as above & 1) Gaps are observed between spillway gate concrete & stilling basin base. (A16) 2) Leakages at D/S head wall near outlet pipe is observed.(A4)	Repairs to stilling basin shall be done. Reffer this problem to SE Dam Circle ,CDO Nashik for getting solution regarding structural repairs. ----------do---------- Necessary remedial measures shall be carried out immediately.
13	Name**:- Vidrupa** Year of completion :- 1990 Location : - Longitude :- 76o 19' 56" Latitude :- 19o 59' 42" Height :- 17.85 m. Gross capacity :- 4.56 Mm3 Design Spillway capacity :- 920 cumecs Sr. No. In National register oflarge Dams 2009) :- **MH09MH1278** **Dist-Buldana.** **Tal- Sindhkhed Raja.**	07/04/2019 08/12/2019	Shri. A.N.Kanna E.E.B.I.D Buldana	Earth dam Outlet	1)Settlement of pitching at three places between ch. 60 to 460m(B3) 2) Outlet gate does not open & close smoothly. Stem rod is bend. (B5) 3) Stem rod is bent. (B5)	Pitching to be reset by using stones of adequate weight and size laid over properly graded filter.1. The proper repairs shall be carried out with the help of Mechanical organisation. -------do-------

SR NO	DAM FEATURES	DATE OF INSPECTION	INSPECTING OFFICER	MAIN COMPONENT OF DAM	SIGNIFICANT DEFICIENCIES NOTICED.	REMEDIAL MEASURES SUGGESTED
14	Name:- **Utawali** Year of completion :- 2005 Location : - Longitude :- 76o 41' 10" Latitude :- 20o 25' 17" Height :- 25.83 m. Gross capacity :- 20.80 Mm3 Design Spillway capacity :- 3740cumecs Sr. No. In National register oflarge Dams 2009) :- **MH09MH1800** **Dist-Buldana.** **Tal- Mehakar.**	26/05/2019 10/12/2019	Shri. A.N.Kanna E.E.B.I.D Buldana	Earth dam W.W. & T.C.	1) Settlement of pitching is observed from RD 2040 to 2100 m. (B3) 2) Dam section is not as per design.(B1) 3) D/S of bar erosion in tail channel is observed as a pit after removal of soft material Also erosion near fall @ ch. 165 m. and at sides of check walls @ ch. 340 & 525 m. (A7)	Pitching to be reset by using stones of adequate weight and size laid over properly graded filter.1. Dam section to be brought to correct design section and level by adding earthwork duly compacted properly. Proper remedial measure be taken and scouring be monitored.
15	Name:- **Masrul** Year of completion :- 1998 Location : - Longitude :- **75°56' 30"** Latitude :- **20° 25' 06"** " Height :-**17.70** m. Gross capacity :- 9.51Mm3 Design Spillway capacity :-1068.81cumecs Sr. No. In National register of large Dams 2009) :- **MH09MH1483** **Dist-Buldana.** **Tal- Buldana**	06/04/2019 24/10/2019 22/08/2019	Shri. A.N.Kanna E.E.B.I.D Buldana Shri. N.K. Tayde EE DSD2 Nashik.		1)Masonry of HR well is damaged at top.(A6) 2) Leakages at D/S head wall near outlet pipe is observed.(A4)	Necessary remedial measures shall be carried out immediately. ----------do----------

SR NO	DAM FEATURES	DATE OF INSPECTION	INSPECTING OFFICER	MAIN COMPONENT OF DAM	SIGNIFICANT DEFICIENCIES NOTICED.	REMEDIAL MEASURES SUGGESTED
EE.A.I.D.AKOLA						
16	Name:- **Nirguna** Year of completion :- **1975** Location : - Longitude :- **76° 01' 00"** Latitude :- **20° 21' 00"** Height :- **25.70 m.** Gross capacity :-**32.29 Mm^3** Design Spillway capacity :- **1678 cumecs** Sr. No. in National register oflarge Dams 2009) :- **MH09MH0530** **Dist-Akola.** **Tal- Patur.**	10/05/2019 05/10/2019	Shri C.V.Wakode E.E.A.I.D Akola	W.W. & T.C. Earth dam	1) Guide wall at RD 600 to 760 m is washed out. (A16) Same as above sr.no.1 2) Pitching on U/S berm was totally disturbed. (B3) 3)Coping on end sill is wash away,end sill wall is damage(B7) 4)U/S & D/S face of bar needs pointing (B6)	Repairs to guide wall shall be done. Pitching to be reset by using stones of adequate weight and size laid over properly graded filter.1. Necessary Repairs shall be carried out. -------do-------
17	Name:- **Ghota** Year of completion :- **1978** Location : - Longitude :- **77° 18' 00"** Latitude :- **20° 30' 00"** Height :- **15.75 m.** Gross capacity :-**1.65 Mm^3** Design Spillway capacity :- **384 cumecs** Sr. No. in National register oflarge Dams 2009) :- **MH09MH0711** **Dist-Akola.** **Tal- Barshi Takli.**	07/05/2019 12/10/2019 31/12/2019	Shri C.V.Wakode E.E.A.I.D Akola Shri N.K.Tayade E.E.DSD-2, Nashik.	Earth dam W.W. & T.C	1) Undulations on top of dam upto 90 cm. at some chainages is obseved. (B3) 2) Masonry of spillway bar damaged. (B7) 3) Guide wall is damaged. (A16) 4)Scouring on the D/S of bar. (A17) 5) Scouring is noticed in tail channel. (A7) 6) Coping is damaged. (B7) Same as above	Dam section to be brought to correct design section and level by adding earthwork duly compacted properly. Repairs to masonary surface shall be done. Repairs to guide wall shall be done. Immediate proper remedial measure be taken and scouring be monitored. --------do-------- Needs to be repair.

SR NO	DAM FEATURES	DATE OF INSPECTION	INSPECTING OFFICER	MAIN COMPONENT OF DAM	SIGNIFICANT DEFICIENCIES NOTICED.	REMEDIAL MEASURES SUGGESTED
18	Name:-**Tuljapur** Year of completion :- **1975** Location : - Longitude :- **77° 55' 00"** Latitude :- **20° 27' 00"** Height :-**15.00 m.** Gross capacity :- **0.90 Mm^3** Design Spillway capacity :- **102 cumecs** Sr. No. in National register oflarge Dams 2009) :- **MH09MH0467** **Dist-Akola.** **Tal- Patur.**	10/05/2019 05/10/2019	Shri C.V.Wakode E.E.A.I.D Akola	Earth Dam W.W. & T.C.	1) 1 to 2 cusec leakages noticed near hill on D/S slope @ RD 04m to 50m . (A1) 2)Coping of W.W. bar is damaged at some places(B7) 3) Dislocation of pitching on U/S of many places noticed (B3)	Necessary repairs shall be carried out to stop the leakage. Necessary repairs shall be carried. Necessary repairs shall be carried.
19	Name:- **Uma** Year of completion :- **1981** Location : - Longitude :- **74° 24' 06"** Latitude :- **20° 35' 30"** Height :- **22.20 m.** Gross capacity :-**14.01 Mm^3** Design Spillway capacity :- **1340 cumecs** Sr. No. in National register oflarge Dams 2009) :- **MH09MH0899** **Dist-Akola.** **Tal- Murtizapur.**	29/04/2019 04/10/2019 31/12/2019	Shri C.V.Wakode E.E.A.I.D Akola Shri N.K.Tayade E.E.DSD-2, Nashik.	W W & Tail Channel	1) Heavy scouring is noticed on D/S of w.w. bar in 500m length ,4to5m depth&10to 30m width. (A17) 2) Curtain wall are damage and washed out. (A7) Same as above	Immediate proper remedial measure be taken and scouring be monitored. Repairs to curtain wall shall be done.

SR NO	DAM FEATURES	DATE OF INSPECTION	INSPECTING OFFICER	MAIN COMPONENT OF DAM	SIGNIFICANT DEFICIENCIES NOTICED.	REMEDIAL MEASURES SUGGESTED
20	Name:- **Pimpalgaon Chambhare.** Year of completion :- **1974** Longitude :- **77° 18' 00"** Latitude :- **20° 30' 00"** Height :- **15. 60 m.** Gross capacity :-**2.53 Mm^3** Design Spillway capacity :- **512 cumecs** Sr. No. in National register oflarge Dams 2009) :- **MH09MH0511.** **Dist-Akola.** **Tal- Barshitakli.**	07/05/2019 26/09/2019 31/12/2019	Shri C.V.Wakode E.E.A.I.D Akola Shri N.K.Tayade E.E.DSD-2, Nashik.	W.W.&T.C.	1) Curtain wall @ RD 30m of 60m. Length is damaged. (B7) 2) Damages observed to masonary surface of E.D.A. (A14) 3) Coping is damaged & masonary of spillway bar is damaged at some places. (B7) 4) Leakage of 10L/S is observed (A4) ----As above----	Repairs to Curtain wall shall be done. Repairs to EDA surface shall be done. Necessary repairs shall be carried out. Necessary repairs shall be carried out.
21	Name:- **Sisa udegaon** Year of completion :- **1979** Location : - Longitude :- **76° 07' 00"** Latitude :- **20° 40' 00"** Height :- **16.60 m.** Gross capacity :-**1.01 Mm^3** Design Spillway capacity :- **199cumecs** Sr. No. in National register oflarge Dams 2009) :- **MH09MH0752** **Dist-Akola.** **Tal- Akola.**	08/05/2019 04/10/2019	Shri C.V.Wakode E.E.A.I.D Akola	Earth Dam	1) Dislocation of pitching on U/S at many places noticed. (B3)	Pitching to be reset by using stones of adequate weight and size laid over properly graded filter.1.

SR NO	DAM FEATURES	DATE OF INSPECTION	INSPECTING OFFICER	MAIN COMPONENT OF DAM	SIGNIFICANT DEFICIENCIES NOTICED.	REMEDIAL MEASURES SUGGESTED
22	Name:**- Chinchpani** Year of completion:-**1999** Location : - Longitude :- **76° 59' 27"** Latitude :- **21° 09' 00"** Height :- **17.25 m.** Gross capacity :-**2.27 Mm^3** Design Spillway capacity :- **302cumecs** Sr. No. in National register oflarge Dams 2009) :- **MH09MH1470**	10/05/2019 15/10/2019 10/12/2019	Shri C.V.Wakode E.E.A.I.D Akola Shri N.K.Tayade E.E.DSD-2, Nashik.	Earth Dam W.W.&T.C	1) Leakages observed in D/S of dam at RD 210 mt. discharge @5 l/sec, clear water & wet patches observed in between RD 195 mt to 225mt, when the dam storage is at 100.90 mt level. This leakage itself stop when dam storage level comes to 99.40m (A1) 2) Leakage through both wing wall of W.W. Bed concrete of EDA damaged. Damages are observed to right side guid wall .(**A14**) ----As above----	Reasons for the leakages shall be carried out and according to this necessary repairs / earth works shall be carried out Necesary repairs shall be immediately carried out.
(II)S.E. W.I.C.Washim E.E. W.I.D. Washim.						
23	Name:- **Fulumbri** Year of completion :-**1980** Location : - Longitude :- **77° 33' 00"** Latitude :- **20° 05' 30"** Height :- **17.5m** Gross capacity :-**1.26 Mm^3** Design Spillway capacity :-**77cumecs** Sr. No. in National register oflarge Dams 2009) :- **MH09MH0808**	10/05/2019 03/11/2019 02/01/2020	Shri P.V. Borse E.E.W.I.D. Washim Shri N.K.Tayade E.E.DSD-2, Nashik.	Outlet Outlet Earthen Dam	1) Head Regulator well have cracks needs repair (A6) 2) Leakage of clear water observed along condute from dam body through D/S head wall.(A4) 3) Settelment of D/S embankment near HR well was observed(B3) ----As above----	1. Necesary repairs shall be immediately carried out. 2. Necesary repairs shall be immediately carried out. 3. Necesary repairs shall be immediately carried out.

SR NO	DAM FEATURES	DATE OF INSPECTION	INSPECTING OFFICER	MAIN COMPONENT OF DAM	SIGNIFICANT DEFICIENCIES NOTICED.	REMEDIAL MEASURES SUGGESTED
24	Name:-**Rui.** Year of completion :- **1986** Location : - Longitude :- **77° 04' 00"** Latitude :- **20° 02' 00"** Height :- **18.85 m.** Gross capacity :-**0.95 Mm^3** Design Spillway capacity :- **206 cumecs** Sr. No. in National register oflarge Dams 2009) :- **MH09MH1114.** **Dist-Washim.** **Tal- Manor.**	11/05/2019 03/11/2019 02/01/2020	Shri P.V. Borse E.E.W.I.D. Washim Shri N.K.Tayade E.E.DSD-2, Nashik.	W.W.& T.C.	1) Heavy scouring on d/s side of right side of guide wall. (A16) 2)Retrogression is noticed in tail channel 60 m. from bar. (A7) 3) Coping of end wall of EDA damaged in half length. (A14) ----As above----	Scouring to be repaired by rich concrete filling suitably & monitored. As if retrogression and erosion is closer to the E.D.A. of spillway or waste weir bar, protective measures shall be under taken to prevent progressive damage. Extent of retrogression should be ascertained and monitored every year by mapping.If the problem of retrogression is moving upstream and serious,and for geological investigation, the problem shall be refered to respective organisation for under taking investigation and studies for evolving suitable solution to the problem Needs to be repair immediately.
25	Name:- **Waigoul** Year of completion :-**1999** Location : - Longitude **77° 38' 21"** Latitude :-**20° 08' 22"** Height :- **17.25 m.** Gross capacity :-**2.21 Mm^3** Design Spillway capacity :- **103.9 cumecs** Sr. No. in National register oflarge Dams 2009) :- **MH09LH1416** **Dist-Washim.** **Tal- Manor**	11/05/2019 03/11/2019	Shri P.V. Borse E.E.W.I.D. Washim	WW & TC	1) Fall at Rd 45m is wash away.(A17), 2) Retrogression observed in tail channel. Details not given. (A7)	Fall shall be reconstructed. Protective measures shall be under taken to prevent progressive damage. Extent of retrogression should be ascertained and monitored every year by mapping.If the problem of retrogression is moving upstream and serious,and for geological investigation, the problem shall be refered to respective organisation for under taking investigation and studies for evolving suitable solution to the problem

SR NO	DAM FEATURES	DATE OF INSPECTION	INSPECTING OFFICER	MAIN COMPONENT OF DAM	SIGNIFICANT DEFICIENCIES NOTICED.	REMEDIAL MEASURES SUGGESTED
(III)S.E. A.I.C.P.Amravati E.E. I.P &W.I.D. Amravati						
26	Name:- **Bordinalla** Year of completion :-**2015** Location : - Longitude **77° 59' 09"** Latitude :-**21°24' 00"** Height :- **18 m.** Gross capacity :-**5.91 Mm³** Design Spillway capacity :- **594.80 cumecs** Sr. No. in National register oflarge Dams 2009) :- **MH09LH2216**	20/06/2019 07/12/2019	Shri S.G.Rathi E.E.I.P.&W..I.D Amravati	Outlet	1) Minor new cracks are observed beside previously seen cracks in settlement area of D/S counduit raft after august 2016 (**B4**)	Necesary repairs shall be immediately carried out.
CHIEF ENGINEER, (W.R.),Amravati (III)SUPERINTENDING ENGINEER, YAVATMAL IRRIGATION CIRCLE (M) E.E. Y.I.D. Yavatmal						
27	Name:- **Kapara** Year of completion :- **1984** Location : - Longitude :- **78°07' 00"** Latitude :- **20°08' 00"** Height :- **20.36 m.** Gross capacity :-**2.80 Mm³** Design Spillway capacity :-**209.5 cumecs** Sr. No. in National register oflarge Dams 2009) :- **MH09MH0904**	15/04/2019 18/10/2019	Shri K.D.Damah E.E.Y.I.D. Yavatmal Shri. A.S.Vhanmane E.E.Y.I.D. Yavatmal	Outlet	1) Outlet gate does not open & closed smoothly. Stem rod is bend/ damaged.(B5) 2) Unusual noise during operation.(B5)	Necesary repairs by Mechanical unit shall be immediately carried out. Necesary repairs by Mechanical unit shall be immediately carried out.

SR NO	DAM FEATURES	DATE OF INSPECTION	INSPECTING OFFICER	MAIN COMPONENT OF DAM	SIGNIFICANT DEFICIENCIES NOTICED.	REMEDIAL MEASURES SUGGESTED
28	Name:- **Nignoor** Year of completion :- **1969** Location : - Longitude :- **78° 50' 00"** Latitude :- **19° 40' 00"** Height :- **18.46 m.** Gross capacity :-3**.63 Mm^3** Design Spillway capacity :- **443 cumecs** Sr. No. in National register oflarge Dams 2009) :- **MH09MH0187** **Dist-Yavatmal** **Tal- Umerkhed.**	03/05/2019 24/10/2019 26/09/2019	Shri K.D.Damah E.E.Y.I.D. Yavatmal Shri. A.S.Vhanmane E.E.Y.I.D. Yavatmal Shri N K Tayade E.E.DSD-2 Nashik	Earth Dam W.W.& Tail Channel	1) At RD 450 to 700 m.heavy seepage of water through earthen dam is observed.(A1) 2) Foundation of w.w. bar is opened and cavitation below foundation is observed @ R.D.20 m to 25m and stone are removed. (B7) ----As above----	Repairs shall be done after locating the leakage spots and the entries. The path of seepage / leakage shall be investigated & if it is piping. Immidiate repairs shall be carried out. Neccesary repairs shall be done.
29	Name:- **Deogaon** Year of completion :- **1986** Location : - Longitude :- **78° 54' 00"** Latitude :- **20° 10' 00"** Height :- **15.91 m.** Gross capacity :- **7.31 Mm^3** Design Spillway capacity :- **764 cumecs** Sr. No. in National register oflarge Dams 2009) :- **MH09MH1131** **Dist-Yavatmal** **Tal- Arni.**	02/05/2019 19/10/2019	Shri K.D.Damah E.E.Y.I.D. Yavatmal Shri. A.S.Vhanmane E.E.Y.I.D. Yavatmal	Earth Dam W.W.& T.C.	1) Water logging is observed on D/S of dam @ RD 270m(A2) 2) Scouring observed left flank & weather rock is collapsing on flank. (A16)	The path of seepage shall be investigated & Repairs shall be done after locating the leakage spots and the entries. Proper remedial measure be taken and scouring be monitored.

SR NO	DAM FEATURES	DATE OF INSPECTION	INSPECTING OFFICER	MAIN COMPONENT OF DAM	SIGNIFICANT DEFICIENCIES NOTICED.	REMEDIAL MEASURES SUGGESTED
30	Name:- **Anji** Year of completion :- 1984 Location : - Longitude :- 78o 34' 00" Latitude :- 20o 10' 00" Height :- 20.32m. Gross capacity :- 2.80 Mm3 Design Spillway capacity :- 210 Sr. No. In National register oflarge Dams 2009) :- **MH09MH1117** **Dist-Yavatmal** **Tal- Ralegaon.**	18/04/2019	Shri K.D.Damah E.E.Y.I.D. Yavatmal	W.W.& T.C.	1) Bed concrete of fall is damaged (A7)	Necessary repairs shall be carried out.
					2) Heavy retrogression in tail channel between first second and third fal. (A7)	If retrogression and erosion is closer to the E.D.A. of spillway or waste weir bar, protective measures shall be under taken to prevent progressive damage. Extent of retrogression should be ascertained and monitored every year by mapping.If the problem of retrogression is moving upstream and serious,and for geological investigation, the problem shall be refered to respective organisation for under taking investigation and studies for evolving suitable solution to the problem
		09/10/2019	Shri. A.S.Vhanmane E.E.Y.I.D. Yavatmal		3) End sill wall of 1st fall,masonry of 2nd fall is damaged.About 50 m length masonry of 3rd fall & end sill wall is washed out. (A16)	Neccesary repairs shall be carried out.

SR NO	DAM FEATURES	DATE OF INSPECTION	INSPECTING OFFICER	MAIN COMPONENT OF DAM	SIGNIFICANT DEFICIENCIES NOTICED.	REMEDIAL MEASURES SUGGESTED
31	Name:- **Singandoh** Year of completion :- 1993 Location : - Longitude :- 78o 58' 00" Latitude :- 20o 24' 06" Height :- 17m. Gross capacity :- 3.13 Mm3 Design Spillway capacity :- 686 Sr. No. In National register oflarge Dams 2009) :- **MH09MH1310** **Dist-Yavatmal** **Tal- Mer**	02/05/2019 18/10/2019	Shri K.D.Damah E.E.Y.I.D. Yavatmal Shri. A.S.Vhanmane E.E.Y.I.D. Yavatmal	Earth Dam W.W.& T.C.	1) Settlement of dam top by 30 cm through out dam length. (B3) 2) Leakages are observed at 15m from right flank wall. (B7) 3) End sill wall is damaged and washout in 30m lenght. (A17) 4) Stilling basin is damaged. (A14)	Dam section to be brought to correct design section and level by adding earthwork on dam top compacted properly. Necessary repairs shall be done after locating the leakage spots. Necessary repairs shall be carried out. Need to be repaired immediately.
32	Name:- **Waghadi** Year of completion :- 1978 Location : - Longitude :- 78o 18' 10" Latitude :- 20o 15' 30" Height :- 26.00 m. Gross capacity :- 41.11 Mm3 Design Spillway capacity :- 1815 cumecs Sr. No. in National register oflarge Dams 2009) :- **MH09MH0739** **Dist-Yavatmal** **Tal- Yavatmal.**	06/05/2019 21/10/2019	Shri K.D.Damah E.E.Y.I.D. Yavatmal Shri. A.S.Vhanmane E.E.Y.I.D. Yavatmal	Earth Dam	1) Settlement of pitching from RD 1215 to 1470 & 1500 to 1600 m is observed(B3)	Pitching to be reset by using stones of adequate weight and size laid over properly graded filter.

SR NO	DAM FEATURES	DATE OF INSPECTION	INSPECTING OFFICER	MAIN COMPONENT OF DAM	SIGNIFICANT DEFICIENCIES NOTICED.	REMEDIAL MEASURES SUGGESTED
33	Name:- **Vihirgaon** Year of completion :- 1992 Location : - Longitude :- 78o 30' 00" Latitude :- 20o 38' 00" Height :- 15.54m. Gross capacity :- 3.17 Mm3 Design Spillway capacity :- 226 Sr. No. In National register oflarge Dams 2009) :- **MH09MH1289** **Dist-Yavatmal** **Tal- Ralegaon.**	16/04/2019 19/10/2019	Shri K.D.Damah E.E.Y.I.D. Yavatmal Shri. A.S.Vhanmane E.E.Y.I.D. Yavatmal	OUTLET W.W.& T.C.	1) Leakage of water through pipe joint. (A4) 2) Stem rod is bent .unsual noise during operation. (B5) 3) Bed concrete of fall is damaged(A7) 4) Retrogression in tail channel on D/S of fall and foundation of end sill wall is opened. (A7) 5) Wet patches are observed on D/S of dam @30m from rock toe (A1)	The proper repairs shall be carried out with the help of Mechanical organisation. The proper repairs shall be carried out with the help of Mechanical organisation Necessary repairs shall be carried out If retrogression and erosion is closer to the E.D.A. of spillway or waste weir bar, protective measures shall be under taken to prevent progressive damage. Extent of retrogression should be ascertained and monitored every year by mapping.If the problem of retrogression is moving upstream and serious,and for geological investigation, the problem shall be refered to respective organisation for under taking investigation and studies for evolving suitable solution to the problem . Check whether this has any connection with storage. Study the foundation details for possible under seepage and necessary repairs i.e. proper drainage of D/S area shall be done.

SR NO	DAM FEATURES	DATE OF INSPECTION	INSPECTING OFFICER	MAIN COMPONENT OF DAM	SIGNIFICANT DEFICIENCIES NOTICED.	REMEDIAL MEASURES SUGGESTED
EE Arunavati project division, Digras						
34	Name:- **Satpalli** Year of completion :- **2000** Location : - Longitude :- **78° 31' 50"** Latitude :- **29° 19' 25"** Height :- **16.05 m.** Gross capacity :-**2.86 Mm^3** Design Spillway capacity :- **185.97 cumecs** Sr. No. in National register oflarge Dams 2009) :- **MH09MH2150** **Dist- Yavatmal.** **Tal- Zari Zamni.**	28/05/2019 15/12/2019	Shri D.J.Rathod EE Arunavati project division Digras	Earth Dam W.W.& T.C	1) Two longitudinal cracks of width 30mm,length 2.5m observed near left HR of dam on both side of it. (B4) 2) Spill channel guide bund is damaged to very large extent. (A7) 3) End sill wall of W.W. is damaged. (A17)	Cracked portion should be excavated in the form of trench up to bottom of cracks and trench filled by well compacted proper soil & sandy murum & this portion shall be reguraly moniterd. Repairs to guide bund shall be done to avoid further deterioration. Needs to be repair immediately.
IV) SUPERINTENDING ENGINEER, YAVATMAL IRRIGATION CIRCLE **E.E. M.I.D.,Pusad**						
35	Name:- **Kali (D)** Year of completion :- **2007** Location : - Longitude :- **77° 42' 52"** Latitude :- **19° 56' 19" .** Height :- **15.32 m.** Gross capacity :-**4.50 Mm^3** Design Spillway capacity :- **489.19 cumecs** Sr. No. in National register oflarge Dams 2009) :- **MH09MH2151** **Dist-Yavatmal** **Tal- Mahagaon.**	27/06/2019 18/12/2019 26/09/2019	Shri R.G.Baghmar EE M.I.D. Pusad Shri G.L Rathod E.E.Y.P.C.D. Yavatmal Shri N K Tayade E.E.DSD-2 Nashik	Earth dam	1) Water logged area on R/S of left bank canal on 100 to 150 m on D/S of dam. (A2) 2) There are boils, wet patcheswater seepage on the D/S of dam withen 200 m. from toe. (A1) . ----As above----	The d/s area at least up to above 200m. from toe, shall be free from Stagnation. The area should be well drained so as to avoid any stagnant pools of water. Check whether this has any connection with storage. Study the foundation details for possible under seepage and necessary repairs i.e. proper drainage of D/S area shall be done.

SR NO	DAM FEATURES	DATE OF INSPECTION	INSPECTING OFFICER	MAIN COMPONENT OF DAM	SIGNIFICANT DEFICIENCIES NOTICED.	REMEDIAL MEASURES SUGGESTED
36	Name:- **Amadapur** Year of completion :- **2005** Location : - Longitude :- **77° 55' 49"** Latitude :-:- **20° 40' 48"** Height :- **17.40 m.** Gross capacity :- **14.83 Mm^3** Design Spillway capacity :- **796 cumecs** Sr. No. in National register oflarge Dams 2009) :- **- MH09MH2155** **Dist-Yavatmal** **Tal- Umerkhed.**	27/06/2019 18/12/2019	Shri R.G.Baghmar EE M.I.D. Pusad Shri G.L Rathod E.E.Y.P.C.D. Yavatmal	Outlet W.W. & T.C.	1) Outlet well is horizontly cracked. (A6) 2) Leakage observed through masonry wall (B7)	The proper repairs shall be carried out The proper repairs shall be carried out
37	Name:- **Pimpalgaon** Year of completion :- **1997** Location : - Longitude :- **77° 47' 03"** Latitude :-:- 19° **42' 03"** Height :- **21.84 m.** Gross capacity :- **8.96 Mm^3** Design Spillway capacity :- **528 cumecs** Sr. No. in National register oflarge Dams 2009) :- **MH09MH1449** **Dist-Yavatmal** **Tal- Mahagaon.**	26/05/2019 18/12/2019	Shri R.G.Baghmar EE M.I.D. Pusad Shri G.L Rathod E.E.Y.P.C.D. Yavatmal	Earth Dam	1) There is depression on U/S side between RD 570 to 680 m. (B3) 2)Relief wells are not functioning. (A5)	Dam section to be brought to correct design section and level by adding earthwork duly compacted properly. It should be cleaned and surge immediately.

SR NO	DAM FEATURES	DATE OF INSPECTION	INSPECTING OFFICER	MAIN COMPONENT OF DAM	SIGNIFICANT DEFICIENCIES NOTICED.	REMEDIAL MEASURES SUGGESTED
V)SUPERINTENDING ENGINEER, UPPER WARDHA PROJECT CIRCLE, AMRAVATI E.E.M&M.I.D. Achalpur						
38	Name:- **Basalapur** Year of completion :- **1972** Location : - Longitude :- **77° 50' 00"** Latitude :- **20° 50' 00"** Height :- **17.85 m.** Gross capacity :- **1.53 Mm^3** Design Spillway capacity :- **193cumecs** Sr. No. In National register oflarge Dams 2009) :- **MH09MH0275** **Dist-Amravati**	08/05/2019 06/12/2019	Shri P.A.Gole E.E.M&M.I.D. Achalpur	Outlet	1) Nearly 1.2 m deep half upper part of well from central cross girder is dislocated. (A6)	Necessary repairs shall be done immediatly.

SR NO	DAM FEATURES	DATE OF INSPECTION	INSPECTING OFFICER	MAIN COMPONENT OF DAM	SIGNIFICANT DEFICIENCIES NOTICED.	REMEDIAL MEASURES SUGGESTED
39	Name:- **Mandwa (AMT)** Year of completion :- **1973** Location : - Longitude :- **76° 47' 00"** Latitude :- **21° 45' 00"** Height :- **17.52 m.** Gross capacity :- **1.37 Mm^3** Design Spillway capacity :- **154 cumecs** Sr. No. In National register oflarge Dams 2009) :- **MH09MH0573** **Dist-Amravati.** **Tal- Dharni.**	10/05/2019 07/12/2019	Shri P.A.Gole E.E.M&M.I.D. Achalpur	Outlet W.W. & T.C	1) Outlet gate does not open & close smoothly. (B5) 2) Leakage through gate or from slots in closed position(A4) 3) Coping on W.W.bar is washed out. (B7) 4) Scouring on d/s side of bar (A17) 5) U/S & D/S/ face of W.W. bar need pointing. (B8) 6) Retrogression observed in tail channel near curtain wall. (A7)	The proper repairs shall be carried out with the help of Mechanical organisation ------do-------- Necessary repairs shall be done. Proper remedial measure be taken and scouring be monitored. Necessary repairs shall be done If retrogression and erosion is closer to the E.D.A. of spillway or waste weir bar, protective measures shall be under taken to prevent progressive damage. Extent of retrogression should be ascertained and monitored every year by mapping.If the problem of retrogression is moving upstream and serious,and for geological investigation, the problem shall be refered to respective organisation for under taking investigation and studies for evolving suitable solution to the problem

Table 2.11

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

Sr. No	Name of Dam	Year of Compl -etion	Location Longitude/ Latitude	Height in m	Gross Capacity Mm^3	Design Spillway Capacity m^3 / sec	Sr.No. in NRLD Register of Large Dams 2009	Gated / Ungated	Date of Inspection	Deficiencies noticed	Total Deficiencies
1	2	3	4	5	6	7	8	9	10	11	12
CHIEF ENGINEER,(S.P), AMRAVATI. SUPERINTENDING ENGINEER, AKOLA IRRIGATION CIRCLE, AKOLA, E.E. B.I.D. Buldana.											
1	Borkhedi	2014	76° 33' 30" 20° 04' 00"	15.94	8.14	795	----	Ungated	08/05/2019 07/11/2019	3.5,3.16,3.19	03
2	Godada	1973	76° 31' 00" 21° 05' 45"	15.64	1.89	129	MH09MH0328	Ungated	25/05/2019 20/12/2019	3.2,39,3.16,3.19,3.22	05
3	Rajura	1978	76° 29' 00" 20° 44' 20"	17.73	3.70	532	MH09MH0725	Ungated	25/05/2019 20/12/2019	3.7,3.9,3.16,3.21,3.22	05
4	Haralkhed	1994	76° 28' 00" 20° 22' 00"	16.37	1.24	189	MH09MH1326	Ungated	05/01/2019 22/12/2019	3.2,3.7,3.9,3.13	04
5	Mandwa(Bld)	1995	76° 20' 00" 20° 01' 20"	18.52	4.10	725	MH09MH1374	Ungated	02/01/2019 05/11/2019	3.5,3.7,3.9,3.10,3.16,3.20,3.21	07
6	Mas	1992	76° 39 45" 20° 36' 15"	17.71	17.50	942	MH09MH0051	Ungated	26/05/2019 01/12/2019	3.9,316,3.20,3.22	04
7	Paldhag	1974	76° 18' 03" 20°35' 45"	24.06	9.09	1095	MH09MH0449	Ungated	11/05/2019 04/11/2019	3.9,3.10,3.16,3.20,3.22	05
8	Pimplener	1979	76° 34' 00" 19° 57' 00"	16.30	2.09	453	MH09MH0784	Ungated	08/05/2019 06/11/2019	3.7,3.9,3.20,3.21	04
9	Sawangimali-1	1991	76° 26' 75" 20° 10' 30"	18.65	1.73	214	MH09MH1270	Ungated	07/05/2019 07/11/2019	3.9,3.19,3.22	03
10	Sawangimali-2	1993	76° 26' 30" 20° 10' 15"	20.67	1.56	343	MH09MH1307	Ungated	07/05/2019 07/11/2019	3.5,3.7,3.9,3.19,3.21	04
11	Shivani armal	1995	76° 15' 30" 20° 07' 30"	17.70	4.28	823	MH09MH1096	Ungated	01/05/2019 19/12/2019	3.5,3.19,3.20,3.21	04
12	Brahmanwada	1995	76° 29' 30" 20° 22' 30"	23.70	6.85	1186	MH09MH1378	Ungated	07/04/2019 22/12/2019	3.9,3.16,3.19,3.20	04
13	Kardi	1997	75° 58' 30" 20° 22' 00"	15.06	5.89	1085	MH09MH1450	gated	06/04/2019 22/12/2019	3.5,3.7,3.9,3.19,3.20,3.35	06

Sr. No	Name of Dam	Year of Compl-etion	Location Longitude/ Latitude	Height in m	Gross Capacity Mm^3	Design Spillway Capacity m^3 / sec	Sr.No. in NRLD Register of Large Dams 2009	Gated / Ungated	Date of Inspection	Deficiencies noticed	Total Deficiencies
14	Vidrupa	1990	76° 19' 56" 19° 59'42"	17.85	4.56	920	MH09MH1278	Ungated	07/04/2019 08/12/2019	3.5,3.9,3.16,3.21	04
15	Utawali	2005	76° 41' 10" 20° 25' 17"	25.83	20.80	3740	MH09MH1800	Ungated	26/05/2019 10/12/2019	3.5,3.9,3.20	03
16	Ancharwadi-1	1985	75° 30' 00" 20° 15' 00"	17.90	2.55	399	MH09MH1088	Ungated	01/05/2019 18/12/2019	3.2,3.5,3.7,3.9,3.16,3.20,3.21,3.22,3.36	09
17	Dhanora	1969	76° 27' 45" 21° 07' 00"	19.24	0.978	168	MH09MH0177	Ungated	25/05/2019 20/12/2019	3.2,3.9,3.13,3.16,3.19,3.20.	06
18	Fattepur	1978	76° 35' 00" 20° 29' 00"	15.40	1.78	242	MH09MH0620	Ungated	07/04/2019 06/12/2019	3.2,3.5,3.7,3.9,3.19	05
19	Gandhari	1976	76° 38' 00" 19° 52' 00"	18.03	2.41	249	MH09MH0568	Ungated	07/05/2019 05/11/2019	3.2,3.5,3.9,3.16,3.19,3.21.	06
20	Garkhed	1970	76° 13' 35" 19° 30' 00"	16.19	2.16	323	MH09MH0209	Ungated	10/05/2019 05/11/2019	3.9,3.19,3.21.	03
21	Hiwarkhed	1983	76° 32' 30" 20° 34' 00"	15.03	1.08	192	MH09MH0959	Ungated	07/04/2019 22/12/2019	3.1,3.2,3.5,3.7,3.9,3.19,3.22	07
22	Jagdari	1980	76° 02' 00" 20° 8' 45"	19.03	3.03	433	MH09MH0828	Ungated	07/05/2019 07/11/2019	3.2,3.9,3.16,3.21	04
23	Kalmeshwar	1998	75° 29' 00" 20° 16' 00"	16.09	1.45	181	MH09MH1463	Ungated	08/05/2019 06/11/2019	3.9,3.21,3.34	03
24	Kawala	1970	76° 23' 25" 20° 25' 00"	18.83	2.71	568	MH09MH0218	Ungated	01/05/2019 07/11/2019	3.7,3.9,3.16,3.19,3.20,3.21	06
25	Koradinalla	1980	76° 30' 22" 20° 12' 43"	19.31	22.08	2496	MH09MH0798	Ungated	07/05/2019 06/11/2019	3.5,3.9,3.10,3.19,3.20,3.22	06
26	Keshav shivani	1983	76° 21'45" 20° 35' 00"	16.10	2.38	464	MH09MH0994	Ungated	10/05/2019 05/11/2019	3.2,3.9,3.16,3.20,3.34	05
27	Nimkhed	1970	76° 36' 00" 20° 00' 00"	21.30	3.07	631	MH09MH0220	Ungated	07/04/2019 2/12/2019	3.5,3.7,3.9,3.10,3.16,3.19	06
28	Pangarkhed	1985	76° 47' 15" 20° 16' 15"	20.58	1.47	219	MH09MH1575	Ungated	08/05/2019 06/11/2019	3.5,3.22	02
29	Pangrikesapur	1973	76° 07' 45" 20° 25' 45"	16.37	1.24	189	MH09MH0341	Ungated	06/04/2019 06/11/2019	3.5,3.7,3.9,3.10,3.20,3.32	06

Sr. No	Name of Dam	Year of Compl -etion	Location Longitude/ Latitude	Height in m	Gross Capacity Mm^3	Design Spillway Capacity m^3 / sec	Sr.No. in NRLD Register of Large Dams 2009	Gated / Ungated	Date of Inspection	Deficiencies noticed	Total Deficiencies
30	Patoda	1996	76° 23' 00" 20° 19' 00"	17.14	2.48	303	MH09MH1471	Ungated	01/05/2019 07/11/2019	3.5,3.7,3.9,3.20,3.21,3.22	06
31	Pimparkhed	1973	76° 14' 00" 20° 55' 00"	18.03	2.41	249	MH09MH0330	Ungated	03/01/2019 05/11/2019	3.5,3.7,3.9,3.21,3.22	04
32	Shekhapur	1988	76° 15' 30" 20° 7' 30"	17.70	4.28	823	MH09MH1096	Ungated	06/04/2019 07/11/2019	3.5,3.9,3.16,3.21,3.22	05
33	Shivnijat	1973	76° 35' 55" 19° 53' 53"	15.90	1.48	208	MH09MH0346	Ungated	08/05/2019 06/11/2019	3.7,3.9,3.16,3.19.	04
34	Tambola	1979	76° 27' 00" 19° 59' 15"	15.76	1.69	247	MH09MH0763	Ungated	08/05/2019 06/11/2019	3.7,3.9,3.16,3.19	04
35	Telhara	1970	76° 20' 00" 20° 20' 00"	15.76	2.45	382	MH09MH1145	Ungated	01/05/2019 07/11/2019	3.1,3.5,3.9,3.10,3.19,3.20,3.22	07
36	Titwi	1972	76° 32' 33" 19° 54' 30"	19.55	3.11	429	MH09MH0299	Ungated	07/05/2019 06/11/2019	3.5,3.7,3.9,3.10,3.16,3.19,3.20, 3.21.	08
37	Torna	1993	76° 42' 45" 20° 27' 30"	23.00	8.48	961	MH09MH1315	Ungated	06/05/2019 10/12/2019	3.19,3.22,3.33	02
38	Dhorapgaon	2005	76° 24' 30" 20° 27' 40"	18.65	6.64	680	MH09MH2154	Ungated	26/05/2019 24/12/2019	3.5,3.9	02
39	Masrul	1998	75° 56' 30" 20° 25' 06"	17.69	9.51	1069	MH09MH1483	Ungated	06/04/2019 22/12/2019	3.5,3.7,3.10,3.20.	04
40	Warwand	2009	76° 17' 28" 20° 30' 52"	17.19	1.70	397	MH09MH2140	Ungated	06/04/2019 06/11/2019	3.2	01
41	Vyaghranalla	1992	76° 3' 30" 20° 41' 15"	15.14	8.40	1063	MH09MH1299	Ungated	11/05/2019 04/11/2019	3.9,3.10,3.16,3.19	04
E.E.A.I.D.Akola											
42	Nirguna	1975	76° 01' 00" 20° 21' 00"	25.70	32.29	1678	MH09MH0530	Ungated	10/05/2019 05/10/2019	3.5,3.7,3.9,3.20	04
43	Ghota	1978	77° 18' 00" 20° 30'00"	15.75	1.65	384	MH09MH0711	Ungated	07/05/2019 12/10/2019 31/12/2019	3.5,3.7,3.9,3.20,3.37	05
44	Tuljapur	1975	77° 55' 00" 20° 27' 00"	15.00	0.90	102	MH09MH0467	Ungated	10/05/2019 05/10/2019	3.9,3.20,3.22	03

Sr. No	Name of Dam	Year of Compl-etion	Location Longitude/ Latitude	Height in m	Gross Capacity Mm^3	Design Spillway Capacity m^3 / sec	Sr.No. in NRLD Register of Large Dams 2009	Gated / Ungated	Date of Inspection	Deficiencies noticed	Total Deficiencies
45	Uma	1981	74° 24' 06" 20° 35' 30"	22.20	14.01	1340	MH09MH0899	Ungated	29/04/2019 04/10/2019 31/12/2019	3.7,3.13,3.16,3.19,3.20,3.34	06
46	Patur	1998	76° 55'00" 20° 24'00"	23.25	2.07	262	MH09MH1362	Ungated	10/05/2019 28/09/2019 31/12/2019	3.19	01
47	Pimpalgaon chambhare	1974	77° 18' 00" 20° 30' 00"	15.60	2.53	512	MH09MH0511	Ungated	07/05/2019 26/09/2019 31/12/2019	3.2,3.5,3.9,3.16,3.19,3.20.	06
48	Sisa Udegaon	1979	76° 07' 00" 20° 40' 00"	16.60	1.01	199	MH09MH0752	Ungated	08/05/2019 04/10/2019	3.1,3.5,3.7,3.9.	04
49	Chinchpani	1999	77° 14' 00" 21° 09' 00"	17.25	2.27	302	MH09MH1470	Ungated	10/05/2019 15/10/2019 10/12/2019	3.5,3.7,3.9,3.20	04
50	Morna	1971	76° 59' 57" 20° 25' 15"	28.65	44.74	1631	MH09MH0266	Ungated	10/05/2019 13/10/2019	3.7,3.9,3.16.	03
51	Mozari	1978	77° 20' 00" 19° 54' 00"	16.49	3.26	569	MH09MH0640	Ungated	08/05/2019 12/10/2019	3.2,3.7,3.9,3.16,3.35	05
52	Shivan (kd)	1995	77° 26' 00" 20° 38' 00"	15.77	4.66	475	MH09MH1367	Ungated	08/12/2018 12/10/2019	Nil	00
53	Vishwamitri	1990	76° 59' 00" 20° 06' 00"	18.56	15.27	1274	MH09MH1249	Ungated	07/12/2018 28/09/2019	3.1,3.5,3.7.	03
E.E.M.I.D.Akola											
54	Shahapur	2018	77°0' 23" 21°11' 34"	18.61	3.44	344	MH09MH2235	Ungated	02/12/2018 26/11/2019	Nil	00
E.E.W.I.D.Washim											
55	Borwha	**1975**	77°12' 00" 20° 15' 00"	15.60	2.35	235	MH09MH0489	Ungated	19/04/2019 17/11/2019 01/01/2020	3.5,3.7,3.9,3.20,3.22	05
56	Rui	1986	77° 04 00" 20° 02' 00"	18.85	0.95	206	MH09MH1114	Ungated	11/05/2019 03/11/2019 02/01/2020	3.1,3.7,3.9,3.16,3.19,3.21	06
57	Upper Morna	2005	77° 55' 49" 20° 40' 48"	17.40	14.83	796	MH09MH2142	Ungated	21/05/2019 10/11/2019	3.5,3.6,3.9,3.16,3.19	05

Sr. No	Name of Dam	Year of Compl -etion	Location Longitude/ Latitude	Height in m	Gross Capacity Mm^3	Design Spillway Capacity m^3 / sec	Sr.No. in NRLD Register of Large Dams 2009	Gated / Ungated	Date of Inspection	Deficiencies noticed	Total Deficiencies
58	Amdari	1989	77° 21' 39" 20° 01' 57"	20.11	2.29	190	MH09MH1345	Ungated	11/05/2019 03/11/2019 01/01/2020	3.5,3.7,3.9,3.21,3.31	05
59	Ansing	2004	77° 21' 39" 20° 01' 57"	25.73	1.69	194	MH09MH1630	Ungated	15/05/2019 23/11/2019	3.2.3.6,3.31.	03
60	Asola (I)	1976	77° 38' 00" 20° 18' 00"	18.00	3.56	414	MH09MH0580	Ungated	24/04/2019 24/11/2019 02/01/2020	3.5,3.9,3.20,3.22	04
61	Asolagava	1989	77° 06' 00" 20° 17' 00"	19.54	2.07	193	MH09MH1213	Ungated	11/05/2019 03/11/2019 01/01/2020	3.1,3.9,3.22	03
62	Borala	1970	77° 12' 00" 20° 03' 00"	17.12	2.20	571	MH09MH0219	Ungated	15/05/2019 23/11/2019	3.9,3.16,3.21,3.22,3.34	05
63	Bramhanwada	1995	76° 29'30" 20° 22' 30"	23.70	6.85	1186	MH09MH1493	Ungated	28/04/2019 0/11/2019	3.9,3.16,3.20,3.21	04
64	Davha	2007	77° 02' 37" 20° 17' 57"	17.29	1.57	173	MH09MH2144	Ungated	28/04/2019 02/11/2019	3.1,3.7,3.9	03
65	Ekburji	1964	77° 05' 00" 20° 02' 00"	23.70	14.10	1001	MH09MH0096	Ungated	01/05/2019 20/11/2019	3.1,3.9,3.16,3.19,3.20	05
66	Fulmari	1980	77° 33' 00" 20° 05' 30"	17.50	1.26	77	MH09MH0808	Ungated	11/05/2019 03/11/2019 02/01/2019	3.9,3.35	05
67	Gartek	1995	77° 32' 43" 20° 21' 23"	18.08	1.99	235	MH09MH1357	Ungated	21/04/2019 17/11/2019	3.9,3.21,3.22	03
68	Gid	1984	76° 01' 00" 20° 17' 00"	16.62	1.61	250	MH09MH1048	Ungated	08/05/2019 09/11/2019 02/01/2020	3.9,3.21,3.22	03
69	Giroli	1973	77° 28' 00" 20° 13' 00"	17.90	3.10	417	MH09MH0366	Ungated	24/04/2019 24/11/2019 02/01/2020	3.7,3.9,3.20,3.22	04
70	Jawala	1990	77° 05' 00" 20° 03' 00"	15.32	1.16	143	MH09MH1255	Ungated	12/05/2019 15/11/2019	3.1,3.7,3.9,3.21,3.22	05
71	Kalmeshawar	1995	76° 55' 15" 20° 15' 00"	17.82	5.22	512	MH09MH1463	Ungated	28/04/2019 06/12/019 03/01/2020	3.1,3.10,3.20,3.21.	04

Sr. No	Name of Dam	Year of Compl -etion	Location Longitude/ Latitude	Height in m	Gross Capacity Mm^3	Design Spillway Capacity m^3 / sec	Sr.No. in NRLD Register of Large Dams 2009	Gated / Ungated	Date of Inspection	Deficiencies noticed	Total Deficiencies
72	Kolambi	1995	76° 42' 00" 19° 34' 00"	19.60	1.58	148	MH09MH1352	Ungated	08/05/2019 09/11/2019	3.5,3.7,3.9,3.19,3.20,3.22	06
73	Kurhal	1988	77° 00' 30" 20° 00' 00"	15.89	3.57	801	MH09MH1196	Ungated	28/04/2019 02/11/2019	3.1,3.7,3.9,3.16,3.20,3.33,3.34	07
74	Mandwa	1995	77° 05' 00" 20° 03' 00"	15.16	1.48	120	MH09MH1351	Ungated	12/05/2019 15/11/2019	3.1,3.73.20,3.21.	04
75	Motsawanga	1975	77° 15' 00" 20° 07' 00"	21.00	4.68	737	MH09MH0518	Ungated	08/05/2019 09/11/2019	3.2,3.7,3.9,3.20,3.22	05
76	Ratanwadi	1976	77° 30' 00" 20° 07' 00"	19.00	1.39	81	MH09MH0543	Ungated	11/05/2019 03/11/2019 01/01/2020	3.1,3.9,3.19,3.22.	04
77	Rohana	1975	77° 28' 00" 20° 16' 00"	18.32	2.91	249	MH09MH0416	Ungated	24/04/2019 24/11/2019 02/01/2020	3.5,3.7,3.9,3.19,3.21.	05
78	Sawargaon	1979	77° 23' 00" 20° 13' 00"	17.20	2.11	240	MH09MH0761	Ungated	08/05/2019 09/11/201* 9	3.5,3.7,3.9,3.16,3.20,3.21,3.34, 3.35	08
79	Shirputy	1971	77° 13' 00" 20° 01' 00"	19.35	2.22	168	MH09MH0241	Ungated	15/05/2019 23/11/2019	3.21	01
80	Sonal	1981	76° 12' 00" 20° 19' 00"	19.00	20.27	1365	MH09MH0901	Ungated	16/05/2019 19/11/2019	3.1,3.9,3.21	03
81	Sonkhas	1976	77° 05' 00" 20° 28' 00"	17.50	1.357	154	MH09MH0476	Ungated	21/05/2019 10/11/2019	3.1,3.9,3.20,3.21.	04
82	Sukanda	1981	76° 15' 57" 20° 25' 15"	15.30	2.75	633	MH09MH1090	Ungated	28/04/2019 02/11/2019	3.1,3.9,3.16,3.21,3.22	05
83	Warla	1979	77° 05' 00" 20° 25' 00"	17.10	2.75	331	MH09MH0773	Ungated	15/05/2019 23/11/2019	3.7,3.16,3.19	03
84	Wathod	1974	77° 32' 00" 20° 15' 00"	16.60	1.98	172	MH09MH0406	Ungated	19/04/2019 17/11/2019 01/01/2020	3.7,3.9,3.16,3.19,3.22	05
85	Januna Sonwal	2009	77° 15' 20" 20° 13' 00"	23.12	3.26	282.49	MH09MH2145	Ungated	08/05/2019 09/11/2019	3.20,23.22	02
86	Waigaul	1999	77° 38' 21" 20° 08' 22"	17.25	2.21	103.9	MH09LH1416	Ungated	11/05/2019 03/11/2019	3.1,3.9,3.19,3.20.	04
87	Bramha	2012	77° 14' 30" 20° 02' 33"	18.84	1.82	115.13	MH09MH2148	Ungated	15/05/2019 23/11/2019	3.7,3.21	02

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88	Bhildongar	2012	77° 27' 07" 20° 11' 19"	18.91	1.36	114.39	MH09MH2149	Ungated	24/04/2019 24/11/2019	3.7,3.9	01
89	Somthana	2000	75°05' 32" 20° 11' 29"	15.21	2.025	150.660	---	Ungated	12/05/2019 10/11/2019	3.5,3.6,3.20	03
90	Adol	1989	76° 46' 20" 20° 24' 30"	18.56	11.23	1274	MH09MH1249	Ungated	12/05/2019 08/12/2019	3.1,3.7,3.22	02
91	Panchala		77° 09' 37" 20° 03' 36"	17.17	2.1200	115.12	---	Ungated	20/05/2019 02/11/2019	3.20	01
92	Falegaon	2016	77° 11' 44" 20° 03' 44"	16.50	1.6963	135	---	Ungated	19/05/2019 18/11/2019	3.5,3.19,3.22	03
93	Shelgaon		77° 56' 18" 20° 29' 06"	18.32	2.6921	246	---	Ungated	19/05/2019 18/11/2019	Nill	00
E.E.M.I.D.(Construction)Washim											
94	Kuttardoh	2012	77° 06' 19" 20° 21' 15"	17.98	2.22	230	MH09MH2143	Ungated	31/05/2019 08/12/2019	3.1,3.19,	02
E.E. M.I.D. Karanja lad											
95	Dastapur	2008	77° 18' 15" 20° 14' 45"	21.71	3.66	331	MH09LH0932	Ungated	04/05/2019 21/12/2019	3.5,3.9,3.16,3.33,3.34	04
96	Kupta	2013	77° 35' 23" 20° 18' 19"	17.89	3.638	290.74	MH09LH2190	Ungated	27/05/2019 22/12/2019	Nill	00
97	Gondegaon	2014	76° 36' 21" 20° 04' 22"	19.95	5.12	403.68	MH09LH2191	Ungated	27/05/2019 22/12/2019	3.2,3.9	02
98	Jogaldari	2011	77° 24' 25" 20° 15' 36"	17.23	3.07	485	MH09MH2146	Ungated	07/01/2019 21/12/2019	3.9,3.19,3.34	03
99+	Kasola	2013	70° 16' 15" 20° 14' 30"	17.90	1.605	230	MH09LH2189	Ungated	04/05/2019 21/12/2019	Nill	00
100	Wadgaon	2016	---	17.40	5.155	676.348	---	Ungated	08/05/2019 22/12/2019	Nill	00
101	Kinkhed	2016	77° 30' 15" 20° 24' 30"	17.74	2.328	248	--	Ungated	08/05/2019 20/12/2019	3.2,3.9.	02
102	Hiwara(Kh)	2011	77° 23' 15" 20° 09' 17"	15.70	2.38	261.30	MH09MH2147	Ungated	27/05/2019 10/12/2019	3.9	01
103	Parwa-Kohar	---	---	16.50	4.42	341	---	Ungated	03/06/2019 20/12/2019	Nill	00
104	Ingalwadi	2019	---	22.30	1.6977	210.940	---	Ungated	27/05/2019 10/12/2019	Nill	00

Sr. No	Name of Dam	Year of Compl -etion	Location Longitude/ Latitude	Height in m	Gross Capacity Mm^3	Design Spillway Capacity m^3 / sec	Sr.No. in NRLD Register of Large Dams 2009	Gated / Ungated	Date of Inspection	Deficiencies noticed	Total Deficiencies
S.E.A,I,P.C.Amravati EE.A.P.C.D. Amravati											
105	Nagthana-2	2010	78° 40' 30" 20° 16' 30"	22.60	4.27	836.04	MH09MH2153	Ungated	19/06/2019 15/11/2019	3.1,3.5	02
106	Bahada	2014	78° 11' 30" 21° 29' 45"	16.73	2.61	164.39	MH09LH2196	Ungated	19/06/2019 05/01/2022	NIL	00
107	Zatamzari	2014	77° 59' 30" 21° 06' 30"	18.30	2.84	83.19	MH09LH2193	Ungated	19/06/2019 15/11/2019	NIL	00
108	Bhimadi	2018	72° 02' 00" 29° 12' 00"	20.28	3.59	155.67	MH09MH2233	Ungated	19/06/2019 12/02/2020	NIL	00
E.E.IP&WID AMRAVATI											
109	Chandi	2012	77° 45' 00" 20° 45' 16"	14.10	14.81	1295.00	MH09LH2192	Ungated	23/05/2019 03/01/2019	3.1	01
110	Bordi nalla	2015	77° 59' 09" 21° 24' 00"	18	5.91	594.80	MH09LH2216	Ungated	20/06/2019 07/12/2019	3.6,3.12	02
111	Doma	2013	77° 33' 30" 21° 32' 45"	20.20	2.04	120.52	MH09LH2194	Ungated	18/05/2019 04/01/2020	NIL	00
112	Ranapisa	2014	77° 45' 00" 20° 45' 16"	18.00	2.69	509.02	MH09LH2195	Ungated	28/05/2019 04/01/2020	NIL	00
CHIEF ENGINEER,(W.R.),AMRAVATI. SUPERINTENDING ENGINEER, BULDANA IRRIGATION PROJECT CIRCLE,BULDANA E.E. M.I.D. Buldhana											
113	Botha	1997	76° 35' 00" 20° 35' 20"	18.08	2.00	175	MH09MH1426	Ungated	15/05/2019 17/12/2019	3.2,3.5,3.7,3.9,3.13,3.20	06
SUPERINTENDING ENGINEER, YAVATMAL IRRIGATION CIRCLE (M), YAVATMAL E.E. Y.I.D.Yavatmal											
114	Nignoor	1969	78° 50' 00" 19° 40' 00"	18.46	3.63	443	MH09MH0187	Ungated	03/05/2019 24/10/2019 26/09/2019	3.9,3.16,3.20,3.22,3.34	05
115	Deogaon	1986	78° 54' 00" 20° 10' 00"	15.91	7.31	764	MH09MH1131	Ungated	02/05/2019 19/10/2019	3.1,3.7,3.9,3.16,3.19	05
116	Anji	1984	78° 34' 00" 20° 10' 00"	20.32	2.80	210	MH09MH1117	Ungated	18/04/2019 09/10/2019	3.1,3.5,3.7,3.9,3.16	05

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117	Singandoh	1993	78° 58' 00" 20° 24' 06"	17.00	3.13	686	MH09MH1310	Ungated	02/05/2019 18/10/2019	3.7,3.9,3.16,3.19,3.20,3.22,3.35.	07
118	Marsul	1981	77° 39' 00" 19° 39'00"	19.84	2.37	199	MH09MH0862	Ungated	03/05/2019 24/10/2019	3.5,3.9,3.16,3.19,3.20,3.22,3.34	07
119	Waghadi	1978	78° 18' 10" 20° 15' 30"	26.00	41.11	1815	MH09MH0739	Ungated	06/05/2019 21/10/2019	3.9,3.19	02
120	Vihirgaon	1992	78° 30' 00" 20°38' 00"	15.54	3.17	226	MH09MH1289	Ungated	16/04/2019 19/10/2019	3.5,3.9,3.16,3.19,3.20	05
121	Antargaon	1986	78° 26' 00" 20° 15' 00"	17.42	7.20	517	MH09MH1123	Ungated	09/05/2019 21/10/2019	3.5,3.7,3.9,3.16	04
122	Borgaon	1993	78° 17' 43" 20° 20' 16"	20.00	14.04	686	MH09MH1311	Ungated	15/04/2019 18/10/2019	3.5,3.7,3.9,3.19,3.22,3.34	06
123	Darati	1985	78° 07' 00" 19° 37' 00"	16.40	2.74	249	MH09MH1080	Ungated	03/05/2019 24/10/2019	3.9,3.16,3.19,3.22	04
124	Dattapur	1991	78° 38' 00" 20° 26' 00"	15.18	1.68	154	MH09MH1267	Ungated	16/04/2019 18/10/2019	3.1,3.5,3.9,3.16,3.20,3.22	06
125	Dudhana	1977	78° 20' 30" 20° 12' 30"	15.00	1.04	148	MH09MH0606	Ungated	06/05/2019 24/10/2019	3.5,3.9,3.16,3.19	04
126	Durug	1967	78° 21' 00" 20° 23' 30"	15.55	3.59	354	MH09MH0143	Ungated	16/04/2019 18/10/2019	3.7,3.9,3.16,3.20,3.22,3.35	06
127	Ghoti	1986	77° 54' 00" 20° 10' 00"	15.91	7.31	764	MH09MH0417	Ungated	16/04/2019 18/10/2019	3.1,3.5,3.7,3.9,3.16,3.19,3.35	07
128	Goki	1981	77° 54' 00" 20° 17' 00"	23.06	50.22	2066	MH09MH0904	Ungated	04/05/2019 24/10/2019	3.1,3.9,3.20,3.25	04
129	Karanji	1985	78° 08' 00" 20° 30' 00"	18.18	2.15	183	MH09MH0348	Ungated	09/05/2019 21/10/2019	3.1,3.5,3.9,3.19,3.20,3.22	06
130	Kapra	1981	78° 7' 00" 20° 08' 00"	20.36	2.80	209.5	MH09MH0904	Ungated	15/04/2019 18/10/2019	3.1,3.7,3.9,3.19,3.22	05
131	Khadakdoh	1976	78° 46' 00" 19° 54' 00"	17.32	2.64	313	MH09MH0624	Ungated	15/05/2019 20/10/2019	3.1,3.5,3.9,3.16,3.19,3.22	06
132	Khandani	2002	78° 18' 23" 21° 33' 31"	18.00	6.62	569	MH09MH0873	Ungated	30/05/2019 20/10/2019	3.1,3.9,3.19,3.20,3.22	05

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133	Muchi	1977	78° 35' 00" 20° 03' 30"	15.55	1.41	183	MH09MH0610	Ungated	10/05/2019 21/10/2019	3.1,3.5,3.7,3.9,3.20,3.21,3.22	07
134	Munjala	1969	77° 33' 00" 20° 03' 00"	16.00	2.10	230	MH09MH0180	Ungated	10/05/2019 21/10/2019	3.5,3.9,3.16,3.19,3.21	05
135	Pendhari	1991	78° 23' 00" 21° 32' 00"	16.00	1.37	119	MH09MH1274	Ungated	15/05/2019 20/10/2019	3.5,3.9,3.19,3.21,3.22	05
136	Pimpalkhuti	1977	78° 30' 40" 20° 11' 20"	15.70	2.38	292	MH09MH0421	Ungated	18/04/2019 19/10/2019	3.1,3.7,3.9,3.16,3.19,3.33	05
137	Rajur	1977	78° 24' 00" 20° 40' 00"	17.02	2.295	196	MH09MH1236	Ungated	16/04/2019 19/10/2019	3.5,3.7,3.9,3.16.	04
138	Rampur	1977	78° 45' 00" 21° 12' 20"	16.05	1.37	119	MH09MH0672	Ungated	15/05/2019 20/10/2019	3.5,3.7,3.9,3.16,3.20,3.22,3.34	06
139	Rui	1967	77° 04' 00" 20° 02' 06"	16.15	3.55	111	MH09MH0137	Ungated	02/05/2019 19/10/2019	3.7,3.9	02
140	Saikheda	1972	78° 30' 40" 20° 05' 00"	23.77	38.51	2671	MH09MH0315	Ungated	09/05/2019 21/10/2019	3.1,3.9,3.16	03
141	Takali	1995	78° 07' 00" 20° 24' 06"	17.00	5.39	554	MH09MH1236	Ungated	15/04/2019 18/10/2019	3.1,3.16,3.19,3.20,3.21,3.34, 3.35	07
142	Zola	1985	78° 08' 10" 20° 30' 00"	18.18	2.15	183	MH09MH1076	Ungated	15/04/2019 18/10/2019	3.5,3.7,3.9,3.16,3.19,3.22	06
EE Arunavati Pro. Dn. Digras Dist, Yavatmal											
143	Nawargaon	1997	78°46' 30" 20°04' 30"	19.35	14.98	1403	MH09MH1451	Ungated	28/05/2019 15/12/2019	3.5,3.7,3.9,3.20,3.22	06
144	Satpalli	2000	78° 31' 50" 29° 19' 25"	16.05	2.86	186	MH09MH2150	Ungated	28/05/2019 15/12/2019	3.1,3.5,3.7,3.9,3.23	05
145	Khemkund	2001	78° 27'45" 20° 11' 06"	17.13	3.70	266	MH09MH1578	Ungated	27/05/2019 25/12/2019	3.6,3.7,3.9,3.20,3.22	05
146	Manjara	1994	78° 22'13" 20° 05' 55"	16.80	3.68	454	MH09MH1585	Ungated	27/05/2019 14/12/2019	3.6,3.7,3.9,3.20,3.22	05
147	Wardh	1998	78° 74' 05" 20° 14' 06"	19.42	8.67	411	MH09MH1598	Ungated	27/05/2019 27/12/2019	3.1,3.20,3.22	03
148	Warud	1997	78° 31'50" 20° 19' 25"	18.32	8.94	576	MH09MH1439	Ungated	27/05/2019 27/12/2019	3.9,3.20,3.22	03
149	Wai	1997	78° 37'30" 20° 05' 00"	18.02	9.31	553	MH09MH0362	Ungated	28/05/2019 25/12/2019	3.1,3.20	02

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150	Sirasgaon	1998	77° 44' 00" 20° 30' 00"	21.12	9.13	860	MH09MH1676	Ungated	14/05/2019 08/12/2019	3.7,3.9,3.20,3.21,3.22	05
157	Ner	1995	78° 30'34" 20° 30' 32"	15.10	6.79	1039	MH09MH0676	Ungated	14/05/2019 08/12/2019	3.7,3.9,3.16,3.20,3.22	05
152	Mulgavan	1994	78° 37' 30" 19° 57' 30"	16.44	2.42	203.66	MH09MH2152	Ungated	28/05/2019 15/12/2019	3.5,3.9,3.16,3.19,3.20,3.23	06
SUPERINTENDING ENGINEER, YAVATMAL IRRIGATION PROJECT CIRCLE, YAVATMAL											
E.E. Y.P.C.D. Yavatmal											
153	Kohal	2016	70° 59' 04" 20° 33' 17"	20.59	12.28	933	--	Ungated	01/05/2019 21/01/2019	3.9,3.33	02
154	Pachpahur	2016	78° 42' 00" 19° 59' 00"	21.35	7.98	711.00	MH09MH1715	Ungated	29/05/2019 18/11/2019	NIl	00
155	Dahegaon	2016	78° 42' 05" 20° 11' 31"	17.35	3.39	406.41	--	Ungated	28/05/2019 02/12/2019	3.20,3.22	02
156	Kumbharpind	2004	77°56' 00" 20° 30' 20"	16.30	4.77	554	--	Ungated	16/05/2019	3.5,3.9,3.20,3.22,3.37	05
E.E. M.I.D.Pusad											
157	Kali (D)	2007	77° 42' 52" 19° 56' 19"	15.32	4.50	489.11	MH09MH2151	Ungated	27/06/2019 18/12/2019 26/09/2019	3.1,3.5,3.9,.3.20	04
158	Amadapur	2005	77° 55' 49" 20° 40'48"	17.40	14.83	796	MH09MH2155	Ungated	27/06/2019 18/12/2019	3.5,3.7,3.9,3.20,3.23,	05
159	Pimpalgaon	1997	77° 47' 03" 19° 42' 03"	21.84	8.96	528	MH09MH1449	Ungated	26/05/2019 18/12/2019	3.7,3.9,3.22	03
160	Jamb nalla	1999	79° 39' 44" 19° 45' 15"	24.20	9.69	795	MH09MH1523	Ungated	27/06/2019 18/12/2019	3.5,3.9,3.20,3.22	04
161	Kumbharkinhi	2002	77° 40' 48" 20° 18' 05"	18.10	11.59	991	MH09MH1613	Ungated	20/06/2019 03/01/2020	3.5,3.7,3.9,3.20,3.22,3.23,3.34, 3.35	08
SUPERINTENDING ENGINEER, UPPER WARDHA IRRIGATION CIRCLE AMRAVATI											
E.E.M. & M. I.P.D , Achalpur											
162	Baslapur	1972	**77° 50' 00" 20° 50' 00"**	17.85	1.53	193	MH09MH0275	Ungated	08/05/2019 06/12/2019	3.2,3.7,3.9,3.20,3.22,3.34	06
163	Mandwa (amt)	1973	**76° 47' 00" 21° 45' 00"**	17.52	1.37	154	MH09MH0573	Ungated	10/05/2019 07/12/2019	3.5,3.7,3.16,3.20,3.21	05

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164	Bhiwapur	1979	77° 43' 00" 20° 33' 00"	17.90	4.04	785	MH09MH0801	Ungated	03/05/2019 06/12/2019	3.2,3.7,3.9,3.20,3.34	05
165	Gawalandoh	1973	76° 47' 00" 21° 45' 00"	17.52	1.37	154	MH09MH0400	Ungated	09/05/2019 07/12/2019	3.2,3.5,3.7,3.9,3.19,3.21	05
166	Ghatkhed	1975	77° 49' 00" 20° 56' 30"	19.67	1.75	187	MH09MH0480	Ungated	03/05/2019 05/12/2019	3.2,3.7,3.9,3.20,3.34	05
167	Gondvihir	1973	77° 59' 30" 20° 52' 00"	15.60	1.89	437	MH09MH0636	Ungated	14/05/2019 09/12/2019	3.5,3.7,3.20	03
168	Gondwagholi	1970	77° 21' 30" 21° 00' 30"	16.67	1.13	246	MH09MH0204	Ungated	18/05/2019 09/12/2019	3.19,3.20.	02
169	Khatizapur	1967	77° 24' 00" 21° 16' 30"	17.25	1.94	409	MH09MH0146	Ungated	18/05/2019 10/12/2019	3.2,3.7	02
170	Khari	1979	76° 50' 30" 21° 27' 30"	19.45	2.55	98.39	MH09MH0156	Ungated	10/05/2019 10/12/2019	3.5,3.7,3.9,3.16,3.19,3.21,3.22	07
171	Malkhed	1972	77° 55' 00" 20° 50' 00"	17.05	10.90	1108	MH09MH0309	Ungated	08/05/2019 06/12/2019	3.5,3.9,3.20,3.21,3.34,3.35	06
172	Nagthana	1990	78° 22' 45" 21° 28' 30"	17.78	2.25	791	MH09MH1244	Ungated	13/05/2019 03/12/2019	3.5,3.7,3.9	03
173	Nanduri	2005	77° 10' 00" 21° 28' 30"	17.11	2.35	214	MH09MH2158	Ungated	10/05/2019 07/12/2019	3.16	01
174	Pusli	2002	78° 18' 23" 21° 33' 31"	18.00	6.62	568.85	MH09MH1599	Ungated	13/05/2019 03/12/2019	3.5,3.19,3.34	03
175	Sadrabadi	1973	76° 47' 00" 21° 47' 00"	17.52	1.37	154	MH09MH0336	Ungated	19/05/2019 07/12/2019	3.5,3.19,3.21,3.7	04
176	Sakhali	1980	77° 43' 00" 20° 33' 30"	18.60	7.26	953	MH09MH0839	Ungated	02/05/2019 05/12/2019	3.5,3.9,3.19,3.20,3.34	05
177	Salai	1982	76° 51' 00" 21° 27' 00"	16.17	1.45	87	MH09MH0913	Ungated	09/05/2019 07/12/2019	3.5	01
178	Saraswati	1973	76° 47' 00" 21° 45' 00"	17.52	1.37	154	MH09MH0368	Ungated	08/05/2019 16/12/2019	3.5,3.9,3.16,3.19,3.25,3.34	06
179	Satnoor	1980	78° 17' 30" 21° 40' 00"	15.58	1.54	86	MH09MH0810	Ungated	13/05/2019 03/12/2019	3.5	01
180	Sawalikheda	1973	76° 42' 00" 21° 21' 00"	16.90	1.24	71.54	MH09MH0542	Ungated	09/05/2019 07/12/2019	3.5,3.7,3.16,3.19,3.21,3.34	06
181	Sawarpani	1970	77° 14' 00" 21° 14' 00"	18.23	0.68	120	MH09MH0198	Ungated	14/05/2019 10/12/2019	3.5,3.7,3.20.	03

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182	Tongalphodi	1976	77° 15' 00" 21° 14' 30"	16.80	1.44	395	MH09MH0577	Ungated	14/05/2019 10/12/2019	3.7,3.22	02
183	Wai	1973	78° 21' 00" 21° 34' 00"	16.30	2.78	362	MH09MH1438	Ungated	13/05/2019 03/12/2019	3.5,3.7,3.16,3.20	04
184	Shekdari	1983	78° 12' 00" 20° 31' 00"	35.35	5.20	591	MH09MH0939	Ungated	31/05/2019 03/12/2019	3.5,3.7,3.22	03
E.E. A.M.P.D Amaravati											
185	Kawaranalla	2007	76° 55' 00" 21° 26' 00"	22.25	11.83	919	MH09MH2156	Ungated	31/05/2019 24/11/2019	3.9,3.20	02
186	Loni Dhawalgiri	2007	78° 11' 40" 21° 24' 30"	15.90	7.93	1043	MH09MH2157	Ungated	29/05/2019 01/12/2019	3.19,3.22	02
187	Hirabambai	2011	76° 48' 10" 21° 20' 50"	22.20	3.73	188	MH09MH2159	Ungated	31/05/2019 24/11/2019	3.9,3.19,3.20,3.22,3.33,3.34	06
188	Karajgaon	2019	77°38' 00" 21°10' 00"	18.10	14.362	1157	MH09MH2166	Ungated	19/05/2019 07/11/2019	3.22	01

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

Damwise 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
---------- No Such Dams under this class ----------						

Table 2.14

Damwise Health status report of Private 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 of Large Dams 2009	Gated / Ungated	Date of Inspection	Deficiencies noticed	Total Deficiencies
1	2	3	4	5	6	7	8	9	10	11	12
---------- No Such Dams under this class ----------											

Table 2.15

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

Damwise 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	Name:- **Nilona** Year of completion :- **1972** Location : - Longitude :- **78° 08' 00"** Latitude :- **20° 23' 00"** Height :- **16.00m.** Gross capacity :- **6.89 Mm^3** Design Spillway capacity :-**880** Sr. No. In National register oflarge Dams 2009) :- **MH09MH0307**	28/07/2019 27/09/2019	Shri N.K.Tayade E.E.D.S.D.2 Nashik	Earth dam	1) The pitching on U/S of dam is distrubeted & also undulation observed on top of dam (B3) 2) Section of earthen dam at many spots is under section (B1)	Dam section to be brought to correct design section and level by adding earthwork duly compacted properly. ---------- do ----------

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 of Large Dams 2009	Gated / Ungated	Date of Inspection	Deficiencies noticed	Total Deficiencies
1	2	3	4	5	6	7	8	9	10	11	12
SUPERINTENDING ENGINEER, MAHARASHTRA JEEVAN PRADHIKARAN CIRCLE, AMRAVATI E.E M.J.P.WORKS, Dn.No.1,Yavatmal											
1	Nilona	1972	78° 08' 00" 20° 23' 00"	16.00	6.89	880	MH09MH0307	Ungated	28/07/2019 27/09/2019	3.1,3.2,3.6,3.9,3.21,3.24, 3.27	07
2	Chapdoh	2004	78° 13' 00" 20° 15' 38"	25.20	13.120	1310	-----	Ungated	28/07/2019 27/09/2019	3.1,3.2,3.5,3.6,3.7,3.9, 3.24.3.27	08

Table 2.18

Significant category 2 deficiency wise list of class-I dams

Sr. No	Deficiency	Names of dams	Total no of dams
1	2	3	4
1	**A 4** : Major leakages through outlet conduit/pipe joints/Gates.	Arunawati,Chandrabhaga	02
2	**A 5** ; Relief wells not functioning properly./ Abnormal rise in water level in wells.	Katepurna,Lower Pus,Arunawati	03
3	**A 9 :** Foundation drains / holes/ porous pipes/chocked/ no seepage through foundation drain holes.	Katepurna,Pentakali.	02
4	**A 14** : EDA / Stilling basin damaged/Hydraulic performance not good.	Lower Pus	01
5	**A 16** : Damages / foundation erosion/ scour/undermining observed in vicinity of flank walls/ guide walls/ junction walls/return walls.	Katepurna ,Gyanganga,Mun,Lower Pus	04
6	**A 17** :End weir not in good condition / scouring noticed on immediate D/S.	Katepurna,Gyanganga,Mun	03
7	**B 3** : Considerable settlement of embankment / Rock toe/Pitching/ U/S & D/S slops, bulging/concavity of slopes.	Purna, Dagadparva	02
8	**B 5 :** Outlet gates not functioning properly. Stem rod is bent(Service gate/Emergency gate/Stop log gate/sluice gate)	Arunawati,Chandrabhaga	02
9	**B 6:** Approach to dam through all weather road not constructed/ maintained properly.	Gyanganga	01
10	**B 10:**Leakage through river sluice.	Pentakali	01
11	**B 12** : Damage to Rubber seals/ considerable Leakages through gates.	Katepurna ,Lower Pus,Purna	03

Table 2.19
Significant category 2 deficiency wise list of class-II dams

Sr. No	Deficiency	Names of dams	Total no of dams
1	2	3	4
1	**A.1**: Boil leakage/ seepage/ wet patches/ slushiness,in Earthen Dam.	Tuljapur,Nignoor, Vihirgaon,Kali(D),Chinchpani.	05
2	**A 2**: Standing pool / Ponding / Water Logging / Slushy condition on D/S of Dam	Godada,Rajura,Deogaon,Kali(D)	04
3	**A 4** : Major leakages through outlet conduit/pipe joints/Gates.	Pimpalgaon Chambhare, Fulumbri, Vihirgaon,Mandwa(Amt), Kardi, Masrul.	06
4	**A 5** ; Relief wells not functioning properly./ Abnormal rise in water level in wells.	Pimpalgaon	01
5	**A 6** : Outlet well is damaged/not in good condition /cracks observed/jets of water in well.	Mandwa (Bld),Amdapur,Baslapur, Mas, Fulumbri, Masrul.	06
6	**A 7 :** Retrogression /scouring in tail channel.	Rajura,Haralkhed,Mas,Paldhag, Pimpalner,Sawangimali-1,Sawangimali-2,Shivani ArmalBramhanwada,Utawali,Ghota,Rui, Uma,Waigoul, Vihirgaon,Anji,Satpalli,Mandwa (Amt)	18
7	**A 14** : EDA / Stilling basin damaged/Hydraulic performance not good.	Mandwa(Bld),Mas,Shivni Armal,Kardi,Pimpalgaon Chambhare,Singandoh , Rui	07
8	**A 16** : Damages / foundation erosion/ scour/undermining observed in vicinity of flank walls/ guide walls/ junction walls/return walls.	Rajura,Haralkhed, Mas ,Kardi, Nirguna ,Ghota, Rui,Deogaon, anji	09
9	**A 17** :End weir not in good condition / scouring noticed on immediate D/S.	Godada,Paldhag,Pimpalner,Ghota,Uma,Sigandoh ,Sawangimali-1,Sawangmali-2, Waigoul,Satpalli,Madwa(Amt)	11
10	**B 1** Dam section is not as per design	Haralkhed,Mandwa(Bld),Mas,Paldhag,Pimpalner Sawangimali-1,Sawagimali-2,Utawali,Nilona	09
11	**B 3** : Considerable settlement of embankment / Rock toe/Pitching/ U/S & D/S slops, bulging/concavity of slopes.	Paldhag,Sawangimali-1,Mandawa(Bld), Mas, Ghota, Tuljapur ,Sisa Udegaon, Singandoah, Shivani Armal, Vidrupa, Utawali, Pimpalgaon, Waghadi, Nilona, Fulumbri.	16
12	**B 4**: Longitudinal / Transverse cracks/ low area/sink holes/gully formation on top side slope of earthen dam.	Mas,Satpalli, B````ordi nalla.	03
13	**B 5 :** Outlet gates not functioning properly. Stem rod is bent(Service gate/Emergency gate/Stop log gate/sluice gate)	Vihirgaon, Mandawa(Amt),Vidrupa, Kapara	04
14	**B 7**: Waste weir/waste weir bar not in good condition/coping damaged/leakage through waste weir.	Mas,Kardi,Ghota,Tuljapur,Pimpalgaon Chambhare, Nignoor, Sigandoh, Amadapur,Mandawa (Amt),Nilona.	10
15	**B 8** : Pointing on U/S face of dam not in good condition./deterioration spalling of concrete surface.	Pimpalner.	01

Chart -1
Districwise & Classwise dams in Amravati Region

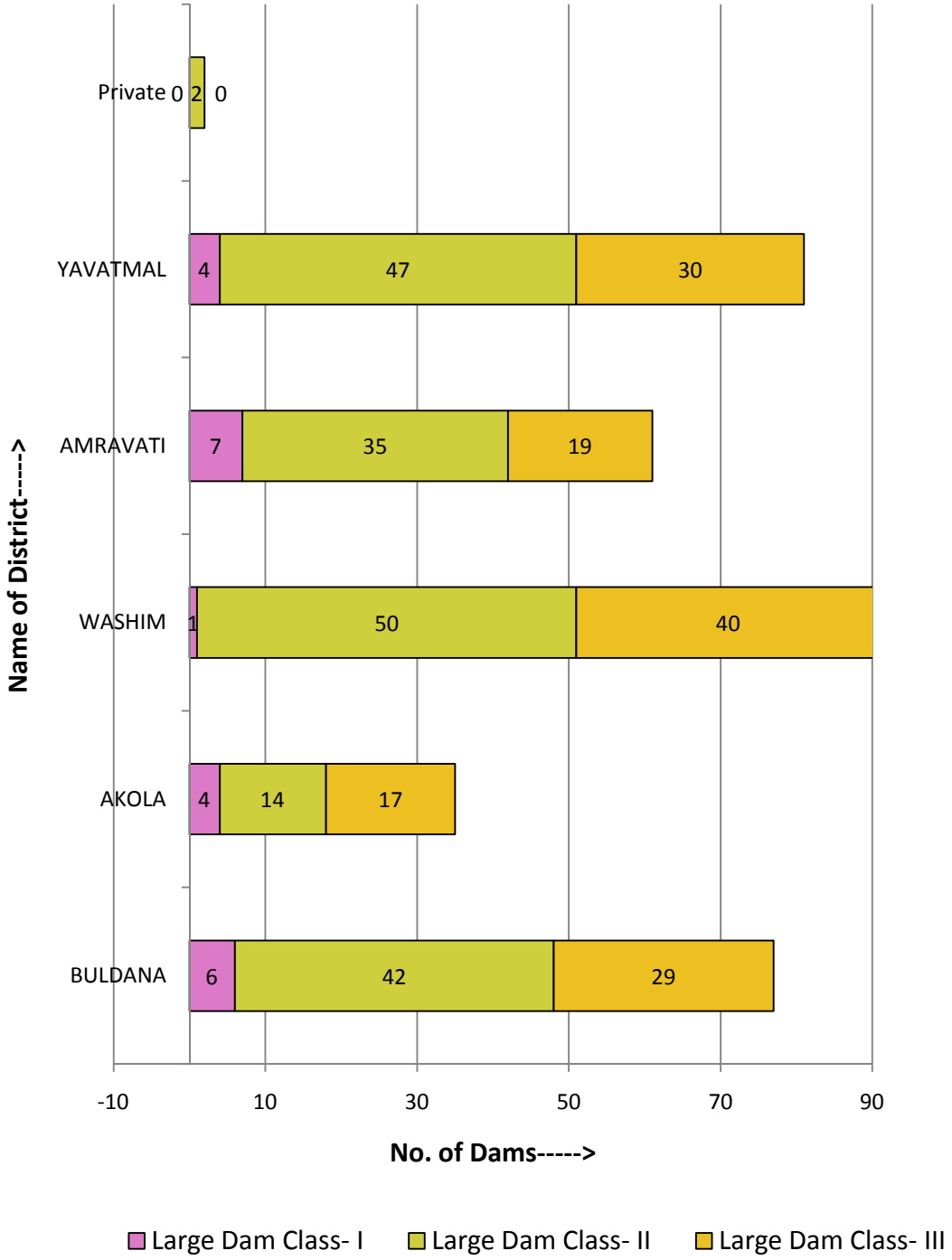

Chart-2
Signifiant Category-2 deficiencies in Class-I dams

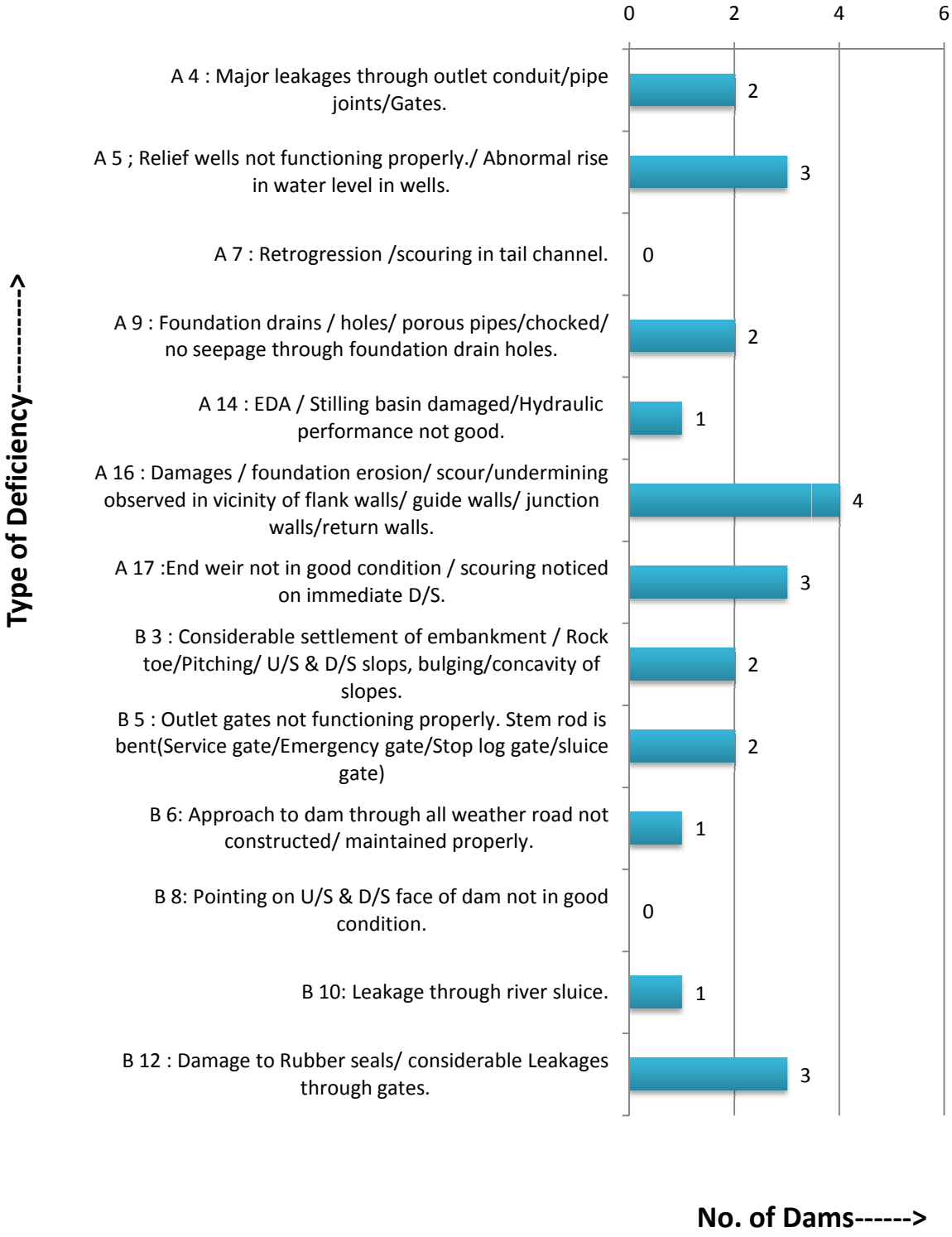

Chart-3
Signifiant Category-2 deficiencies in Class-II dams

ANNEXURE- 1
General Information For Dam Safety Inspections

1.0TIMESCHEDULE 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 organisation)	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?

2.0CLASSIFICATION 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 m.	Impounded gross storage capacity Up to FRL in M Cum	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 FIELDINSPECTION 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	7	8	9
1	Large Dam (Class-I)	Superintending Engineer/ Administrator	1) Chief Engineer 2) Superintending Engineer Dam Safety Organisation.	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 Organisation	
3	Large Dam (Class-III)	Sub-Divisional Eng./Sub Divisional Officer	1)Superintending Engineer/ Administrator 2) Executive Engineer	

4.0 PREPARATIONOF ANNUAL HEALTH STATUS REPORTS OF CLASS-I AND CLASS-II DAMS.

Dam safety organisation 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.

6.0GUIDELINES REGARDING PREPARATION OF ANNUAL HEALTH STATUS REPORT OF IDENTIFIED LARGEDAMS-

ASHR is prepared in DSO as per Central Water Commission New Delhi's guidelines received vide letter No. 3/19/NCDS/HS/DSM/2001/627-56 dated 28 August 2002. As per this letter it is requested that all states / organizations should send the AHSR for all large dams in prescribed Performa in the month of 'April' every year.

7.0CATEGORIZATION 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 consist of a Proforma with 20 columns which gives 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 isverypoor . 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 2018 Maharashtra state comprises of total 2400 dams (2129 completed dams and 271 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 SUGGESTIONSFOR 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.

1) 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.

2) The periodical inspection reports of all the dams shall be sent in original instead of carbon or xerox copy.

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

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

5) 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 Organisation, Nashik- 4.

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

7) 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.

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

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

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

11) 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.

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

13) 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

1E -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 Downs tream 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 uncontrolled outlet-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.

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	
	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.

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 Minorerosion/ 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

Photo -1

Pimpalgaon Chambhare (Class-II)
Taluka – Barshi takli Dist – Akola Date of Inspection –31/12/2019
Curtain wall @ RD 30m of 60m. Length is damaged. (B7)

Photo 2

Masrul (Class-II)
Taluka – Buldana Dist – Buldana Date of Inspection –22/08/2019
. Leakages at D/S head wall near outlet pipe is observed.(A4)

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

PART – 3

Annual performance Report of Instruments installed on 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/ MASONARY DAM

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 can not 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 can not 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) Various instruments numbering 296 have been installed on these 10 dams. Out of which 46 were working and 250 were not working i.e. 84.45% instruments are in non working condition.

2) Instrument data analysis for Upper Wardha project was prepared on the basis of data supplied by field officer. Analysis of piezometer and seepage discharge through “V- notches” in toe drain,foundation gallery of Upper Wardha Project have been done &submitted to field officers.

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

4) Comparison of mortality rate of instrument as compared to last year is given as per table No.3.3.

Table No.3.1
DAMWISE STATUS OF DAM INSTRUMENTS INSTALLED ON LARGE DAMS.
IN AMRAVATI REGION

Sr. no.	Name of Dam	Instrument Name	Instrument Type	Year of Installation	Total	Functional Status Functioning/ Non functioning		Remark
						F	N.F.	
1.	2.	3.	4.	5.	6.	7.	8.	9.
Chief Engineer,(W.R) Amravati								
1	Upper Pus	Stand pipe Piezometer	Hydrolic	-	64	0	64	*
2	Upper Wardha	Conventional plumb bob	Mechanical	16/06/1996	1	0	1	As Per Visit Jan-2017
		Uplift Pressure Cell	Hydrolic	-	14	0	14	As Per Visit Jan-2017
		Stand Pipe Piezometers	Hydrolic	1997	37	5	32	As Per Visit Jan-2017
3	Bembala	Uplift Pressure cell	Hydrolic	2014	12	0	12	As per visit in March 2017
		Plumb bob(conventional)	Mechanical	2008	1	0	1	As per visit in March 2017
		Plumb bob(Inverted)	Mechanical	2008	1	0	1	As per visit in March 2017
4	Arunawati	Cassagrande type piezometer	Hydrolic	1994	10	0	10	Visited & Updated 12/06/2018
		Stand pipe Piezometer	Hydrolic		11	0	11	
5	Adan	Cassagrande type piezometer	Hydrolic		17	17	0	Visited & Updated 12/06/2018
		Stand pipe Piezometer	Hydrolic	-	33	23	10	
6	Purna	Conventional plumb bob	Mechanical	01/05/2006	1	0	1	As Per Visit Jan-2017
CE Wise Total for 6 Dams				**TOTAL**	**202**	**45**	**157**	

Sr. no.	Name of Dam	Instrument Name	Instrument Type	Year of Installation	Total	Functional Status Functioning/ Non functioning		Remark
						F	N.F.	
1.	2.	3.	4.	5.	6.	7.	8.	9.
Chief Engineer,(SP) Amravati								
7	Wan	Plumb bob	Mechanical	2001	1	0	1	As Per Visit Jan-2017
		Uplift Pressure Cell	Hydrolic	1998	41	1	40	
8	Katepurna	Twin Tube piezometer	Hydrolic	1975	9	0	9	Visited & Updated 12/06/2018
		Uplift pressure cell	Hydrolic	1975	5	0	5	
9	Nalganga	Twin tube piezometer	Hydrolic		30	0	30	*
10	Khadakpurna	Plumb Bob	Mechanical	2013	1	0	1	Updated and dam listed as per visit dtd 11/06/18
		Uplift Pressure Cell	Hydrolic		7	0	7	
CE Wise Total for 4 Dams					**94**	**1**	**93**	
Amravati Region Total for 10 Dams					**296**	**46**	**250**	

*Asper pre & post monsoon report 2018

Table No.3.2
MORTALITY STATUS OF INSTRUMENTS INSTALLED ON LARGE DAMS IN AMRAVATI REGION

Sr. No.	Type of Instruments	Status Of Instruments			
		Total	Working	Non-Working	Mortality (%)
1	2	7	8	9	10
(A) Earth Dams					
1	Casagrande/ Stand pipe piezometers(CG/SPP)	172	45	127	73.84
2	Twin tube piezometers (TTP)	39	0	39	100
3	Horizontal/Vertical device / Cross arm, surface settlement plug (SSP)	0	0	0	0
4	Earth pressure cells (EPC)	0	0	0	0
5	Slope indicator	0	0	0	0
Total		**211**	**45**	**166**	**78.68**
(B) Masonry Dams					
1	Pore pressure meters (PPM)	0	0	0	0
2	Stress meter (SM)	0	0	0	0
3	Strain meter/ No stress-strain meter (STM/NSSM)	0	0	0	0
4	Uplift pressure cells (UPC)	79	1	78	98.73
5	Plumb bob/ Inverted Plumb Bob / co-ordimeter (PLUMB LINES)	6	0	6	100
6	Long Gauge extensometer, Multiple Bore hole extensometer (EXTENSOMETERS)	0	0	0	0
7	Thermometers	0	0	0	0
8	Joint meters/Dial Gauge (JM/DG)	0	0	0	0
9	Tilt meter	0	0	0	0
Total		**85**	**1**	**84**	**98.83**

	Instruments in	Total	Working	Non Working	Mortality
A)	Earth Dams	211	45	166	**78.68**
B)	Masonry Dams	85	1	84	**98.83**
	Grand Total	**296**	**46**	**250**	**84.45**

Table No. 3.3
Comparative Statement for Status of Instruments in Dams Amravati 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 (W.R), Amravati	6	202	45	157	22.28	6	202	45	157	22.28
2	Chief Engineer (S.P.),Amravati	4	94	1	93	1.06	4	94	1	93	1.06
		10	296	46	250	15.54	10	296	46	250	15.54

Annual Consolidated Health Status Report
Of Identified Large Dams In
AmravatiRegion2019-20

PART – 4

Based on 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.

Performance of the Meterological instruments dealt in this report are only the instruments operated and maintained by Dam authorities. In addition to these, there is vast network of the hydro meterological stations stack which is operated and maintained by Hydrology Project. Same is not dealt in this AHSR.

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 thedamwise 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 Amravati region it is seen that 131 various meteorological instruments installed on dams out of which 97 are functioning and 34 are non functioning. The non-functioning 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

DAMWISE STATUS OF METEOROLOGICAL INSTRUMENTS INSTALLED ON DAMS IN AMRAVATI REGION

Sr. No.	Name of dam with Location	Name of Instruments	No.of Insttruments	Performance		Status of Data analysis
				Working	Non working	
1	2	3	4	5	6	7
1	Nalganga Dist-Buldana	1)Rainguage on dam(ordinary)	1	1	-	Data collection is done at field level
		2)Rainguage in the catchment(ordinary)	1	1	-	
		3)Pan evaporimeter	1	1	-	-do-
		4)Wind velocity recorder	1	-	1	-do-
		5)Wind direction recorder	1	-	1	-do-
2	Gyanganga Dist-Buldana	1)Rainguage on dam(ordinary)	1	1	-	-do-
		2)Pan evaporimeter	1	-	-	-do-
3	Katepurna Dist-Akola	1)Rainguage on dam(ordinary)	1	**1**	-	-do-
		2)Rainguage in the catchment(ordinary)	4	4	-	
		2)Rainguage on dam (self records)	1	1	-	-do-
		3)Pan evaporimeter	1	-	1	-do-
4	Shekdari Dist-Amravati	1)Rainguage on dam(ordinary)	1	1	1	-do-
5	Shahanoor Dist-Amravati	1)Rainguage on dam(ordinary)	1	1		-do-
		2)Raingauge in catchment(Ordinary)	1	1		-do-
		3)Pan evaporimeter	1	1	-	-do-
6	Purna Dist. Awati	1)Rainguage on dam(ordinary)	1	1	-	-do-
7	Lower Pus Dist-yavatmal	1)Rainguage on dam(ordinary)	1	1	-	-do-
		2) Pan evapometer	1	1	-	-do-

Sr. No.	Name of dam with Location	Name of Instruments	No.of Insttruments	Performance		Status of Data analysis
				Working	Non working	
1	2	3	4	5	6	7
8	Pus Dist- Yavatmal	1)Rainguage on dam(ordinary)	1	-	1	-do-
9	Mun Dist-Buldana	1)Rainguage on dam(ordinary)	1	1	-	-do-
		2)Pan evaporimeter	1	-	1	-do-
10	Khirkund Dist-Amravati	1)Rainguage on dam(ordinary)	1	1	-	-do-
11	Upper Wardha Dist-Amravati	1)Rainguage on dam(ordinary)	1	1	-	-do-
		2)Rainguage in the catchment (ordinary)	1	-	1	-do-
		3)Pan evaporimeter	1	1	-	-do-
		4) Wind velocity meter.	1	1	-	-do-
12	Wan Dist-Akola	1)Rainguage on dam(ordinary)	1	1	-	-do-
		2)Rainguage in the catchment(ordinary)	3	3	-	-do-
		3) Wet dry thermometer	1	1	-	-do-
13	Adan Dist-Akola	1)Rainguage on dam(ordinary)	1	1	-	-do-
		2)Pan evaporimeter	1	-	1	-do-
		3)Wave Height Recorder	1	-	1	-do-
14	Popatkhed Dist. Akola	1)Rainguage on dam(ordinary)	1	1	-	-do-
15	Arunavati Dist-Yavatmal	1)Rainguage on dam(ordinary)	1	1	-	-do-
		2)Rainguage in the catchment(self records)	5	5	-	-do-
		3)Pan evaporimeter	1	-	1	-do-
		4)Rain guage on Dam (Self recording)	1	1	-	-do-
		5) Other meteorological Instrument	1	-	1	-do-

Sr. No.	Name of dam with Location	Name of Instruments	No.of Insttruments	Performance		Status of Data analysis
				Working	Non working	
1	2	3	4	5	6	7
16	Chandrabhaga Dist-Amravati	1)Rainguage on dam(ordinary)	1	1	-	-do-
		2)Rainguage in the catchment(self recorder)	2	2	-	-do-
		3)Pan evaporimeter	1	1	-	-do-
17	Chargad Dist.-Amarawati	1)Rainguage on dam(ordinary)	1	1	-	-do
18	Pentakli Dist-Buldhana	1)Rainguage on dam(ordinary)	1	1	-	
		2)Pan evaporimeter	1	1	-	
19	Khadakpurna Dist-Buldhana	1)Rainguage on dam(ordinary)	1	1	-	-do-
		2)Pan evaporimeter	1	1	-	-do-
20	Paldhag Dist-Buldana	1)Rainguage on dam(ordinary)	1	1	-	-do-
		2)Pan evaporimeter	1	-	1	-do-
21	Mas Dist-Buldana	1)Rainguage on dam(ordinary)	1	1	-	-do-
		2)Pan evaporimeter	1	-	1	-do-
22	Pangrikesapur DistBuldana	1)Rainguage on dam(ordinary)	1	1	-	-do-
23	Shivani Armal DistBuldana	1)Rainguage on dam(ordinary)	1	1	-	-do-
24	Kawala Dist Buldana	1)Rainguage on dam(ordinary)	1	1	-	-do-
		2) Pan evaporimeter	1	-	1	-do-
25	Koradi Dist-Buldana	1)Rainguage on dam(ordinary)	1	1		-do-
		2)Pan evaporimeter	1	-	1	-do-
26	Botha Dist-Buldana	1)Rainguage on dam(ordinary)	1	1	-	-do-

Sr. No.	Name of dam with Location	Name of Instruments	No.of Insttruments	Performance		Status of Data analysis
				Working	Non working	
1	2	3	4	5	6	7
27	Morna Dist-Akola	1)Rainguage on dam(ordinary)	1	1		-do-
		2)Rainguage on dam (self records)	1	-	1	-do-
		3) Rainguage in the catchment(self records)	1	1	-	-do-
		4) Pan evaporimeter	1	-	1	-do-
28	Nirguna Dist-Akola	1)Rainguage on dam(ordinary)	1	1	-	-do-
		2)Rainguage on dam(self records)	1	-	1	-do-
		3)D.W.L.L.	1	-	1	do-
		4) Pan evapoimeter	1	-	1	-do-
29	Uma Dist-Akola	1)Rainguage on dam(ordinary)	1	1	-	
		2)Pan evaporimeter	1	-	1	
30	Chinchpani Dist-Akola	1)Rainguage in catchment	1	-	1	-do-
31	Ekburji Dist-Washim	1)Rainguage on dam(ordinary)	1	1	-	-do-
		2)Pan evaporimeter	1	-	1	-do-
32	Sonal Dist-Washim	1)Rainguage on dam(ordinary)	1	-	1	-do-
33	Malkhed Dist-Amravati	1)Rainguage on dam(ordinary)	1	1	-	-do-
34	Sakhali Dist- Amravati	1)Rainguage on dam(ordinary)	1	1	-	-do-
35	Wai Dist-Amravati	1)Rainguage on dam(ordinary)	1	1	-	-do-
36	Khatijapur Dist-Amravati	1)Rainguage on dam(ordinary)	1	1	-	-do-
37	Khari Dist-Amravati	1)Rainguage on dam(ordinary)	1	1	-	-do-

Sr. No.	Name of dam with Location	Name of Instruments	No.of Insttruments	Performance		Status of Data analysis
				Working	Non working	
1	2	3	4	5	6	7
38	Sadrabadi Dist-Amravati	1)Rainguage on dam(ordinary)	1	1	-	-do-
39	Mandwa Dist-Amravati	1)Rainguage on dam(ordinary)	1	1	-	-do-
40	Salai Dist-Amravati	1)Rainguage on dam(ordinary)	1	1	-	-do-
41	Nagthana Dist-Amravati	1)Rainguage on dam(ordinary)	1	1	-	-do-
42	Tongalphodi Dist-Amravati	1)Rainguage on dam(ordinary)	1	1	-	
43	Pusli Dist-Amravati	1)Rainguage on dam(ordinary)	1	1	-	-do-
44	Sawarpani Dist-Amravati	1)Rainguage on dam(ordinary)	1	1	-	-do-
45	Satnoor Dist-Amravati	1)Rainguage on dam(ordinary)	1	1	-	-do-
46	Nanduri Dist-Amravati	1)Rainguage on dam(ordinary)	1	1	-	-do-
47	Sawalikheda Dist-Amravati	1)Rainguage on dam(ordinary)	1	1	-	-do-
48	Gondvihir Dist-Amravati	1)Rainguage on dam(ordinary)	1	1	-	-do-
49	Gondwagholi Dist-Amravati	1)Rainguage on dam(ordinary)	1	1	-	-do-
50	Waghadi Dist.-Yavatmal	1)Rainguage on dam(ordinary)	1	1	-	-do-
51	Goki Dist – Yavatmal	1)Rainguage on dam(ordinary)	1	1	-	-do-
		2) Pan evapometer	1	1	-	-do-
52	Saikheda Dist.-Yavatmal	1)Rainguage in the catchment(self records)	1	-	1	-do-
53	Muchi Dist.-Yavatmal	1)Rainguage on dam(ordinary)	1	-	1	-do-
54	Khadakdoh Dist.-Yavatmal	1)Rainguage on dam(ordinary)	1	-	1	-do-
55	Pendhari Dist.-Yavatmal	1)Rainguage on dam(ordinary)	1	-	1	-do-
56	Antargaon Dist.-Yavatmal	1)Rainguage on dam(ordinary)	1	-	1	

Sr. No.	Name of dam with Location	Name of Instruments	No.of Insttruments	Performance		Status of Data analysis
				Working	Non working	
1	2	3	4	5	6	7
57	Nawargaon Dist.-Yavatmal	1)Rainguage on dam(ordinary)	1	1	-	-do-
58	Rampur Dist.-Yavatmal	1)Rainguage on dam(ordinary)	1	-	1	-do-
59	Khandni Dist.-Yavatmal	1)Rainguage on dam(ordinary)	1	-	1	-do-
60	Mandwa Dist-Buldana	1)Rainguage on dam(ordinary)	1	1	-	
61	Pimlgaon chambhare Dist-Akola	1)Rainguage on dam(ordinary)	1	1	_	-do-
62	Mozari Dist-Akola	1)Rainguage on dam(ordinary)	1	1	_	-do-
63	Ghota Dist-Akola	1)Rainguage on dam(ordinary)	1	1	_	-do-
64	Giroli Dist-Washim	1)Rainguage in the catchment(self Record)	1	-	1	-do-
65	Saraswati Dist-Amravati	1)Rainguage on dam(ordinary)	1	1	_	-do-
66	Gawalndoh Dist-Yavatmal	1)Rainguage on dam(ordinary)	1	1	_	-do-
67	Borgaon Dist-Yavatmal	1)Rainguage on dam(self recorder)	1	_	1	
68	Karanji Dist.-Yavatmal	1)Rainguage on dam(ordinary)	1	_	1	-do-
69	Kombadi Nalla Dist.- Buldhana	1)Raingauge on dam(ordinary)	1	1	-	-do-
		2)Pan Evaporimeter	1	-	1	-do-
70	Pimpalgaon Dist.- Akola	1)Raingauge on dam(ordinary)	1	1	-	-do-
71	Loni Dhavalgiri Dist.- Amarawati	1)Raingauge on dam(ordinary)	1	1	-	-do-
72	Ghatkhed Dist.- Amarawati	1)Raingauge on dam(ordinary)	1	1	-	-do-
73	Kawara Nalla Dist.- Amarawati	1)Raingauge on dam(ordinary)	1	1	-	-do-

Sr. No.	Name of dam with Location	Name of Instruments	No.of Insttruments	Performance		Status of Data analysis
				Working	Non working	
1	2	3	4	5	6	7
74	Utawale Project Dist.-Buldhana	1)Raingauge on dam(ordinary)	1	1	-	-do-
75	Dhorapgaon Dist.-Buldhana	1)Raingauge on dam(ordinary)	1	1	-	-do-
76	Munjala Dist.-Yavatmal	1)Raingauge on dam(ordinary)	1	-	1	-do-
		Total	**131**	**97**	**34**	

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

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)	73	64	9	12.33
2	Rain gauge on dam (Self recorder)	5	2	3	60.00
3	Rain gauge in catchment (ordinary)	13	11	2	15.38
4	Rain gauge in catchment (Self recorder)	8	7	1	12.50
5	Pan Evapometer	24	8	16	66.67
6	Wind Velocity recorder	2	2	-	0.00
7	Wind direction recorder	1	1	-	0.00
8	Wet/dry bulb thermometer	1	1	-	0.00
9	Thermometer for air jump	-	-	-	0.00
10	Thermometer for reservoir water temp.	-	-	-	0.00
11	Water stage recorder	1	1	-	0.00
12	Baro meter	-	-	-	0.00
13	Sun shine reocrder	-	-	-	0.00
14	Max. and Minmum thermometer	-	-	-	0.00
15	Wave height recorder	1	0	1	100.00
16	Hydrometer	-	-	-	0.00
17	Humidity meter	-	-	-	0.00
18	Steven meter	-	-	-	0.00
19	Automatic level recorder	-	-	-	0.00
20	D W L L	1	-	1	100.00
21	Other Meteorological Inst.	1	-	1	100.00
Total		**131**	**97**	**34**	**25.95**

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PART – 5

Status of NCDS Documents subimitted to DSO of Category-I Dams (Including Private Dams)

National Committee on Dam Safety (NCDS) Documents

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 all the Dam owners to take necessary steps for preparation of EAPs & other documents & report to NCDS Secretariat about the number of Dams for which EAPs & other documents have been prepared, along with the target dates for the preparation of EAPs & other documents for the remaining Dams.

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 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.17May

2006.CWC Guidelines are available on http://www.cwc.gov.in/main/ downloads /cwc/EAP chapters.pdf

2. R.O.S. (Reservoir operation schedule) & 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 & Completion Report :

The importance of record drawings & 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.

Amravati Region

Table No.5.1

Position of preparation of Emergency Action Plan (EAP)

Sr. No.	Name of CE	Total	Received	Not Received	Remarks
1	CE (WR) Amravati	11	10	1	
2	CE (SP) Amravati	11	9	2	
	Total	**22**	**19**	**3**	

Position of preparation of Reservior Operation Schedule (ROS)

Gated Dams = 17nos

Sr. No.	Name of CE	Total	Received	Not Received	Remarks
1	CE (WR) Amravati	9	9	0	
2	CE (SP) Amravati	8	8	0	
	Total	**17**	**17**	**0**	

Position of preparation of Gate Operation Schedule (GOS)

Gated Dams = 17nos

Sr. No.	Name of CE	Total	Received	Not Received	Remarks
1	CE (WR) Amravati	9	7	2	
2	CE (SP) Amravati	8	8	0	
	Total	**17**	**15**	**2**	

Table No.5.2
Dam Wise Position of EAP, ROS,GOS Documents(Class -1 Dams)

Sr.No.	Name of dam	EAP	ROS	GOS
1	2	3	4	5
Amravati Region				
A	**CE (WR) Amravati**			
	1)S.E.Y.I.C.(M), Yavatmal			
1	Adan	R(1990)	R(2008)	R(1989)
2	Arunavati	R	R(2003)	R(1996)
3	Bembla	R(2010)	R(2007)	R(2010)
4	Lower Pus	R(1983)	R(2008)	R(1989)
5	Upper Pus (UG)	NR	Not Applicable	Not Applicable
	Total	**5**	**4**	**4**
	(R) Received	**4**	**4**	**4**
	(NR) Not Rceived	**1**	**0**	**0**
	2) S.E. U.W.I.C, Amravati			
1	Shahanoor	R	R(2009)	NR
2	Sapan	R(2010)	R(2010)	R
3	Chargad (UG)	R(2003)	Not Applicable	Not Applicable
4	Chandrabhaga	R(2006)	R(2010)	R(2005)
5	Purna	R(2010)	R(2015)	NR
6	Upper Wardha	R(2015)	R(2016)	R(2015)
	Total	**6**	**5**	**5**
	(R) Received	**6**	**5**	**3**
	(NR) Not Rceived	**0**	**0**	**2**
B	**CE (SP) Amravati**			
	1) S.E.A.I.C, Akola			
1	Nalganga	R(2012)	R(2008)	**R(1989)**
2	Gyanganga (UG)	R	Not Applicable	Not Applicable
3	Katepurna	R	R(2008)	**R(1989)**
4	Dagadparwa	R(2008)	R(2008)	R(2008)
5	Dongarshewali (UG)	NR	Not Applicable	Not Applicable
6	Pentakli	R	R(2010)	R(2014)
7	Mun	R(1991)	**R(2009)**	**R**

8	Wan	R(2009)	R(2009)	R(2009)
Sr.No.	**Name of dam**	**EAP**	**ROS**	**GOS**
9	Khadakpurna	R(2011)	R(2009)	R(2009)
10	Khirkund (UG)	NR	Not Applicable	Not Applicable
11	Popatkhed	R(2005)	R(2015)	R (2015**)**
	Total	**11**	**8**	**8**
	(R) Received	**9**	**8**	**8**
	(NR) Not Rceived	**2**	**0**	**0**
	PRIVATE DAMS – No Class-I Private Dams in Amaravati Region			

Table No.5.3
Damwise position of Other NCDS Documents (Class-I Dams)

Sr. No	Name of Dam	Completion Report	Record Drawing	Data Book	O& M Mannual
	Amravati Region				
A	**CE (WR) Amravati**				
	1)S.E.Y.I.C.(M), Yavatmal				
1	Adan	R	R	R	R
2	Arunavati	NR	NR	NR	NR
3	Bembla	NR	R	NR	NR
4	Lower Pus	NR	R	R	R
5	Upper Pus	NR	R	R	R
	Total	**5**	**5**	**5**	**5**
	(R) Received	**1**	**4**	**3**	**3**
	(NR) Not Rceived	**4**	**1**	**2**	**2**
	2) S.E. U.W.I.C, Amravati				
1	Shahanoor	NR	NR	NR	NR
2	Sapan	NR	NR	NR	NR
3	Chargad (UG)	NR	NR	R	NR
4	Chandrabhaga	NR	NR	R	NR
5	Purna	NR	NR	NR	NR
6	Upper Wardha	R	R	R	R
	Total	**6**	**6**	**6**	**6**
	(R) Received	**1**	**1**	**3**	**1**
	(NR) Not Received	**7**	**5**	**3**	**5**
B	**CE (SP) Amravati**				
	1) S.E.A.I.C, Akola				
1	Nalganga	NR	R	R	R
2	Gyanganga	NR	R	R	NR
3	Katepurna	NR	NR	NR	NR
4	Dagadparwa	NR	NR	NR	NR
5	Dongarshewali(UG)	NR	NR	NR	NR
6	Pentakli	NR	NR	NR	NR
7	Mun	R	R	R	R
8	Wan	R	R	R	R
Sr.	**Name of**	**Completion**	**Record**	**Data**	**O& M Mannual**

No	Dam	Report	Drawing	Book	
9	Khadakpurna	NR	NR	NR	NR
10	Khirkund	NR	NR	NR	NR
11	Popatkhed	NR	NR	NR	NR
	Total	**11**	**11**	**11**	**11**
	(R) Received	**2**	**4**	**4**	**3**
	(NR) Not Rceived	**9**	**7**	**7**	**8**
	PRIVATE DAMS – No Class-I Private Dams in Amaravati Region				

Table 5.4 Position of preparation of Other NCDS Documents										
Sr. No	**Name of CE**	**Total no. Of dams**	**Completion Report**		**Record Drawing**		**Data Book**		**O&M Mannual**	
			R	NR	R	NR	R	NR	R	NR
1	CE (WR) Amravati	11	2	9	5	6	6	5	4	7
2	CE (SP) Amravati	11	2	9	4	7	4	7	3	8
	Total	**22**	**4**	**18**	**9**	**13**	**10**	**12**	**7**	**15**

R= Received

NR= Not Received

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PART – 6

Data filling status on DHARMA portal
Amravati Region

DHARMA: Dam Health and Rehabilitation monitoring application

Introduction-

Dam health & Rehabilatation 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.

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.

Table-6.1
Data filling status on Dam Health and Rehabilitation Monitoring Application (DHARMA) portal of Amravati Region, in DRIP- II

Sr. No	Name of Dam	NRLD registration number	Dharma data filling status (%)
[A]Chief Engineer(W.R.)Water Resources Department Amravati **(1)Superintending Engineer, Yavatmal Irrigation Circle (M), Yavatmal.** **(a)Executive Engineer , Yavatmal Irrigation division, Yavatmal**			
1	Lower Pus	MH019MH1012	11
2	Pus	MH09HH0268	11
(b)Executive Engineer, Arunavati Project Div. Digras			
1	Adan	MH09HH0660	11
2	Arunavati	MH09MH1343	----
(2)Superintending Engineering Upper Wardha Irrigation Circle , Amravati. **(a)Minor & Medium Irrigation Project Div. Achalpur.**			
1	Shahnoor	MH09HH1212	10
2	Chandrabhaga	MH09HH1801	74
3	Chargad	MH09HH1621	10
4	Purna	MH09HH1803	65
(b)Amravati Medium Project Division, Amravati			
1	Sapan	MH09HH2139	10
(C)Upper Wardha Irrigation Division, Amravati			
1	Upper Wardha	MH09HH1319	62
[A]Chief Engineer(S.P.)Special Project, Amravati **(1)Superintending Engineer, AkolaIrrigation Circle, Akola** **(a)Executive Engineer , Akola Irrigation division, Akola**			
1	Katepurna	MH09MH455	17
2	Dagadparwa	MH09LH2184	11
3	Wan(Akola)	MH09HH1560	51
(b)Executive Engineer , Buldana Irrigation division, Buldana.			
1	Nalganga	MH09HH0152	13
2	Gyanganga	MH09HH0267	56
3	Dongarshewali	MH09MH2136	11
4	Pentakli	MH09MH1624	26
5	Mun	MH09HH1492	11
6	Khadakpurna	MH09HH2137	11
(c)Executive Engineer, Minor Irrigation Division, Akola.			
1	Khirkund	MH09HH1516	11
2	Popatkhed	MH09HH1656	10

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PART – 7

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

Part-7 Status report of Gates of Various gated dams in Amravati 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 mansoon inspection of total 173 gateddams have been carried out by Mechanical Organisation. It is to be noted that Chief engineer (Mechanical) W.R.D Nashik, prepares independently the detail Helth status Report of all the gated dams inspected by mechanical organisation.This report is published and submitted to WRD and circulated toall Concern Chief Engineers.

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

7.2 Overall Health Statues of Gated Dams

17 Class-I gated dams in the Amaravati region were inspected by Mechanical organisation Category -1 deficiency is not observed on any dam. Category -2 & 3 deficiencies are observed on all the 17 dams. Total 284 Category -2 deficiencies and1016 Category -3 deficiencies are observed on the dams in the region

Table No.6.1 shows the dam wise and categorywise deficiencies identified in the region.

Table 7.1
Damwise and Categoriwise Number of Deficiencies Identified on Gated Dams in the Amravati Region

Sr. No.	Name of Class-1 Gated Dam	Categoriwise Identified Deficiencie			Remarks
		Cat-I	Cat-II (2A)&(2B)	Cat-III	
1	*2*	*3*	*4*	*5*	*6*
A)	**Chief Engineer (WR) Amravati**				
1	Aadan	--	07	36	
2	Arunavati	--	33	69	
3	Bembala	--	15	65	
4	Lower Pus	--	23	77	
5	Shahanoor	--	18	47	
6	Sapan	--	12	35	
7	Chandrabhaga	--	40	85	
8	Purna	--	30	69	
9	Upper Wardha	--	18	75	
		--			
B)	**Chief Engineer (SP) Amravati**				
10	Nalganga	--	09	43	
11	Katepurna	--	08	34	
12	Dagadparawa	--	10	54	
13	Pentakali	--	10	76	
14	Man	--	07	42	
15	Wan	--	19	71	
16	Khadakpurna	--	14	86	
17	Popatkhed	--	11	52	
	Total -	**0**	**284**	**1016**	

Chandrabhaga Dam Dist. Amravati