WATER QUALITY STATUS REPORT OF MAHARASHTRA 2023-2024

Maharashtra Pollution Control Board
महाराष्ट्र प्रदूषण नियंत्रण मंडळ

FINAL REPORT

WATER QUALITY STATUS OF MAHARASHTRA

2023-2024

(COMPILATION OF WATER QUALITY DATA RECORDED BY MPCB)

Prepared by

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"Your Service is our Duty"

महाराष्ट्र प्रदूषण नियंत्रण मंडळ
MAHARASHTRA POLLUTION CONTROL BOARD

Preface

Maharashtra Pollution Control Board established under the provisions of the Water (Prevention and Control of Pollution) Act, 1974, it works to control and prevent pollution by monitoring environmental standards and ensuring compliance with laws related to air, water, noise, and waste management. The Board monitors water quality across 294 stations under under National Water Monitoring Programme (NWMP) and State Water Monitoring Programme (SWMP) at various locations as per the Uniform Monitoring Protocol of Central Pollution Control Board / MoEF, New Delhi

The current report presents comprehensive compilation and statistical analysis of water quality observed at 294 monitoring stations during the period April 2023 to March 2024. Additionally, the report includes the Water Quality Index (WQI), calculated using the National Sanitation Foundation (NSF) formula, Moreover the report also comprises of Water Quality Index (WQI) calculated using National Sanitation Foundation, USA's formula offering a simplified snapshot of water quality in a single, easily interpretable number that can be easily understood by the public. It also presents a comparative analysis of the WQI over the past several years.

In terms of surface water, there was no significant change in water quality compared to the previous year (2022-23). Out of the 228 WQMS, about 212 WQMS (92.98%) were observed under the Non polluted category a slight decrease from the 214 WQMS (93.85%) in the previous year (2022-23).Further out of 212 WQMS, 164 WQMS (79.24%) recorded their annual average WQI under the 'Good to Excellent' whereas 36 WQMS (16.98%) fell under the 'Medium to Good' category. Out of the 'Polluted' category, 10 WQMS and 6 WQMS recorded annual average WQI under the 'Bad' and 'Bad to Very bad' categories respectively. Additionally, 2 WQMS (compared to just 1 in 2022-23) were classified as 'Dry.'

In case of Priority ranking of Polluted River Stretches, it was noted that there are 03 number of Rivers (Mithi, Pawana, Mutha) in the Priority 1 category (with a BOD value greater than 30mg/l). This shows the pollution levels in these rivers, primarily caused by the sewage discharge from surrounding residential and commercial areas. In 2023-24, the distribution of rivers under various priority categories was as follows: 3 rivers were placed under Priority II, 7 under Priority III, 10 under Priority IV, and 27 under Priority V. Waghur River was the river categorized as non-polluted, with a BOD value of less than 3 mg/l. Additionally, five rivers—Amravati, Bori, Hiwara, Manjara, and Titur—were observed to be dry.

For the 2023-24 year, in terms of Groundwater, Kolhapur district recorded the highest number of WQMS (6 stations) under 'Excellent' category. Similarly Nagpur had the most WQMS (9 Nos.) under 'Good Water' category. The number of stations categorized as 'Water Unsuitable for Drinking' are 04.

This report has been prepared by The Energy and Resources Institute (TERI), Mumbai Western Regional Centre. I would like to extend my sincere appreciation for the efforts of Smt. Pranali Sarang , *Research Associate* , Shri. Manish Asodekar, *Research Associate*, TERI and team, for their contributions to the preparation of this report. I also value the inputs provided by Shri. S. L. Waghmare, Joint Director-WPC, and entire team, whose support and insights were instrumental in the report's development.

With this, I am pleased to present this status report. I am confident that it will serve as an effective monitoring tool for all relevant departments, aiding them in formulating appropriate action plans to improve water quality.

Date : 31.03.2025

(Dr. Avinash Dhakne, IAS)
Member Secretary

Abbreviations

BCM	Billion Cubic Meters
BIS	Bureau of Indian Standards
BOD	Biochemical Oxygen Demand
CAGR	Compound Annual Growth Rate
CGWB	Central Ground Water Board
CPCB	Central Pollution Control Board
CWC	Central Water Commission
DO	Dissolved Oxygen
FC	Fecal Coliform
GIS	Geographical Information System
GSDA	Ground water Surveys & Development Agency
GW	Ground Water
IPC	Irrigation Potential Created
IPU	Irrigation Potential Utilized
MoEF	Ministry of Environment and Forests
MoEFCC	Ministry of Environment Forest and Climate Change
MPCB	Maharashtra Pollution Control Board
NSFWQI	National Sanitation Foundation Water Quality Index
NWMP	National Water Quality Monitoring Program
pH	Potential of Hydrogen
POPs	Persistent Organic Pollutants
RO	Regional Office
SD	Standard Deviation
Shp	Shape files
SPCBs	State Pollution Control Boards
SW	Surface Water
SWMP	State Water Quality Monitoring Program
TDS	Total Dissolved Solids
TH	Total Hardness
WHO	World Health Organisation
WQI	Water Quality Index
WQMS	Water Quality Monitoring Stations

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EXECUTIVE SUMMARY

Earth contains about 1.332 billion cubic kilometers (km^3) of water, but only 2.5% of this is fresh water, with approximately 68.7% locked in glaciers and ice caps. Only about 1% of Earth's freshwater is found in rivers, lakes, and reservoirs, which is directly available for human use..But increasing demand, unpredictable supply, pollution, and water-related disasters threaten its availability and quality. As climate change and population growth continues, the pressure on water resources is expected to rise, worsening these challenges. The State of Global Water Resources report highlights severe stress on global water supplies, with five consecutive years of below-normal river flows and reservoir inflows[1]

According to the World Resources Institute (WRI), around 2 billion people live in countries facing high water stress, and the demand for water is projected to rise significantly due to population growth, industrialization, and agriculture[2].Furthermore, climate change is exacerbating the issue by altering precipitation patterns, increasing the frequency of droughts in some regions, and floods in others. 1 in 3 people globally do not have access to safe drinking water as stated by WHO[3]. India is expected to be the most severely affected as the global urban population facing water scarcity is projected to increase from 933 million in 2016 to 1.7-2.4 billion people in 2050[4] Diarrhoeal disease, the fourth leading cause of death among children under five globally, is primarily caused by unsafe drinking water and poor sanitation and hygiene[5]. In India, about 400,000 to 500,000 young children die from diarrhoea every year. Additionally, viral hepatitis affects 12 out of every 100,000 people.Over 25 million people in 17 states are exposed to drinking water with fluoride levels exceeding the safe limit of 1.5 parts per million. Long-term exposure to high fluoride concentrations can lead to skeletal fluorosis, a condition that affects bone health[6].

To maintain close surveillance of water resources in India, the Central Pollution Control Board (CPCB), in collaboration with State Pollution Control Boards (SPCBs), has established a network of Water Quality Monitoring Stations (WQMS) across key water bodies such as rivers, reservoirs, seas, creeks, and groundwater sources under the National Water Quality Monitoring Programme (NWMP). Among the 28 states and 3 Union Territories, Maharashtra leads with the highest number of WQMS, having 53 stations dedicated to monitoring water quality[7].

[1] https://wmo.int/publication-series/state-of-global-water-resources-2023#:~:text=The%20State%20of%20Global%20Water,communities%2C%20agriculture%2C%20and%20ecosystems.

[2] https://www.wri.org/sdgs/sdg-6

[3] https://www.who.int/news/item/18-06-2019-1-in-3-people-globally-do-not-have-access-to-safe-drinking-water-unicef-who

[4] https://wri-india.org/blog/indias-first-water-body-census-connecting-missing-links

[5] https://www.unicef.org/media/137206/file/triple-threat-wash-EN.pdf

[6] https://pmc.ncbi.nlm.nih.gov/articles/PMC1151007/

[7] https://cpcb.nic.in/nwmp-monitoring-network/

The Maharashtra Pollution Control Board (MPCB), as the state nodal agency, has set up 294 Water Quality Monitoring Stations across the state. These stations monitor and assess water quality under two main programs: the National Water Quality Monitoring Program (NWMP) and the State Water Quality Monitoring Program (SWMP). Surface water (SW) samples are collected and monitored monthly, while groundwater (GW) samples are monitored biannually.

This report presents the statistically analyzed data for the year 2023-2024, along with visual illustrations and spatial representations that highlight the water quality of both surface and groundwater in Maharashtra. The report also presents the Water Quality Index (WQI) across 294 WQMS for both surface and groundwater in Maharashtra. The Water Quality Index (WQI) is a numerical tool used to summarize the quality of water in a single, easy-to-understand value. It is calculated {formula developed by the National Sanitation Foundation (NSF) and subsequently modified by the CPCB based on several water quality parameters, which together represent the overall health of the water at a specific location and time. Additionally, the report includes information on polluted river stretches in Maharashtra, ranked in order of priority based on their compliance with the desired criteria for Biochemical Oxygen Demand (BOD). This helps in identifying areas that require immediate attention and targeted efforts to improve water quality.

Surface Water Quality

The surface water resources of Maharashtra are primarily sourced from five major river basins: the Godavari, Krishna, Tapi, Narmada, and the West-flowing rivers. To monitor and manage water quality, the Maharashtra Pollution Control Board (MPCB) has set up approximately 228 Water Quality Monitoring Stations (WQMS) across these river basins, as well as along the sea, creeks, and nallahs.The WQI for surface water is calculated using 4 parameters namely pH, Dissolved Oxygen (DO), Biochemical Oxygen Demand (BOD), and Fecal Coliform (FC). For its easy interpretation, color codes are assigned which depict the water quality of that particular SW sample/water body

Table No. 1: Classification of Water Quality for Surface Water

Water Quality Index - Surface Water			
WQI	Quality Classification	Remarks	Colour Code
63-100	Good to Excellent	Non-Polluted	
50-63	Medium to Good	Non-Polluted	
38-50	Bad	Polluted	
38 and less	Bad to Very Bad	Heavily Polluted	

Source: http://www.mpcb.gov.in/envtdata/Ebulletin_pdf/E_bulletin_Oct2016.pdf

Table No. 2: Annual Average WQI for Surface WQMS in various basins and sub basins

Basin	Sub Basin	Name of the rivers	G2E	M2G	B	B2V	Dry	NA	Grand Total
Tapi	Tapi Upper	Tapi, Purna, Pedhi	5						5
	Tapi Middle	Tapi, Girna, Rangavali, Amravati, Bori, Burai, Gomai, Hiwara, Kan, Mor, Panzara, Titur, Waghur	10				1	4	15
Krishna	Bhima Upper	Bhima, Nira, Chandrabhaga, Mutha, Ghod, Indrayani, Pawana, Sina, Vel, Mula-Mutha	23	9	4				36
	Krishna Upper	Krishna, Panchganga, Koyna, Urmodi, Venna	21						21
Godavari 1	Godavari Upper	Godavari, Darna, Kadwa, Kham, Shivna	18		2				20
	Godavari Middle	Godavari, Bindusara, Sukhna, Purna	7	1	1		1	1	11
	Manjra	Godavari, Manjra	1					1	2
Godavari 2	Weinganga	Kolar, Kanhan, Wainganga	11		1	2		1	15
	Wardha	Wardha, Penganga, Wena, Morna	12						12
	Pranhita & Others	Wainganga	1						1
Coastal	West Flowing Rivers	Kalu, Ulhas, Patalganga, Bhatsa, Vashishti, Mithi, Kundalika, Savitri, Amba, Kundalik, Muchkundi, Surya, Tansa, Vaitarna	41			1			42
	Sea/Creek		13	23					36
	Nallah	Rabodi nallah, Colour Chem nallah, Sandoz nalla, BPT Navapur, Tarapur MIDC nallah, Pimpal-Paneri nallah, Chikali Nallah,Nallah at Alkai Mandir,Moti Nallah and Lowki Nallah	4	3	2	3			12
Total			**167**	**36**	**10**	**6**	**2**	**7**	**228**

Good to Excellent	Medium to Good	Bad	Bad to Very Bad	Dry	No data	Does not comply with WQI Calculation criteria (NA)

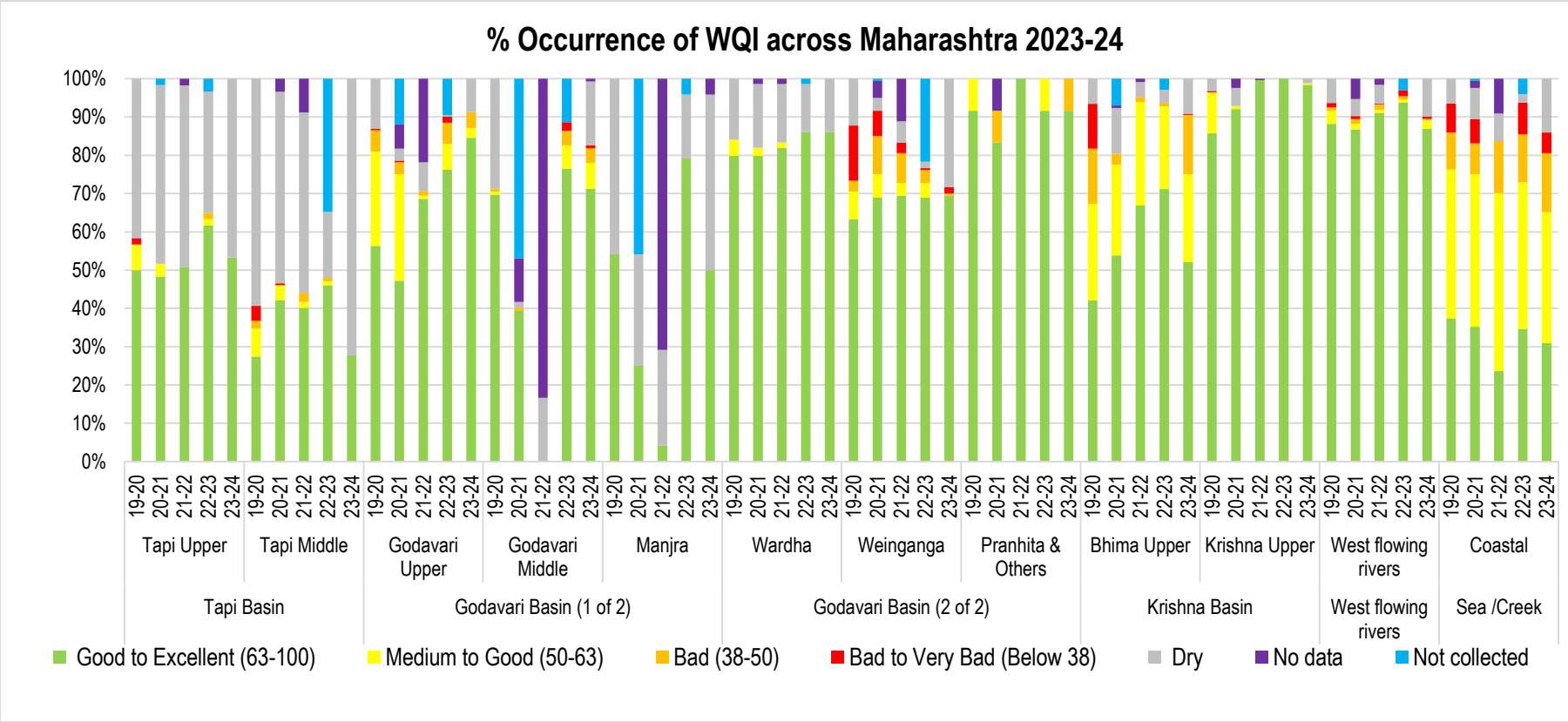


Figure No. 1 :Percentage Occurrence of WQI across Maharashtra 2023-24

As shown in Figure No. 2, during the year 2023-24, approximately 53% of the total observations in the Tapi Upper Sub-Basin were classified under the 'Good to Excellent' category, while 47% fell under the 'Dry' category, according to the WQMS data. In comparison to the previous year (2022-23), there was an 8% decrease in the proportion of observations categorized as 'Good to Excellent,' while the 'Dry' category saw an increase of 15%. Notably, no observations were recorded in other categories during the current year.

In the Tapi Middle Sub-Basin for the year 2023-24, around 72% of the observations were recorded under the 'Dry' category, while 28% were categorized as 'Good to Excellent.' This represents a significant decline in the proportion of 'Good to Excellent' observations, which decreased from 46% in 2022-23 to 28% in the current year. Meanwhile, the share of 'Dry' observations saw a substantial increase of 55% compared to the previous year.

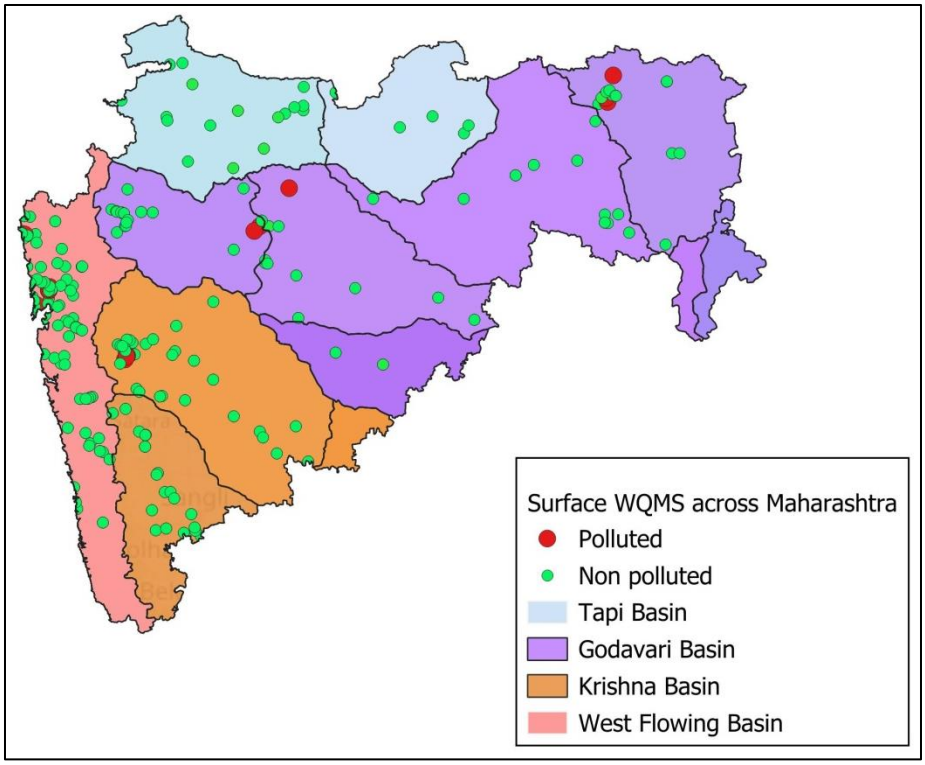
In the Godavari Basin (1 of 2), which includes the Godavari Upper, Godavari Middle, and Manjra Sub-basins, approximately 63.8% of total observations were classified under the 'Good to Excellent' category. Around 3.36% were noted under the 'Medium' category, while 2% fell under the 'Bad' category. The 'Dry' category accounted for 20% of the total observations, followed by 8% of observations categorized as 'Not Collected.

1. **Godavari Upper Sub-Basin**: There was a significant increase in the 'Good to Excellent' category, rising from 76.19% in 2022-23 to 84.53% in 2023-24. The 'Medium to Good' category decreased by 4%, while observations in the 'Bad' and 'Very Bad' categories declined by 1.38% and 1.58%, respectively. The 'Dry' category saw an 8% increase.
2. **Godavari Middle Sub-Basin**: The 'Good to Excellent' category dropped by 5%, with a 1.5% decrease in the 'Very Bad' category. The 'Dry' category accounted for 16% of observations in 2023-24.
3. **Manjra Sub-Basin**: A 29% decrease in the 'Good to Excellent' category was observed compared to 2022-23. The 'Dry' category accounted for 29%, while the 'No Data' category saw a 4% increase.

In the Godavari Basin (2 of 2), encompassing the Wardha, Wainganga, Pranhita, and other sub-basins, about 74.8% of total observations were recorded in the 'Good to Excellent' category. The 'Medium to Good' and 'Bad' categories each represented 1.5% of the observations. The 'Dry' category accounted for 14%, while 7.3% of the observations fell under the 'Not Collected' category.
Amongst 3 sub basins, Prahnita and others sub basin the recorded highest percent of observations (91%) under “good to Excellent” followed by Wardha (86.1%) and Weinganga (69.4%).No significant change in the Godavari Basin 2 of 2 was observed as compared to previous year 2022-23.

In the Bhima Upper Sub-Basin, there was a 19% decrease in the 'Good to Excellent' category compared to the previous year, 2022-23. Conversely, the 'Bad' category saw a significant increase of 14.60%, while the 'Medium to Good' category recorded a modest rise of 1.3% compared to last year. In the Krishna Upper Sub-Basin, nearly 98% of observations were classified under the 'Good to Excellent' category, with 0.39% falling under 'Medium to Good' and 1.2% under the 'Dry' category.

In the West Flowing Rivers, approximately 86% of total observations were recorded in the 'Good to Excellent' water quality category, showing a decline of 6.9% compared to the previous year, 2022-23. Similarly, the Coastal Basin experienced a decrease in 'Good to Excellent' observations, dropping from 34.65% in 2022-23 to 30.9% in 2023-24. However, the 'Medium to Good' category showed an increase, rising from 12% to 15% in the Coastal Basin. About 14% of total observations were recorded under the 'Dry' category.



Map No. 1 : Spatial representation of Surface WQMS which recorded WQI as polluted for more than 50% of the observations (2023-24)

Table No. 3: WQMS which recorded WQI as polluted for more than 50% observations in 2023-24

Station code	Station Name	Village	Taluka	District
179	Sillod - D/S of Sillod near bridge at bhavan	Sillod	Sillod	Aurangabad
180	Aurangabad - Near Holly cross bridge	Aurangabad	Aurangabad	Aurangabad
181	Aurangabad - Near Patoda Village	Aurangabad	Aurangabad	Aurangabad
186	Nag River Near, Bhandewadi Bridge, Nagpur	Nagpur	Nagpur	Nagpur
187	Nag River Near, Asoli Bridge, Bhandara Road, Nagpur	Nagpur	Nagpur	Nagpur
188	Pill River Near, Wanjra Layout Kamptee Road, Nagpur	Nagpur	Nagpur	Nagpur
1189	Bhima river at Pune(Mutha river) at U/s of Vithalwadi near Sankar Mandir	Vithalwadi	Haweli	Pune
2168	Mithi River at near bridge	Mahim	Bandra	Mumbai
2191	Mutha River at Sangam Bridge Near Ganpathi Ghat	Shivaji Nagar	Pune	Pune
2678	Mutha River near Veer Savarkar Bhavan	Pune M.C	Pune	Pune
2679	Mutha River at Deccan Bridge, Pune	Deccan	Pune	Pune
2782	Rabodi Nalla	Rabodi	Thane	Thane
2783	Colour Chem Nalla	Majiwada	Thane	Thane
2784	Sandoz Nalla	Sandozbaug	Thane	Thane
2785	BPT Navapur	Navapur	Palghar	Palghar
2788	Tarapur MIDC Nalla near sump-III	MIDC Tarapur	Palghar	Palghar

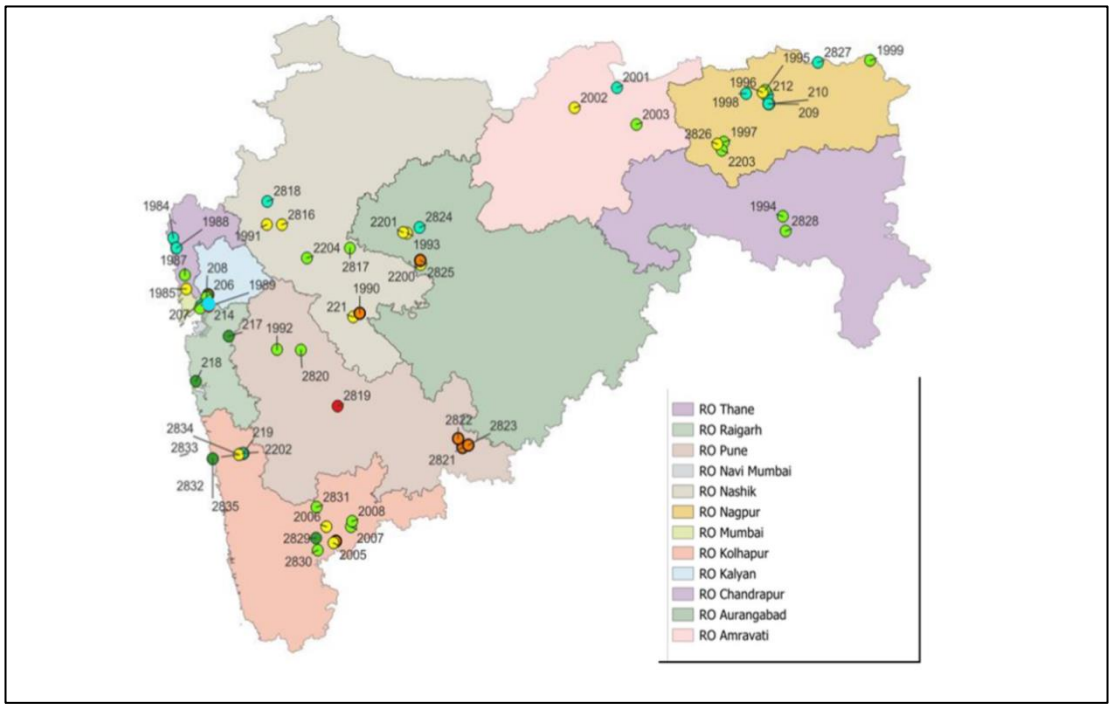
Ground Water Quality

The Maharashtra Pollution Control Board (MPCB) oversees groundwater quality through a robust network of 66 Water Quality Monitoring Stations (WQMS) spread across the state. Water samples are collected twice a year from these stations to monitor pollutant levels. Groundwater quality is assessed using the Water Quality Index (WQI), which is calculated based on nine key parameters: pH, Total Hardness, Total Dissolved Solids, Calcium, Magnesium, Chloride, Fluoride, Sulphate, and Nitrate. To simplify the understanding of the WQI results, color codes are employed for easy categorization.

Table No. 4: Classification of Water Quality for Ground water

Water Quality Index – Ground Water			
WQI	**Water Quality**	**Remark**	**Colour Code**
<50	Excellent	Non Polluted	
50-100	Good water	Non Polluted	
100-200	Poor Water	Polluted	
200-300	Very Poor Water	Polluted	
>300	Water Unsuitable for Drinking	Heavily Polluted	

Source: http://www.mpcb.gov.in/envtdata/Ebulletin_pdf/E_bulletin_English_March2017_13062017.pdf



Map No. 2: Spatial representation for average groundwater WQI represented as per the standard color code

Legend

Excellent	Good	Poor	Very Poor	Not suitable for drinking	Dry	No data	NA

Table No. 5: List of WQMS which recorded annual average WQI in the 'Water Unsuitable for Drinking' category in 2023-24

Station code	RO	Type	Station Name	District	Taluka	Village
1990	Nashik	bore well	Bore well at BMW Site , Burudgaon	Ahmednagar	Ahmednagar	Burudgaon
2821	Pune	Bore well	Bore Well at Bale Railway Station premises Owned by Shri Digambar Joshi	Solapur	North Solapur	Dahegaon
2822	Pune	Bore well	Bore Well near Chincholi	Solapur	Mohol	Chincholi
2823	Pune	Bore well	Bore Well at Shete Vasti near old Tuljapur Road	Solapur	Solapur	Shete vasthi, Tuljapur Naka

Table No. 6: Annual Average WQI for Groundwater WQMS across MPCB Regional Offices (2023-24)

Regional Office	Total Stations	Excellent	Good Water	Poor Water	Very Poor	Water Unsuitable for Drinking	Dry	NA
Amravati	3		1	1			1	
Aurangabad	5			3	1		1	
Chandrapur	1		1					
Kalyan	4		1	2	1			
Kolhapur	15	6	1	4	3		1	
Nagpur	15	1	9	1			2	2
Nashik	7	1	1	2		1	2	
Navi Mumbai	2		1				1	
Pune	6		2		1	3		
Raigad	3	2		1				
Thane	5		1	1			3	
Grand Total	**66**	**10**	**18**	**15**	**6**	**4**	**11**	**2**

For the 2023-24 year, groundwater WQI for 66 WQMS revealed that 27.2% (18 stations) were classified as 'Good Water,' while 22.7% were categorized under 'Poor Water.' Approximately 15.1% of the stations were rated as 'Excellent,' and 9.0% and 6.0% were classified as 'Very Poor Water' and 'Water Unsuitable for Drinking,' respectively.The station code 2821 (Bore Well at Bale Railway Station premises Owned by Shri Digambar Joshi) at Pune RO recorde the highest annual average WQI under 'Water Unsuitable for Drinking'category due to high levels of total Dissolved solids (annual average 5237 mg/l),magnesium (annual average 715 mg/l),chloride (annual average 847 mg/l) .calcium (annual average 935 mg/l) and sulphate (annual average 1055 mg/l) as compared to their respective standard value.

INTRODUCTION

Water Pollution.

Water is essential for life, economic development, and public health, making its preservation increasingly important amid growing environmental and population pressures. Often referred to as the "universal solvent," water is particularly susceptible to pollution from various anthropogenic activities. As per The Water (Prevention And Control Of Pollution) Act, 1974, *"pollution" means such contamination of water or such alteration of the physical, chemical or biological properties of water or such discharge of any sewage or trade effluent or of any other liquid, gaseous or solid substance into water (whether directly or indirectly) as may, or is likely to, create a nuisance or render such water harmful or injurious to public health or safety, or to domestic, commercial, industrial, agricultural or other legitimate uses, or to the life and health of animals or plants or of acquatic organisms*[8].

Water pollution in India is a critical issue affecting health, ecosystems, and livelihoods. Rapid industrialization, urbanization, and agricultural practices have led to the contamination of rivers, lakes, and groundwater with pollutants such as chemicals, heavy metals, and pathogens. This crisis contributes to widespread waterborne diseases and poses significant challenges to public health and environmental sustainability.One of the most prevalent causes of death in underdeveloped countries is waterborne diseases[9]. In 2022, microbial contamination of drinking water, primarily due to fecal pollution, posed the greatest threat to water safety for approximately 1.7 billion people worldwide[10]. In addition to bacteria, viruses, intestinal parasites, and other dangerous pathogens, contaminated water can result in water-borne diseases like typhoid, dysentery, and diarrhea. Each year diarrhoea kills around 443,832 children under 5 and an additional 50,851 children aged 5 to 9 years[11].

Water pollutants can be broadly categorized into 2 categories namely

- Point Sources (contamination originates from a single source) such as effluent discharged from industrial settlements, wastewater discharged from public and industrial wastewater treatment plants.
- Non-Point sources (contamination derived from a combination of diffused pollutant sources) such as surface runoff from agricultural and construction sites, water runoff from human settlements containing dirt, facial matter, oil and litter etc.

Health impacts associated with the Water pollution

Tackling water pollution is essential for protecting public health and guaranteeing access to clean water for everyone. The effects are widespread, influencing not only physical health but also mental well-being and the stability of communities.

[8] https://www.indiacode.nic.in/bitstream/123456789/15429/1/the_water_%28prevention_and_control_of_pollution%29_act%2C_1974.pdf

[9] https://ijcsrr.org/wp-content/uploads/2022/03/05-03-2022.pdf

[10] https://www.who.int/news-room/fact-sheets/detail/drinking-water

[11] https://www.who.int/news-room/fact-sheets/detail/diarrhoeal-disease

Waterborne Diseases: Contaminated water is a significant source of diseases such as cholera, dysentery, and hepatitis A. The World Health Organization (WHO) estimates that unsafe drinking water contributes to around 505,000 diarrheal deaths annually[12].

Chemical Contamination: Exposure to pollutants like heavy metals (e.g., lead and mercury) and agricultural chemicals (e.g., pesticides) can lead to serious health issues, including neurological disorders and increased cancer risks. For instance, chronic lead exposure is linked to cognitive and behavioral problems in children[13].

Nutritional Deficiencies: Pollution can harm aquatic ecosystems and result in the accumulation of toxins in fish. This is especially concerning for communities that depend on fish as a primary food source, which can lead to nutritional deficiencies[14].

Environmental Impacts associated with the Water Pollution

The environment, biodiversity, and ecosystems are all greatly impacted by water pollution. It disrupts aquatic ecosystems, resulting in the loss of habitat and declining numbers of wildlife. Pollutants such as pesticides and heavy metals can change food webs by causing species extinction or decline. Additionally, pollutants degrade the quality of the water, making it unsafe for wildlife, leisure, and drinking. Pollutants from runoff can enter the soil and impact groundwater quality and plant growth. As pollutants accumulate in the food chain, they have an impact on humans, terrestrial animals, and aquatic life. In addition to reducing leisure opportunities, contaminated water bodies contribute to climate change. It is crucial that water pollution be addressed in order to protect biodiversity and ensure a sustainable future.

Water Pollution Act

To provide for the prevention and control of water pollution, and for the maintaining or restoring of wholesomeness of water in the country, the Water (Prevention and Control of Pollution) Act came into effect on March 23rd, 1974. It was amended in 1988. The Water (Prevention and Control of Pollution) Cess Act was enacted in 1977, to provide for the levy and collection of a cess on water consumed by people operating and carrying on certain types of industrial activities. This cess is collected with a view to raise the resources of the Central Board and the State Boards for the prevention and control of water pollution constituted under the Water (Prevention and Control of Pollution) Act, 1974. It was last amended in 2003.

National Water Quality Monitoring Program

The Water (Prevention and Control of Pollution) Act, 1974's preamble designated the Pollution Control Boards at the State and Central levels as responsible for preserving and restoring India's water bodies' wholesomeness. Monitoring water quality is therefore a necessary prerequisite for determining the level of maintenance and restoration of water bodies. The water quality monitoring is performed with following main objectives: -

- To assess nature and extent of pollution control needed in different water bodies or their part

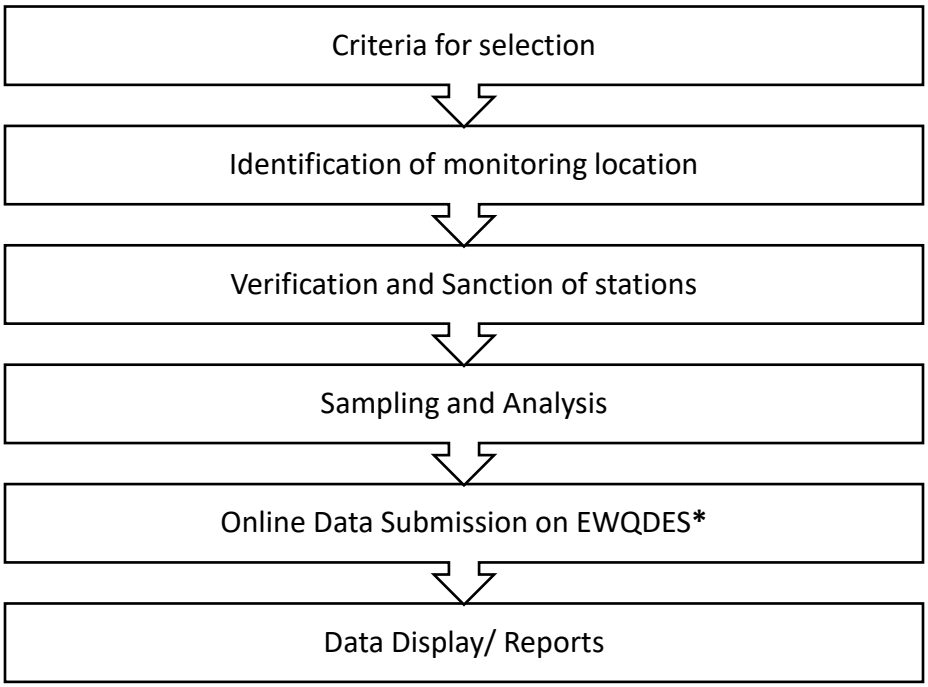
[12] https://www.who.int/news-room/fact-sheets/detail/drinking-water

[13] https://www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water

[14]https://openknowledge.fao.org/server/api/core/bitstreams/20e618b3-93a1-488a-9697-798f6b6c6b35/content

- To evaluate effectiveness of pollution control measures already in existence
- To evaluate water quality trend over a period of time
- To assess assimilative capacity of a water body thereby reducing cost on pollution control
- To understand the environmental fate of different pollutants
- To assess the fitness of water for different uses
- To carry out rational planning of pollution control strategies and their prioritization.

Steps involved in water quality monitoring under the NWMP are as follows[15]



***EWQDES: Environmental Water Quality Data Entry System.**

[15] https://cpcb.nic.in/uploads/WQM_Objective.pdf

WATER QUALITY MONITORING IN MAHARASHTRA

Sustainable growth, environmental protection, and public health in Maharashtra all depend on efficient water quality monitoring. Resolving persistent issues requires constant advancements in monitoring methods and community engagement. Maharashtra has a methodical strategy to evaluate and manage its water resources, which includes monitoring the quality of the state's water. A number of important issues are usually covered throughout the monitoring process because of the diverse geography and continuous development.

Maharashtra is the third-largest state in India by land area (3.08 km^2)[16], making up approximately 9.36% of the nation's total land area. The state is divided into five river basins: the Godavari, the Tapi, the Krishna, the Narmada, and the West flowing rivers (Konkan region). The MPCB, as the nodal agency for monitoring environmental pollution, collects water samples and tests the levels of water pollutants; samples are collected across 294 WQMS (176 on rivers, 36 on sea/creek, 12 on nallahs, and 66 on groundwater locations). Surface water samples are monitored monthly, while groundwater samples are monitored every two years.

Table No. 7: Basin and water body typewise tally of WQMS in Maharashtra

Water body		Basin				
		Tapi	Godavari	Krishna	West Flowing Rivers	**Grand Total**
Surface Water	Rivers	20	60	57	40	176
	Dam		2		2	4
	Sea				16	16
	Creek				20	20
	Nalla	2	1	1	8	12
Groundwater	Bore well	1	10	10	8	29
	Dug well	1	14	6	13	34
	Hand pump		1			1
	Tube well	1				1
	Well		1			1
Total		**25**	**88**	**74**	**107**	**294**

[16] https://www.ibef.org/download/Maharashtra-June-2021.pdf

METHODOLOGY

For the evaluation of both surface and groundwater quality; the WQMS installed across the state are organized basin-wise in order to effectively monitor, collect and record data sets. Further, in order to study the trend of water quality, the WQMS are arranged from upstream to downstream. Table No.8 provides information on the classification of the various rivers, their basins and sub-basins considered in this report. Generally, 4 parameters namely pH, BOD (mg/l), DO (mg/l to %) and FC (MPN/100 ml) are taken into consideration for the calculation of the surface water WQI. The formula coined by the NSF and the relative weights modified by CPCB are used in order to calculate WQI. Moreover, spatial data in the form of the Geographical Information System (GIS) maps are also developed in order to present data in an effective manner.

Table No. 8: Classification of the rivers considered under basins and sub basins in the report

Basin	Sub basins	Name of rivers	Number of WQM stations
Tapi	Tapi Upper	Tapi, Purna, Pedhi	8
	Tapi Middle	Tapi, Girna, Rangavali, Amravati, Bori, Burai, Gomai, Hiwara, Kan, Mor, Panzara, Titur, Waghur, Waghur	17
Godavari 1	Godavari Upper	Godavari, Chikhali nalla, Darna	28
	Godavari Middle	Godavari, Bindusara	14
	Manjra	Godavari, Manjra	2
Godavari 2	Wardha	Wardha, Penganga	17
	Wainganga	Kolar, Kanhan, Wainganga	26
	Pranhita and others	Wainganga	1
Krishna	Bhima Upper	Bhima, Nira, Chandrabhaga, Mutha, Ghod, Indrayani, Pawana, Sina, Vel, Nalla, Mula-Mutha	45
	Krishna Upper	Krishna, Panchganga, Koyna, Urmodi, Venna	29
West Flowing rivers		Kalu, Ulhas, Patalganga, Bhatsa, Vashishti, Mithi, Kundalika, Savitri, Amba, Kundalik, Muchkundi, Surya, Tansa, Vaitarna	59
		Rabodi nalla, Colour Chem nalla, Sandoz nalla, BPT Navapur, Tarapur MIDC nalla, Pimpal-Paneri nalla	12
Saline			36
Total			**294**

Developing Spatial Maps

- **Basin & Sub Basin Maps**
- The sub basin level map was generated as per data & demarcation published by the Central Ground Water Board (CGWB), Ministry of Water Resources Government of India.
- The imageries, for the basins of Tapi, Krishna and Godavari, were downloaded and upon geo-referencing those, the maps were digitized on GIS platform to generate shape (.shp) files.
- **MPCB Regional Office (RO) Maps.**
- Maps depicting the jurisdiction of the regional offices of MPCB, superimposed with district boundaries have been generated as part of this report.
- The peak season water quality index for the stations in each RO have been compiled for the necessary action by the respective RO's of MPCB.

Organizing and presentation of Data sets

- The data sets for water quality parameters like temperature, dissolved oxygen, pH, conductivity, BOD, COD, and Fecal Coliform and so on were shared by MPCB in soft copy for the year 2023- 2024.
- The data sets were organized in spread sheets for further analysis and illustrative presentation. Stock graphs have been generated to depict the minimum, maximum, 25th and 75th percentile values along with the mean values observed for parameters namely pH, BOD, DO and FC.

Water Quality Index

- A water quality index provides a single number (like a grade) that expresses overall water quality of a certain water sample (location and time specific) for several water quality parameters {Developed by The National Sanitation Foundation, USA (NSFWQI) in 1970}.
- The objective of developing an index is to simplify the complex water quality parametric data into comprehensive information for easy understanding. A water index based on important parameters provides a simple indicator of water quality and a general idea on the possible problems with the water in the region.

WQI for surface water

The NSF WQI has been modified considering the Indian context and relative weights have been assigned by the CPCB. This ensures uniformity in the WQI assessment across the country, based on the parameters monitored in India under the NWMP. The modified weights as per CPCB are given in Table No. 9 and the equations used to determine the sub-index values are given in Table No. 10. Upon determining the Water Quality Index, the water quality is described for easy understanding and interpretation. The description used in the report for classifying and the describing the water quality is presented in Table No.11.

Table No. 9: Modified weights for computation of WQI based on DO, FC, pH and BOD

Parameters	Original Weights from NSF WQI	Modified Weights by CPCB
Dissolved Oxygen (DO)	0.17	0.31
Fecal Coliform (FC)	0.15	0.28
pH	0.12	0.22
BOD	0.1	0.19

Table No. 10: Sub index equation used to calculate NSF WQI for DO, FC, pH and BOD

Water Quality Parameters (units)	Range Applicable	Equation
Dissolved Oxygen (DO)(% Saturation)	0-40	0.18 + 0.66 X % Saturation DO
	40-100	(-13.55) + 1.17 X % Saturation DO
	100-140	163.34 - 0.62 X % Saturation DO
Fecal Coliform (FC) (counts/100 ml)	1 - 10^3	97.2 - 26.6 X log FC
	10^3 - 10^5	42.33 - 7.75 X log FC
	>10^5	2
pH	02 - 05	16.1 + 7.35 X (pH)
	05 - 7.3	(-142.67) + 33.5 X (pH)
	7.3 - 10	316.96 - 29.85 X (pH)
	10 – 12	96.17 - 8.0 X (pH)
	<2, >12	0
BOD (mg/l)	0 – 10	96.67 - 7 X (BOD)
	10 – 30	38.9 - 1.23 X (BOD
	>30	2

Table No. 11: Water Quality Classification and Best Designated use

WQI	Quality classification	Class by CPCB	Class by MPCB	Remarks	Colour code
63 - 100	Good to Excellent	A	A-I	Non Polluted	
50 - 63	Medium to Good	B	Not Prescribed	Non Polluted	
38 - 50	Bad	C	A-II	Polluted	
38 and less	Bad to Very Bad	D, E	A-III, A-IV	Heavily Polluted	

Sample calculation for determining Surface WQI

Parameters considered in the year 2023-2024- Biological Oxygen Demand (BOD), Dissolved Oxygen (DO), pH, Fecal Coliform (FC)

Station Name : Krishna river at Rajapur Weir, Village- Rajapur, Taluka- Shirol, District- Kolhapur

Station Code : 1153 (April month)

Sub basin	:	Krishna Upper	Basin	:	Krishna
BOD	:	2.2mg/l	DO	:	5.5 mg/l
FC	:	6 MPN/100 ml	pH	:	7.6

Formula

$$NSFWQI = \sum_{i=1}^{p} WiIi$$

Where;

Ii= sub index for water quality parameter

Wi= weight (in terms of importance) associated with water quality parameter

P= number of water quality parameters

Sub index for BOD
BOD value = 2.2 mg/l
Since 2.2 lies in range (0-10), the corresponding formula is used Table No.10
Sub Index (BOD) = 96.67 – 7 X (BOD value)
= 96.67 – 7 X 2.2
= 81.27 X Modified Weights by CPCB for BOD (Table No.9)
= 81.27 X 0.19
= 15.44

Sub index for Dissolved Oxygen (DO)
DO value = 5.5 mg/l
DO (saturation %) = 5.5 /6.5 X 100 [6.5 has been taken as constant as per DO vs temp]
= 84.61

Since 84.61 lies in range (40-100), the corresponding formula is used from Table No.10
Sub Index (DO) = (-13.55) + 1.17 X % Saturation DO value
= (-13.55) + 1.17 X 84.61

= 85.44 X Modified Weights by CPCB for DO (Table No.9)
= 85.44* 0.31
= 26.48

Sub index for Fecal Coliform (FC)

Fecal Coliform value = 6 MPN/100ml

Since 6 lies in range (1-10^3), the corresponding formula is used from Table No.10

Sub Index (FC) = 97.2 - 26.6 X log FC
= 97.2-26.6 X log 6
= 76.50 X Modified Weights by CPCB for FC (Table No.9)
= 76.50 X 0.28
= 21.42

Sub Index for pH

pH value = 7.6

Since 7.6 lies in range (7.3-10), the corresponding formula is used from Table No.10

Sub Index (pH) = 316.96 - 29.85 X (pH)
= 316.96-29.85 X 7.6
= 90.1 X Modified Weights by CPCB for pH (Table No.9)
= 90.1 X 0.22
= 19.82

WQI of Krishna river at Rajapur Weir, Village- Rajapur, Taluka- Shirol, District-Kolhapur

WQI = $\sum$ (sub –index of all parameters)
= $\sum$ (15.44+26.48+21.42+19.82)
= 83.16

Quality Classification: Good to Excellent

WQI for ground water

Once in every six months, MPCB monitors the water quality of groundwater collected from the respective monitoring stations. The water is tested to record levels of pH, Total Hardness, Calcium, Magnesium, Chloride, Total Dissolved Solids, Fluoride, Manganese, Nitrate, Sulphates and so on. Based on the stringency of the parameters and their relative importance in the overall quality of water for drinking purposes, each parameter has been assigned a specific weightage[17]. The relative weights of the same have been determined (Table No.12) for the parameters monitored and recorded by MPCB for the water samples monitored in the year 2023-24. These weights indicate the relative harmfulness when present in water. The maximum weight assigned is 5 and minimum is 1.

Table No. 12: Relative Weight of chemical parameters used for calculating WQI for Ground water

Chemical Parameters	Indian Standards for Drinking Water Quality[18]		Weight (Wi)			
	Acceptable Limit	Permissible Limits	Weight	Relative Weight	Weight w/o Iron, Manganese and Bicarbonate	Relative Weight w/o Iron, Manganese and Bicarbonate
pH	6.5-8.5	No relaxation	4	0.09756	4	0.13333
Total Hardness (TH)	300	600	2	0.04878	2	0.06667
Calcium	75	200	2	0.04878	2	0.06667
Magnesium	30	No relaxation	2	0.04878	2	0.06667
Bicarbonate	244	732	3	0.07317	-	-
Chloride	250	1000	3	0.07317	3	0.10000
Total Dissolved Solids (TDS)	500	2000	4	0.09756	4	0.13333
Fluoride	1	1.5	4	0.09756	4	0.13333
Manganese	0.1	0.3	4	0.09756	-	-
Nitrate	45	No relaxation	5	0.12195	5	0.16667
Iron	0.3	No relaxation	4	0.09756	-	-
Sulphate	200	400	4	0.09756	4	0.13333
	Total		41	1	30	1

Source: BIS 10500 and CPCB 2001

[17] C. R. Ramakrishnaiah, *Assessment of Water Quality Index for the Groundwater* , E-Journal of Chemistry, 2009, 6(2), 523-530; ISSN: 0973-4945

[18] Bureau of Indian Standards, *Draft Indian Standard Drinking Water – Specification*; Second Revision of IS 10500, ICS No. 13.060.20

The maximum weight of 5 has been assigned to the parameter nitrate due to its major importance in water quality while, magnesium is given the minimum weight of 1 as may not be harmful.

The relative weight is then computed from the following equation

$$Wi = \frac{wi}{\sum_{i=1}^{n} wi}$$

Where;

Wi = the relative weight

wi = the weight of each parameter

n = number of parameters

In the next step a quality rating scale (qi) for each parameter is assigned by dividing its concentration in each water sample by its respective standard according to the guidelines published by BIS (Bureau of Indian Standards) and the result thus obtained is multiplied by 100.

qi= (Ci/Si) x 100

Where;

Qi = quality rating

Ci = the concentration of each chemical parameter in each water sample in mg/L

Si = the Indian drinking water standard for each chemical parameter in mg/L according to the guidelines of the BIS 10500, (2004-2005).

Based on the absolute value of the index determined from the calculations, water quality is classified as presented below in Table No.13.

Table No. 13: Ground water classification based on the Water Quality Index

WQI Value	Water Quality	Colour code used in this report
<50	Excellent	
50-100	Good water	
100-200	Poor Water	
200-300	Very Very Poor water	
>300	Water Unsuitable for drinking	

Sample Calculation for determining Ground WQI

Station name : Milgaon Borewell water, Nr. Khopoli, MSW Site

Station code : 217 (October Month) Sub basin : West Flowing River

Basin Coastal

Calcium	: 51.6 mg/l	Chlorides	: 17.99 mg/l	Fluoride: 0.2	
Magnesium	: 29.6 mg/l	Nitrate	: 0.3 mg/l	Sulphate: 14.55 mg/l	
pH	: 7.9	TDS	: 242 mg/l	TH	: 81.2 mg/l

Formula

$$\text{WQI} = \sum_{i=1}^{n=9} qi.wi$$

Where;

Wi = relative weight

qi = quality rating

wi = relative of each weight

$$qi = (Ci/Si) \times 100$$

Where;

Ci = the concentration of each chemical parameter in each water sample in mg/l

Si = the Indian drinking water standard for each chemical parameter in mg/l according to

Parameters considered for ground water monitoring: pH, Total hardness, Calcium, Magnesium, Chloride, Total Dissolved Solids, Fluoride and Sulphate.

*The relative weight (wi) without iron, manganese and Bicarbonate has been considered in calculation.

Sub Index for pH

pH	=	7.9
Sub index (pH)	=	Concentration /Standard X 100
	=	7.9/7.5 X 100
	=	105.33 X relative weight (Table no. 12)
	=	105.33 X 0.13333

= 14.044

Sub index for Total hardness

Total hardness = 81.2
Sub index (TH) = Concentration /Standard X 100
= 81.2 / 300*100
= 27.066 X relative weight (Table no. 12)
= 27.066 X 0.06667
= 1.80

Sub index Calcium

Calcium = 51.6
Sub index (Calcium) = Concentration /Standard *100
= 51.6 / 75 X 100
= 68.8 X relative weight (Table no. 12)
= 68.8 X 0.0666
= 4.57

Sub index for Chloride

Chloride = 17.99
Sub index (Chloride) = Concentration /Standard X 100
= 17.99/ 250 X 100
= 7.169 X relative weight (Table no. 12)
= 7.169 X 0.1
= 0.716

Sub index for Fluoride

Fluoride = 0.2
Sub index (Fluoride) = Concentration /Standard X 100
= 0.2/ 1 X 100
= 20X relative weight (Table no. 12)
= 20X 0.1333
= 2.666

Sub index for Magnesium

Magnesium = 29.6
Sub index (Mg) = Concentration/ Standard X 100
= 29.6 / 30*100
= 98.66 X relative weight (Table no. 12)
= 98.66 X 0.06667
= 6.578

Sub index for Nitrate

Nitrate = 0.3

Sub index (Nitrate) = Concentration/ Standard X 100
= 0.3 /45 *100
= 0.667 X relative weight (Table no. 12)
= 2.6 X 0.16667
= 0.111

Sub index for Sulphate
Sulphate = 14.55
Sub index (Sulphate) = Concentration/ Standard X 100
= 14.55 / 200 X 100
= 7.27 X relative weight (Table no. 12)
= 7.27 X 0.13333
= 0.9699

Total Dissolved Solids
Total Dissolved Solids= 242
Sub index (TDS) = Concentration/ Standard X 100
= 242/ 500 X 100
= 48.4 X relative weight (Table no. 12)
= 48.4 X 0.13333
= 6.45

WQI of Milgaon Borewell water, Nr. Khopoli, MSW Site
WQI = ∑ (sub –index of all parameters)
= ∑ (14.044+ 1.80+ 4.57+ 0.716+ 2.666+ 6.578+ 0.111+ 0.9699+ 6.45)
= 37.9

Quality Classification: Excellent

CAGR: Compound Annual Growth Rate

Compound Annual Growth Rate= ((End value/Start value) ^ (1/Number of intervals))- 12
Number of intervals = (Number of observations)-1 *100

Sample Calculation for determining CAGR

Example Station code: 2700
WQI
(End value) : 53; WQI of 2014-15 ;(Start value) :74; WQI of 2023-24 ; Number of intervals: 10
CAGR % = ((End value/Start Value) ^1/Number of intervals)) - 1 X 100
= ((74/53) ^ (1/10)-1 *100
= 3.30%
=Quality Improved

SURFACE WATER QUALITY

The surface water resources in India, especially in Maharashtra, are essential for a wide range of activities including agriculture, drinking water, industrial use, and power generation. These resources are primarily sustained by five major river basins in the state: Godavari, Krishna, Tapi, Narmada, and the West-flowing rivers. They play a crucial role in supporting irrigation for agriculture, providing drinking water to urban and rural populations, and supplying industries, particularly for cooling purposes in thermoelectric power generation.However, these resources are under growing pressure due to several factors like Urbanization and Industrial Growth , Changing Rainfall Pattern (Unpredictable monsoon seasons and shifting rainfall patterns), exacerbated by climate change, affect the replenishment of rivers and reservoirs.

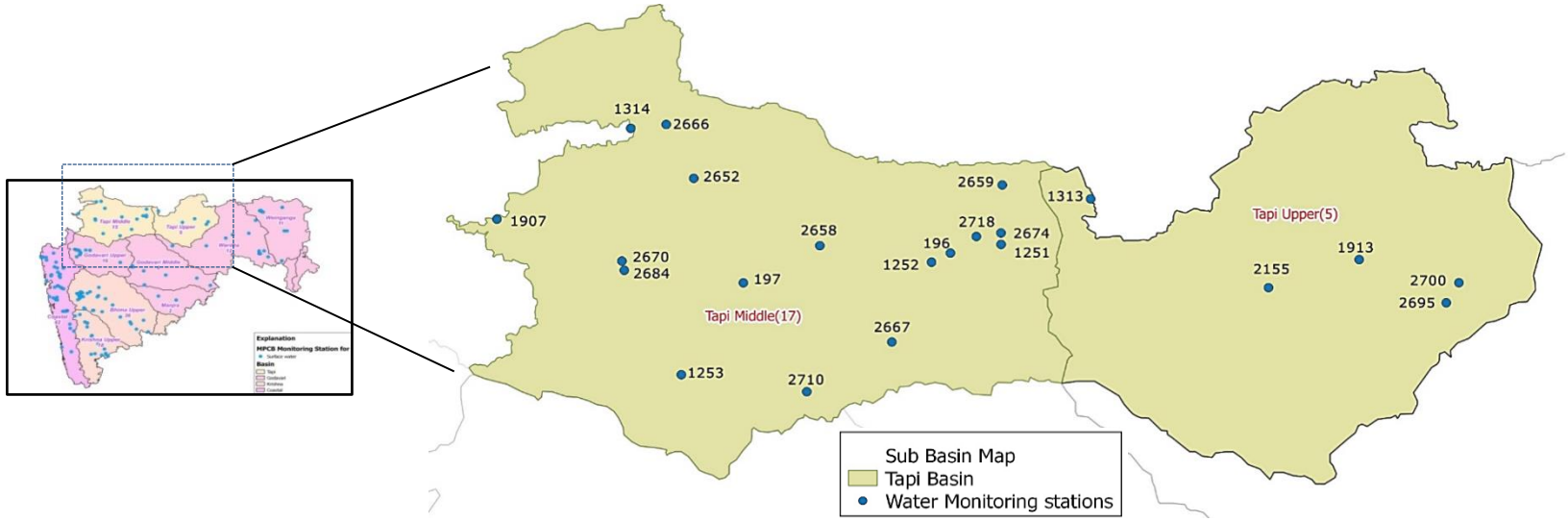
To address these challenges at State level, the Maharashtra Pollution Control Board (MPCB) has set up a network of Water Quality Monitoring Stations (WQMS) across the state. These stations play a crucial role in assessing the quality of surface water resources. The total WQMS for the year 2023-24 is represented in Table No. 14. They collect water samples and test them for a range of parameters to ensure the safety and suitability of water for various uses.MPCB has established a total of 43 parameters to test surface water samples. Each collected sample undergoes testing and analysis for these parameters which are divided into 4 sections namely Field observations (6), Core Parameters (9), General Parameters (18), and Trace Metals (10).The spatial presence of the stations is presented basin-wise in the respective sections. The following section presents the intra as well as inters basin performance and WQI of major river basins (Tapi, Godavari, Krishna and West flowing rivers) and coastal basin (Sea/Creek). Further, it represents the concentration level of parameters (pH, DO, BOD & FC) in graphical form recorded by 228 surface WQMS.

Table No. 14: List of monitoring stations across different type of water bodies under MPCB

Water Quality Monitoring Stations	
Water Bodies	**2023-24**
Rivers	176
Sea and Creek	36
Nalla	12
Dams	4
Total	**228**

Tapi Basin

The Tapi River is one of the major rivers in peninsular India, known for its east-to-west flow. It is one of only three rivers in the region, along with the Narmada and Mahi rivers, that flows in this direction. With a drainage area of approximately 65,145 square kilometers, the Tapi forms the second largest westward-draining interstate river basin in India. The river basin predominantly covers the state of Maharashtra (around 79.1%), with smaller portions extending into Madhya Pradesh (15%) and Gujarat (5.9%). In Maharashtra, the basin spans across the districts of Amaravati, Akola, Washim, Buldhana, Jalgaon, Dhule, and Nandurbar[19].. The Tapi has 14 tributaries, with major ones including the Purna, Girna, Gomai, Panzara, Pedhi, and Arna rivers. Additionally, a list of Water Quality Monitoring Stations (WQMS) installed in the Tapi basin area is provided in Table No. 15.



[19] https://www.interscience.in/cgi/viewcontent.cgi?article=1111&context=ijmie

Tapi Basin (Intra Basin analysis)

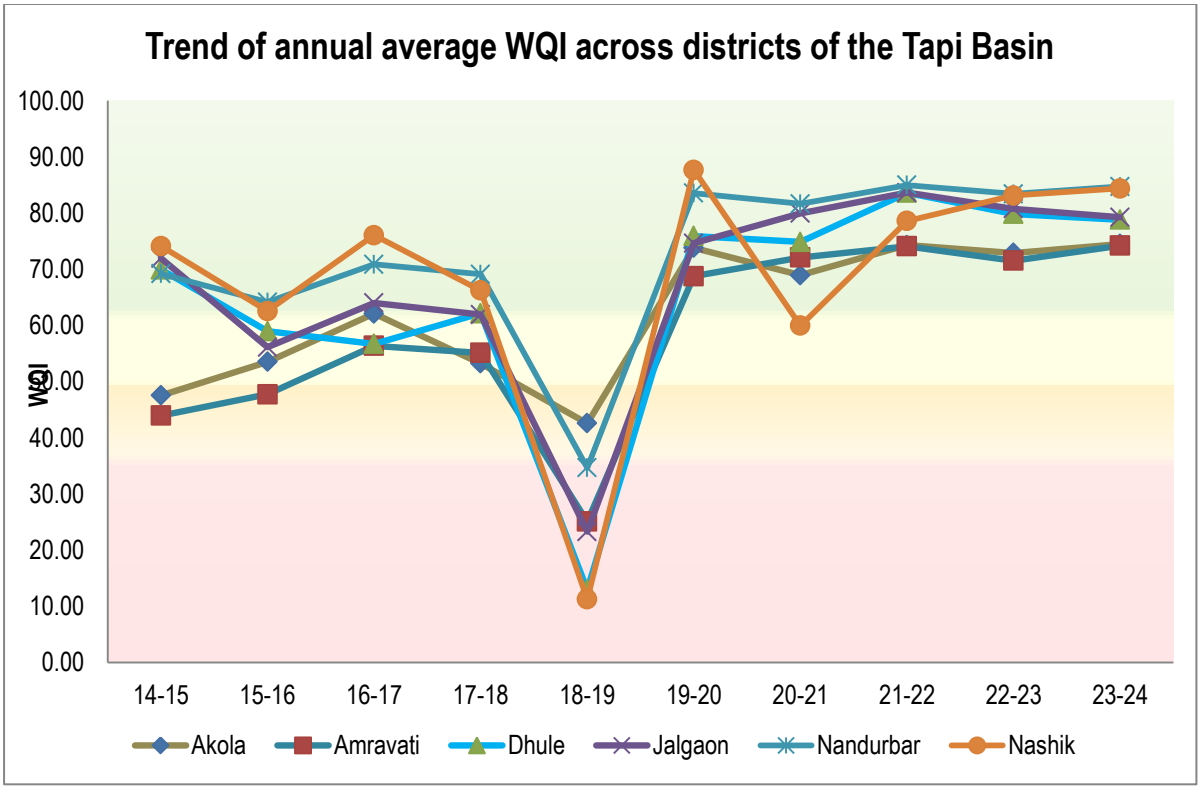


Figure No. 2: Trend of annual average WQI across districts of the Tapi basin

WQI	WQI Category	Class by CPCB	Represented in the above graph
63-100	Good to Excellent	A	Non-polluted
50-63	Medium to Good	B	Non-polluted
38-50	Bad	C	Polluted
38 & less	Bad to Very Bad	D, E	Heavily polluted

Note: This graph considers the average WQI for all the monitoring stations in that particular district and hence may include some bias. This graph is only for an overview and monitoring station-wise data may be analyzed to pinpoint the most affected and polluted patches of rivers in that district.

The analysis illustrated in Figure No.2 presents the intra-basin performance of the Tapi River, focusing on the average occurrence of different categories of the WQI, across all WQMS installed within the basin. It was found that all 6 districts equipped with WQMS reported an annual average WQI under the 'Good to Excellent' category during the year 2023-24.

The WQMS installed in districts namely Akola, Amaravati, Nandurbar and Nashik recorded an increase in the annual WQI whereas a small fraction of decrease was recorded by WQMS installed at Dhule (from 79.84 to 78.83) and Jalgaon (from 80.77 to 79.25) districts, as compared to the previous year (2022-23). WQMS installed at Nashik district recorded about 5.76% increase in the annual average WQI (from 78.6 to 83.13) as compared to the previous year (2021-22) showcasing overall improvement in the water quality.

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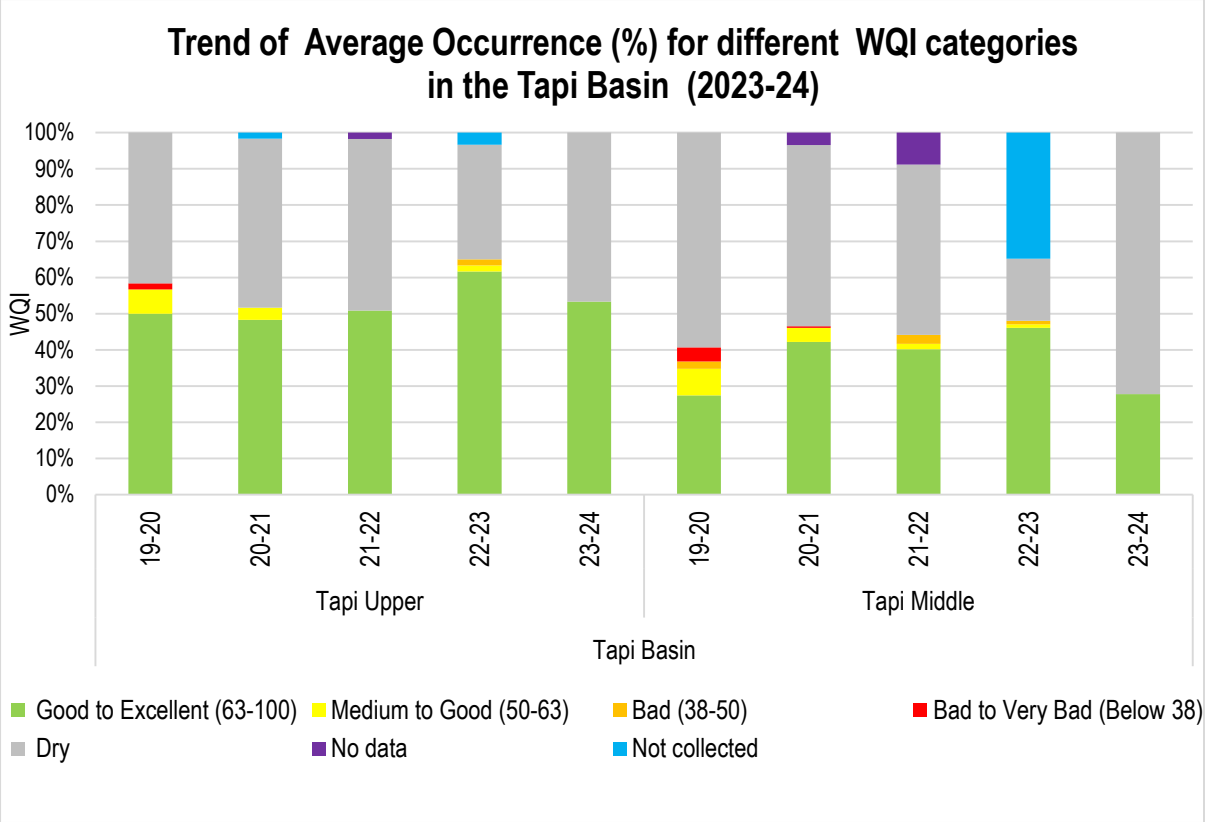
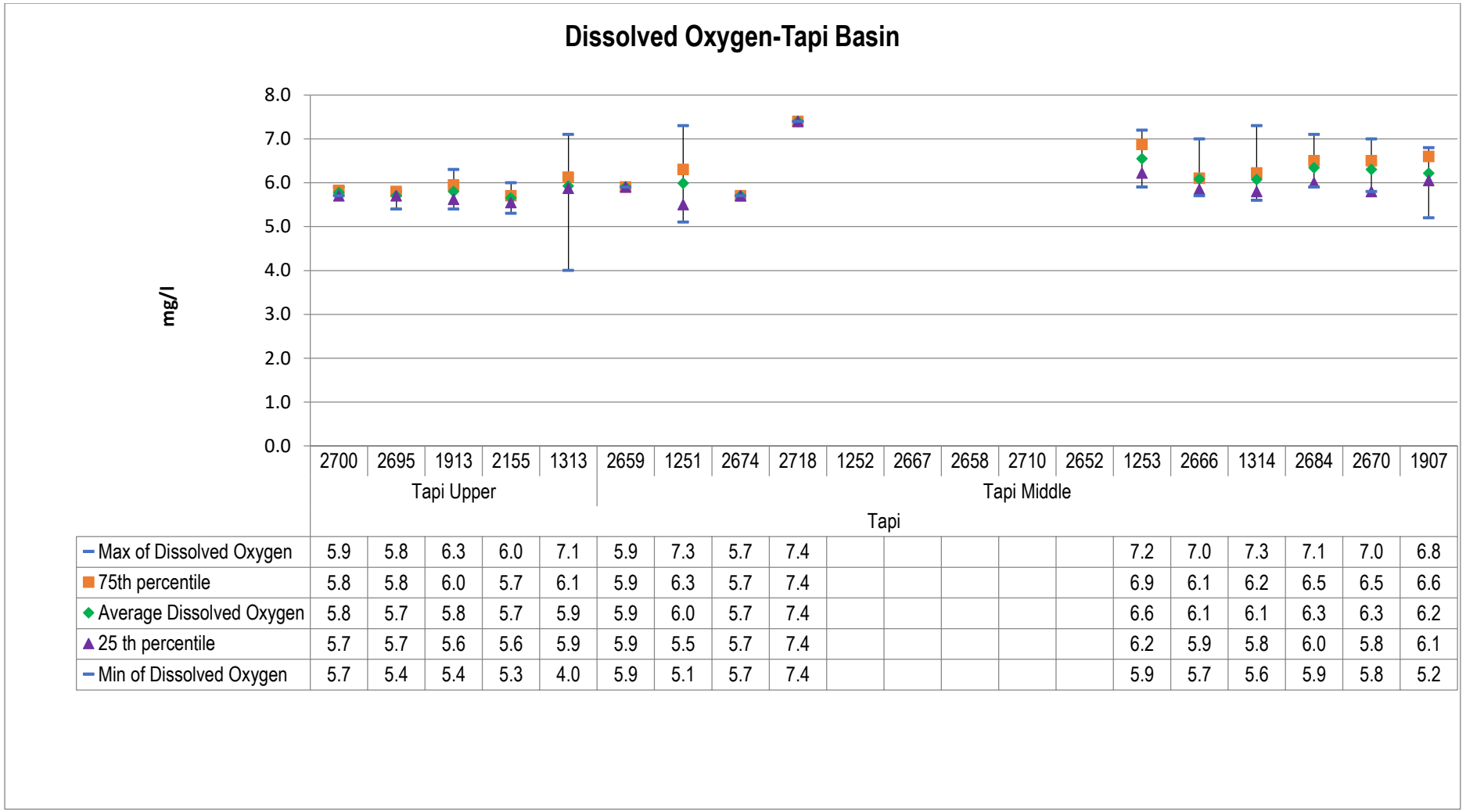


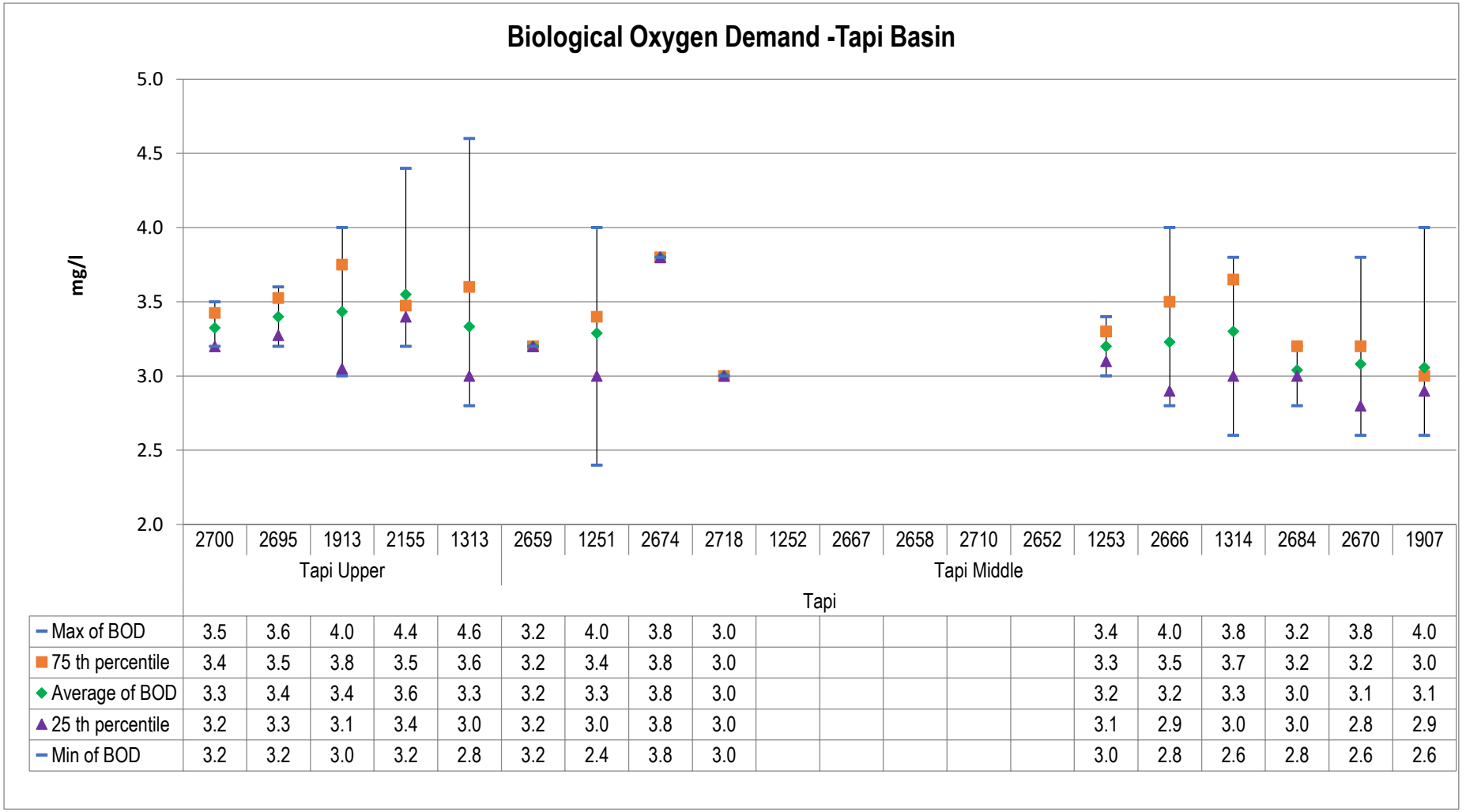
Figure No. 3: Trend in average occurrence for different categories of WQI in the Tapi basin

The interbasin analysis of the Tapi basin is illustrated in Figure No. 3. In Tapi Upper, approximately 53.3% of the total observations were classified under the 'Good to Excellent' WQI category in 2023-24, showing a decline from 61.67% recorded in 2022-23. On the other hand, remaining 46.7% observations were recorded as 'Dry'. Similarly kind of scenario was recorded at Tapi Middle where the percentage share of observations under the 'Good to Excellent' decreased from 46.01% (2022-23) to 27.78% in 2023-24 whereas share of observations categorized under the 'Dry' category increased from 17.16% in 2022-23 to about 72.22% in 2023-24.



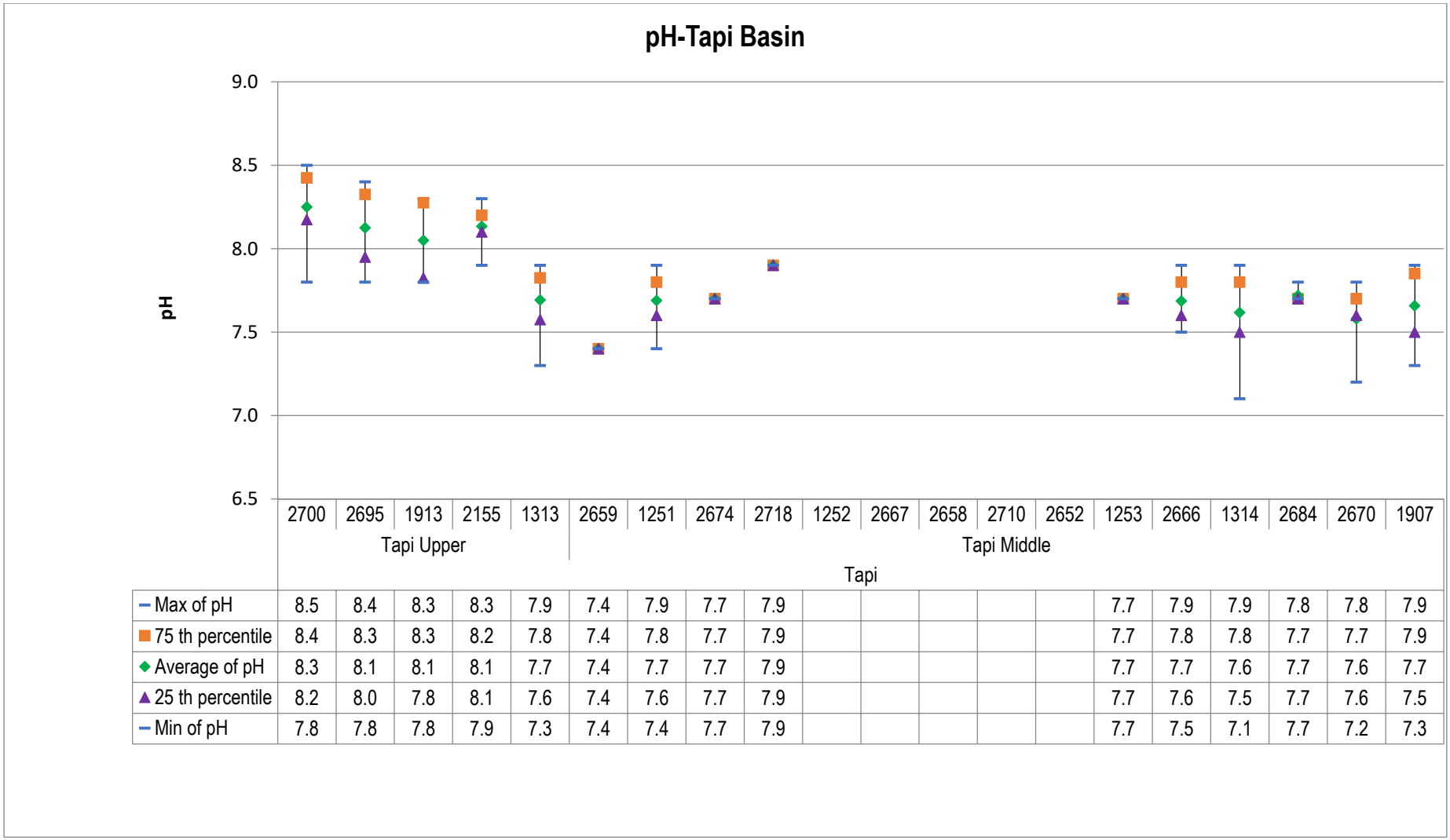
	2700	2695	1913	2155	1313	2659	1251	2674	2718	1252	2667	2658	2710	2652	1253	2666	1314	2684	2670	1907
Max of Dissolved Oxygen	5.9	5.8	6.3	6.0	7.1	5.9	7.3	5.7	7.4						7.2	7.0	7.3	7.1	7.0	6.8
75th percentile	5.8	5.8	6.0	5.7	6.1	5.9	6.3	5.7	7.4						6.9	6.1	6.2	6.5	6.5	6.6
Average Dissolved Oxygen	5.8	5.7	5.8	5.7	5.9	5.9	6.0	5.7	7.4						6.6	6.1	6.1	6.3	6.3	6.2
25 th percentile	5.7	5.7	5.6	5.6	5.9	5.9	5.5	5.7	7.4						6.2	5.9	5.8	6.0	5.8	6.1
Min of Dissolved Oxygen	5.7	5.4	5.4	5.3	4.0	5.9	5.1	5.7	7.4						5.9	5.7	5.6	5.9	5.8	5.2

Figure No. 4: Trend of Dissolved Oxygen (DO) levels recorded at WQMS at Tapi basin



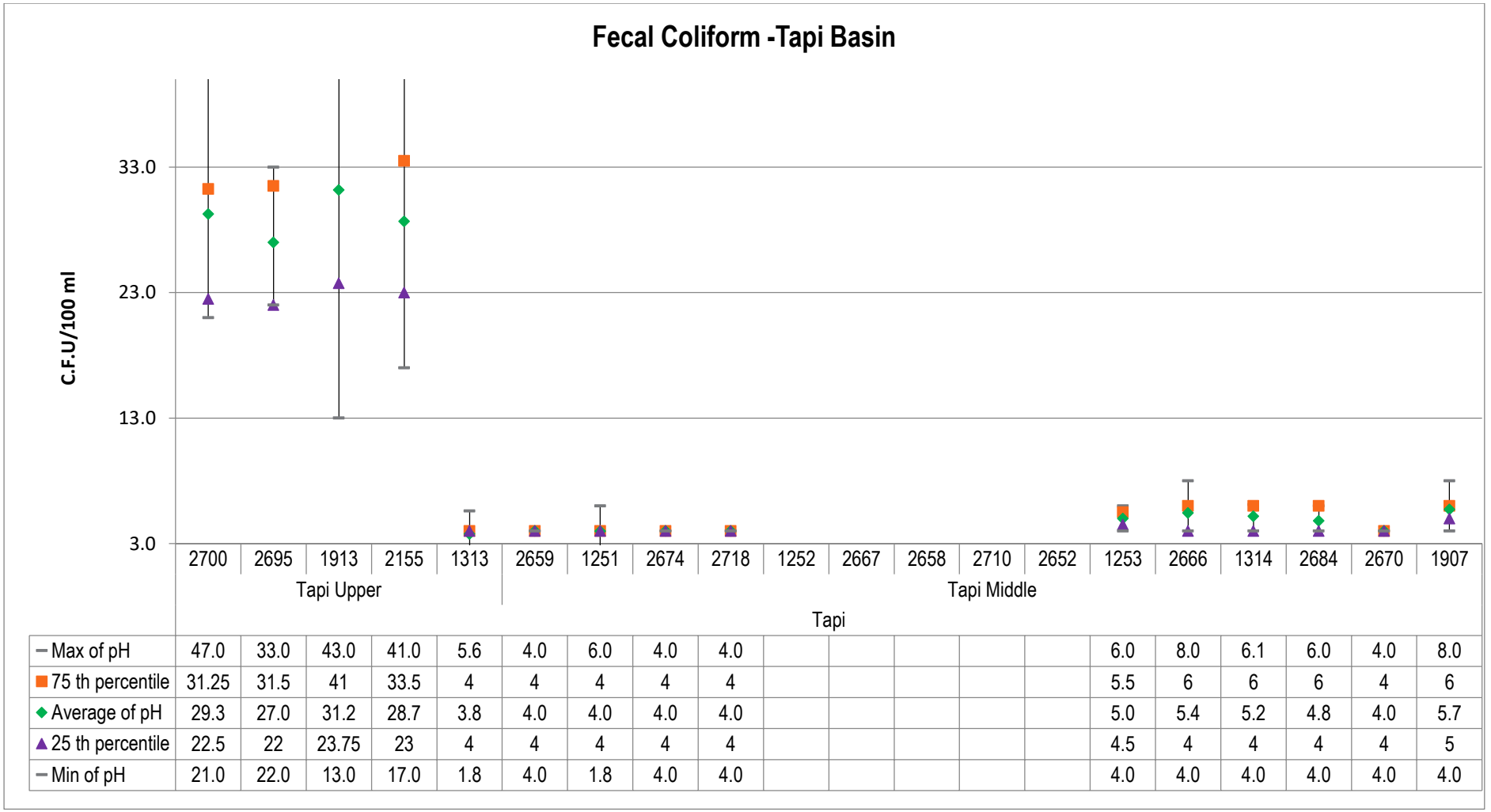
	2700	2695	1913	2155	1313	2659	1251	2674	2718	1252	2667	2658	2710	2652	1253	2666	1314	2684	2670	1907
Max of BOD	3.5	3.6	4.0	4.4	4.6	3.2	4.0	3.8	3.0						3.4	4.0	3.8	3.2	3.8	4.0
75 th percentile	3.4	3.5	3.8	3.5	3.6	3.2	3.4	3.8	3.0						3.3	3.5	3.7	3.2	3.2	3.0
Average of BOD	3.3	3.4	3.4	3.6	3.3	3.2	3.3	3.8	3.0						3.2	3.2	3.3	3.0	3.1	3.1
25 th percentile	3.2	3.3	3.1	3.4	3.0	3.2	3.0	3.8	3.0						3.1	2.9	3.0	3.0	2.8	2.9
Min of BOD	3.2	3.2	3.0	3.2	2.8	3.2	2.4	3.8	3.0						3.0	2.8	2.6	2.8	2.6	2.6

Figure No. 5: Trend of Biological Oxygen Demand (BOD) levels recorded at WQMS at Tapi basin



	2700	2695	1913	2155	1313	2659	1251	2674	2718	1252	2667	2658	2710	2652	1253	2666	1314	2684	2670	1907
Max of pH	8.5	8.4	8.3	8.3	7.9	7.4	7.9	7.7	7.9						7.7	7.9	7.9	7.8	7.8	7.9
75 th percentile	8.4	8.3	8.3	8.2	7.8	7.4	7.8	7.7	7.9						7.7	7.8	7.8	7.7	7.7	7.9
Average of pH	8.3	8.1	8.1	8.1	7.7	7.4	7.7	7.7	7.9						7.7	7.7	7.6	7.7	7.6	7.7
25 th percentile	8.2	8.0	7.8	8.1	7.6	7.4	7.6	7.7	7.9						7.7	7.6	7.5	7.7	7.6	7.5
Min of pH	7.8	7.8	7.8	7.9	7.3	7.4	7.4	7.7	7.9						7.7	7.5	7.1	7.7	7.2	7.3

Figure No. 6: Trend of pH levels recorded at WQMS at Tapi basin



	2700	2695	1913	2155	1313	2659	1251	2674	2718	1252	2667	2658	2710	2652	1253	2666	1314	2684	2670	1907
Max of pH	47.0	33.0	43.0	41.0	5.6	4.0	6.0	4.0	4.0						6.0	8.0	6.1	6.0	4.0	8.0
75 th percentile	31.25	31.5	41	33.5	4	4	4	4	4						5.5	6	6	6	4	6
Average of pH	29.3	27.0	31.2	28.7	3.8	4.0	4.0	4.0	4.0						5.0	5.4	5.2	4.8	4.0	5.7
25 th percentile	22.5	22	23.75	23	4	4	4	4	4						4.5	4	4	4	4	5
Min of pH	21.0	22.0	13.0	17.0	1.8	4.0	1.8	4.0	4.0						4.0	4.0	4.0	4.0	4.0	4.0

Figure No. 7: Trend of Fecal Coliform levels recorded at WQMS at Tapi basin

Water Quality Index for WQMS in Tapi Basin

Apr	Dry	NA	Dry	Dry	86	Dry	83	NA	NA	NA	NA	NA	NA	Dry	Dry	Dry	85	Dry	Dry	Dry
May	Dry	NA	NA	NA	83	Dry	79	NA	NA	NA	NA	NA	NA	Dry	Dry	Dry	83	Dry	Dry	Dry
Jun	Dry	NA	NA	NA	82	Dry	78	NA	NA	NA	NA	NA	NA	Dry	Dry	Dry	82	Dry	Dry	Dry
Jul	NA	NA	NA	NA	84	Dry	85	83	NA	NA	NA	NA	NA	Dry	Dry	82	81	Dry	Dry	Dry
Aug	73	74	71	69	89	87	89	NA	NA	NA	NA	NA	NA	Dry	83	88	88	86	88	87
Sep	75	77	76	74	84	Dry	84	NA	NA	NA	NA	NA	NA	Dry	Dry	84	84	84	85	82
Oct	74	77	76	75	85	Dry	85	NA	84	NA	NA	NA	NA	Dry	86	86	85	85	86	85
Nov	74	71	71	75	89	Dry	86	NA	NA	NA	NA	NA	NA	Dry	Dry	84	88	87	91	90
Dec	NA	NA	80	77	89	Dry	91	NA	NA	NA	NA	NA	NA	Dry	Dry	82	83	85	83	80
Jan	NA	NA	77	74	89	Dry	NA	NA	NA	NA	NA	NA	NA	Dry	Dry	85	88	Dry	Dry	87
Feb	Dry	Dry	NA	NA	85	Dry	NA	NA	NA	NA	NA	NA	NA	Dry	Dry	Dry	85	Dry	Dry	84
Mar	Dry	NA	NA	NA	71	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	81	Dry	Dry	Dry
Station code	2700	2695	1913	2155	1313	2659	1251	2674	2718	1252	2667	2658	2710	2652	1253	2666	1314	2684	2670	1907
Sub Basin	Tapi Upper					Tapi Middle														
Basin	Tapi																			

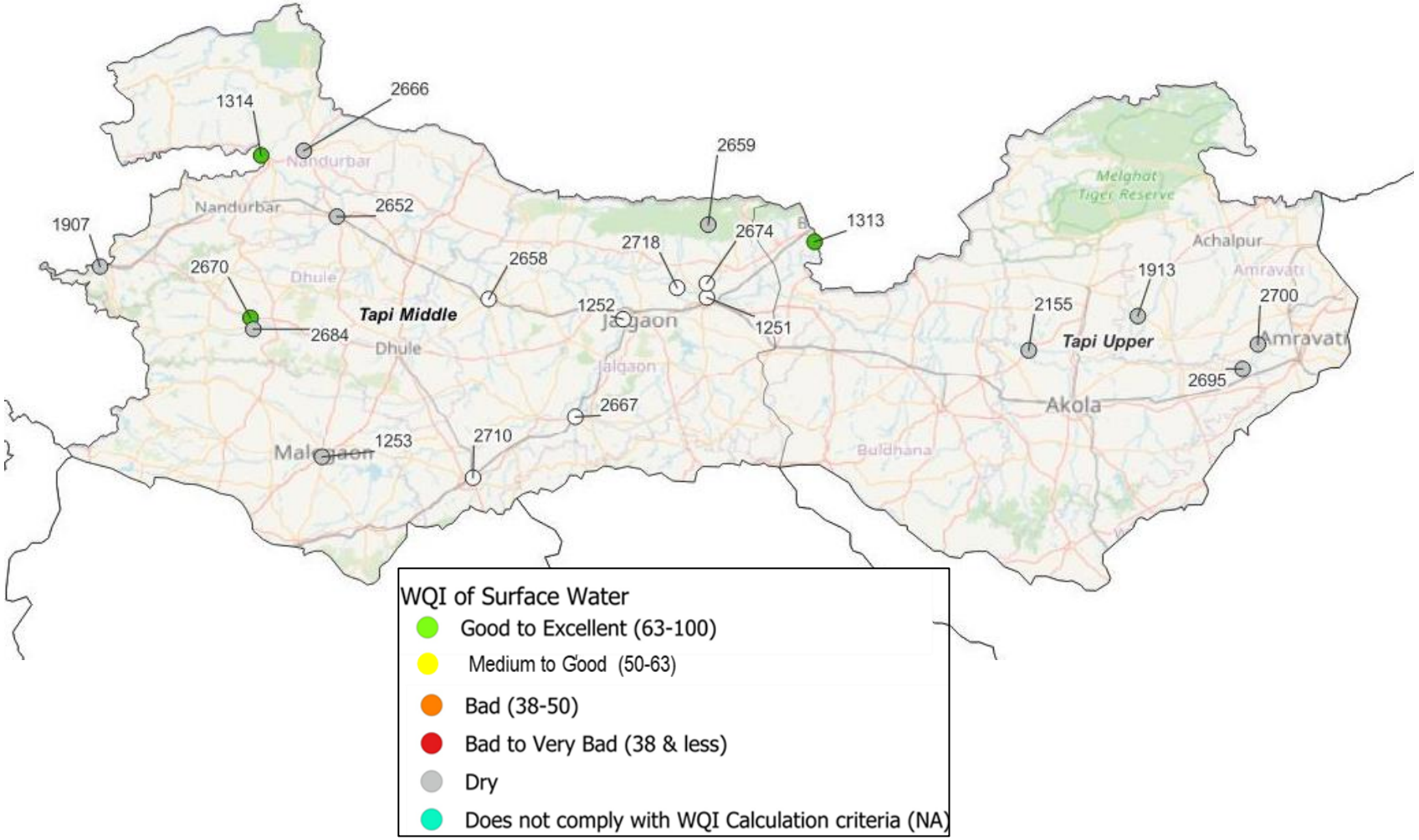
Legend

Good to Excellent	Medium to Good	Bad	Bad to Very Bad	Dry	Not Available

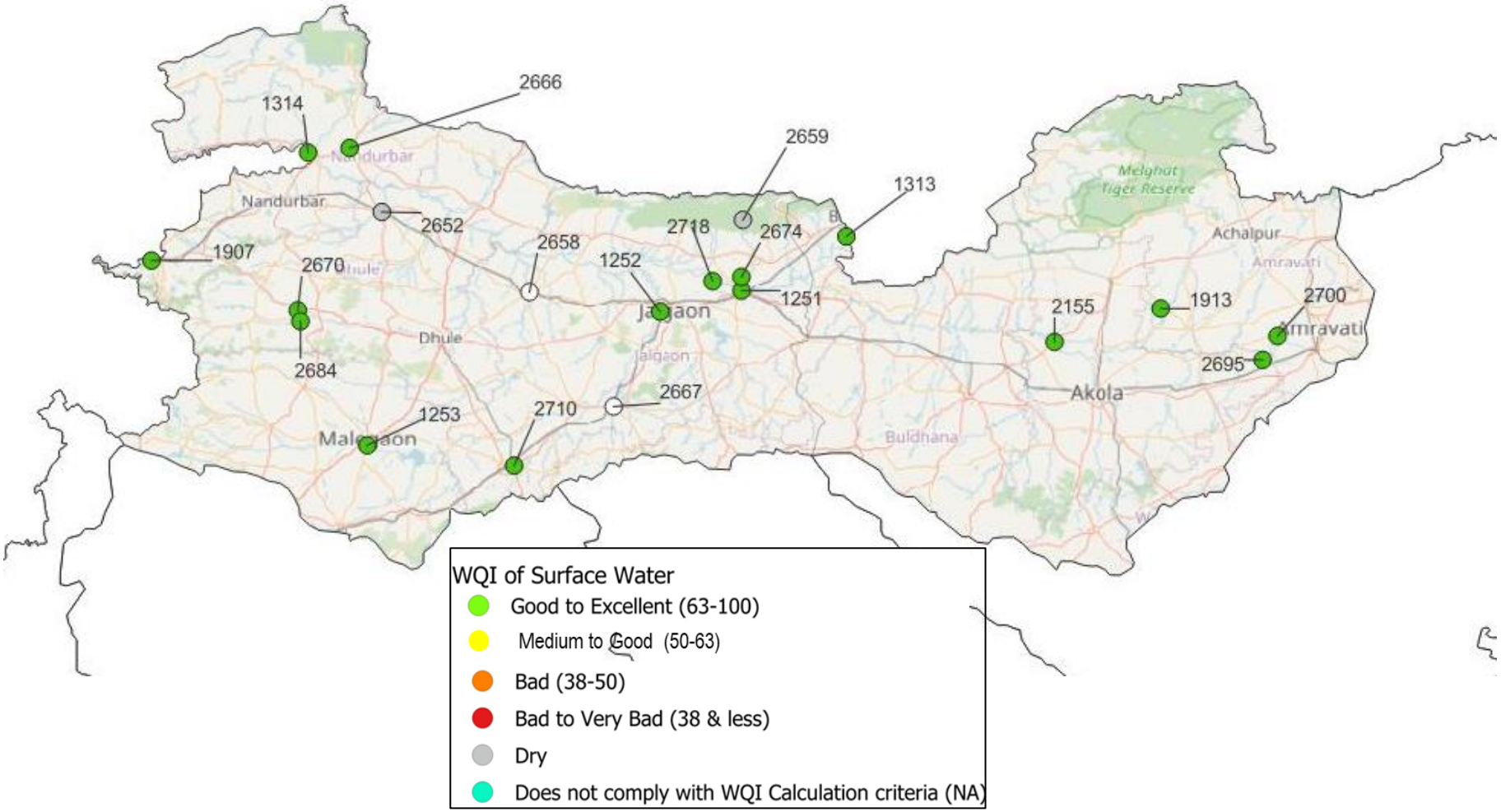
Table No. 15 : Surface water quality monitoring stations in Tapi basin

Program	Station ID	River/Nalla	Station Name	Village	Taluka	District
NWMP	2700	Purna	Purna near Achalpur-Amravati Road Bridge, Asegaon	Asegaon	Chandur bazaar	Amravati
NWMP	2695	Pedhi	Pedhi near Road Bridge at Dadhi-Pedhi village	Asegaon	Chandur Bazar	Amravati
NWMP	1913	Purna	Purna at Dhupeshwar at U/s of Malkapur Water works	Malkapur	Akola	Akola
NWMP	2155	Purna	Purna at D/s of confluence of Morna & Purna at Andhura village	Andura	Balapur	Akola
NWMP	1313	Tapi	Tapi at Ajnad	Ajnad	Raver	Jalgaon
NWMP	2659	Burai	Burai before confluece to Tapi	Mukudas	Dhule	Dhule
NWMP	1251	Tapi	Tapi at Bhusawal	Bhusawal Railway Colony	Bhusawal	Jalgaon
NWMP	2674	Mor	Mor near Padalshe	Padalashe	Jalgaon	Jalgaon
NWMP	2718	Waghur	Waghur at Sakegaon before Confluence with Tapi	Sakegaon	Jalgaon	Jalgaon
NWMP	1252	Girna	Girna at Jalgaon at intake of Girna pump house	Girna pump house area	Jalgaon	Jalgaon
NWMP	2667	Hiwara	Hiwara D/s of Pachora	Pachora	Jalgaon	Jalgaon
NWMP	2658	Bori	Bori D/s of Amalner	Amalner	Jalgaon	Jalgaon
NWMP	2710	Titur	Titur D/s of Chalisgaon	Chalisgaon	Jalgaon	Jalgaon
NWMP	2652	Amravati	Amravati D/s of Dondaicha	Dondaicha	Dhule	Dhule
NWMP	1253	Girna	Girna at Malegaon at Malegaon road bridge	Malegaon	Malegaon	Nashik
NWMP	2666	Gomai	Gomai D/s of Shahada	Shahada	Dhule	Dhule
NWMP	1314	Tapi	Tapi at Ubad village near Gujrat border	Ubad	Shahada	Nandurbar
NWMP	2684	Panjhra	Panjhra near Panzarakan SSK Ltd	Panjhre	Dhule	Dhule
NWMP	2670	Kan	Kan near Sakri water works	Sakri	Dhule	Dhule
NWMP	1907	Rangavali	Rangavali at D/s of Navapur near Rangavali bridge	Navapur	Navapur	Nandurbar

Spatial map of Surface WQI at Tapi Basin (April -2023)



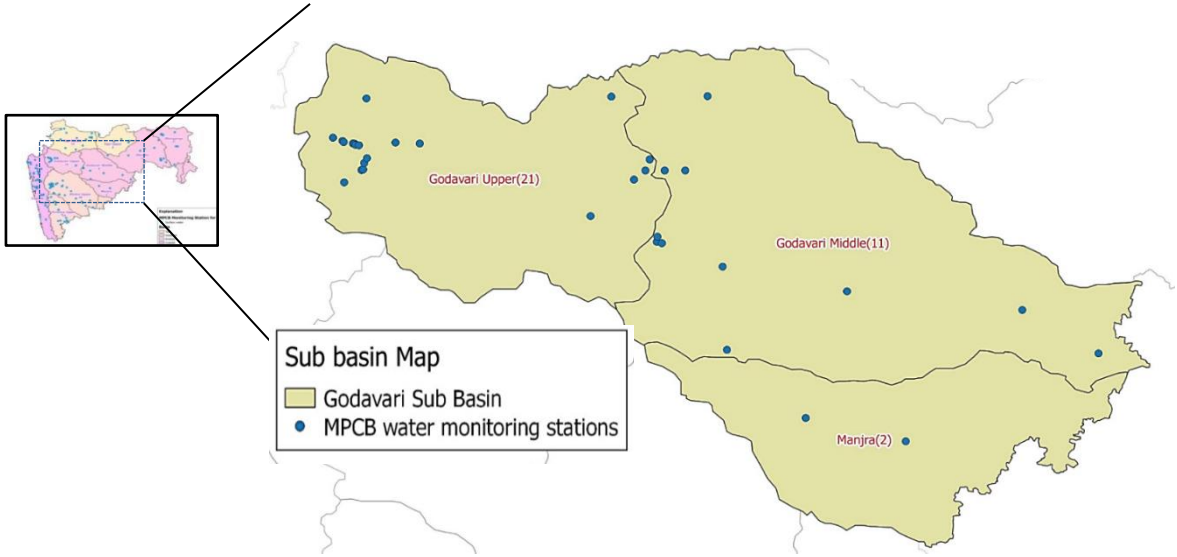
Spatial map of Surface WQI at Tapi Basin (December -2023)



Godavari Basin :

The Godavari River is the largest river in peninsular India, and its basin is the second largest in the country, following the Ganges basin. Covering a total drainage area of about 3,12,812 square kilometers, the Godavari basin accounts for roughly 9.5% of India's total geographical area. Originating in the Sahyadri Mountains near Trimbakeshwar in the Nashik district of Maharashtra, the river flows across the Deccan Plateau, passing from the Western Ghats to the Eastern Ghats. The majority of the basin, about 48.66%, is located in Maharashtra, followed by 19.87% in Telangana, 10.69% in Chhattisgarh, 10.17% in Madhya Pradesh, 5.67% in Odisha, 3.53% in Andhra Pradesh, 1.41% in Karnataka, and a small fraction (0.001%) in the Union Territory of Puducherry[20].. For better understanding, the Godavari basin is divided into two parts: **Godavari Basin (1 of 2)**, which includes the Godavari Upper, Godavari Middle, and Manjra Sub-basins, and **Godavari Basin (2 of 2)**, which covers the Wardha, Wainganga, and Pranhita Sub-basins. Additionally, lists of Water Quality Monitoring Stations (WQMS) installed in areas of the Godavari basin (1 of 2) are provided in Tables No. 16 and 17.

Godavari Basin (1 of 2): Godavari upper, Godavari Middle and Manjra Sub basin



[20] https://www.grmb.gov.in/grmb/basin

Godavari Basin (1 of 2) (Intra Basin analysis)

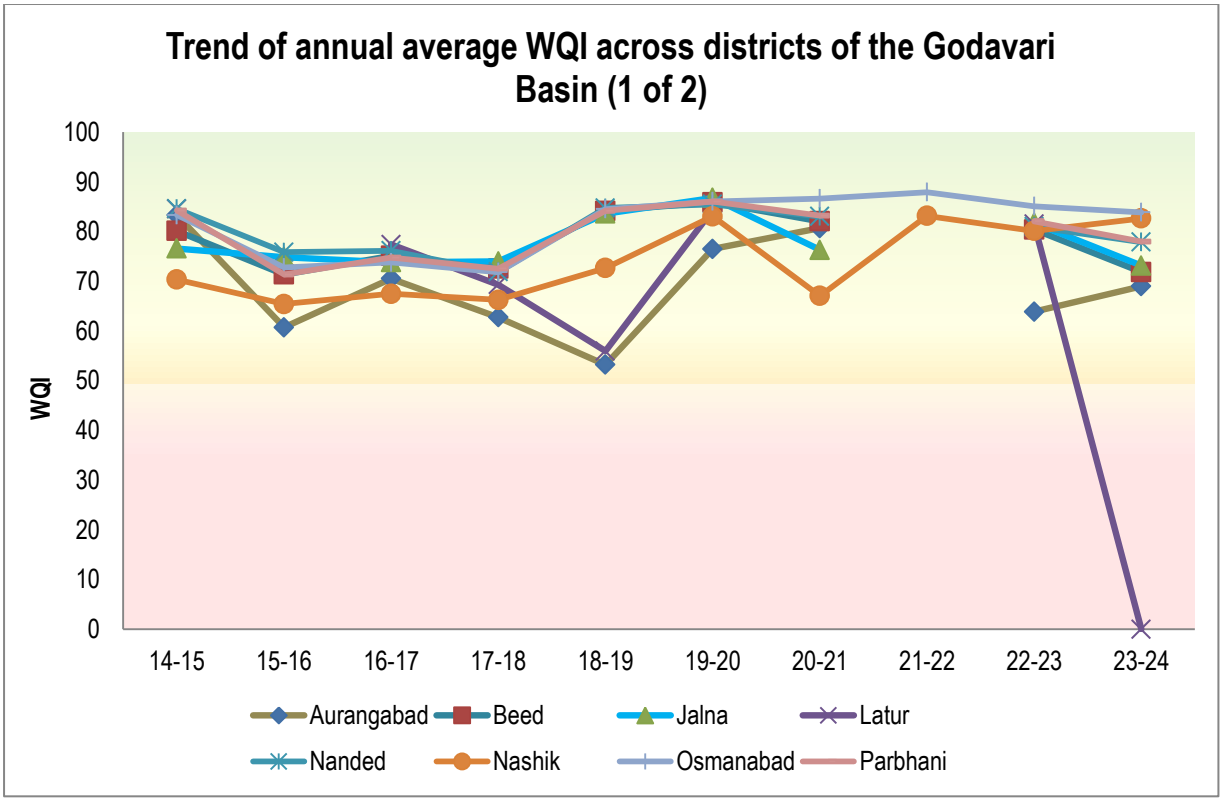


Figure No. 8: Trend in annual average WQI across districts of the Godavari basin (1 of 2)

WQI	WQI Category	Class by CPCB	Represented in the above graph
63-100	Good to Excellent	A	Non-polluted
50-63	Medium to Good	B	Non-polluted
38-50	Bad	C	Polluted
38 & less	Bad to Very Bad	D, E	Heavily polluted

Note: This graph considers the average WQI for all the monitoring stations in that particular district and hence may include some bias. This graph is only for an overview and monitoring station-wise data may be analyzed to pinpoint the most affected and polluted patches of rivers in that district.

The analysis illustrated in Figure No.8 presents the intra-basin performance of the Godavari River (1 of 2), focusing on the average occurrence of different categories of the WQI, across all WQMS installed within the basin. Except for the Latur district, all remaining 7 districts equipped with WQMS reported an annual average WQI under the 'Good to Excellent' category during the year 2023-24. No data was available for the Latur district.

The WQMS installed at districts namely Beed, Jalna, Nanded, Osmanabad and Parbhani recorded a decrease in their annual average WQI, while still falling within the 'Good to Excellent' range. In contrast, both WQMS installed at Aurangabad and Nashik exhibited an improvement, with their annual average WQI showing an increase compared to the previous year (2022-23).

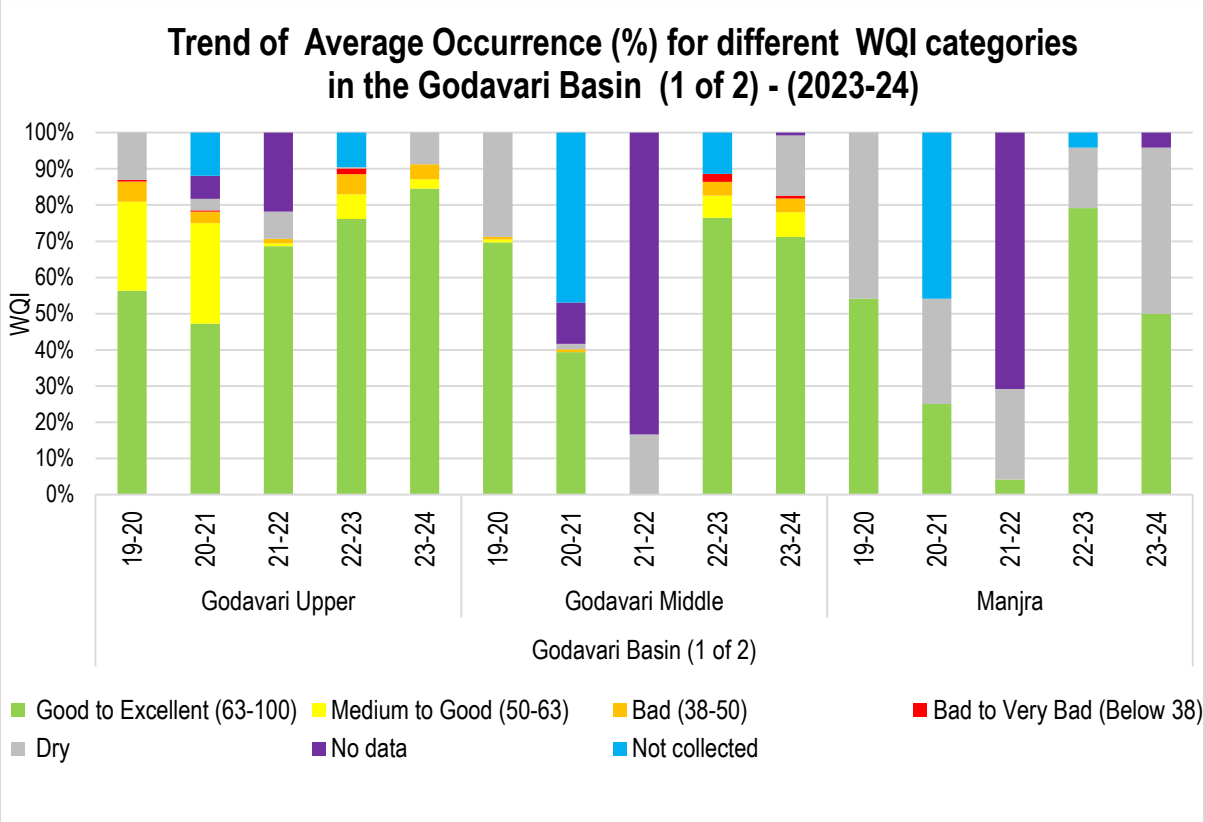
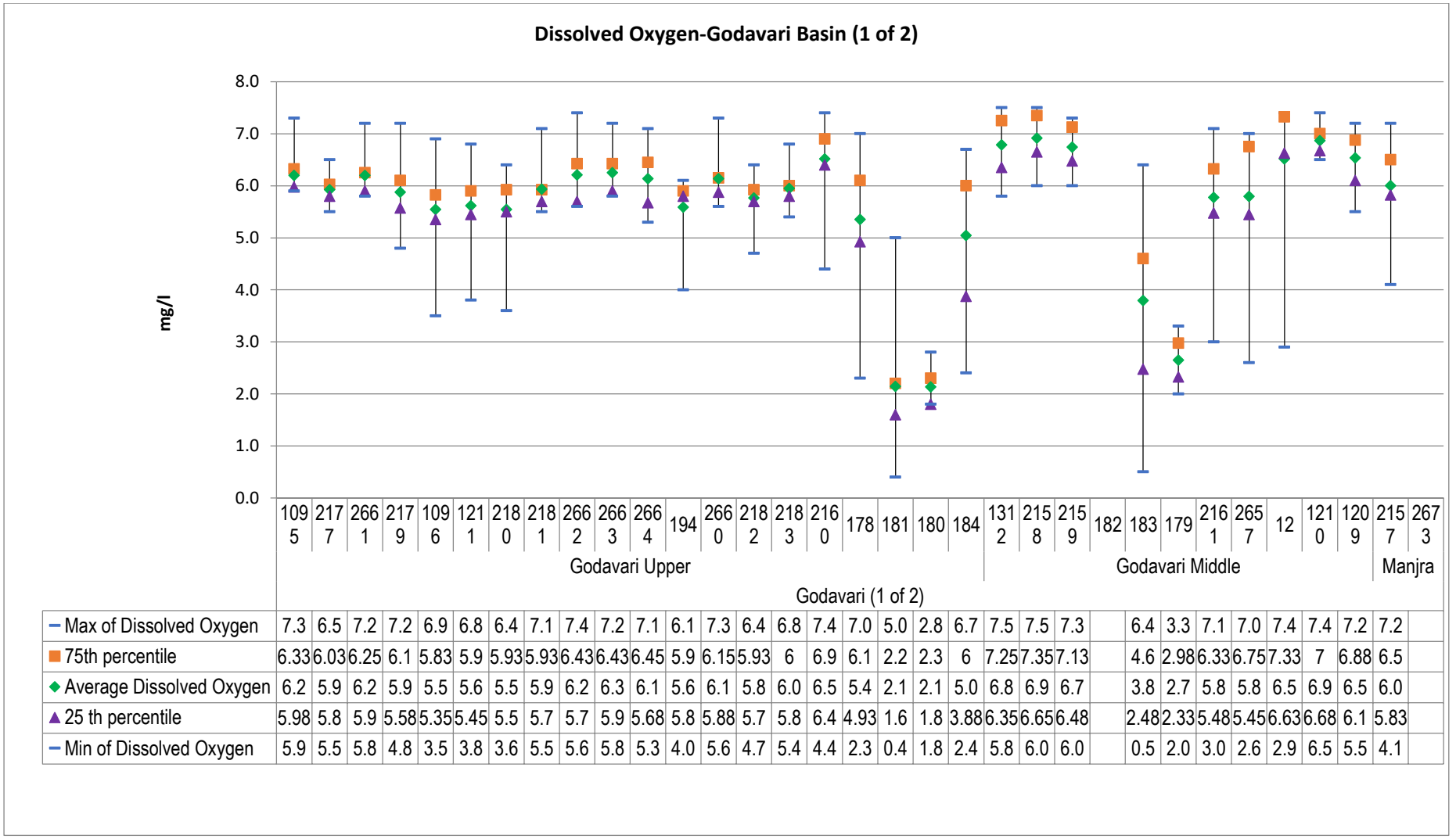


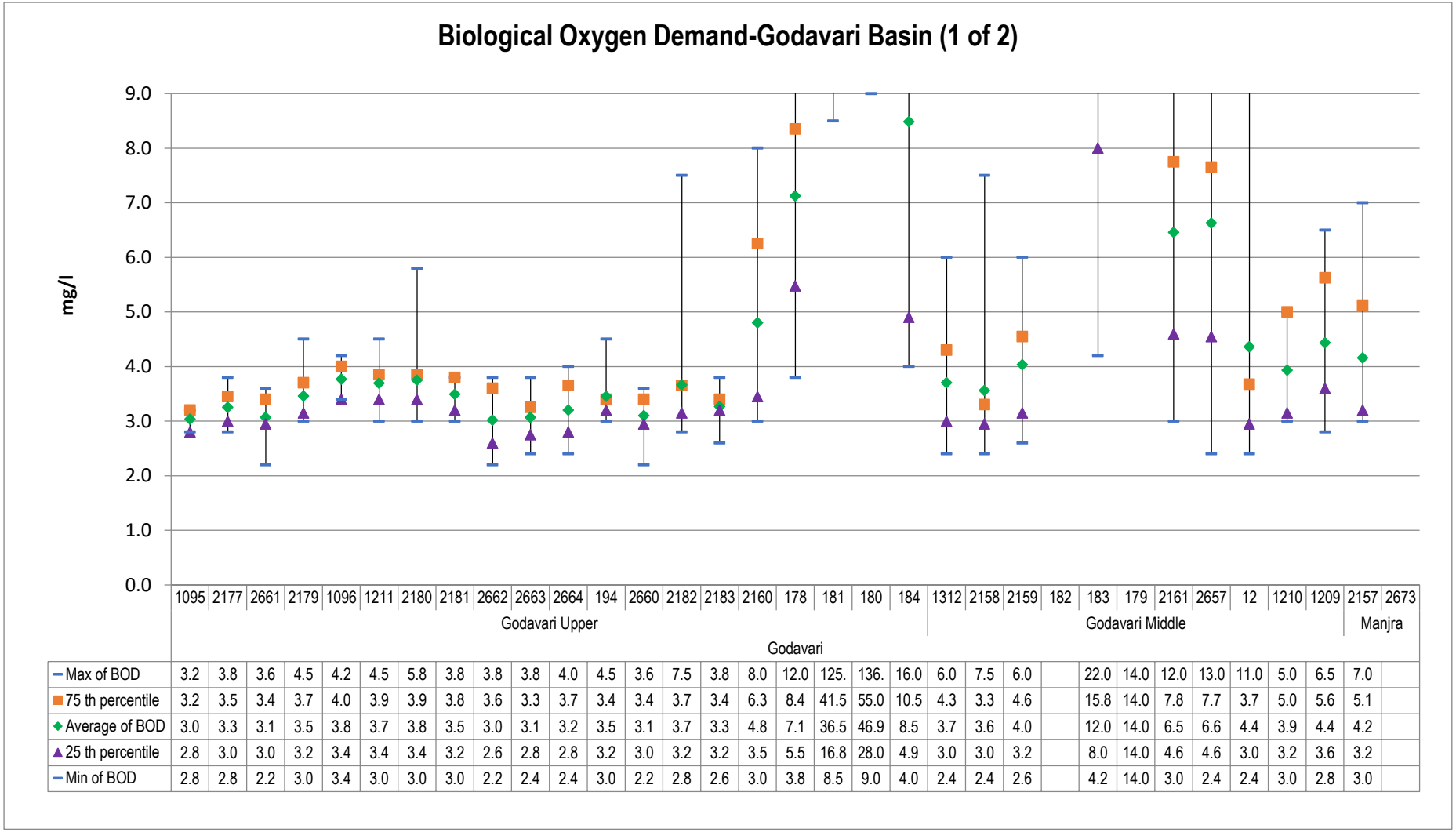
Figure No. 9: Trend of average occurrence for different WQI categories – the Godavari basin (1 of 2)

The interbasin performance of the Godavari basin (1 of 2) is shown in the Figure No. 9.In Godavari Upper,an increase in number of observations (84.58%) of the total observations was noted this year 2023-24 as compared to last year 2022-23 which recorded 76.19 under under the 'Good to Excellent' WQI category Meanwhile, 8.75% of the observations were categorized as 'Dry'. In Godavari Middle, the percentage of observations in the 'Good to Excellent' category decreased slightly from 76.51% in 2022-23 to 71.21% in 2023-24, with 16.66% recorded under the 'Dry' category. In Manjra, the percentage of 'Good to Excellent' observations dropped significantly to 50% in 2023-24, compared to 79.16% in 2022-23. Conversely, the 'Dry' category increased to 45.83%, up from 16.66% the previous year.



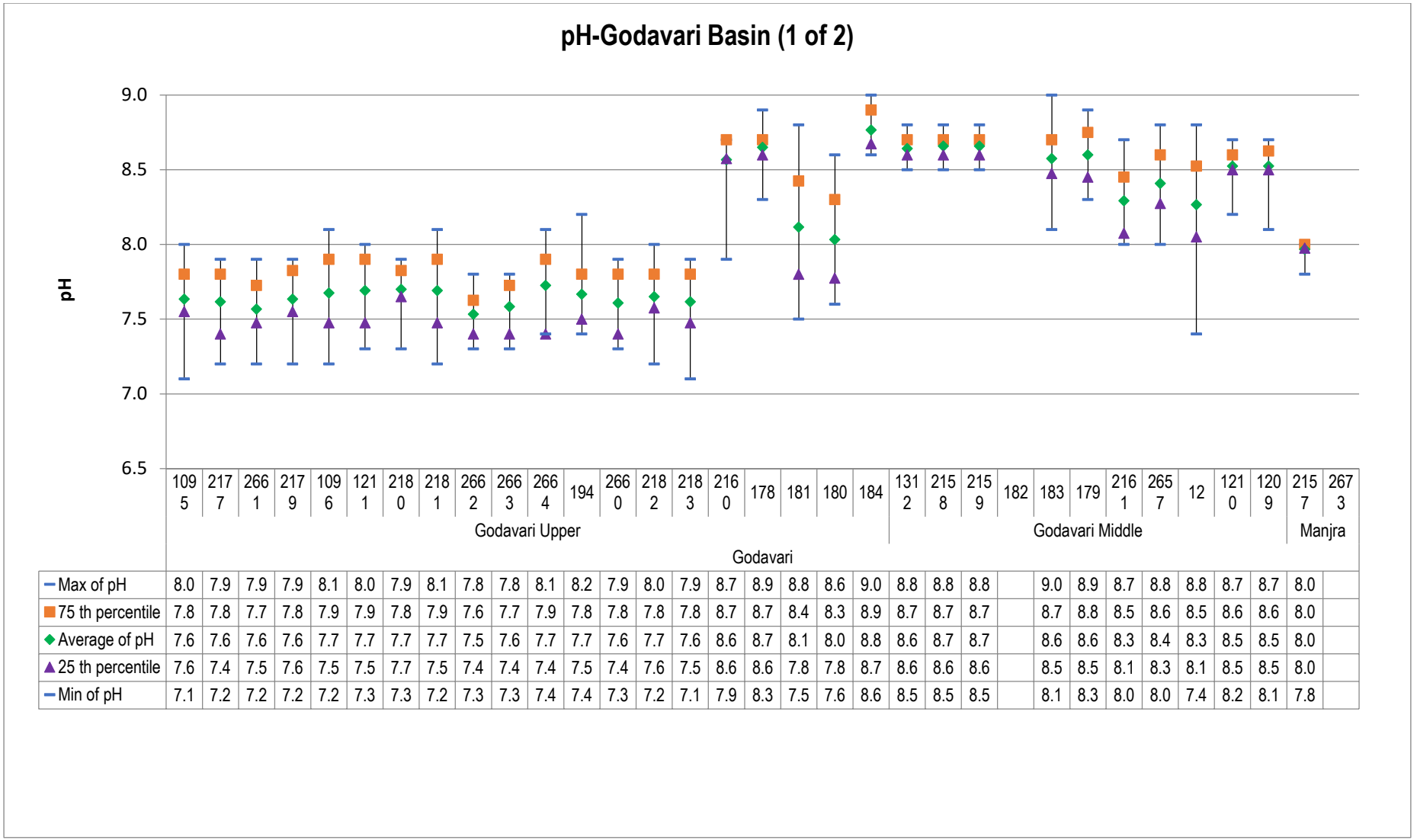
	1095	2177	2661	2179	1096	1211	2180	2181	2662	2663	2664	194	2660	2182	2183	2180	1784	1312	2158	2159	182	1833	1791	2161	2657	12	1210	1209	2157	2673
Max of Dissolved Oxygen	7.3	6.5	7.2	7.2	6.9	6.8	6.4	7.1	7.4	7.2	7.1	6.1	7.3	6.4	6.8	7.4	7.0	5.0	2.8	6.7	7.5	7.5	7.3	6.4	3.3	7.1	7.0	7.4	7.4	7.2	7.2
75th percentile	6.33	6.03	6.25	6.1	5.83	5.9	5.93	5.93	6.43	6.43	6.45	5.9	6.15	5.93	6	6.9	6.1	2.2	2.3	6	7.25	7.35	7.13	4.6	2.98	6.33	6.75	7.33	7	6.88	6.5
Average Dissolved Oxygen	6.2	5.9	6.2	5.9	5.5	5.6	5.5	5.9	6.2	6.3	6.1	5.6	6.1	5.8	6.0	6.5	5.4	2.1	2.1	5.0	6.8	6.9	6.7	3.8	2.7	5.8	5.8	6.5	6.9	6.5	6.0
25 th percentile	5.98	5.8	5.9	5.58	5.35	5.45	5.5	5.7	5.7	5.9	5.68	5.8	5.88	5.7	5.8	6.4	4.93	1.6	1.8	3.88	6.35	6.65	6.48	2.48	2.33	5.48	5.45	6.63	6.68	6.1	5.83
Min of Dissolved Oxygen	5.9	5.5	5.8	4.8	3.5	3.8	3.6	5.5	5.6	5.8	5.3	4.0	5.6	4.7	5.4	4.4	2.3	0.4	1.8	2.4	5.8	6.0	6.0	0.5	2.0	3.0	2.6	2.9	6.5	5.5	4.1

Figure No. 10: Trend of Dissolved Oxygen (DO) levels recorded at WQMS at Godavari basin (1 of 2)



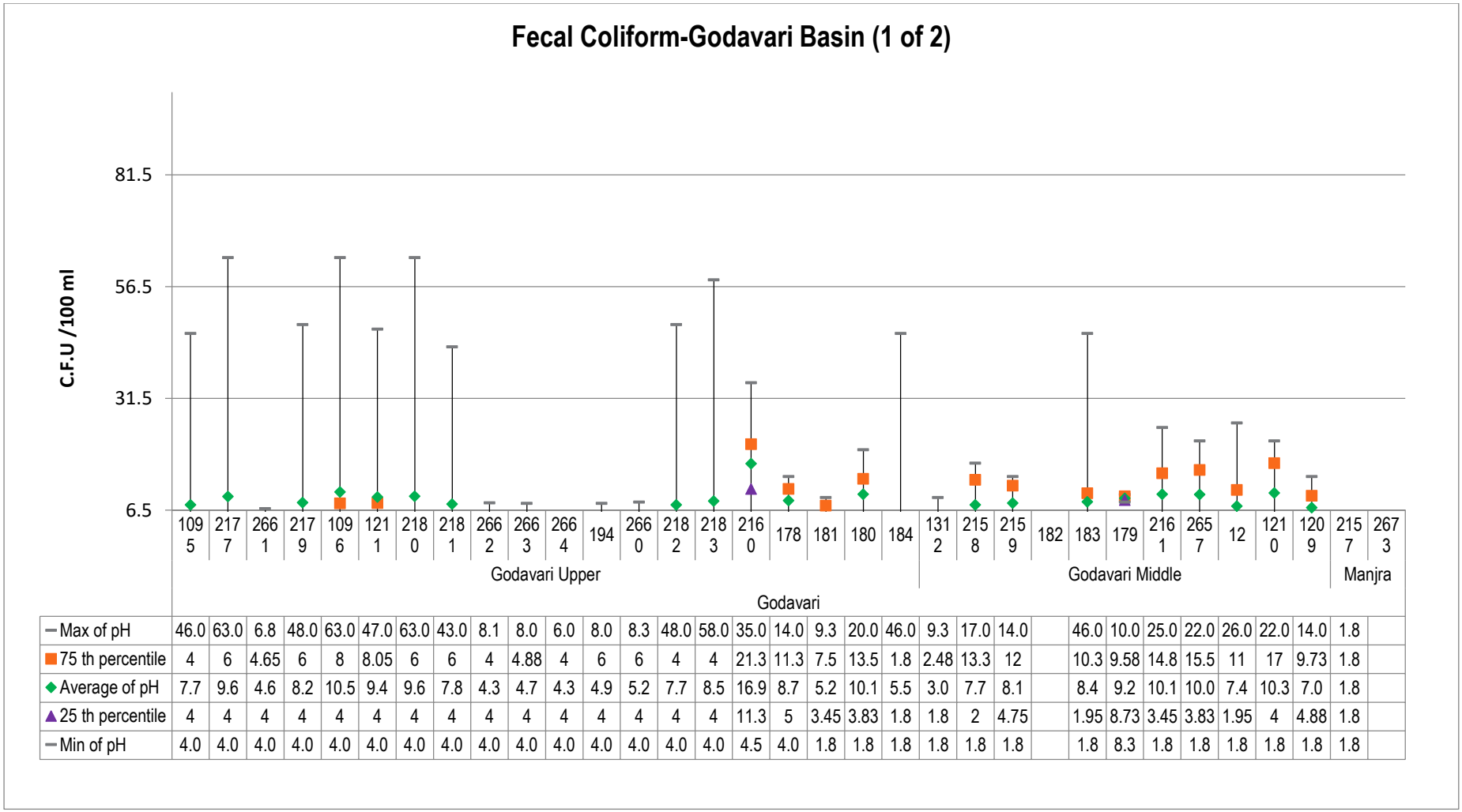
	1095	2177	2661	2179	1096	1211	2180	2181	2662	2663	2664	194	2660	2182	2183	2160	178	181	180	184	1312	2158	2159	182	183	179	2161	2657	12	1210	1209	2157	2673
	Godavari Upper																				Godavari Middle											Manjra
	Godavari																															
Max of BOD	3.2	3.8	3.6	4.5	4.2	4.5	5.8	3.8	3.8	3.8	4.0	4.5	3.6	7.5	3.8	8.0	12.0	125.	136.	16.0	6.0	7.5	6.0		22.0	14.0	12.0	13.0	11.0	5.0	6.5	7.0	
75 th percentile	3.2	3.5	3.4	3.7	4.0	3.9	3.9	3.8	3.6	3.3	3.7	3.4	3.4	3.7	3.4	6.3	8.4	41.5	55.0	10.5	4.3	3.3	4.6		15.8	14.0	7.8	7.7	3.7	5.0	5.6	5.1	
Average of BOD	3.0	3.3	3.1	3.5	3.8	3.7	3.8	3.5	3.0	3.1	3.2	3.5	3.1	3.7	3.3	4.8	7.1	36.5	46.9	8.5	3.7	3.6	4.0		12.0	14.0	6.5	6.6	4.4	3.9	4.4	4.2	
25 th percentile	2.8	3.0	3.0	3.2	3.4	3.4	3.4	3.2	2.6	2.8	2.8	3.2	3.0	3.2	3.2	3.5	5.5	16.8	28.0	4.9	3.0	3.0	3.2		8.0	14.0	4.6	4.6	3.0	3.2	3.6	3.2	
Min of BOD	2.8	2.8	2.2	3.0	3.4	3.0	3.0	3.0	2.2	2.4	2.4	3.0	2.2	2.8	2.6	3.0	3.8	8.5	9.0	4.0	2.4	2.4	2.6		4.2	14.0	3.0	2.4	2.4	3.0	2.8	3.0	

Figure No. 11: Trend of Biological Oxygen Demand (BOD) levels recorded at WQMS at Godavari basin (1 of 2)



	1095	2177	2661	2179	1096	1211	2180	2181	2662	2663	2664	194	2660	2182	2183	2160	178	181	180	184	1312	2158	2159	182	183	179	2161	2657	12	1210	1209	2157	2673
	Godavari Upper																				Godavari Middle											Manjra	
	Godavari																																
Max of pH	8.0	7.9	7.9	7.9	8.1	8.0	7.9	8.1	7.8	7.8	8.1	8.2	7.9	8.0	7.9	8.7	8.9	8.8	8.6	9.0	8.8	8.8	8.8		9.0	8.9	8.7	8.8	8.8	8.7	8.7	8.0	
75 th percentile	7.8	7.8	7.7	7.8	7.9	7.9	7.8	7.9	7.6	7.7	7.9	7.8	7.8	7.8	7.8	8.7	8.7	8.4	8.3	8.9	8.7	8.7	8.7		8.7	8.8	8.5	8.6	8.5	8.6	8.6	8.0	
Average of pH	7.6	7.6	7.6	7.6	7.7	7.7	7.7	7.7	7.5	7.6	7.7	7.7	7.6	7.7	7.6	8.6	8.7	8.1	8.0	8.8	8.6	8.7	8.7		8.6	8.6	8.3	8.4	8.3	8.5	8.5	8.0	
25 th percentile	7.6	7.4	7.5	7.6	7.5	7.5	7.7	7.5	7.4	7.4	7.4	7.5	7.4	7.6	7.5	8.6	8.6	7.8	7.8	8.7	8.6	8.6	8.6		8.5	8.5	8.1	8.3	8.1	8.5	8.5	8.0	
Min of pH	7.1	7.2	7.2	7.2	7.2	7.3	7.3	7.2	7.3	7.3	7.4	7.4	7.3	7.2	7.1	7.9	8.3	7.5	7.6	8.6	8.5	8.5	8.5		8.1	8.3	8.0	8.0	7.4	8.2	8.1	7.8	

Figure No. 12: Trend of pH levels recorded at WQMS at Godavari basin (1 of 2)



	1095	2177	2661	2179	1096	1211	2180	2181	2662	2663	2664	194	2660	2182	2183	2160	178	181	180	184	1312	2158	2159	182	183	179	2161	2657	12	1210	1209	2157	2673
Max of pH	46.0	63.0	6.8	48.0	63.0	47.0	63.0	43.0	8.1	8.0	6.0	8.0	8.3	48.0	58.0	35.0	14.0	9.3	20.0	46.0	9.3	17.0	14.0		46.0	10.0	25.0	22.0	26.0	22.0	14.0	1.8	
75 th percentile	4	6	4.65	6	8	8.05	6	6	4	4.88	4	6	6	4	4	21.3	11.3	7.5	13.5	1.8	2.48	13.3	12		10.3	9.58	14.8	15.5	11	17	9.73	1.8	
Average of pH	7.7	9.6	4.6	8.2	10.5	9.4	9.6	7.8	4.3	4.7	4.3	4.9	5.2	7.7	8.5	16.9	8.7	5.2	10.1	5.5	3.0	7.7	8.1		8.4	9.2	10.1	10.0	7.4	10.3	7.0	1.8	
25 th percentile	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	11.3	5	3.45	3.83	1.8	1.8	2	4.75		1.95	8.73	3.45	3.83	1.95	4	4.88	1.8	
Min of pH	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.5	4.0	1.8	1.8	1.8	1.8	1.8	1.8		1.8	8.3	1.8	1.8	1.8	1.8	1.8	1.8	

Figure No. 13: Trend of Fecal Coliform levels recorded at WQMS at Godavari basin (1 of 2)

Water Quality Index for WQMS in Godavari Basin (1 of 2): Sub-Basin-Godavari Upper

Apr	80	76	86	78	74	76	74	77	83	88	85	85	83	79	78	80	Dry	45	NA	65
May	84	82	84	78	67	70	69	82	84	87	82	87	87	82	83	77	Dry	NA	NA	49
Jun	84	83	86	76	75	78	80	82	85	84	80	81	84	81	85	83	Dry	NA	NA	82
Jul	85	82	84	84	79	83	82	82	85	84	82	82	83	80	83	75	Dry	NA	NA	76
Aug	85	87	87	85	83	81	84	85	88	89	88	87	89	85	85	59	58	47	NA	54
Sep	86	84	85	86	81	82	82	84	86	82	81	71	81	86	84	71	71	41	NA	57
Oct	83	88	85	83	83	85	88	85	85	86	85		84	85	86	69	44	48	54	51
Nov	88	86	84	87	86	82	84	83	92	88	86		83	84	88	75	76	49	43	76
Dec	89	85	87	84	78	83	84	85	89	84	90		89	89	84	72	76	47	NA	74
Jan	89	90	89	88	88	85	83	81	91	89	85	84	85	84	84	75	67	65	40	82
Feb	87	86	87	87	85	83	84	84	88	89	89	86	86	84	85	75	75	NA	NA	73
Mar	86	82	86	80	82	80	78	87	86	86	85	79	87	76	87	73	73	NA	NA	81
Station code	1095	2177	2661	2179	1096	1211	2180	2181	2662	2663	2664	194	2660	2182	2183	2160	178	181	180	184
Sub Basin	Godavari Upper																			
Basin	Godavari																			

Legend

Good to Excellent	Medium to Good	Bad	Bad to Very Bad	Dry	No Data	Not Available

Table No. 16 : Surface water quality monitoring stations in Godavari Basin (1 of 2)

Program	Station ID	River/Nalla	Station Name	Village	Taluka	District
NWMP	1095	Godavari	Godavari at U/s of Gangapur Dam	Gangapur	Nashik	Nashik
NWMP	2177	Godavari	Godavari near Someshwar Temple	Someshwar	Nashik	Nashik
NWMP	2661	Darna	Darna at Aswali (Darna Dam)	Aswali	Igatpuri	Nashik
NWMP	2179	Godavari	Godavari at Hanuman Ghat	Nashik city	Nashik	Nashik
NWMP	1096	Godavari	Godavari at Panchavati at Ramkund	Panchavati	Nashik	Nashik
NWMP	1211	Godavari	Godavari at Nashik D/s of near Amardham	Gadgebaba Maharaj Nagar	Nashik	Nashik
NWMP	2180	Godavari	Godavari at near Tapovan	Tapovan	Nashik	Nashik
NWMP	2181	Godavari	Godavari at Kapila -Godavari confluence point	Tapovan	Nashik	Nashik
NWMP	2662	Darna	Darna at MES site Pumping station	Bhagur	Nashik	Nashik
NWMP	2663	Darna	Darna at Bhagur Pumping station near Pandhurli Bridge	Bhagur	Nashik	Nashik
NWMP	2664	Darna	Darna at Sansari	Sansari	Nashik	Nashik
SWMP	194	Kadwa	Kadwa at Awankhed Village, Taluka - Dindori, District - Nashik	Awankhed Village	Dindori	Nashik
NWMP	2660	Darna	Darna at Chehedi pumping station	Chehedi	Nashik	Nashik
NWMP	2182	Godavari	Godavari at Saikheda	Saikheda	Niphad	Nashik
NWMP	2183	Godavari	Godavari at Nandur-Madhameshwar Dam	Nandur	Niphad	Nashik
NWMP	2160	Godavari	Godavari at U/s of Aurangabad Reservoir Kaigaon Tokka near, Kaigaon Bridge	Kaigaon	Gangapur	Aurangabad
SWMP	178	Shivna	Kannad - D/S of Kannad near Bridge	Kannad	Kannad	Aurangabad
SWMP	181	Kham	Aurangabad - Near Patoda Village	Aurangabad	Aurangabad	Aurangabad
SWMP	180	Kham	Aurangabad - Near Holly cross bridge	Aurangabad	Aurangabad	Aurangabad
SWMP	184	Harsool Dam	Aurangabad - Harsool Dam	Aurangabad	Aurangabad	Aurangabad

Water Quality Index for WQMS in Godavari Basin (1 of 2): Sub-Basin-Godavari Middle and Manjra

Apr	76	83	79	Dry	58	Dry	77	78	81	79	86	87	NA
May	81	80	84	Dry	60	Dry	85	84	86	84	78	89	Dry
Jun	80	77	78	Dry	53	Dry	86	82	85	80	83	85	Dry
Jul	82	82	77	Dry	66	Dry	84	83	84	81	79	76	Dry
Aug	77	74	73	Dry	43	53	59	57	64	73	74	82	Dry
Sep	82	76	76	Dry	37	Dry	73	62	76	75	77	88	Dry
Oct	82	69	75	Dry	47	42	74	71	81	NA	72	75	Dry
Nov	83	75	75	Dry	47	Dry	52	48	58	75	76	89	Dry
Dec	82	79	78	Dry	66	Dry	68	72	83	77	72	86	Dry
Jan	80	80	76	Dry	82	Dry	72	69	75	78	80	86	Dry
Feb	80	80	78	Dry	70	Dry	77	77	82	78	77	79	Dry
Mar	82	79	77	Dry	74	Dry	72	79	79	78	79	85	Dry
Station code	1312	2158	2159	182	183	179	2161	2657	12	1210	1209	2157	2673
Sub Basin	Godavari Middle											Manjra	
Basin	Godavari											Godavari	

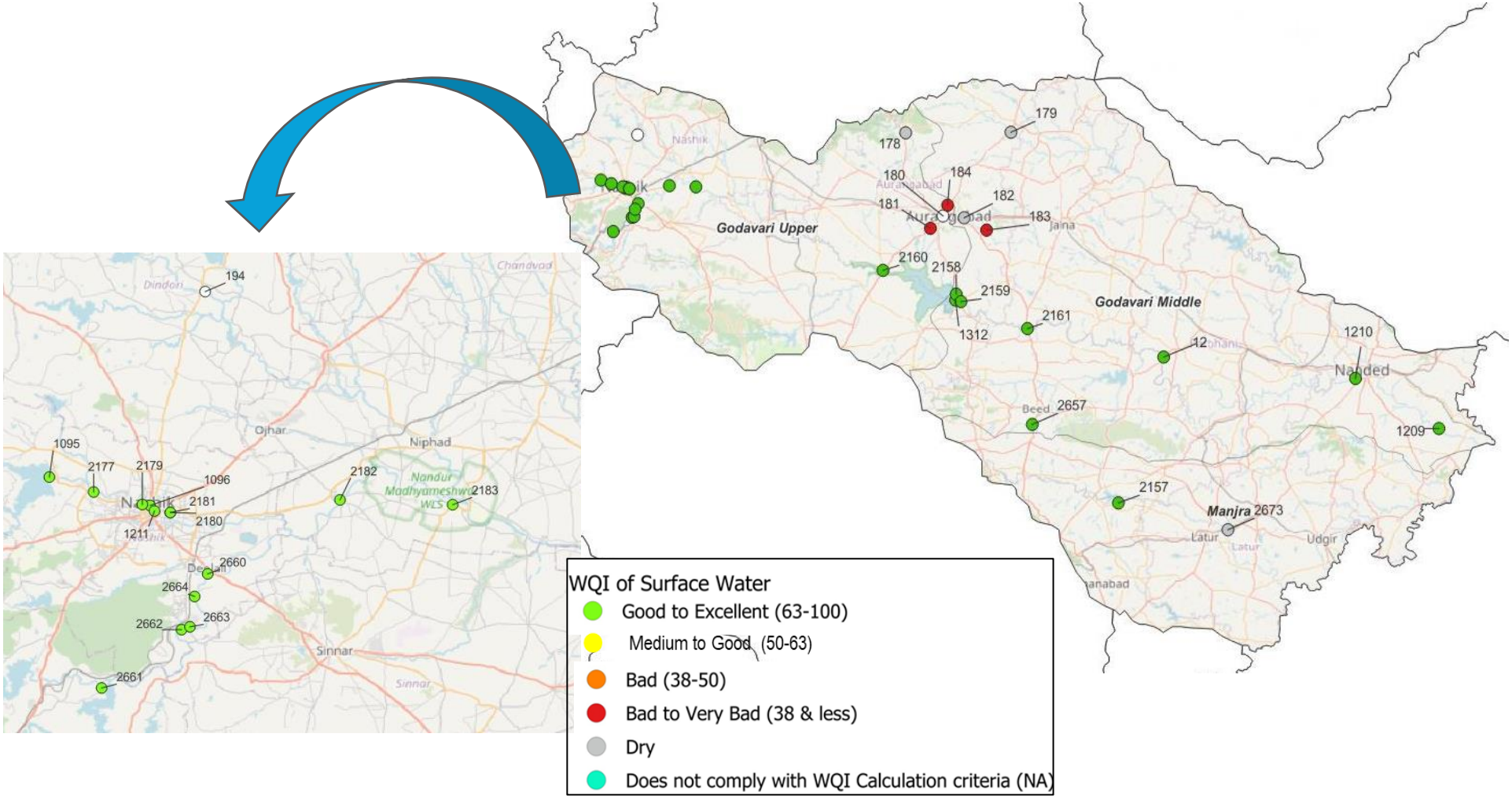
Legend

Good to Excellent	Medium to Good	Bad	Bad to Very Bad	Dry	No Data	Not Available

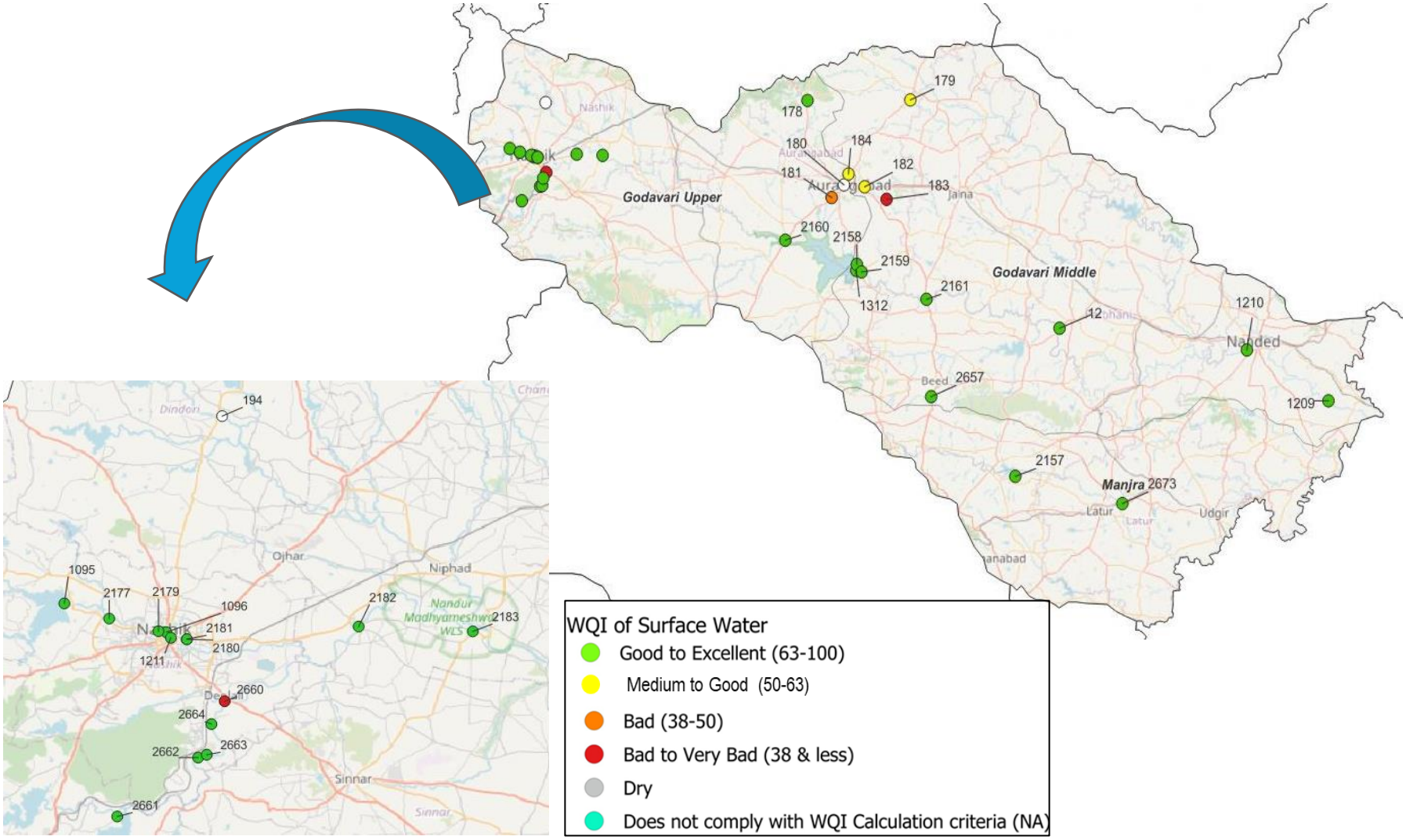
Table No. 17 : Surface water quality monitoring stations in Godavari Basin (1of 2)

Program	Station ID	River/Nalla	Station Name	Village	Taluka	District
NWMP	1312	Godavari	Godavari at Jaikwadi Dam, Paithan	Paithan	Paithan	Aurangabad
NWMP	2158	Godavari	Godavari at Paithan U/s of Paithan Intake pump house	Jayakwadi	Paithan	Aurangabad
NWMP	2159	Godavari	Godavari at D/s of Paithan at Pathegaon bridge	Pathegaon	Paithan	Aurangabad
SWMP	182	Sukhna	Aurangabad - Near Chikhalthana Bridge	Aurangabad	Aurangabad	Aurangabad
SWMP	183	Sukhna Dam	Aurangabad - At Sukhna Dam	Aurangabad	Aurangabad	Aurangabad
SWMP	179	Purna	Sillod - D/S of Sillod near bridge at bhavan	Sillod	Sillod	Aurangabad
NWMP	2161	Godavari	Godavari at Jalna Intake water pump house Shahagad	Shahabad	Ambad	Jalna
NWMP	2657	Bindusara	Bindusara at Beed, near Intake water pump house at Dam	Paligaon	Beed	Beed
NWMP	12	Godavari	Godavari at Dhalegaon	Dhalegaon	Pathari	Parbhani
NWMP	1210	Godavari	Godavari at Intake of pump house	Vishnupuri	Nanded	Nanded
NWMP	1209	Godavari	Godavari at Raher	Raher	Nayagaon	Nanded
NWMP	2157	Godavari	Godavari at Latur Water intake near pump house	Dhamegaon	Kalumb	Osmanabad
NWMP	2673	Manjra	Manjra at D/s of Latur, near Latur-Nanded Bridge	Bhatkheda	Latur	Latur

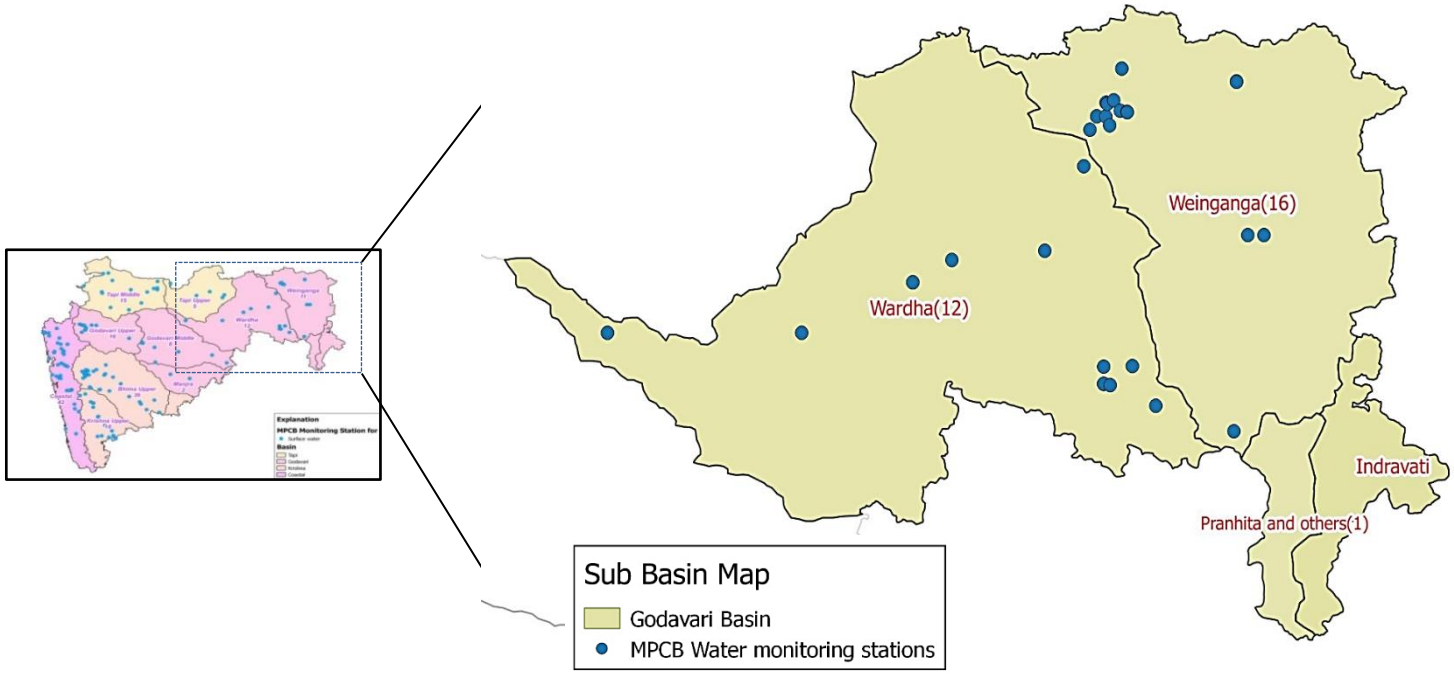
Spatial map of Surface WQI at Godavari Basin 1 of 2 (April -2023)



Spatial map of Surface WQI at Godavari Basin 1 of 2 (December -2023)



Godavari Basin (2 of 2): Wardha, Wainganga and Pranhita Sub basin



In basin 2, there are a total 29 surface water monitoring stations (12 on Wardha, 16 on Wainganga and 1 on Pranhita River). A list of WQMS stations installed in areas of the Godavari basin (2 of 2) basin has been provided in the Table No.18 and Table No. 19.

Godavari Basin (2 of 2) (Intra Basin analysis)

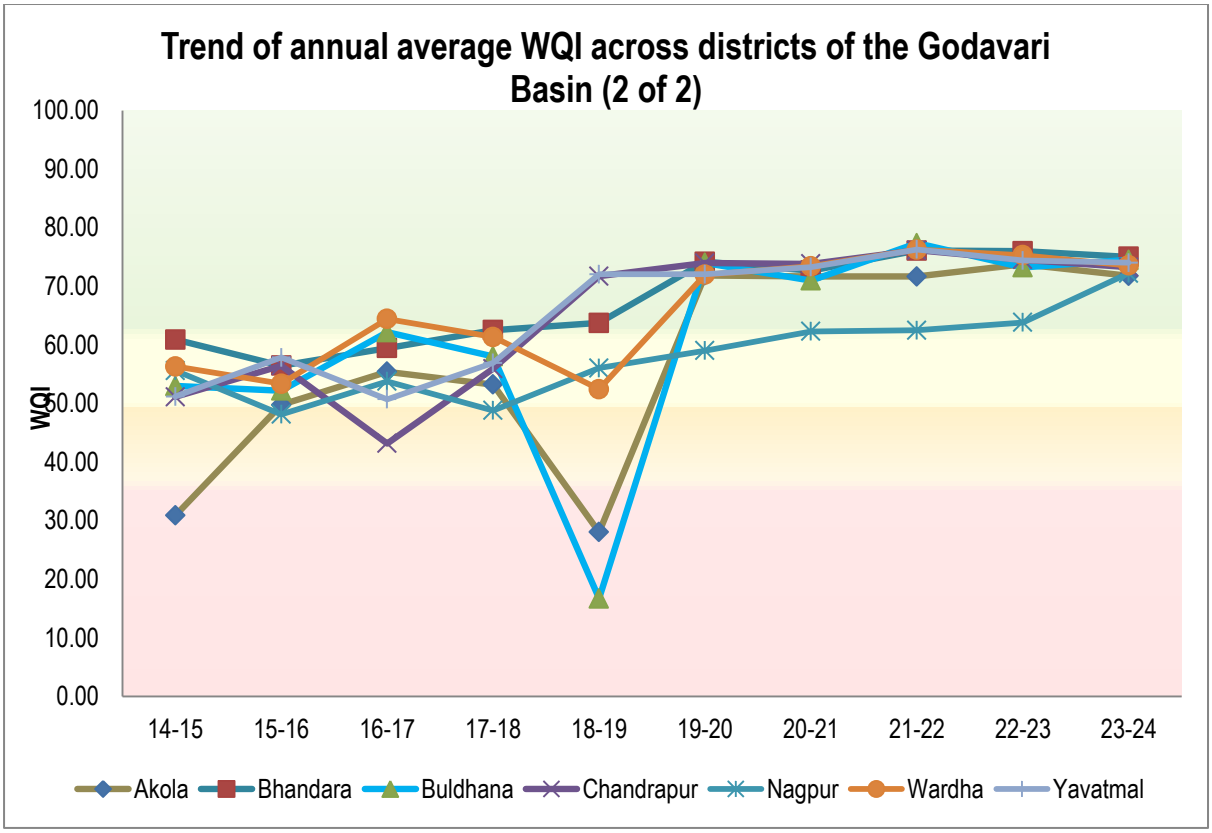


Figure No. 14: Trend of annual average WQI across districts of the Godavari basin (2 of 2)

WQI	WQI Category	Class by CPCB	Represented in the above graph
63-100	Good to Excellent	A	Non-polluted
50-63	Medium to Good	B	Non-polluted
38-50	Bad	C	Polluted
38 & less	Bad to Very Bad	D, E	Heavily polluted

Note: This graph considers the average WQI for all the monitoring stations in that particular district and hence may include some bias. This graph is only for an overview and monitoring station-wise data may be analyzed to pinpoint the most affected and polluted patches of rivers in that district.

The performance analysis of the Godavari (2 of 2), as depicted in Figure No.14, provides insights into the average occurrence of various WQI categories recorded by WQMS installed across 7 districts. The data indicates that the annual average WQI across all monitored districts remained within the 'Good to Excellent' category. However, there were slight variations recorded in WQI compared to the previous year (2022-23). For instance, out of 7 districts, an increase in annual average WQI was recorded by WQMS installed at Nagpur (from 63.83 to 72.22) and Buldhana (from 73.24 to 74.52) whereas the rest of the districts recorded a minuscule dip in the annual average WQI..

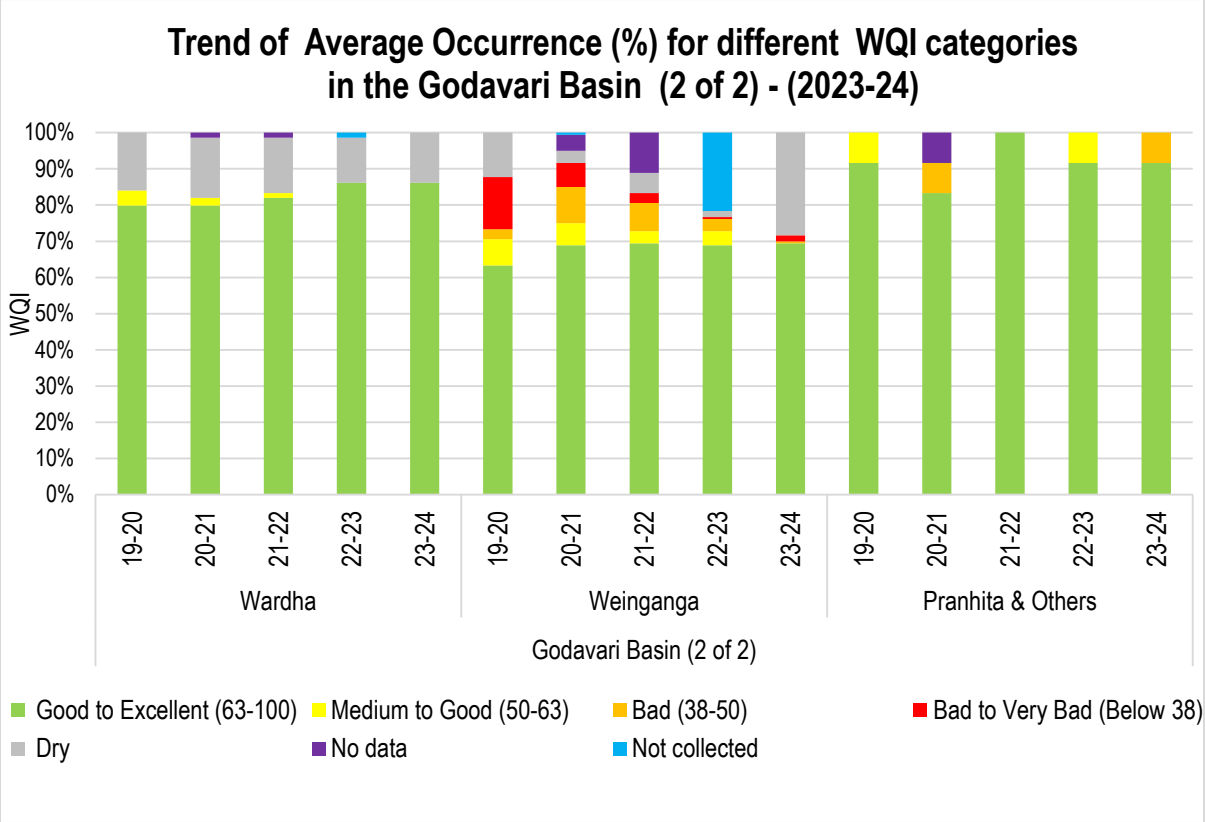
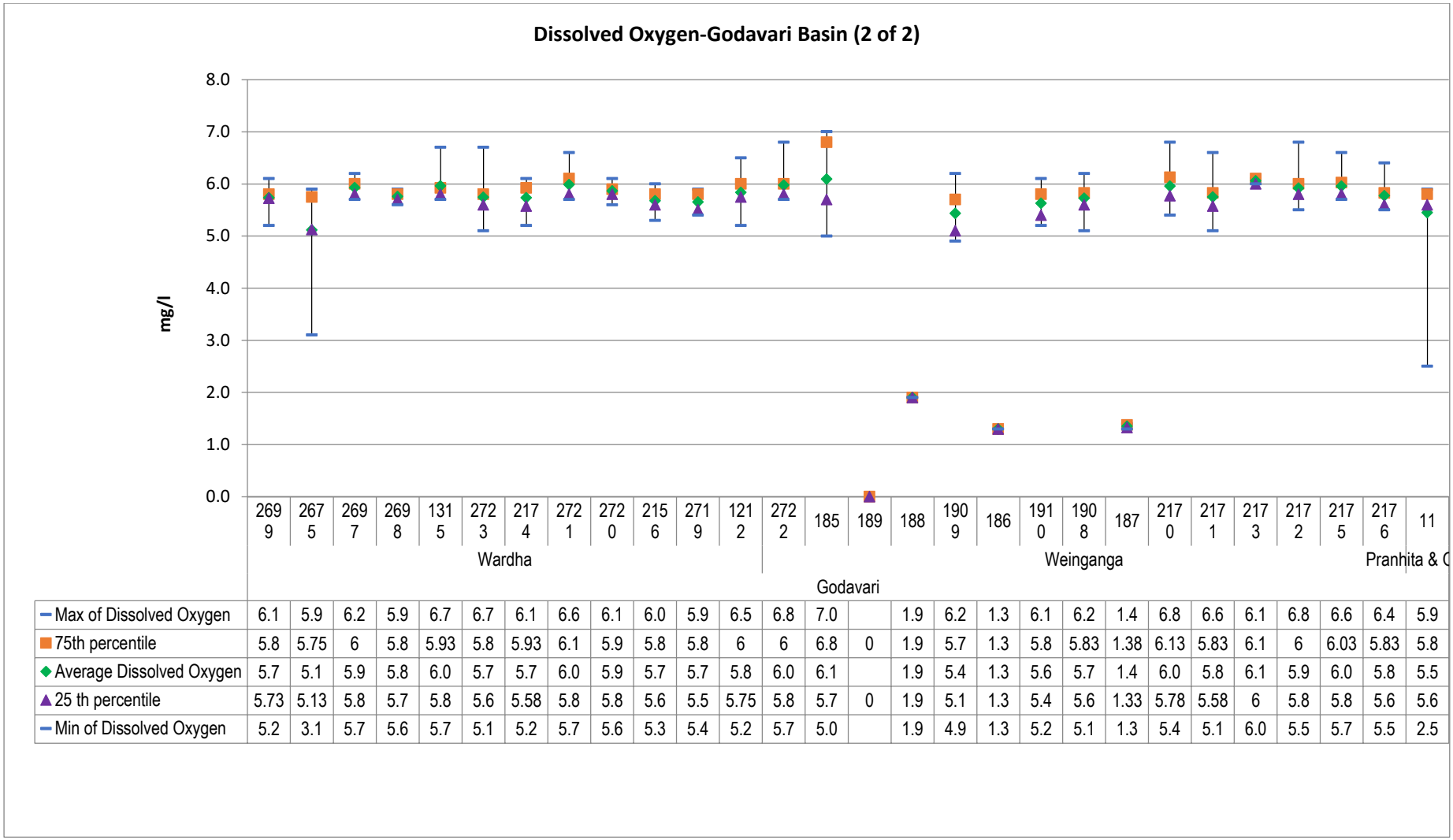


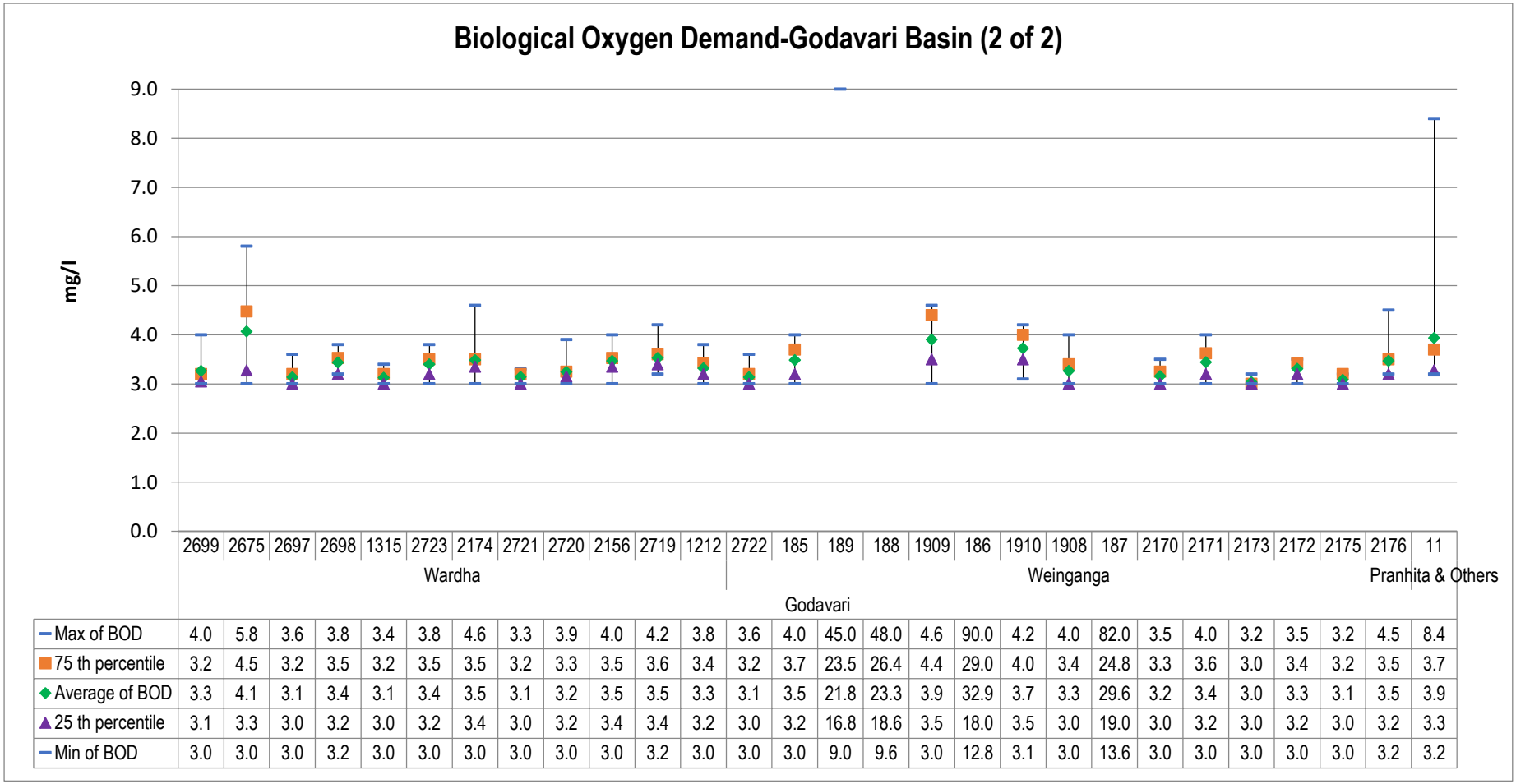
Figure No. 15: **Trend of average occurrence for different WQI categories in the Godavari basin (2 of 2)**

The interbasin performance of the Godavari basin (2 of 2) is shown in the Figure No. 15
In Wardha, the percentage of observations categorized as 'Good to Excellent' in the Water Quality Index (WQI) remained unchanged at 86.11% in 2023-24 compared to 2022-23, while the 'Dry' category accounted for 13.88% of total observations. In Weinganga, the 'Good to Excellent' WQI category slightly increased to 69.44% in 2023-24 from 68.88% in 2022-23, while the 'Dry' category comprised 28.33% of the observations showing significant increase from 1.66% in the year 2022-23. In Pranhita & others, the 'Good to Excellent' WQI category remained consistent at 91.66% in 2023-24, with 0 observations recorded in the 'Dry' category.



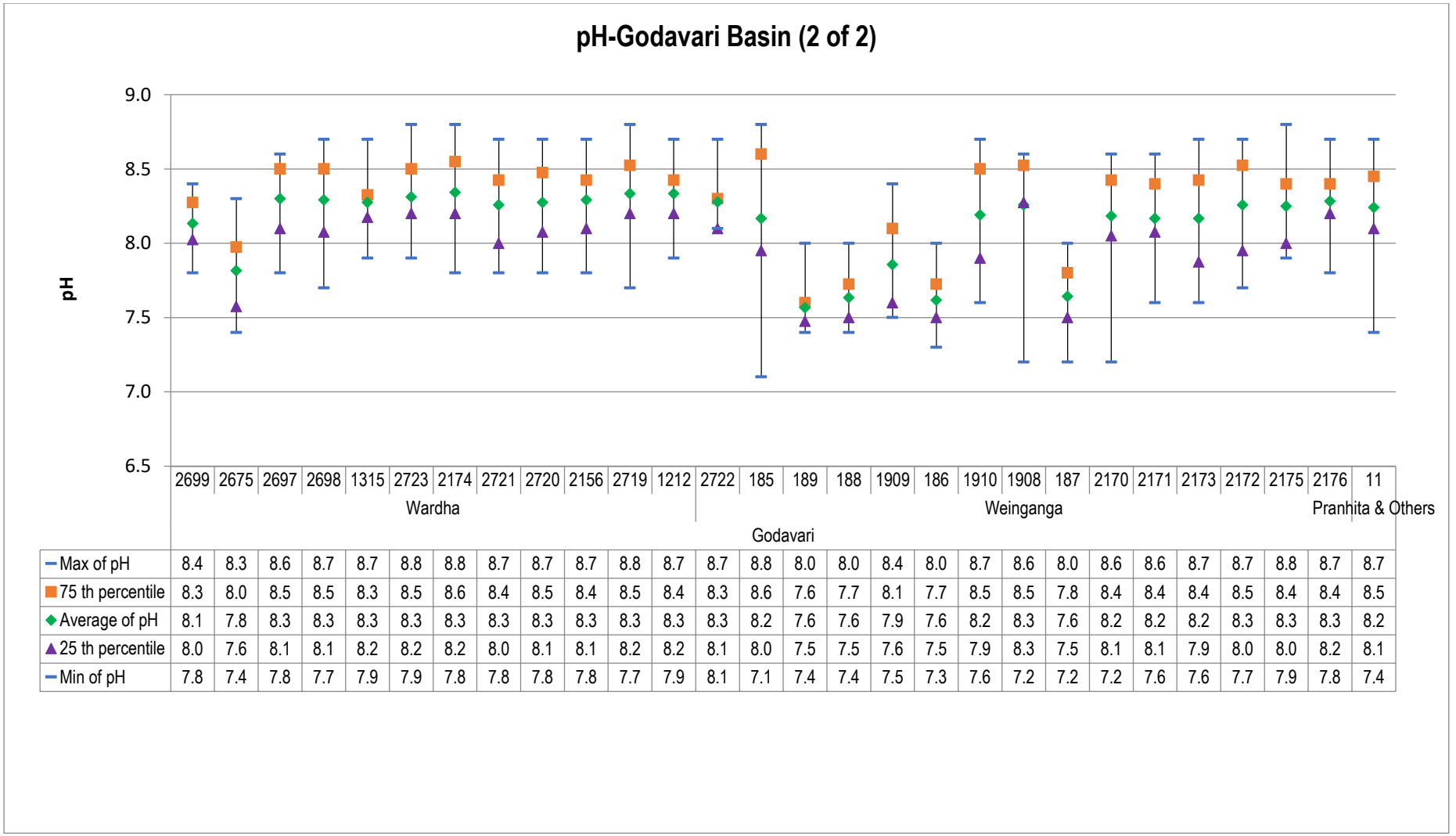
	2699	2675	2697	2698	1315	2723	2174	2721	2720	2156	2719	1212	2722	185	189	188	1909	186	1910	1908	187	2170	2171	2173	2172	2175	2176	11
Max of Dissolved Oxygen	6.1	5.9	6.2	5.9	6.7	6.7	6.1	6.6	6.1	6.0	5.9	6.5	6.8	7.0		1.9	6.2	1.3	6.1	6.2	1.4	6.8	6.6	6.1	6.8	6.6	6.4	5.9
75th percentile	5.8	5.75	6	5.8	5.93	5.8	5.93	6.1	5.9	5.8	5.8	6	6	6.8	0	1.9	5.7	1.3	5.8	5.83	1.38	6.13	5.83	6.1	6	6.03	5.83	5.8
Average Dissolved Oxygen	5.7	5.1	5.9	5.8	6.0	5.7	5.7	6.0	5.9	5.7	5.7	5.8	6.0	6.1		1.9	5.4	1.3	5.6	5.7	1.4	6.0	5.8	6.1	5.9	6.0	5.8	5.5
25 th percentile	5.73	5.13	5.8	5.7	5.8	5.6	5.58	5.8	5.8	5.6	5.5	5.75	5.8	5.7	0	1.9	5.1	1.3	5.4	5.6	1.33	5.78	5.58	6	5.8	5.8	5.6	5.6
Min of Dissolved Oxygen	5.2	3.1	5.7	5.6	5.7	5.1	5.2	5.7	5.6	5.3	5.4	5.2	5.7	5.0		1.9	4.9	1.3	5.2	5.1	1.3	5.4	5.1	6.0	5.5	5.7	5.5	2.5

Figure No. 16: Trend of Dissolved Oxygen (DO) levels recorded at WQMS at Godavari basin (2 of 2)



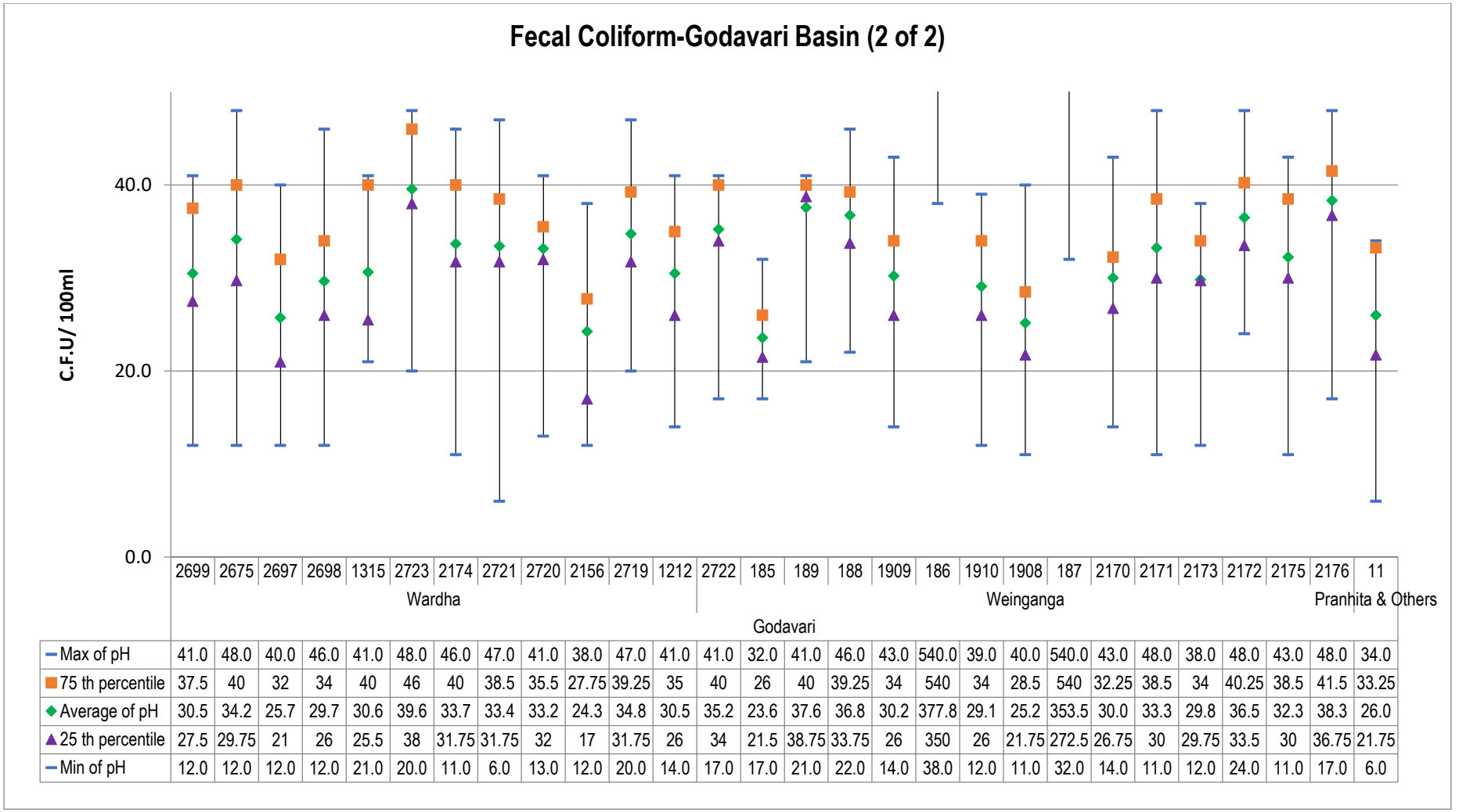
	2699	2675	2697	2698	1315	2723	2174	2721	2720	2156	2719	1212	2722	185	189	188	1909	186	1910	1908	187	2170	2171	2173	2172	2175	2176	11
Max of BOD	4.0	5.8	3.6	3.8	3.4	3.8	4.6	3.3	3.9	4.0	4.2	3.8	3.6	4.0	45.0	48.0	4.6	90.0	4.2	4.0	82.0	3.5	4.0	3.2	3.5	3.2	4.5	8.4
75 th percentile	3.2	4.5	3.2	3.5	3.2	3.5	3.5	3.2	3.3	3.5	3.6	3.4	3.2	3.7	23.5	26.4	4.4	29.0	4.0	3.4	24.8	3.3	3.6	3.0	3.4	3.2	3.5	3.7
Average of BOD	3.3	4.1	3.1	3.4	3.1	3.4	3.5	3.1	3.2	3.5	3.5	3.3	3.1	3.5	21.8	23.3	3.9	32.9	3.7	3.3	29.6	3.2	3.4	3.0	3.3	3.1	3.5	3.9
25 th percentile	3.1	3.3	3.0	3.2	3.0	3.2	3.4	3.0	3.2	3.4	3.4	3.2	3.0	3.2	16.8	18.6	3.5	18.0	3.5	3.0	19.0	3.0	3.2	3.0	3.2	3.0	3.2	3.3
Min of BOD	3.0	3.0	3.0	3.2	3.0	3.0	3.0	3.0	3.0	3.0	3.2	3.0	3.0	3.0	9.0	9.6	3.0	12.8	3.1	3.0	13.6	3.0	3.0	3.0	3.0	3.0	3.2	3.2

Figure No. 17: Trend of Biological Oxygen Demand (BOD) levels recorded at WQMS at Godavari basin (2 of 2)



	2699	2675	2697	2698	1315	2723	2174	2721	2720	2156	2719	1212	2722	185	189	188	1909	186	1910	1908	187	2170	2171	2173	2172	2175	2176	11
	Wardha												Weinganga														Pranhita & Others	
	Godavari																											
Max of pH	8.4	8.3	8.6	8.7	8.7	8.8	8.8	8.7	8.7	8.7	8.8	8.7	8.7	8.8	8.0	8.0	8.4	8.0	8.7	8.6	8.0	8.6	8.6	8.7	8.7	8.8	8.7	8.7
75 th percentile	8.3	8.0	8.5	8.5	8.3	8.5	8.6	8.4	8.5	8.4	8.5	8.4	8.3	8.6	7.6	7.7	8.1	7.7	8.5	8.5	7.8	8.4	8.4	8.4	8.5	8.4	8.4	8.5
Average of pH	8.1	7.8	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.2	7.6	7.6	7.9	7.6	8.2	8.3	7.6	8.2	8.2	8.2	8.3	8.3	8.3	8.2
25 th percentile	8.0	7.6	8.1	8.1	8.2	8.2	8.2	8.0	8.1	8.1	8.2	8.2	8.1	8.0	7.5	7.5	7.6	7.5	7.9	8.3	7.5	8.1	8.1	7.9	8.0	8.0	8.2	8.1
Min of pH	7.8	7.4	7.8	7.7	7.9	7.9	7.8	7.8	7.8	7.8	7.7	7.9	8.1	7.1	7.4	7.4	7.5	7.3	7.6	7.2	7.2	7.2	7.6	7.6	7.7	7.9	7.8	7.4

Figure No. 18: Trend of pH levels recorded at WQMS at Godavari basin (2 of 2)



	2699	2675	2697	2698	1315	2723	2174	2721	2720	2156	2719	1212	2722	185	189	188	1909	186	1910	1908	187	2170	2171	2173	2172	2175	2176	11
Max of pH	41.0	48.0	40.0	46.0	41.0	48.0	46.0	47.0	41.0	38.0	47.0	41.0	41.0	32.0	41.0	46.0	43.0	540.0	39.0	40.0	540.0	43.0	48.0	38.0	48.0	43.0	48.0	34.0
75 th percentile	37.5	40	32	34	40	46	40	38.5	35.5	27.75	39.25	35	40	26	40	39.25	34	540	34	28.5	540	32.25	38.5	34	40.25	38.5	41.5	33.25
Average of pH	30.5	34.2	25.7	29.7	30.6	39.6	33.7	33.4	33.2	24.3	34.8	30.5	35.2	23.6	37.6	36.8	30.2	377.8	29.1	25.2	353.5	30.0	33.3	29.8	36.5	32.3	38.3	26.0
25 th percentile	27.5	29.75	21	26	25.5	38	31.75	31.75	32	17	31.75	26	34	21.5	38.75	33.75	26	350	26	21.75	272.5	26.75	30	29.75	33.5	30	36.75	21.75
Min of pH	12.0	12.0	12.0	12.0	21.0	20.0	11.0	6.0	13.0	12.0	20.0	14.0	17.0	17.0	21.0	22.0	14.0	38.0	12.0	11.0	32.0	14.0	11.0	12.0	24.0	11.0	17.0	6.0

Figure No. 19: Trend of Fecal Coliform levels recorded at WQMS at Godavari basin (2 of 2)

Water Quality Index for WQMS in Godavari Basin (2 of 2): Sub-Basin-Wardha

Apr	Dry	Dry	72	72	Dry	Dry	72	74	73	72	69	75
May	NA	NA	77	75	Dry	Dry	75	78	73	78	72	76
Jun	NA	NA	75	71	Dry	Dry	71	76	71	73	72	73
Jul	NA	NA	75	72	Dry	71	71	73	74	71	71	69
Aug	69	67	72	71	74	68	75	76	74	73	72	74
Sep	77	78	76	74	76	72	76	75	74	74	72	73
Oct	75	75	79	78	72	72	77	79	77	76	77	76
Nov	71	73	74	76	74	73	68	75	73	72	72	76
Dec	80	64	79	75	80	80	78	79	77	77	73	76
Jan	75	73	74	74	74	74	69	73	74	73	71	74
Feb	NA	NA	74	72	75	68	70	71	77	73	72	71
Mar	NA	NA	NA	72	73	70	69	70	72	72	68	69
Station code	2699	2675	2697	2698	1315	2723	2174	2721	2720	2156	2719	1212
Sub Basin	Wardha											
Basin	Godavari											

Good to Excellent	Medium to Good	Bad	Bad to Very Bad	Dry	No Data	Not Available

Table No. 18: Surface water quality monitoring stations in Godavari Basin (2 of 2)

Program	Station ID	River/Nalla	Station Name	Village	Taluka	District
NWMP	2699	Penganga	Penganga at Mehkar-Buldana Road Bridge	Mehkar	Mehkar	Buldana
NWMP	2675	Morna	Morna at D/s of Railway Bridge	Akola	Akola	Akola
NWMP	2697	Penganga	Penganga near water supply scheme of Umarkhed MC	Belkhed	Umarkhed	Yavatmal
NWMP	2698	Penganga	Penganga D/s of Isapur Dam	Isapur	Pusad	Yavatmal
NWMP	1315	Wardha	Wardha at Pulgaon Railway Bridge	Pulgaon	wardha	Wardha
NWMP	2723	Wena	Wena at D/s of Mohata Mills, near Bridge on Hinganghat-Wadner Road	Hinganghat	Hinganghat	Wardha
NWMP	2174	Wardha	Wardha at D/s of ACC Ghuggus	Ghuggus	Chandrapur	Chandrapur
NWMP	2721	Wardha	Wardha at U/s of ACC Ghuggus	Ghuggus	Chandrapur	Chandrapur
NWMP	2720	Wardha	Wardha at U/s of Erai	Hadasti	Chandrapur	Chandrapur
NWMP	2156	Wardha	Wardha at confluence point of Penganga & Wardha	Jugad	Wani	Yavatmal
NWMP	2719	Wardha	Wardha at D/s of Erai	Hadasti	Chandrapur	Chandrapur
NWMP	1212	Wardha	Wardha at Rajura bridge	Rajura	Chandrapur	Chandrapur

Water Quality Index for WQMS in Godavari Basin (2 of 2): Sub-Basin-Wainganga and Pranhita

Apr	Dry	76	NA	NA	NA	NA	NA	72	NA	76	71	73	71	75	74	45
May	Dry	73	NA	NA	81	36	75	77	36	80	78	74	73	76	73	73
Jun	Dry	77	NA	NA	Dry	NA	75	76	NA	77	76	75	71	77	72	70
Jul	74	72	NA	45	Dry	NA	68	73	35	73	71	76	73	74	71	74
Aug	74	74	NA	NA	69	NA	73	70	NA	70	69	78	77	77	73	70
Sep	74	74	NA	NA	69	NA	70	76	NA	78	74	78	72	75	72	72
Oct	73	76	NA	NA	70	NA	69	74	NA	74	73	75	72	77	76	77
Nov	74	77	NA	NA	77	NA	74	80	NA	77	75	79	77	73	69	73
Dec	79	77	NA	NA	79	NA	80	75	NA	77	79	79	77	76	75	78
Jan	75	75	NA	NA	72	NA	78	73	NA	74	73	74	73	73	70	73
Feb	75	81	NA	NA	69	NA	68	71	NA	72	72	77	71	76	75	85
Mar	70	71	NA	NA	79	NA	73	74	NA	74	74	80	77	70	70	71
Station code	2722	185	189	188	1909	186	1910	1908	187	2170	2171	2173	2172	2175	2176	11
Sub Basin	Weinganga															Pranhita & Others
Basin	Godavari															Godavari

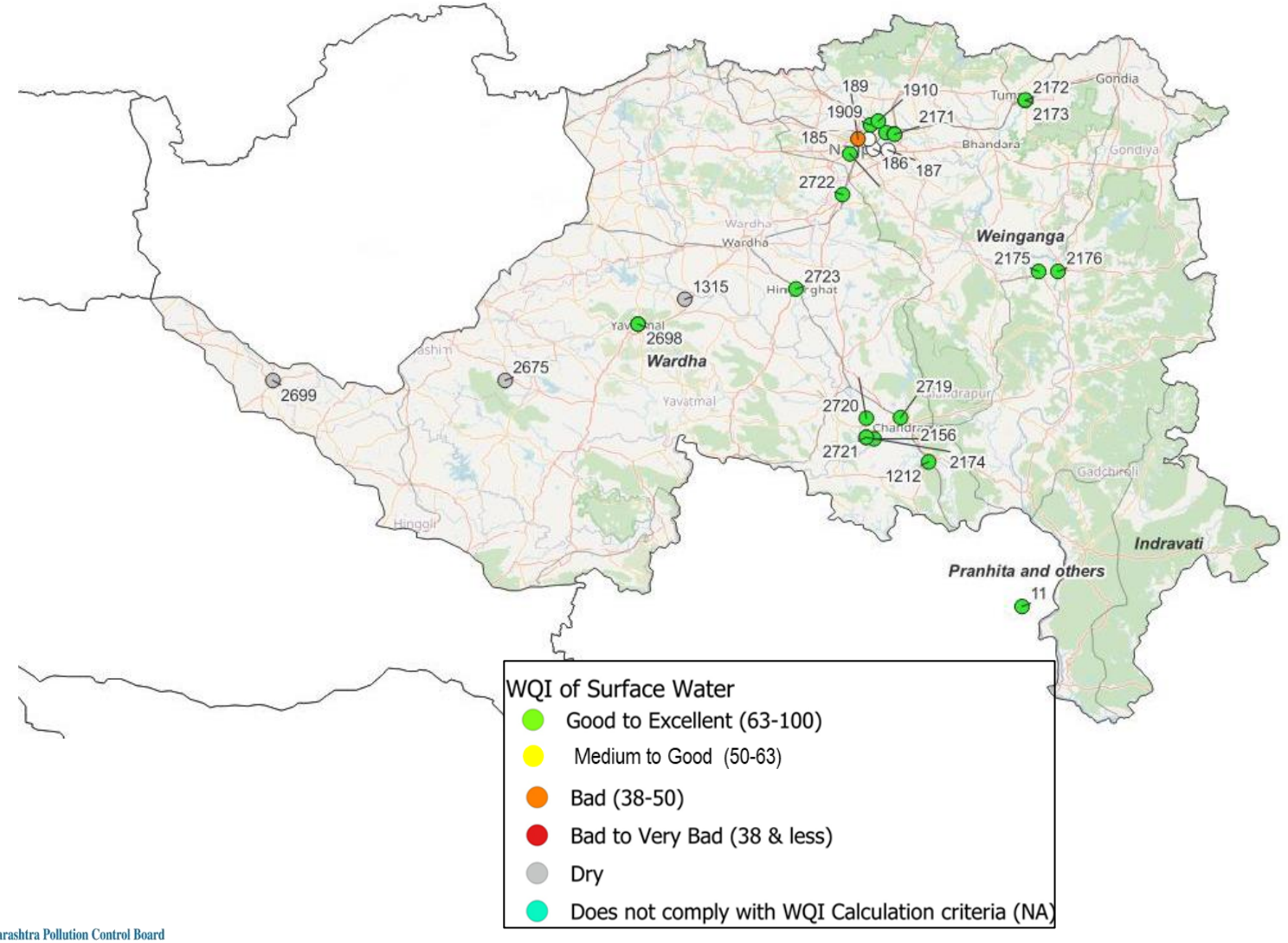
Legend

Good to Excellent	Medium to Good	Bad	Bad to Very Bad	Dry	No Data	Not Available

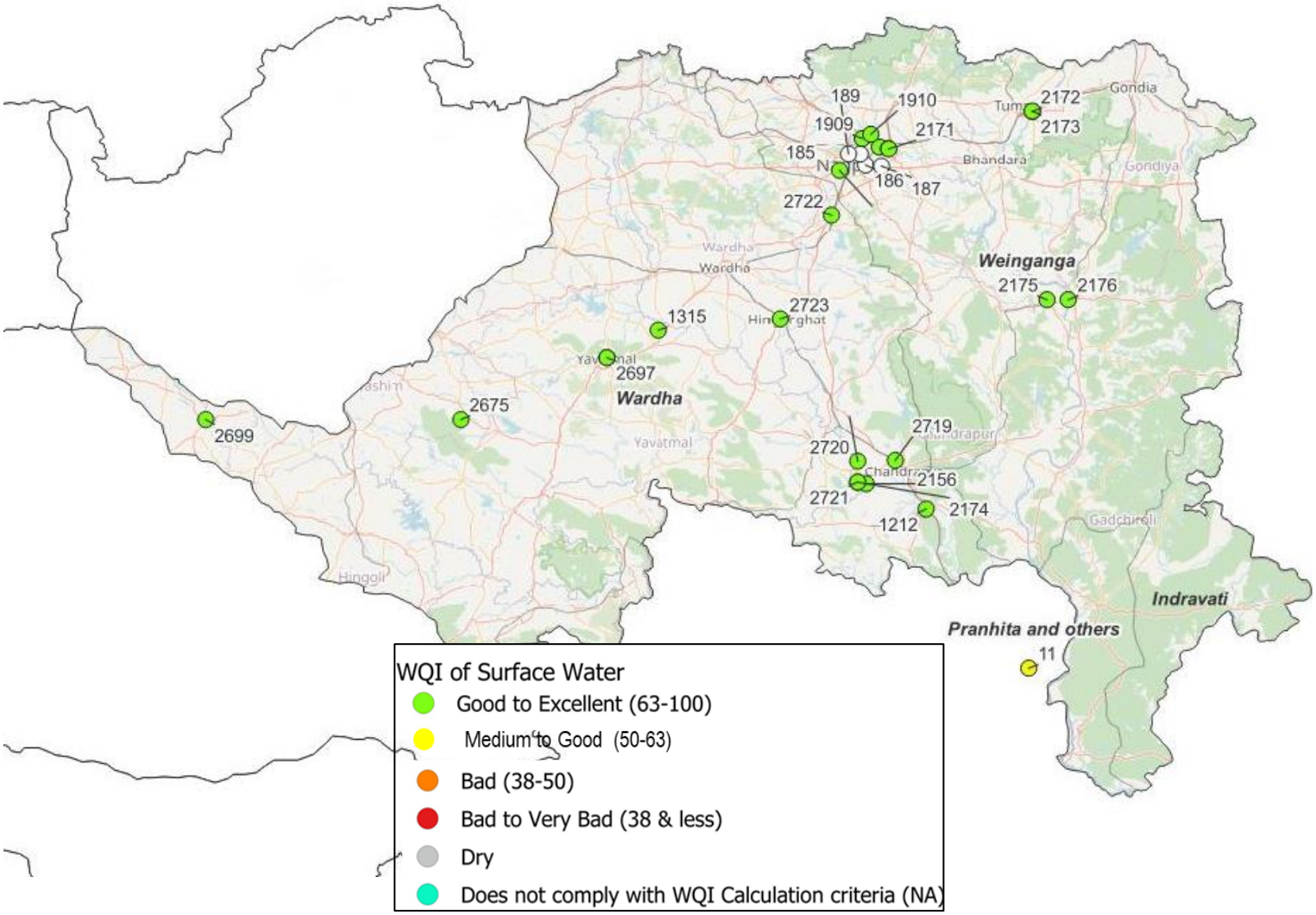
Table No. 19: Surface water quality monitoring stations in Godavari Basin (2 of 2)

Program	Station ID	River/Nalla	Station Name	Village	Taluka	District
NWMP	2722	Wena	Wena at U/s of Mohata Mills, nearby Brigde on Hinganghat Wadner Road	Hinganghat	Hinganghat	Wardha
SWMP	185	Nag	Nag Near, Ambazari Lake, Nagpur	Nagpur	Nagpur	Nagpur
SWMP	189	Pill	Pill Near, Mankapur on Koradi Road, Nagpur	Nagpur	Nagpur	Nagpur
SWMP	188	Pill	Pill Near, Wanjra Layout Kamptee Road, Nagpur	Nagpur	Nagpur	Nagpur
NWMP	1909	Kanhan	Kanhan at D/s of Nagpur	Agargaon	Kuhi	Nagpur
SWMP	186	Nag	Nag Near, Bhandewadi Bridge, Nagpur	Nagpur	Nagpur	Nagpur
NWMP	1910	Wainganga	Wainganga after confluence with Kanhan	Ambhora	Kuhi	Nagpur
NWMP	1908	Kolar	Kolar before confluence with Kanhan at Waregaon Bridge	Waregaon	Kamptee	Nagpur
SWMP	187	Nag	Nag Near, Asoli Bridge, Bhandara Road, Nagpur	Nagpur	Nagpur	Nagpur
NWMP	2170	Kanhan	Kanhan (Wainganga basin) at U/s of M/s Vidharba Paper Mill	Sinora	Parseoni	Nagpur
NWMP	2171	Kanhan	Kanhan (Wainganga basin) at D/s of M/s Vidharbha Paper Mills	Sinora	Parseoni	Nagpur
NWMP	2173	Wainganga	Wainganga at U/s of Ellora Paper Mills	Tumsar	Tumsar	Bandara
NWMP	2172	Wainganga	Wainganga at D/s of Ellora Paper Mill	Tumsar	Tumsar	Bandara
NWMP	2175	Wainganga	Wainganga at U/s of Gaurav Paper Mills near Jack Well	Bramhpuri	Chandrapur	Chandrapur
NWMP	2176	Wainganga	Wainganga at D/s of Gaurav Paper Mills Near Jackwell	Bramhpuri	Chandrapur	Chandrapur
NWMP	11	Wainganga	Wainganga at Ashti	Ashti	Gondpipri	Chandrapur

Spatial map of Surface WQI at Godavari Basin (2of 2)- (April 2023)

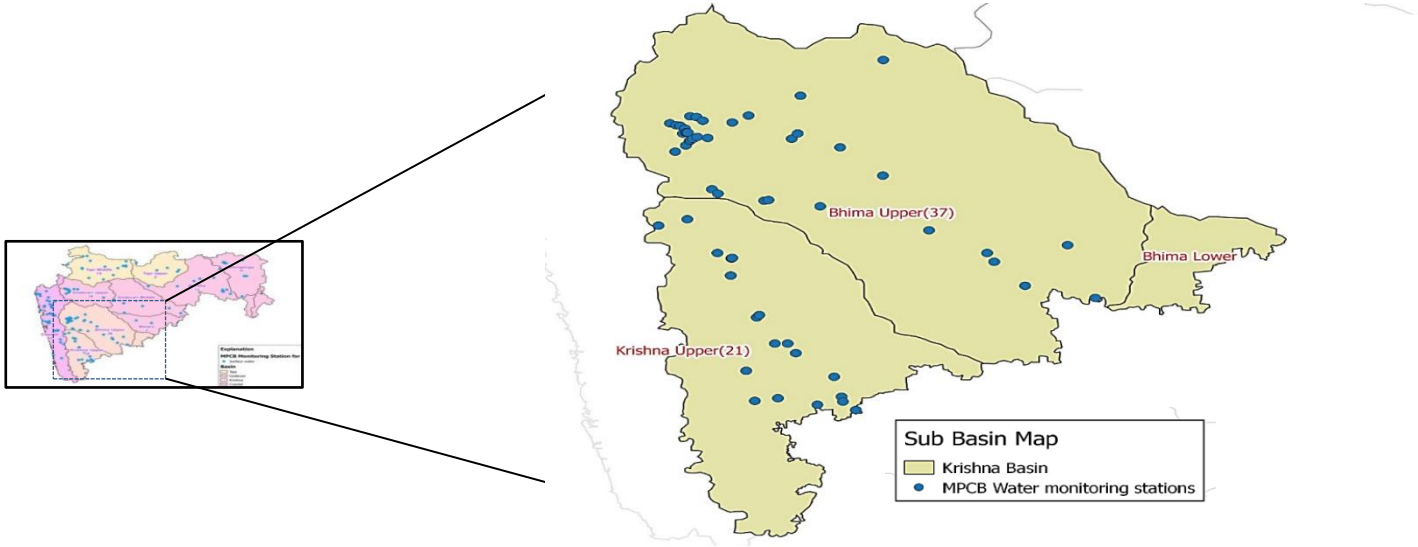


Spatial map of SurfaceWQI at Godavari Basin (2 of 2)- (December 2023)



Krishna Basin

The Krishna River is the second largest eastward-draining interstate river in Peninsular India, with a drainage area of approximately 2,58,948 square kilometers, accounting for about 8% of the country's total geographical area. Originating in the Western Ghats at an altitude of 1,337 meters, just north of Mahabaleshwar and around 64 km from the Arabian Sea, the river flows from west to east and eventually joins the Bay of Bengal, downstream of Vijayawada in Andhra Pradesh. Spanning a course of about 1,400 km, the Krishna River is joined by 13 major tributaries. It serves as a crucial source of irrigation for the states of Maharashtra, Karnataka, Telangana, and Andhra Pradesh. The Krishna Basin is further divided into the Bhima Upper and Krishna Upper regions. A list of Water Quality Monitoring Stations (WQMS) installed in areas of the Krishna basin can be found in Tables No. 20 to 22.



Krishna Basin (Intra Basin analysis)

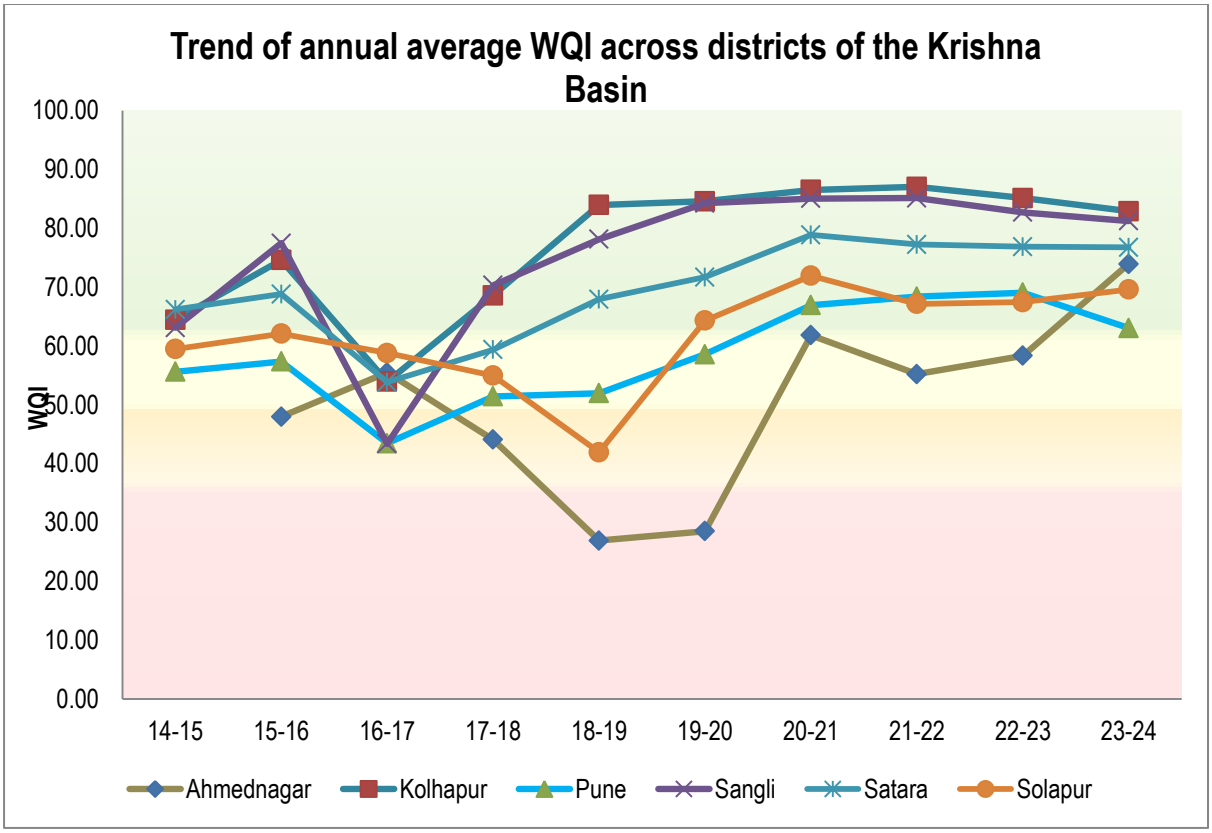


Figure No. 20: Trend of annual average WQI across districts of the Krishna basin

WQI	WQI Category	Class by CPCB	Represented in the above graph
63-100	Good to Excellent	A	Non-polluted
50-63	Medium to Good	B	Non-polluted
38-50	Bad	C	Polluted
38 & less	Bad to Very Bad	D, E	Heavily polluted

Note: This graph considers the average WQI for all the monitoring stations in that particular district and hence may include some bias. This graph is only for an overview and monitoring station-wise data may be analyzed to pinpoint the most affected and polluted patches of rivers in that district.

Figure No. 20 represents the intrabasin performance of the Krishna basin. In the year 2023-24, the data indicates that the annual average WQI across all 6 monitored districts remained within the 'Good to Excellent' category. However, there were slight variations recorded in WQI compared to the previous year (2022-23). For instance, out of 6 districts, an increase in annual average WQI was recorded by WQMS installed at Ahmednagar (from 58.34 to 73.93) and Solapur (from 67.46 to 69.59) whereas the rest of the districts recorded a minuscule dip in the annual average WQI.

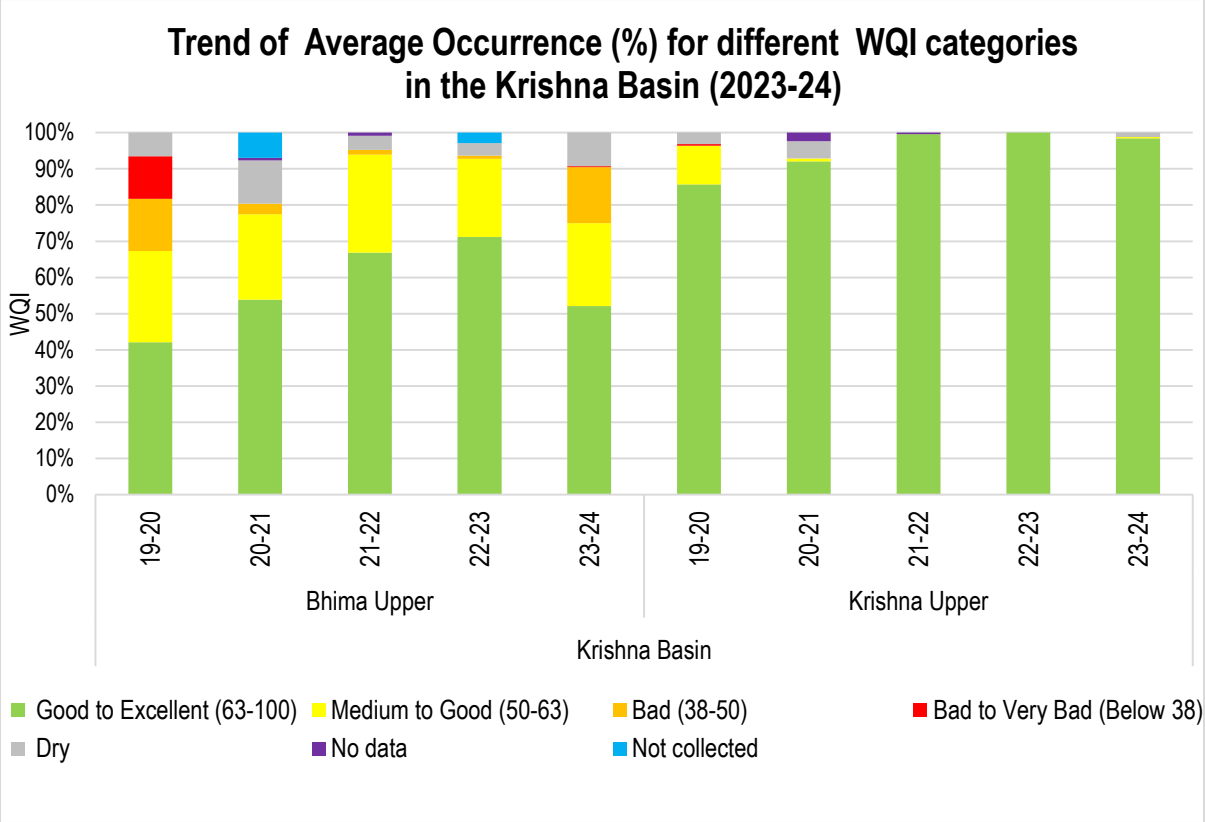
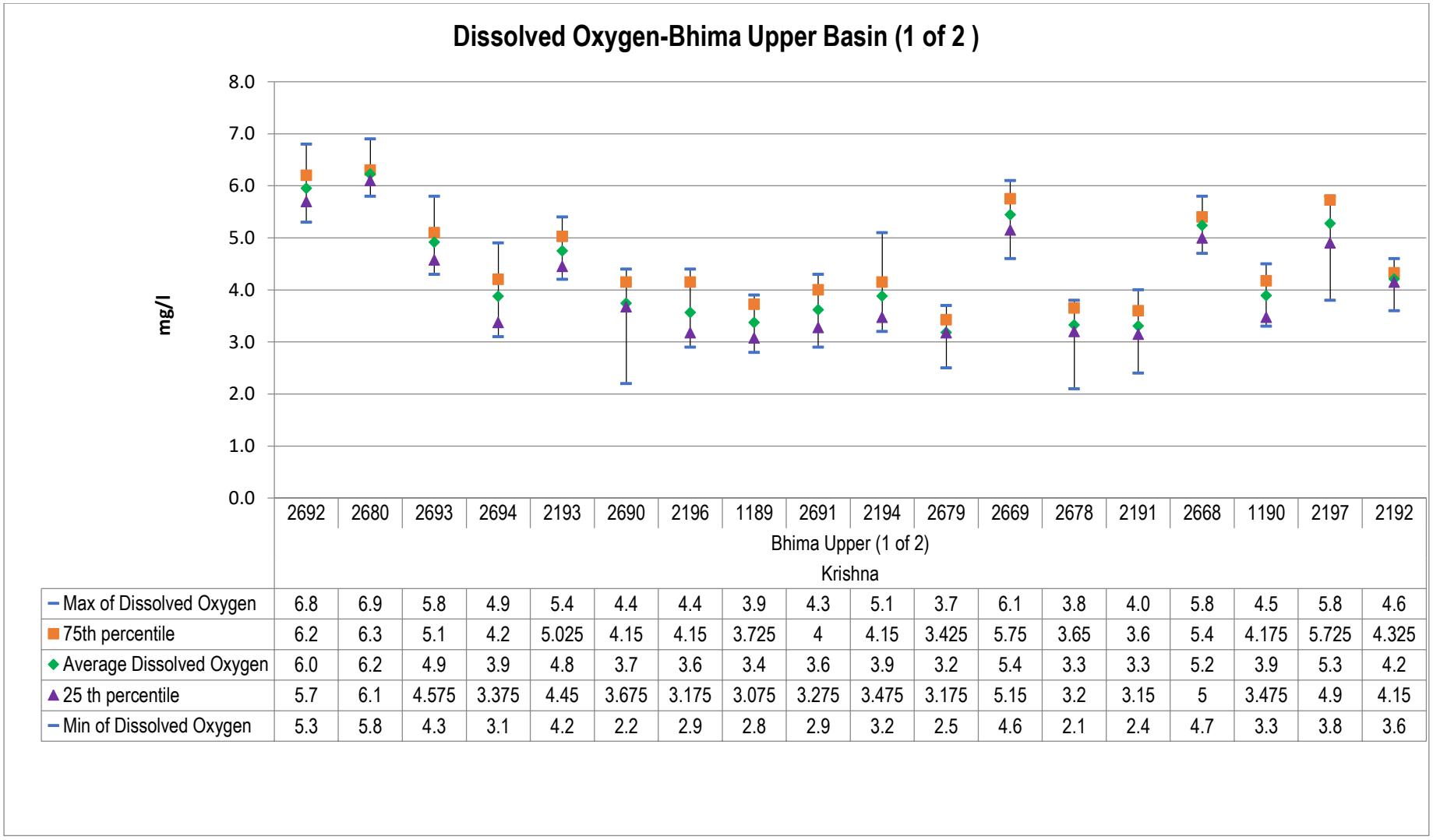


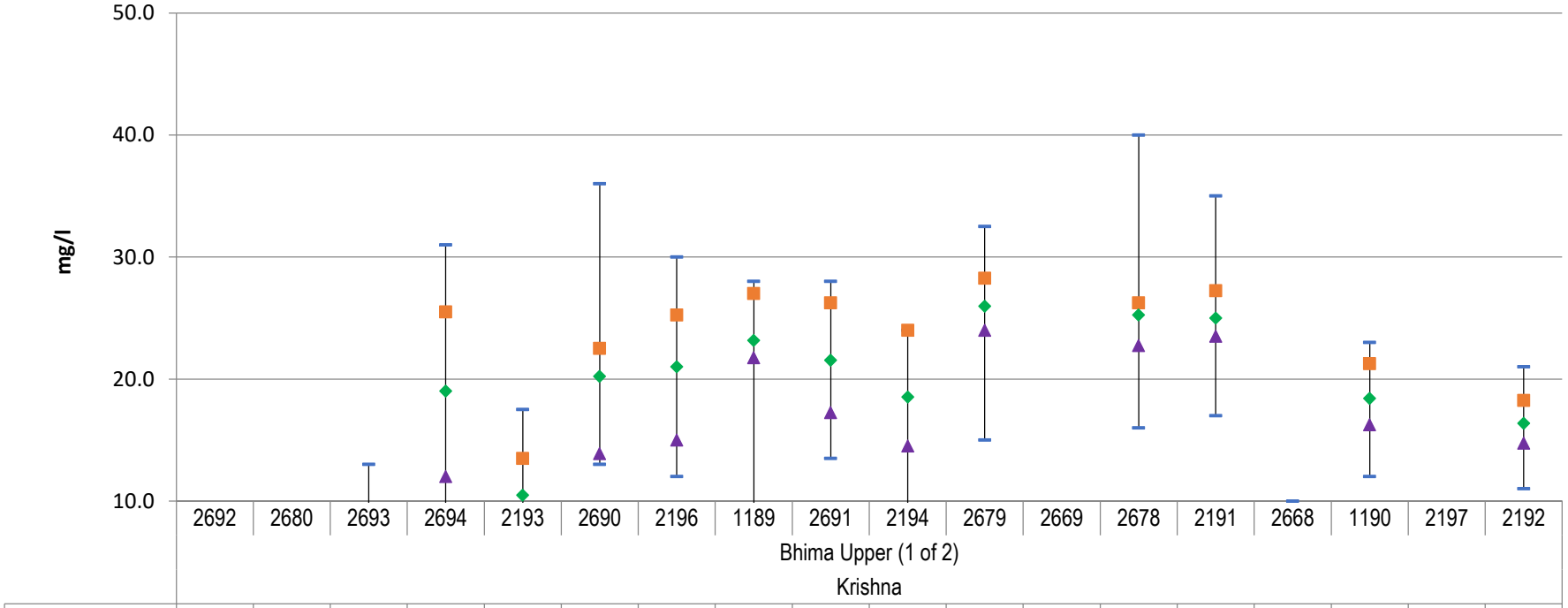
Figure No. 21: Trend of average occurrence for different WQI categories in the Krishna Basin

The interbasin performance of the Krishna is shown in the Figure No. 21.In Bhima Upper, the percentage of observations rated 'Good to Excellent' in the Water Quality Index (WQI) was 52.08%, a significant decline from 71.17% in 2022-23. The 'Dry' category accounted for 9.25%, while the 'Bad' category saw a notable increase, rising to 15.50% in 2023-24, compared to just 0.90% the previous year. In Krishna Upper, 98.41% of observations fell under the 'Good to Excellent' category, with only 1.19% categorized as 'Dry'.



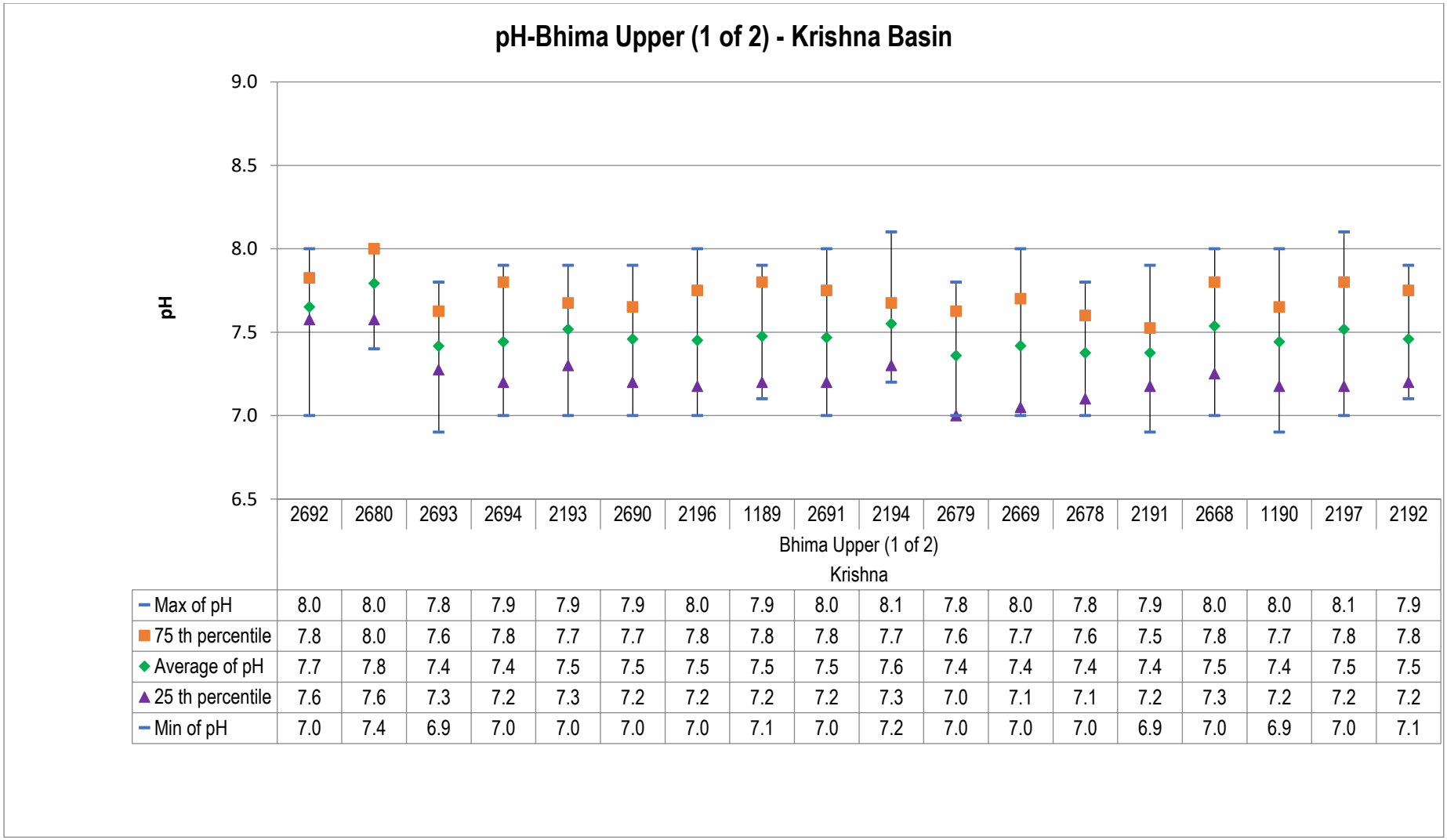
	2692	2680	2693	2694	2193	2690	2196	1189	2691	2194	2679	2669	2678	2191	2668	1190	2197	2192
Max of Dissolved Oxygen	6.8	6.9	5.8	4.9	5.4	4.4	4.4	3.9	4.3	5.1	3.7	6.1	3.8	4.0	5.8	4.5	5.8	4.6
75th percentile	6.2	6.3	5.1	4.2	5.025	4.15	4.15	3.725	4	4.15	3.425	5.75	3.65	3.6	5.4	4.175	5.725	4.325
Average Dissolved Oxygen	6.0	6.2	4.9	3.9	4.8	3.7	3.6	3.4	3.6	3.9	3.2	5.4	3.3	3.3	5.2	3.9	5.3	4.2
25 th percentile	5.7	6.1	4.575	3.375	4.45	3.675	3.175	3.075	3.275	3.475	3.175	5.15	3.2	3.15	5	3.475	4.9	4.15
Min of Dissolved Oxygen	5.3	5.8	4.3	3.1	4.2	2.2	2.9	2.8	2.9	3.2	2.5	4.6	2.1	2.4	4.7	3.3	3.8	3.6

Figure No. 22: Trend of Dissolved Oxygen (DO) levels recorded at WQMS at Bhima upper sub basin -Krishna Basin (1 of 2)



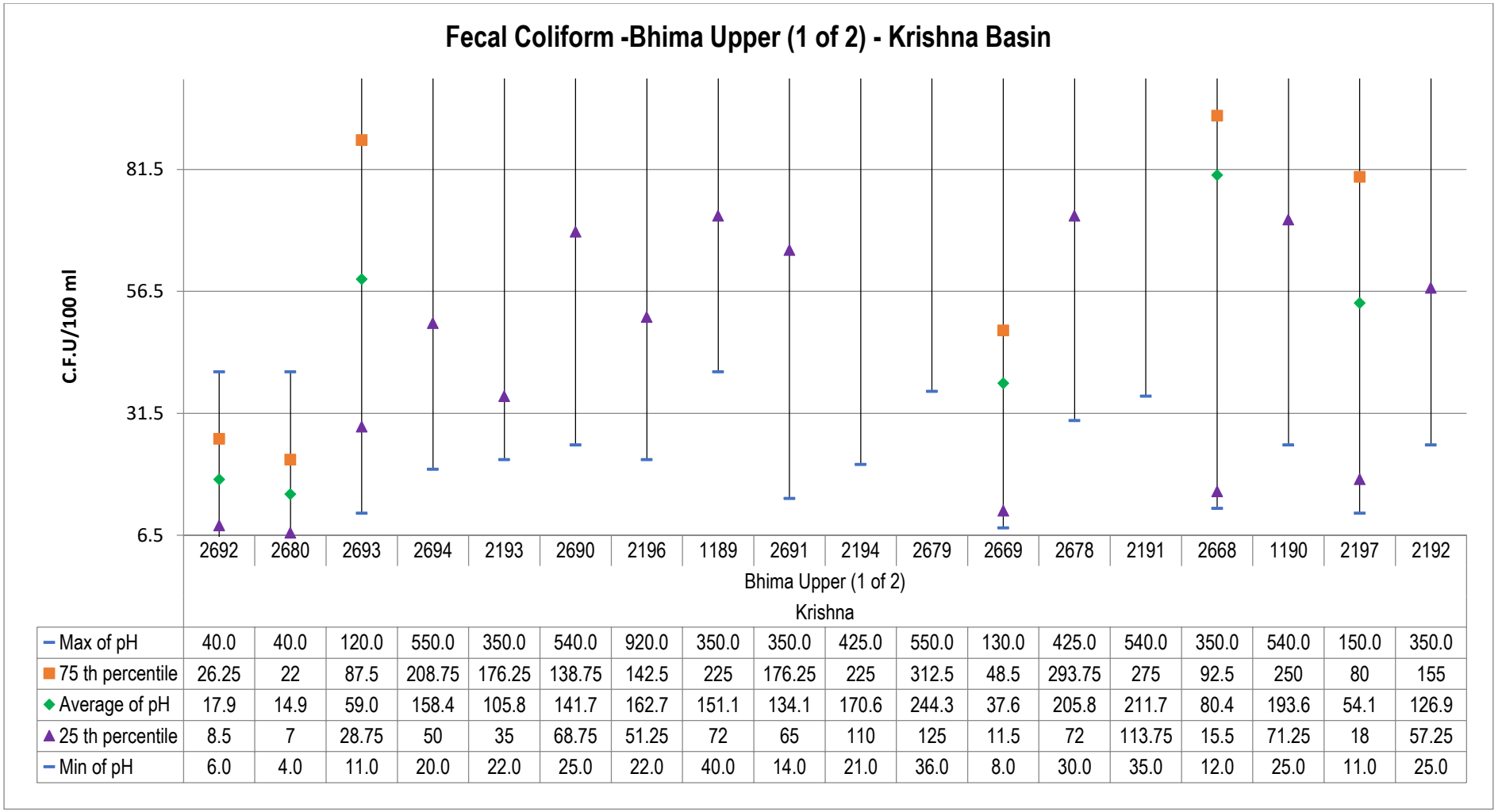
	2692	2680	2693	2694	2193	2690	2196	1189	2691	2194	2679	2669	2678	2191	2668	1190	2197	2192
Max of BOD	4.8	3.2	13.0	31.0	17.5	36.0	30.0	28.0	28.0	24.0	32.5	9.0	40.0	35.0	10.0	23.0	9.5	21.0
75 th percentile	4.1	2.9	8.8	25.5	13.5	22.5	25.3	27.0	26.3	24.0	28.3	5.7	26.3	27.3	7.2	21.3	6.4	18.3
Average of BOD	3.6	2.7	8.1	19.0	10.5	20.2	21.0	23.2	21.5	18.5	26.0	5.0	25.3	25.0	6.1	18.4	5.6	16.4
25 th percentile	3.2	2.6	6.6	12.0	7.9	13.9	15.0	21.8	17.3	14.5	24.0	4.2	22.8	23.5	4.9	16.3	4.3	14.8
Min of BOD	2.2	2.0	4.8	9.0	5.2	13.0	12.0	6.8	13.5	5.4	15.0	2.2	16.0	17.0	3.2	12.0	3.5	11.0

Figure No. 23: Trend of Biological Oxygen Demand (BOD) levels recorded at WQMS at Bhima upper sub basin -Krishna Basin (1 of 2)



	2692	2680	2693	2694	2193	2690	2196	1189	2691	2194	2679	2669	2678	2191	2668	1190	2197	2192
Max of pH	8.0	8.0	7.8	7.9	7.9	7.9	8.0	7.9	8.0	8.1	7.8	8.0	7.8	7.9	8.0	8.0	8.1	7.9
75 th percentile	7.8	8.0	7.6	7.8	7.7	7.7	7.8	7.8	7.8	7.7	7.6	7.7	7.6	7.5	7.8	7.7	7.8	7.8
Average of pH	7.7	7.8	7.4	7.4	7.5	7.5	7.5	7.5	7.5	7.6	7.4	7.4	7.4	7.4	7.5	7.4	7.5	7.5
25 th percentile	7.6	7.6	7.3	7.2	7.3	7.2	7.2	7.2	7.2	7.3	7.0	7.1	7.1	7.2	7.3	7.2	7.2	7.2
Min of pH	7.0	7.4	6.9	7.0	7.0	7.0	7.0	7.1	7.0	7.2	7.0	7.0	7.0	6.9	7.0	6.9	7.0	7.1

Figure No. 24: Trend of pH levels recorded at WQMS at Bhima upper sub basin -Krishna Basin (1 of 2)



	2692	2680	2693	2694	2193	2690	2196	1189	2691	2194	2679	2669	2678	2191	2668	1190	2197	2192
Max of pH	40.0	40.0	120.0	550.0	350.0	540.0	920.0	350.0	350.0	425.0	550.0	130.0	425.0	540.0	350.0	540.0	150.0	350.0
75 th percentile	26.25	22	87.5	208.75	176.25	138.75	142.5	225	176.25	225	312.5	48.5	293.75	275	92.5	250	80	155
Average of pH	17.9	14.9	59.0	158.4	105.8	141.7	162.7	151.1	134.1	170.6	244.3	37.6	205.8	211.7	80.4	193.6	54.1	126.9
25 th percentile	8.5	7	28.75	50	35	68.75	51.25	72	65	110	125	11.5	72	113.75	15.5	71.25	18	57.25
Min of pH	6.0	4.0	11.0	20.0	22.0	25.0	22.0	40.0	14.0	21.0	36.0	8.0	30.0	35.0	12.0	25.0	11.0	25.0

Figure No. 25: Trend of Fecal Coliform levels recorded at WQMS at Bhima upper sub basin -Krishna Basin (1 of 2)

Water Quality Index for WQMS in Krishna Basin (1 of 2): Sub-Basin-Bhima Upper (1 of 2)

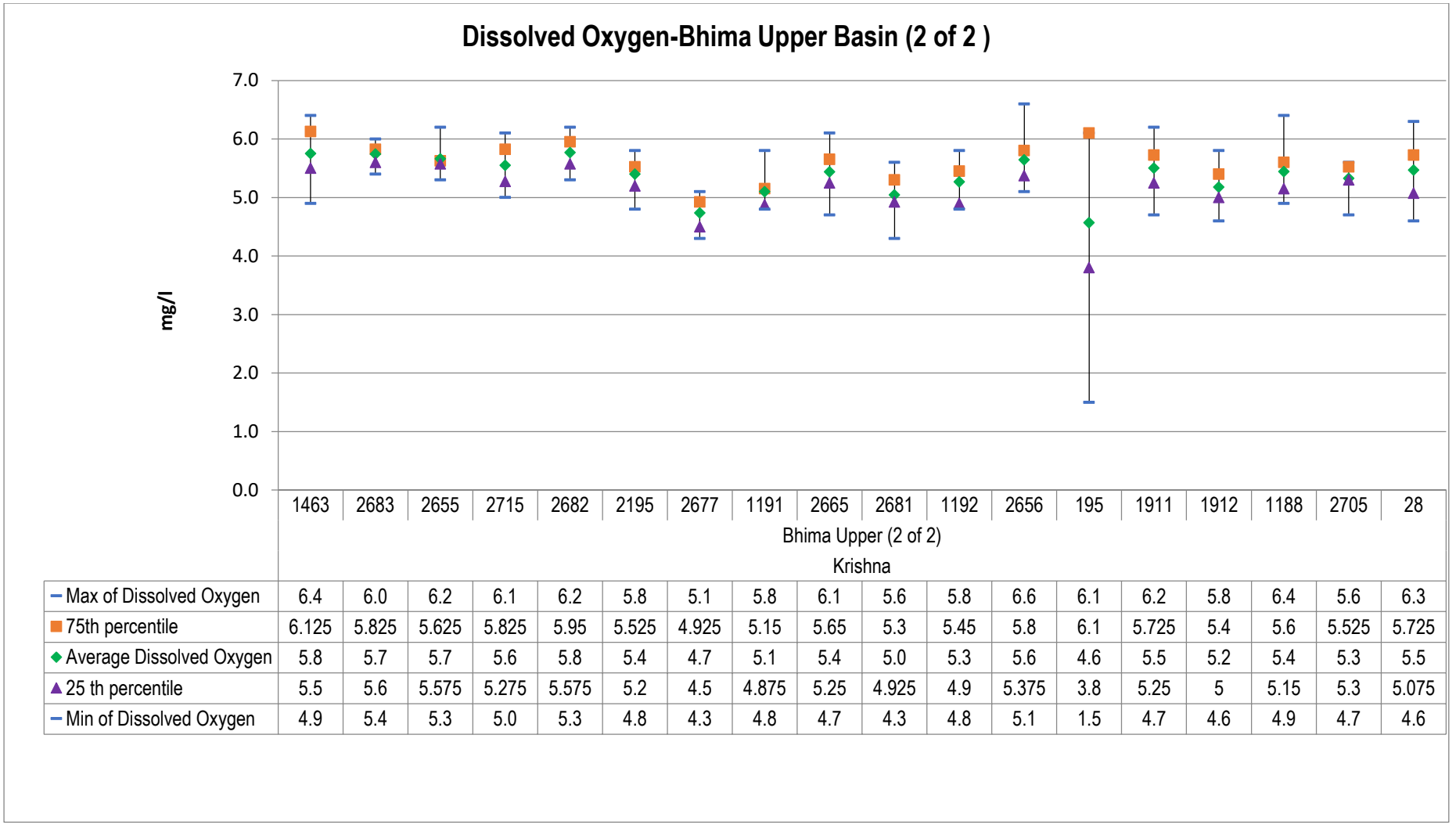
Apr	84	87	76	57	65	55	51	53	53	50	48	81	51	51	78	52	80	57
May	84	85	68	52	56	52	47	45	42	46	44	77	44	44	74	45	78	51
Jun	87	86	64	57	64	54	50	49	46	50	44	84	47	48	79	49	76	53
Jul	83	84	71	65	70	61	63	49	65	62	54	84	55	58	75	58	78	60
Aug	75	83	72	65	68	62	62	56	62	61	51	80	56	52	74	52	77	59
Sep	75	79	67	57	74	58	57	47	56	69	40	75	46	47	70	61	76	63
Oct	79	82	71	56	66	57	59	53	53	57	47	72	48	42	67	53	69	55
Nov	78	79	65	47	53	52	51	51	48	50	48	68	48	48	Dry	54	77	53
Dec	76	81	58	42	63	49	45	46	51	54	41	74	45	46	71	51	67	58
Jan	83	82	64	46	54	38	43	45	49	47	40	63	42	40	61	58	59	58
Feb	76	83	59	46	56	42	45	41	44	46	40	Dry	42	46	60	45	64	54
Mar	78	81	61	48	58	45	40	52	42	41	45	62	45	43	59	44	55	46
Station code	2692	2680	2693	2694	2193	2690	2196	1189	2691	2194	2679	2669	2678	2191	2668	1190	2197	2192
Sub Basin	Bhima Upper (1 of 2)																	
Basin	Krishna																	

Legend

Good to Excellent	Medium to Good	Bad	Bad to Very Bad	Dry	No Data	Not Available

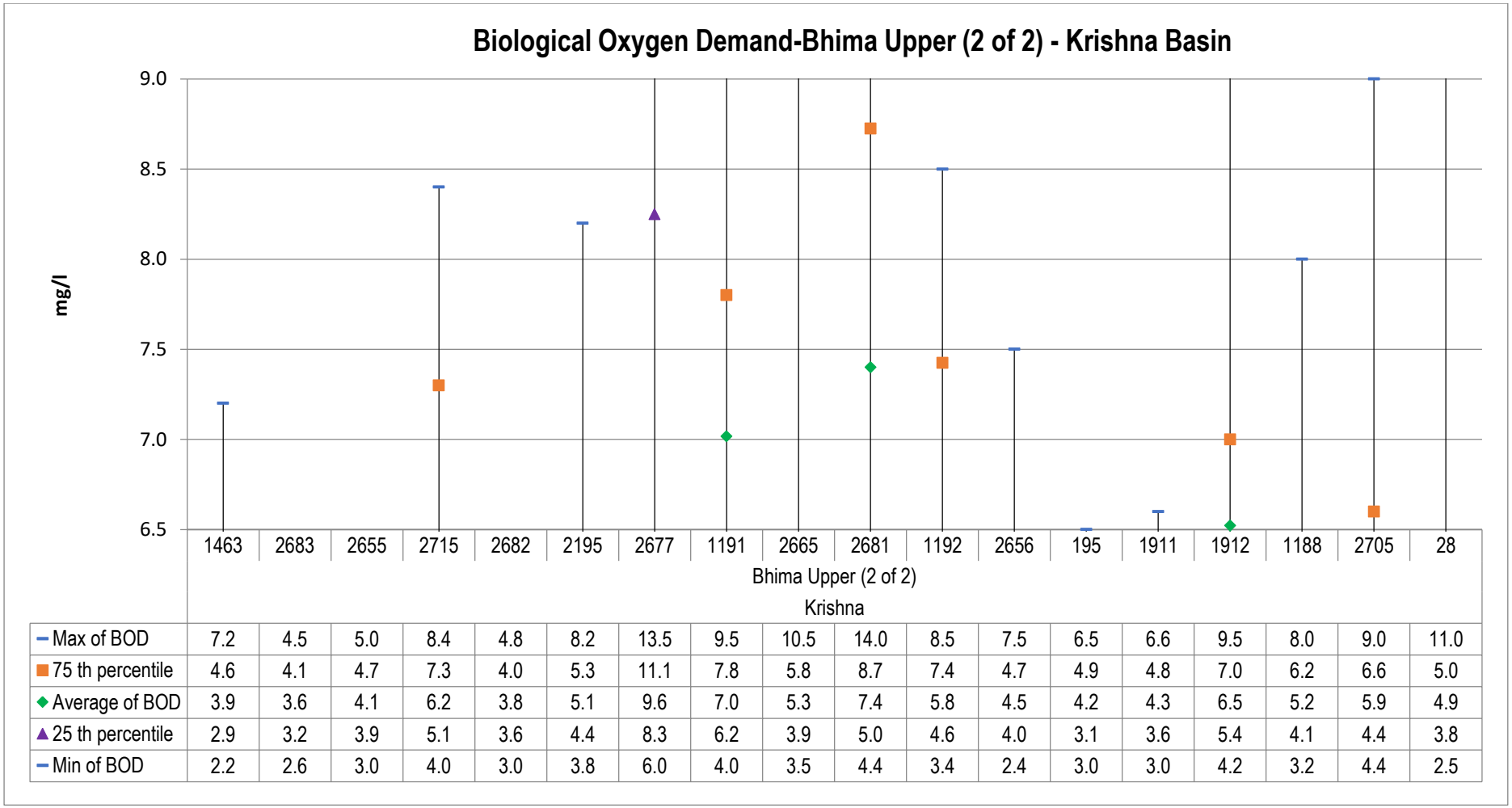
Table No. 20 : Surface water quality monitoring stations in Krishna Basin (1 of 2) Sub Basin –Bhima Upper (1 of 2)

Program	Station ID	River/Nalla	Station Name	Village	Taluka	District
NWMP	2692	Pawana	Pawana at Ravet Weir, Pune	Ravet	Haweli	Pune
NWMP	2680	Mutha	Mutha at Khadakvasla Dam Pune	Kadakvasla	Haweli	Pune
NWMP	2693	Pawana	Pawana at Chinchwadgaon, Pune	Chinchwadgaon	Haweli	Pune
NWMP	2694	Pawana	Pawana at Pimprigaon, Pune	Pimprigaon	Haweli	Pune
NWMP	2193	Mula	Mula at Aundh Bridge -Aundgaon	Aundhgaon	Haweli	Pune
NWMP	2690	Pawana	Pawana at Kasarwadi Pune	Kasarwadi	Haweli	Pune
NWMP	2196	Pawana	Pawana at Sangavigaon, Pune	Sangavigaon	Haweli	Pune
NWMP	1189	Bhima	Bhima at Pune(Mutha) at U/s of Vithalwadi near Sankar Mandir	Vithalwadi	Haweli	Pune
NWMP	2691	Pawana	Pawana at Dapodi Bridge at Pawana-Mulla Sangan Pune	Dapodi	Haweli	Pune
NWMP	2194	Mula	Mula at Harrison Bridge near Mula -Pawana Sangam	Bopodi	Haweli	Pune
NWMP	2679	Mutha	Mutha at Deccan Bridge, Pune	Deccan	Pune	Pune
NWMP	2669	Indrayani	Indrayani at U/s of Moshigaon, Pune	Moshigaon	Haweli	Pune
NWMP	2678	Mutha	Mutha near Veer Savarkar Bhavan	Pune M.C	Pune	Pune
NWMP	2191	Mutha	Mutha at Sangam Bridge Near Ganpathi Ghat	Shivaji Nagar	Pune	Pune
NWMP	2668	Indrayani	Indrayani at D/s of Moshi village	Moshi	Haveli	Pune
NWMP	1190	Bhima	Bhima at D/s of Bundgarden, Pune	Yerwada	Haweli	Pune
NWMP	2197	Indrayani	Indrayani at D/s of Alandigaon, Pune	Alandigaon	Haweli	Pune
NWMP	2192	Mula-Mutha	Mula-Mutha at Mundhwa Bridge	Mundhawa	Haweli	Pune



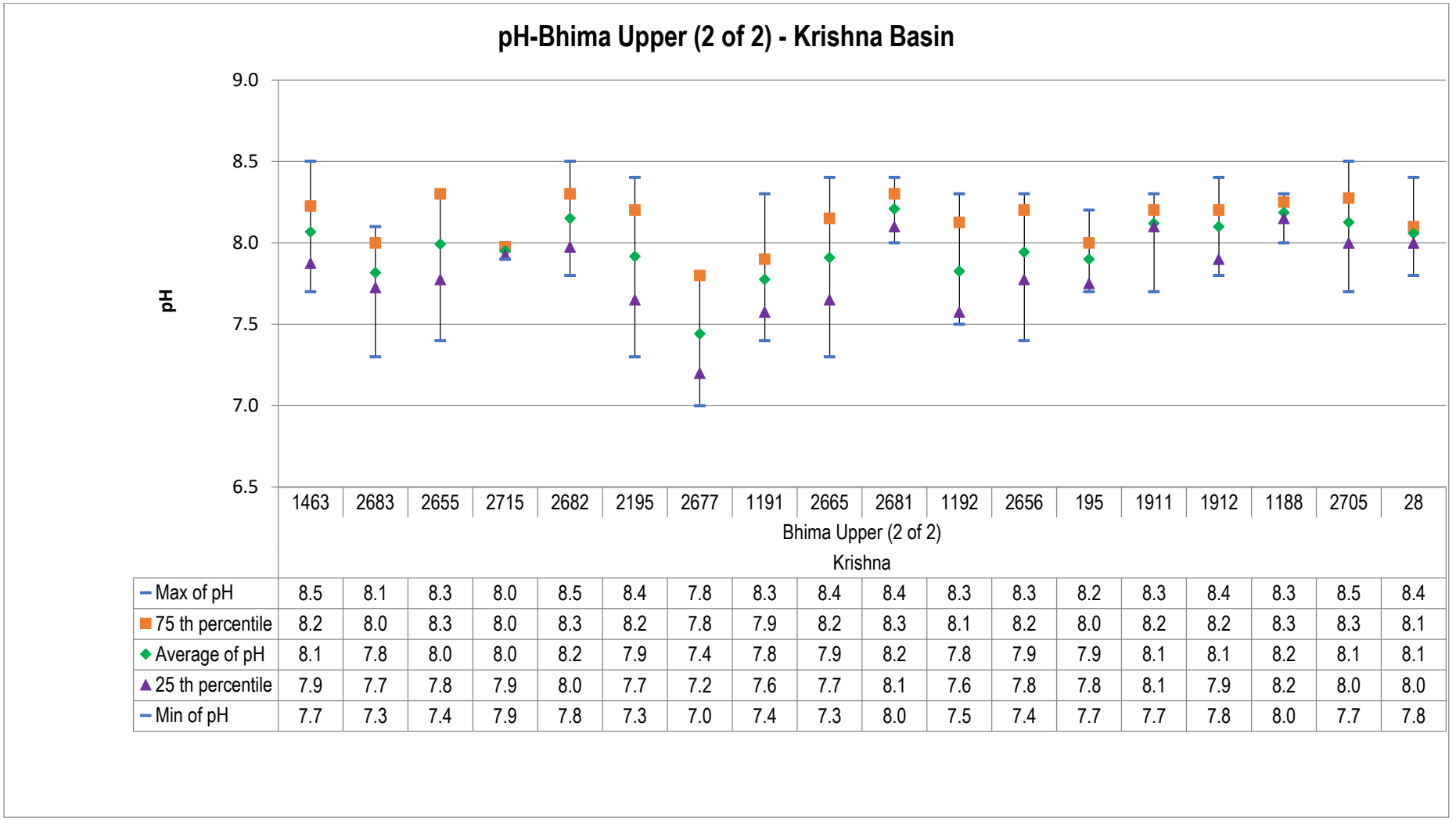
	1463	2683	2655	2715	2682	2195	2677	1191	2665	2681	1192	2656	195	1911	1912	1188	2705	28
Max of Dissolved Oxygen	6.4	6.0	6.2	6.1	6.2	5.8	5.1	5.8	6.1	5.6	5.8	6.6	6.1	6.2	5.8	6.4	5.6	6.3
75th percentile	6.125	5.825	5.625	5.825	5.95	5.525	4.925	5.15	5.65	5.3	5.45	5.8	6.1	5.725	5.4	5.6	5.525	5.725
Average Dissolved Oxygen	5.8	5.7	5.7	5.6	5.8	5.4	4.7	5.1	5.4	5.0	5.3	5.6	4.6	5.5	5.2	5.4	5.3	5.5
25 th percentile	5.5	5.6	5.575	5.275	5.575	5.2	4.5	4.875	5.25	4.925	4.9	5.375	3.8	5.25	5	5.15	5.3	5.075
Min of Dissolved Oxygen	4.9	5.4	5.3	5.0	5.3	4.8	4.3	4.8	4.7	4.3	4.8	5.1	1.5	4.7	4.6	4.9	4.7	4.6

Figure No. 26: Trend of Dissolved Oxygen (DO) levels recorded at WQMS at Bhima upper sub basin -Krishna Basin (2 of 2)



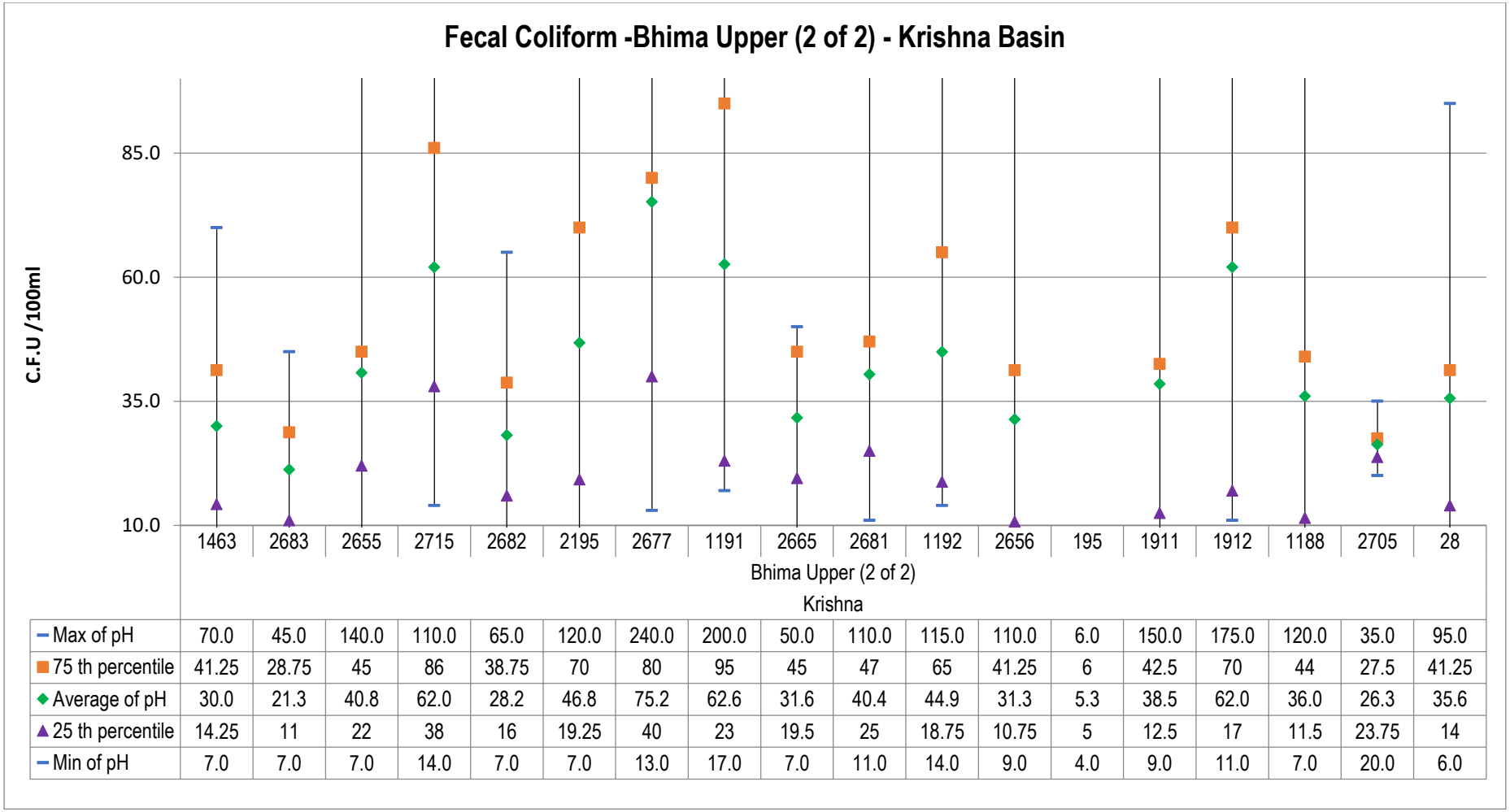
	1463	2683	2655	2715	2682	2195	2677	1191	2665	2681	1192	2656	195	1911	1912	1188	2705	28
Max of BOD	7.2	4.5	5.0	8.4	4.8	8.2	13.5	9.5	10.5	14.0	8.5	7.5	6.5	6.6	9.5	8.0	9.0	11.0
75 th percentile	4.6	4.1	4.7	7.3	4.0	5.3	11.1	7.8	5.8	8.7	7.4	4.7	4.9	4.8	7.0	6.2	6.6	5.0
Average of BOD	3.9	3.6	4.1	6.2	3.8	5.1	9.6	7.0	5.3	7.4	5.8	4.5	4.2	4.3	6.5	5.2	5.9	4.9
25 th percentile	2.9	3.2	3.9	5.1	3.6	4.4	8.3	6.2	3.9	5.0	4.6	4.0	3.1	3.6	5.4	4.1	4.4	3.8
Min of BOD	2.2	2.6	3.0	4.0	3.0	3.8	6.0	4.0	3.5	4.4	3.4	2.4	3.0	3.0	4.2	3.2	4.4	2.5

Figure No. 27: Trend of Biological Oxygen Demand (BOD) levels recorded at WQMS at Bhima upper sub basin -Krishna Basin (2 of 2)



	1463	2683	2655	2715	2682	2195	2677	1191	2665	2681	1192	2656	195	1911	1912	1188	2705	28
Max of pH	8.5	8.1	8.3	8.0	8.5	8.4	7.8	8.3	8.4	8.4	8.3	8.3	8.2	8.3	8.4	8.3	8.5	8.4
75 th percentile	8.2	8.0	8.3	8.0	8.3	8.2	7.8	7.9	8.2	8.3	8.1	8.2	8.0	8.2	8.2	8.3	8.3	8.1
Average of pH	8.1	7.8	8.0	8.0	8.2	7.9	7.4	7.8	7.9	8.2	7.8	7.9	7.9	8.1	8.1	8.2	8.1	8.1
25 th percentile	7.9	7.7	7.8	7.9	8.0	7.7	7.2	7.6	7.7	8.1	7.6	7.8	7.8	8.1	7.9	8.2	8.0	8.0
Min of pH	7.7	7.3	7.4	7.9	7.8	7.3	7.0	7.4	7.3	8.0	7.5	7.4	7.7	7.7	7.8	8.0	7.7	7.8

Figure No. 28: Trend of pH levels recorded at WQMS at Bhima upper sub basin -Krishna Basin (2 of 2)



	1463	2683	2655	2715	2682	2195	2677	1191	2665	2681	1192	2656	195	1911	1912	1188	2705	28
Max of pH	70.0	45.0	140.0	110.0	65.0	120.0	240.0	200.0	50.0	110.0	115.0	110.0	6.0	150.0	175.0	120.0	35.0	95.0
75 th percentile	41.25	28.75	45	86	38.75	70	80	95	45	47	65	41.25	6	42.5	70	44	27.5	41.25
Average of pH	30.0	21.3	40.8	62.0	28.2	46.8	75.2	62.6	31.6	40.4	44.9	31.3	5.3	38.5	62.0	36.0	26.3	35.6
25 th percentile	14.25	11	22	38	16	19.25	40	23	19.5	25	18.75	10.75	5	12.5	17	11.5	23.75	14
Min of pH	7.0	7.0	7.0	14.0	7.0	7.0	13.0	17.0	7.0	11.0	14.0	9.0	4.0	9.0	11.0	7.0	20.0	6.0

Figure No. 29: Trend of Fecal Coliform levels recorded at WQMS at Bhima upper sub basin -Krishna Basin (2 of 2)

Water Quality Index for WQMS in Krishna Basin (1 of 2): Sub-Basin-Bhima Upper (2 of 2)

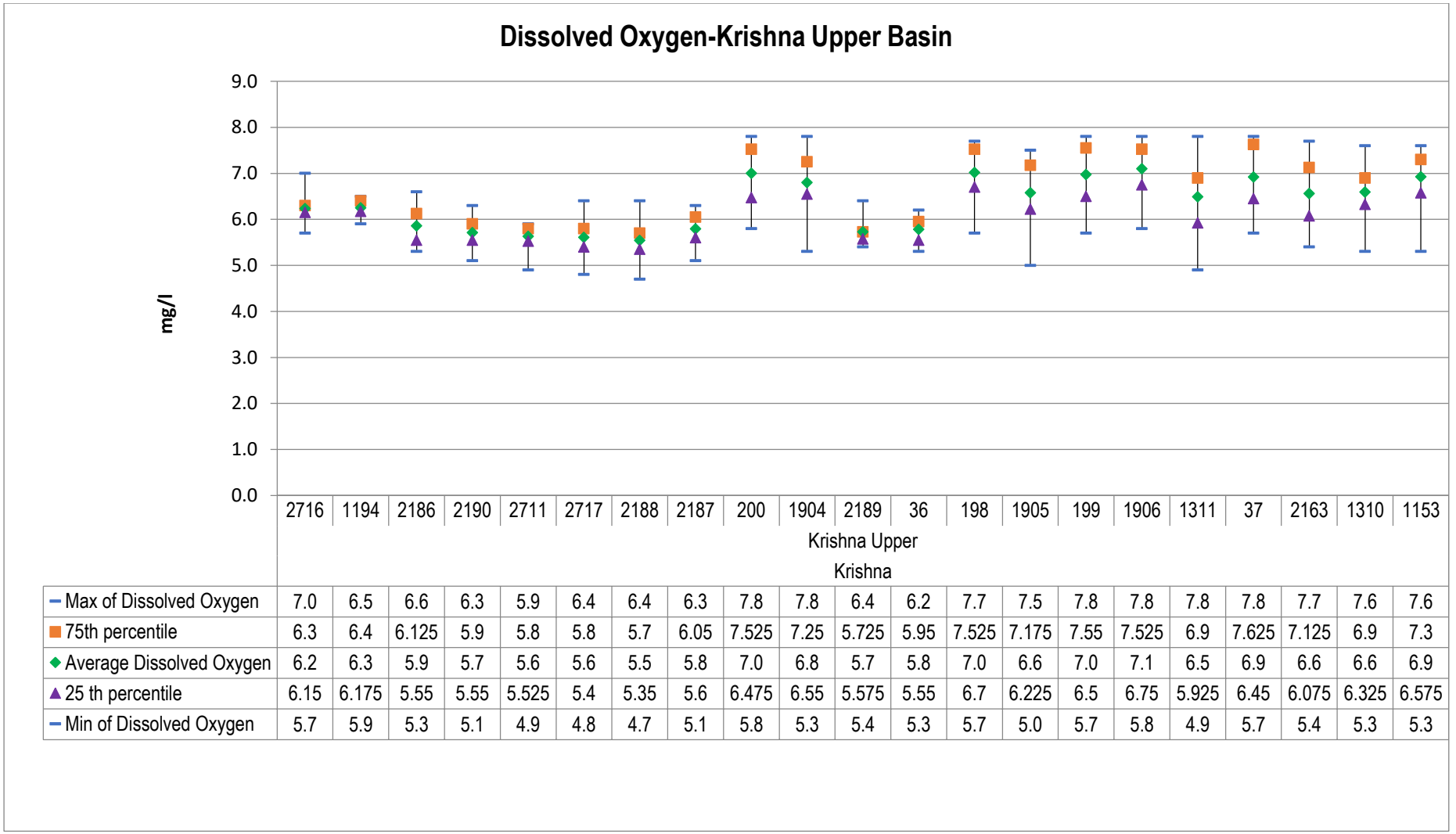
Apr	77	82	76	Dry	76	79	66	70	71	64	74	77		78	74	74	69	77
May	74	76	72	Dry	69	66	65	69	72	55	75	79		Dry	64	Dry	Dry	79
Jun	79	81	78	Dry	76	74	58	63	Dry	62	66	74		80	Dry	Dry	Dry	75
Jul	84	80	76	Dry	81	76	68	70	75	68	77	75		74	74	82	Dry	77
Aug	82	77	80	79	75	76	71	76	80	71	78	82		79	70	Dry	Dry	81
Sep	63	75	72	Dry	80	73	66	67	67	61	70	74		Dry	Dry	Dry	Dry	76
Oct	74	75	73	61	74	73	65	67	76	71	68	77		69	63	61	Dry	74
Nov	70	78	73	Dry	74	75	62	75	72	69	76	75		70	69	Dry	Dry	70
Dec	72	81	76	Dry	69	65	62	57	77	70	63	67		69	60	73	76	64
Jan	74	78	73	Dry	76	64	58	61	59	56	65	73	84	71	61	66	60	60
Feb	70	74	69	Dry	72	68	57	59	76	69	60	70	82	67	62	69	72	64
Mar	79	76	68	Dry	73	67	59	67	67	62	69	74	56	65	Dry	69	Dry	64
Station code	1463	2683	2655	2715	2682	2195	2677	1191	2665	2681	1192	2656	195	1911	1912	1188	2705	28
Sub Basin	Bhima Upper (2 of 2)																	
Basin	Krishna																	

Legend

Good to Excellent	Medium to Good	Bad	Bad to Very Bad	Dry	No Data	Not Available

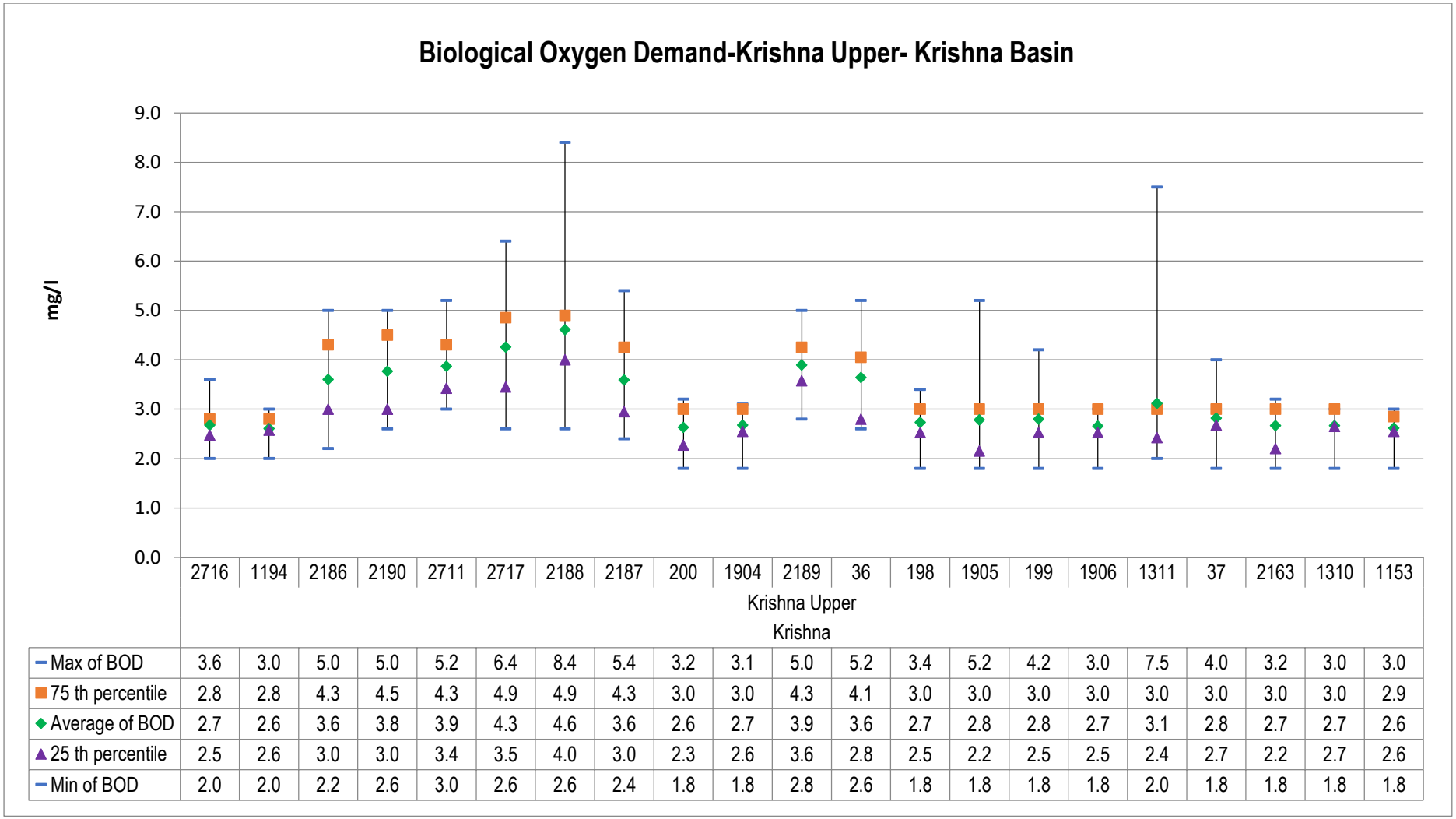
Table No. 21 : Surface water monitoring stations at Krishna Basin (1 of 2) Sub Basin Bhima Upper (2 of 2)

Program	Station ID	River/Nalla	Station Name	Village	Taluka	District
NWMP	1463	Nira	Nira at Sarola bridge	Sarola	Bhor	Pune
NWMP	2683	Nira	Nira at Shindewadi	Shindewadi, Shirwal	Khandala	Satara
NWMP	2655	Bhima	Bhima at Koregaon near Koregaon Bridge, Pune	Koregaon	Shirur	Pune
NWMP	2715	Vel	Vel at Shikrapur, Pune	Shikrapur	Shirur	Pune
NWMP	2682	Nira	Nira at U/s of Jubilant Organosis Pune	Nira(Datta ghat)	Baramati	Pune
NWMP	2195	Nira	Nira at D/s of Jubilant Organosis Pune	Nimbut	Baramati	Pune
NWMP	2677	Mula-Mutha	Mula-Mutha at D/s of Theur, Pune	Theur	Haweli	Pune
NWMP	1191	Bhima	Bhima after confluence with Mula-Mutha at Pargaon near Vasant Bandara	Pargaon	Daund	Pune
NWMP	2665	Ghod	Ghod at Shirur, Pune	Shirur	Shirur	Pune
NWMP	2681	Nira	Nira at Sangavi	Sangavi	Phaltan	Satara
NWMP	1192	Bhima	Bhima at Daund near Mahadev temple	Daund	Daund	Pune
NWMP	2656	Bhima	Bhima Backwater of Ujani Dam near raw water pump house	Kumbargaon	Indapur	Pune
SWMP	195	Sina	Sina Bridge At Burudgaon Road, A/P Ahmednagar, Taluka & District Ahmednagar	Burudgaon	Ahmednagar	Ahmednagar
NWMP	1911	Chandrabhaga	Chandrabhaga at U/s of Pandharpur town	Gursale	Pandarpur	Solapur
NWMP	1912	Chandrabhaga	Chandrabhaga at D/s of Pandharpur town near Vishnupant Mandir	Gopalpur	Pandarpur	Solapur
NWMP	1188	Bhima	Bhima at Narshingpur near Sangam Bridge after confluence with Nira	Narsingpur	Malshiros	Solapur
NWMP	2705	Sina	Sina near Laboti till naka Solapur	Laboti	Mohal	Solapur
NWMP	28	Bhima	Bhima at Takli	Takali	South Solapur	Solapur



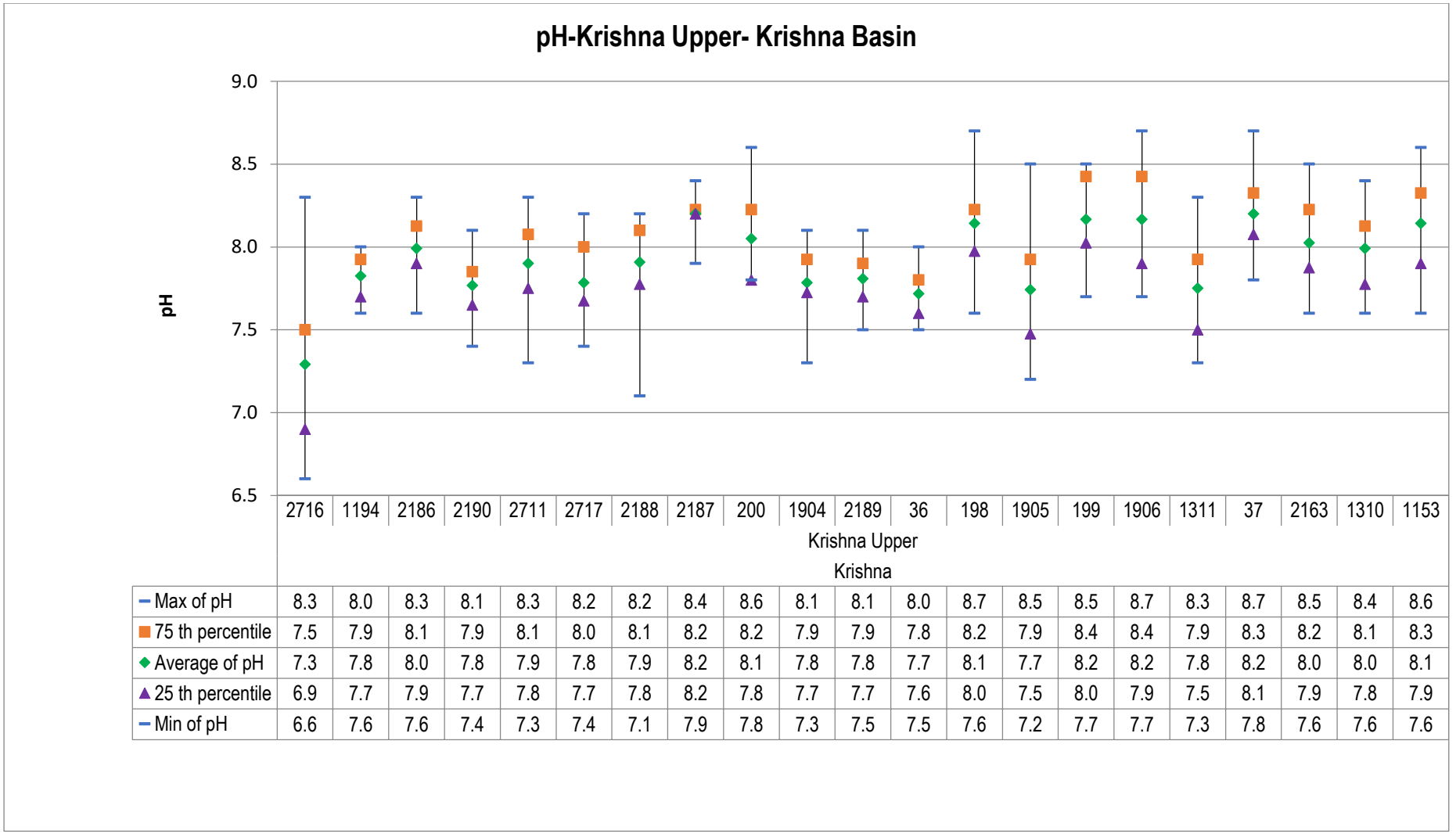
	2716	1194	2186	2190	2711	2717	2188	2187	200	1904	2189	36	198	1905	199	1906	1311	37	2163	1310	1153
Max of Dissolved Oxygen	7.0	6.5	6.6	6.3	5.9	6.4	6.4	6.3	7.8	7.8	6.4	6.2	7.7	7.5	7.8	7.8	7.8	7.8	7.7	7.6	7.6
75th percentile	6.3	6.4	6.125	5.9	5.8	5.8	5.7	6.05	7.525	7.25	5.725	5.95	7.525	7.175	7.55	7.525	6.9	7.625	7.125	6.9	7.3
Average Dissolved Oxygen	6.2	6.3	5.9	5.7	5.6	5.6	5.5	5.8	7.0	6.8	5.7	5.8	7.0	6.6	7.0	7.1	6.5	6.9	6.6	6.6	6.9
25 th percentile	6.15	6.175	5.55	5.55	5.525	5.4	5.35	5.6	6.475	6.55	5.575	5.55	6.7	6.225	6.5	6.75	5.925	6.45	6.075	6.325	6.575
Min of Dissolved Oxygen	5.7	5.9	5.3	5.1	4.9	4.8	4.7	5.1	5.8	5.3	5.4	5.3	5.7	5.0	5.7	5.8	4.9	5.7	5.4	5.3	5.3

Figure No. 30: Trend of Dissolved Oxygen (DO) levels recorded at WQMS at Krishna upper sub basin -Krishna Basin



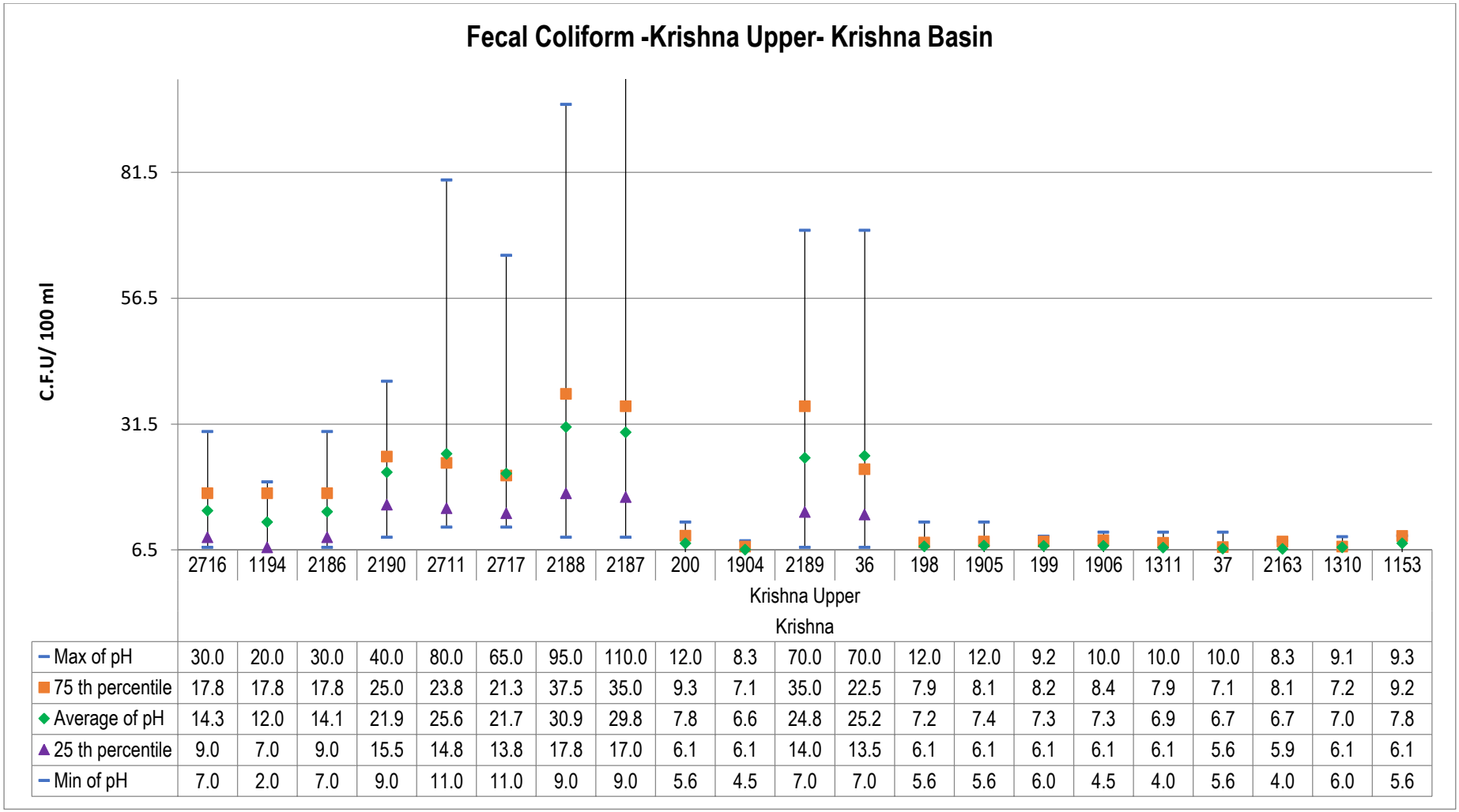
	2716	1194	2186	2190	2711	2717	2188	2187	200	1904	2189	36	198	1905	199	1906	1311	37	2163	1310	1153
	Krishna Upper Krishna																				
Max of BOD	3.6	3.0	5.0	5.0	5.2	6.4	8.4	5.4	3.2	3.1	5.0	5.2	3.4	5.2	4.2	3.0	7.5	4.0	3.2	3.0	3.0
75 th percentile	2.8	2.8	4.3	4.5	4.3	4.9	4.9	4.3	3.0	3.0	4.3	4.1	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.9
Average of BOD	2.7	2.6	3.6	3.8	3.9	4.3	4.6	3.6	2.6	2.7	3.9	3.6	2.7	2.8	2.8	2.7	3.1	2.8	2.7	2.7	2.6
25 th percentile	2.5	2.6	3.0	3.0	3.4	3.5	4.0	3.0	2.3	2.6	3.6	2.8	2.5	2.2	2.5	2.5	2.4	2.7	2.2	2.7	2.6
Min of BOD	2.0	2.0	2.2	2.6	3.0	2.6	2.6	2.4	1.8	1.8	2.8	2.6	1.8	1.8	1.8	1.8	2.0	1.8	1.8	1.8	1.8

Figure No. 31: Trend of Biological Oxygen Demand (BOD) levels recorded at WQMS at Krishna upper sub basin - Krishna Basin



	2716	1194	2186	2190	2711	2717	2188	2187	200	1904	2189	36	198	1905	199	1906	1311	37	2163	1310	1153
Max of pH	8.3	8.0	8.3	8.1	8.3	8.2	8.2	8.4	8.6	8.1	8.1	8.0	8.7	8.5	8.5	8.7	8.3	8.7	8.5	8.4	8.6
75 th percentile	7.5	7.9	8.1	7.9	8.1	8.0	8.1	8.2	8.2	7.9	7.9	7.8	8.2	7.9	8.4	8.4	7.9	8.3	8.2	8.1	8.3
Average of pH	7.3	7.8	8.0	7.8	7.9	7.8	7.9	8.2	8.1	7.8	7.8	7.7	8.1	7.7	8.2	8.2	7.8	8.2	8.0	8.0	8.1
25 th percentile	6.9	7.7	7.9	7.7	7.8	7.7	7.8	8.2	7.8	7.7	7.7	7.6	8.0	7.5	8.0	7.9	7.5	8.1	7.9	7.8	7.9
Min of pH	6.6	7.6	7.6	7.4	7.3	7.4	7.1	7.9	7.8	7.3	7.5	7.5	7.6	7.2	7.7	7.7	7.3	7.8	7.6	7.6	7.6

Figure No. 32: Trend of pH levels recorded at WQMS at Krishna upper sub basin -Krishna Basin



	2716	1194	2186	2190	2711	2717	2188	2187	200	1904	2189	36	198	1905	199	1906	1311	37	2163	1310	1153
Max of pH	30.0	20.0	30.0	40.0	80.0	65.0	95.0	110.0	12.0	8.3	70.0	70.0	12.0	12.0	9.2	10.0	10.0	10.0	8.3	9.1	9.3
75 th percentile	17.8	17.8	17.8	25.0	23.8	21.3	37.5	35.0	9.3	7.1	35.0	22.5	7.9	8.1	8.2	8.4	7.9	7.1	8.1	7.2	9.2
Average of pH	14.3	12.0	14.1	21.9	25.6	21.7	30.9	29.8	7.8	6.6	24.8	25.2	7.2	7.4	7.3	7.3	6.9	6.7	6.7	7.0	7.8
25 th percentile	9.0	7.0	9.0	15.5	14.8	13.8	17.8	17.0	6.1	6.1	14.0	13.5	6.1	6.1	6.1	6.1	6.1	5.6	5.9	6.1	6.1
Min of pH	7.0	2.0	7.0	9.0	11.0	11.0	9.0	9.0	5.6	4.5	7.0	7.0	5.6	5.6	6.0	4.5	4.0	5.6	4.0	6.0	5.6

Figure No. 33: Trend of Fecal Coliform recorded at WQMS at Krishna upper sub basin -Krishna Basin

Water Quality Index for WQMS in Krishna Basin (2 of 2): Sub-Basin-Krishna Upper

Apr	82	88	80	83	84	77	77	76	82	80	79	81	83	83	83	83	86	80	81	86	78
May	86	85	81	NA	76	73	73	78	82	82	79	78	81	83	82	83	81	82	85	79	84
Jun	76	85	79	77	79	83	78	76	81	84	79	78	81	83	81	81	87	80	81	84	79
Jul	87	85	82	78	75	75	74	76	85	88	83	77	87	86	82	86	85	85	85	85	85
Aug	78	80	81	79	75	74	80	80	84	85	77	74	83	88	84	84	87	85	86	85	86
Sep	86	83	80	84	78	77	70	72	79	84	81	80	77	85	78	77	83	81	80	84	80
Oct	83	82	70	76	76	71	76	68	84	84	72	78	82	83	81	80	85	82	83	82	82
Nov	86	80	80	78	72	82	71	76	77	82	72	72	76	82	79	75	81	77	79	79	82
Dec	84	84	74	75	71	70	63	69	81	80	75	82	83	78	82	83	80	81	78	81	77
Jan	86	86	78	79	Dry	75	72	72	80	88	77	85	79	89	77	79	85	81	82	80	79
Feb	83	82	72	72	73	73	69	77	82	89	72	76	80	87	79	81	87	78	84	85	79
Mar	86	84	82	77	Dry	82	79	76	85	85	77	79	84	76	82	80	71	82	84	84	83
Station code	2716	1194	2186	2190	2711	2717	2188	2187	200	1904	2189	36	198	1905	199	1906	1311	37	2163	1310	1153
Sub Basin	Krishna Upper																				
Basin	Krishna																				

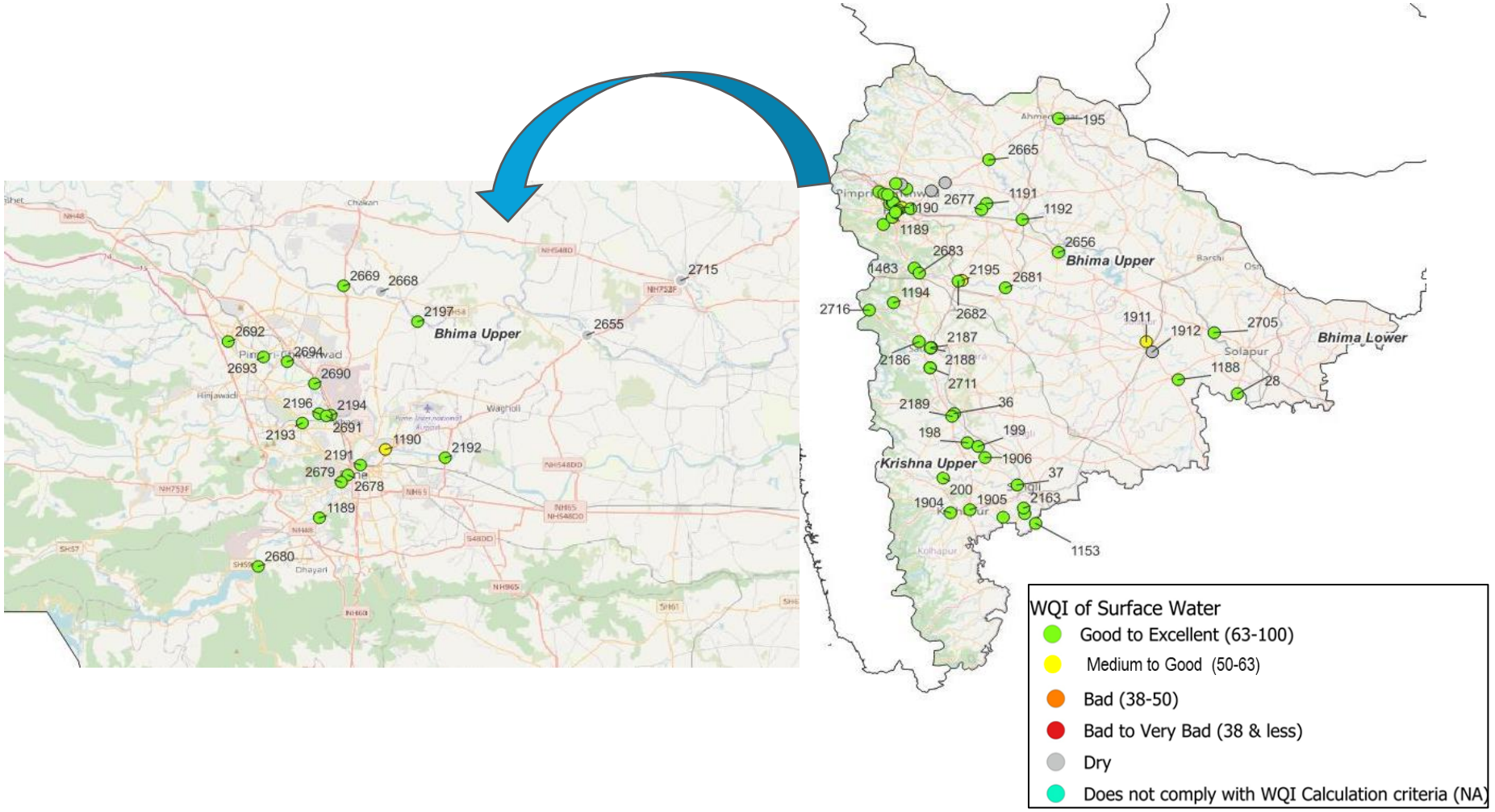
Legend

Good to Excellent	Medium to Good	Bad	Bad to Very Bad	Dry	No Data	Not Available

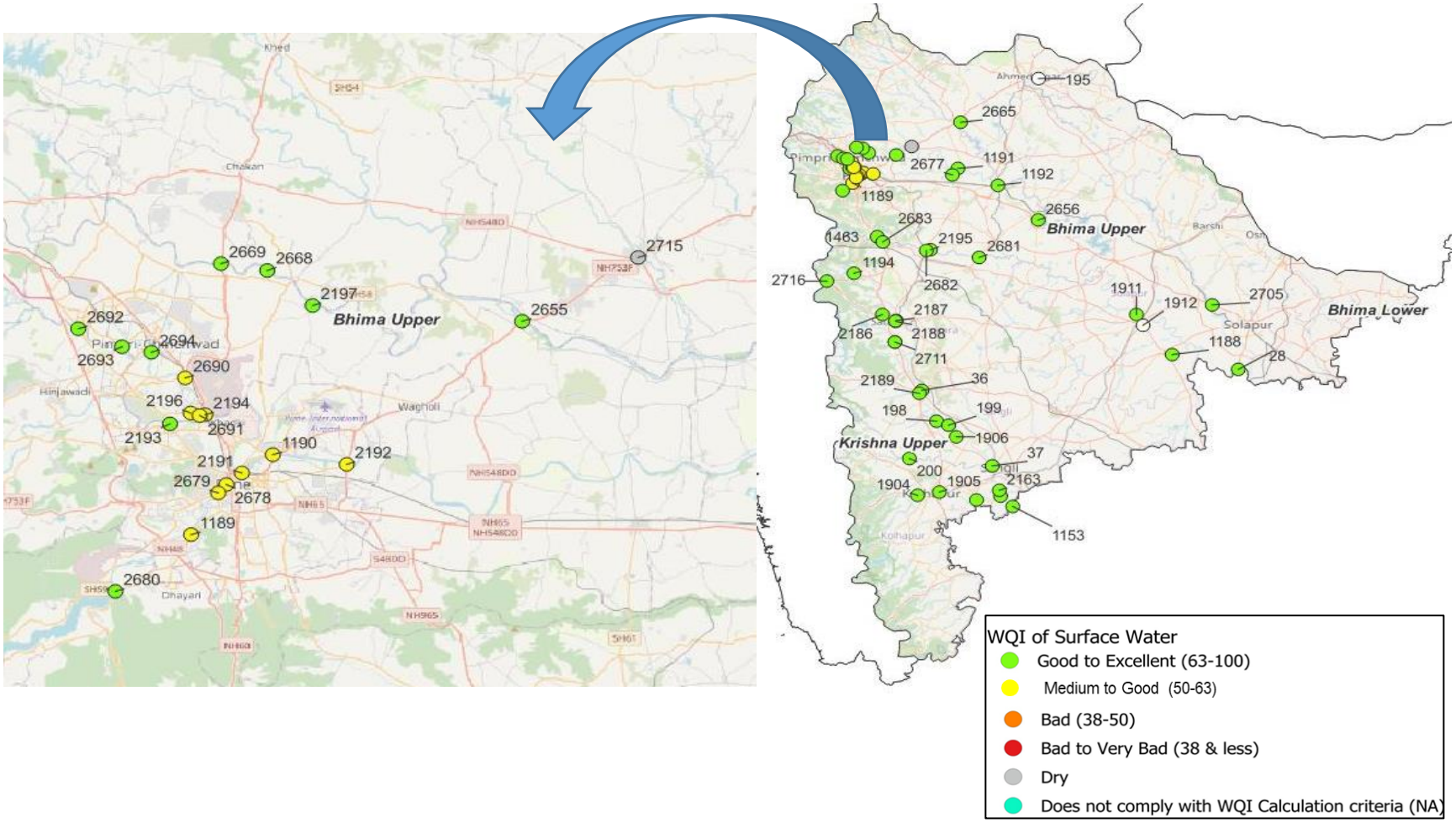
Table No. 22 : Surface water quality monitoring stations in Krishna Basin (2 of 2): Sub basin Krishna Upper

Program	Station ID	River/Nalla	Station Name	Village	Taluka	District
NWMP	2716	Venna	Venna at Mahabaleshwar	Mahabaleshwar	Mahabaleshwar	Satara
NWMP	1194	Krishna	Krishna at Dhom Dam	Wai	Mahabaleshwar	Satara
NWMP	2186	Venna	Venna at Varya, Satara	Varye	Satara	Satara
NWMP	2190	Krishna	Krishna at Wai	Wai	Wai	Satara
NWMP	2711	Urmodi	Urmodi at Nagthane Satara	Nagthane	Satara	Satara
NWMP	2717	Venna	Venna at Mahuli	Mahuli	Satara	Satara
NWMP	2188	Krishna	Krishna at Krishna-Venna Sangam, Mahuli	Mahuli	Mahuli	Satara
NWMP	2187	Krishna	Krishna at Kshetra Mahuli Satara	Kshetra Mahuli	Mahuli	Satara
SWMP	200	Warna	Mangle Bridge, (After Confluence of Morna)	Mangle	Shirala	Sangli
NWMP	1904	Panchganga	U/s of Kolhapur town near Balinga Pumping Station	Balinga	Karvir	Kolhapur
NWMP	2189	Koyna	Koyna at Karad	Karad	Karad	Satara
NWMP	36	Krishna	Krishna at Krishna Bridge, Karad	Karad	Karad	Satara
SWMP	198	Krishna	Bahe KT Weir, Bahe, Taluka - Walwa, District - Sangli	Bahe	Walwa	Sangli
NWMP	1905	Panchaganga	Panchaganga at D/s of Kolhapur town at Gandhi nagar near NH-4 bridge and MIDC intake well	Uchegaon	Kolhapur	Kolhapur
SWMP	199	Krishna	Borgaon KT Weir, Borgaon, Taluka - Walwa, District - Sangli	Borgaon	Walwa	Sangli
NWMP	1906	Krishna	Krishna at Walwa, D/s of Islampur near Vithal Temple	Walwa	Walwa	Sangli
NWMP	1311	Panchganga	Panchganga at Ichalkaranji near MIDC intake well	Shiradhwad (Ichalkaranji ghat)	Hatkanangale	Kolhapur
NWMP	37	Krishna	Krishna at Maighat, Sangli	Gawali gally	Miraj	Sangli
NWMP	2163	Panchganga	Panchganga at Shirol near Shirol intake well	Shirol	Shirol	Kolhapur
NWMP	1310	Krishna	Krishna at Kurundwad	Narshingwadi, Kurundwad	Shirol	Kolhapur
NWMP	1153	Krishna	Krishna at Rajapur Weir	Rajapur	Shirol	Kolhapur

Spatial map of Surface WQI at Krishna Basin (April 2023)

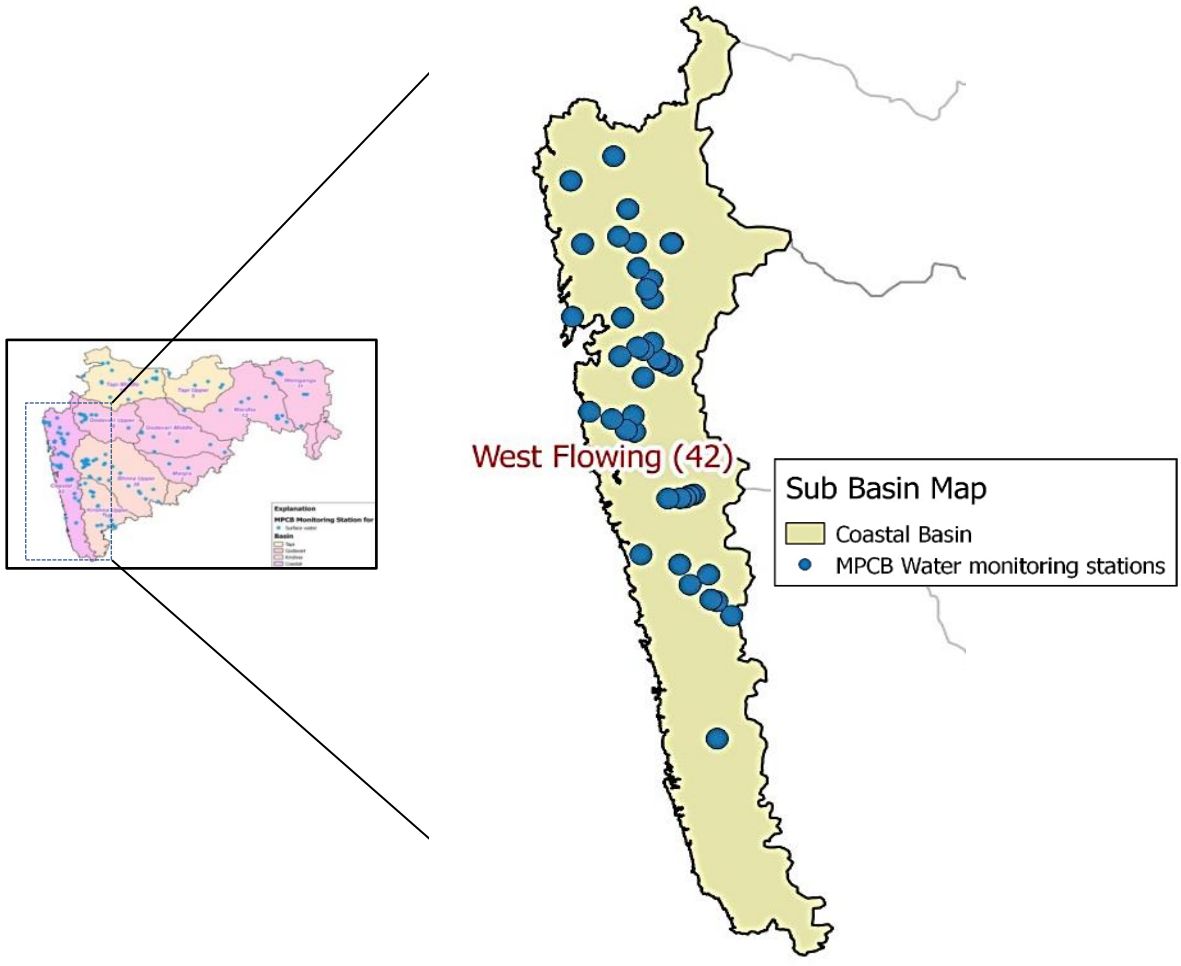


Spatial map of Surface WQI at Krishna Basin (December 2023)



West Flowing Rivers

Compared to the eastward-flowing rivers, the westward-flowing rivers of peninsular India are generally smaller and fewer in number. Notable among these are the Surya, Vaitrana, Ulhas, Savitri, Kundalika, Patalganga, and Vashishti rivers. Most of these rivers are monsoon-dependent, originating from the Western Ghats and draining into the Arabian Sea. These rivers contribute to about 45% of the state's water resources[21].Some of the oldest and largest industrial complexes are located near these west-flowing rivers, such as the Ulhas, Patalganga, and Amba rivers. Unfortunately, the waters of these rivers are particularly vulnerable to high levels of pollution, primarily due to the discharge of industrial effluents and domestic sewage from nearby settlements. To monitor water quality, the Maharashtra Pollution Control Board (MPCB) has installed approximately 42 Water Quality Monitoring Stations (WQMS) at designated sites along these rivers.



[21] https://sandrp.files.wordpress.com/2018/03/rivers_of_maharashtra_dec_2011.pdf

West Flowing Rivers Basin (Intra Basin analysis)

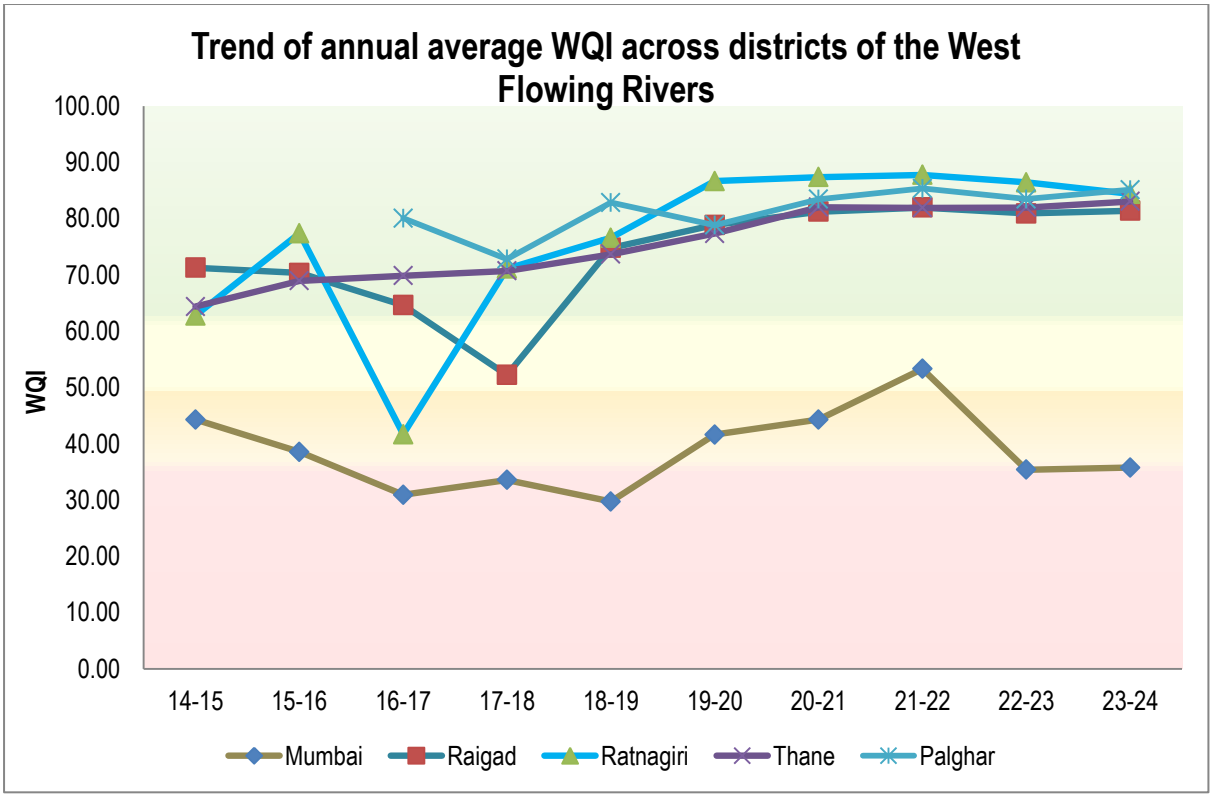


Figure No. 34: Trend of annual average WQI across districts of the West Flowing Rivers

WQI	WQI Category	Class by CPCB	Represented in the above graph
63-100	Good to Excellent	A	Non-polluted
50-63	Medium to Good	B	Non-polluted
38-50	Bad	C	Polluted
38 & less	Bad to Very Bad	D, E	Heavily polluted

Note: This graph considers the average WQI for all the monitoring stations in that particular district and hence may include some bias. This graph is only for an overview and monitoring station-wise data may be analyzed to pinpoint the most affected and polluted patches of rivers in that district.

The analysis presented in Figure No. 34 depicts the intra-basin performance of the West Flowing Rivers based on the annual average WQI, recorded by WQMS installed in respective districts. In the year 2023-24, a slight improvement has been observed in the annual average WQI values recorded by WQMS installed at Raigad, Thane and Palghar districts; categorized under the 'Good to Excellent' range; indicating a positive trend as far as the water quality is concerned. Conversely, the Ratnagiri district has experienced a minor decline in the annual average WQI, being recorded by respective WQMS; recording a value of 84.37 in 2023-24 , down from 86.44 in 2022-23.

The scenario of water quality of rivers in the Mumbai district is of concern, with an annual average WQI assessed at approximately 35.77, categorizing it under the 'Bad to Very Bad' range. It shows a considerable level of pollution in these waterbodies which needs to be addressed by implementing feasible interventions.

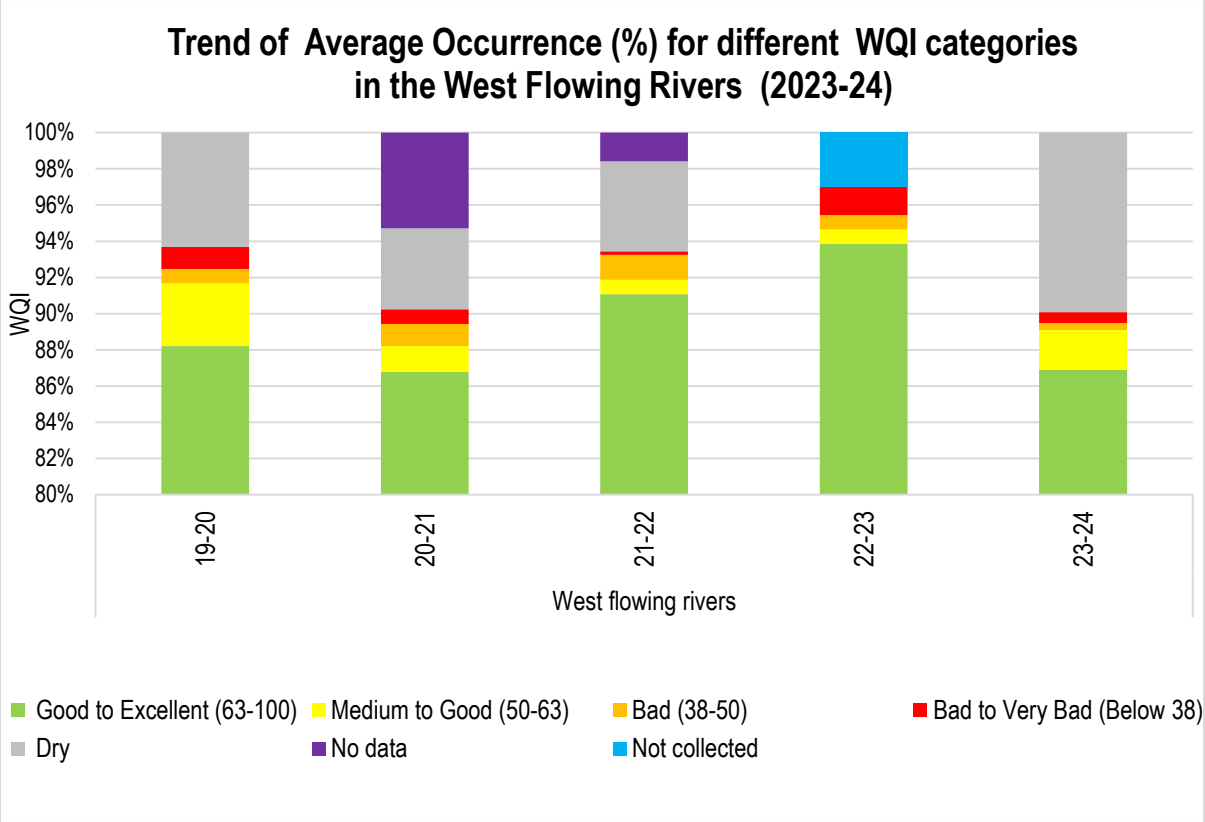
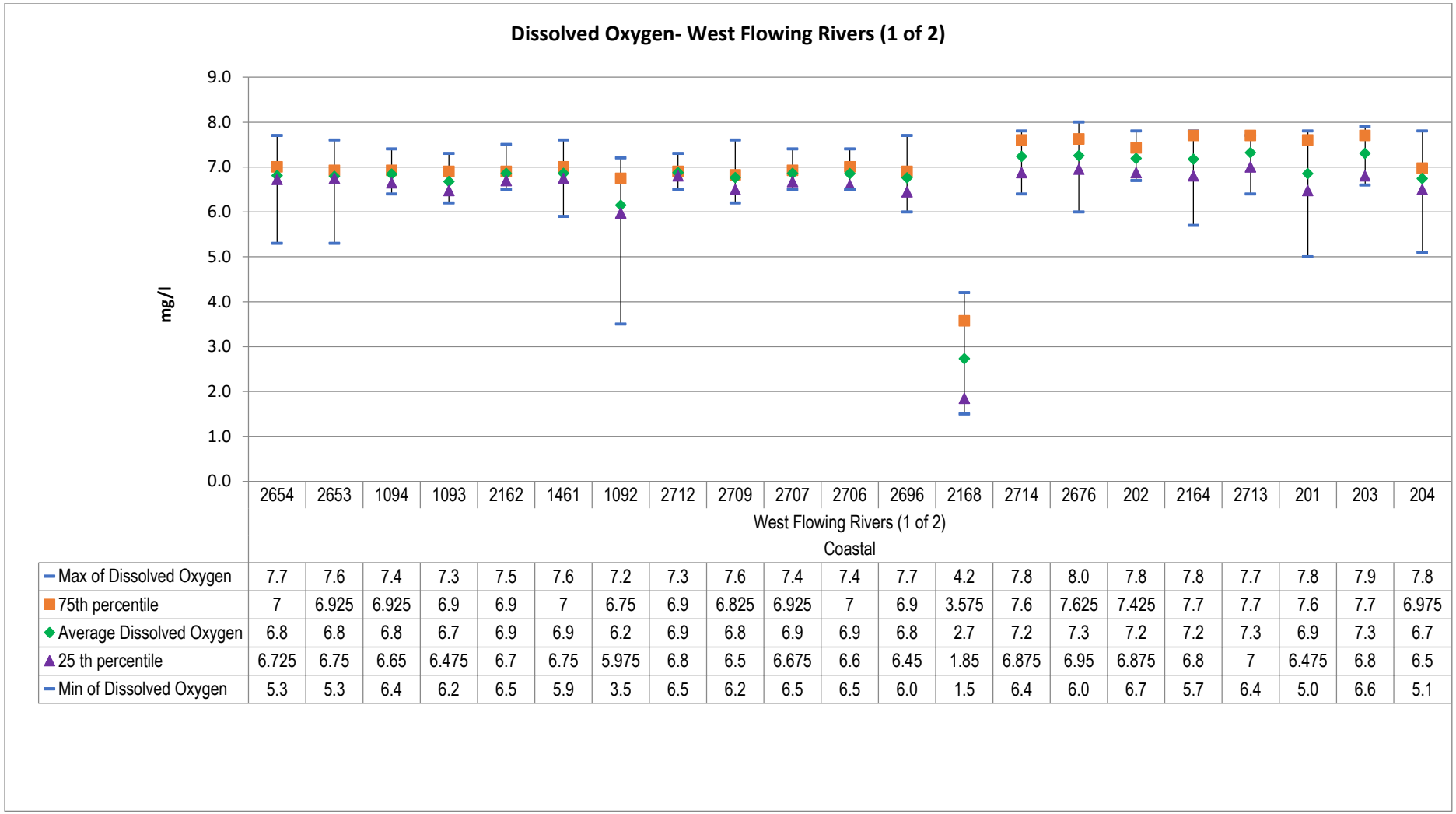


Figure No. 35: Trend of average occurrence for different WQI categories in the West Flowing Rivers

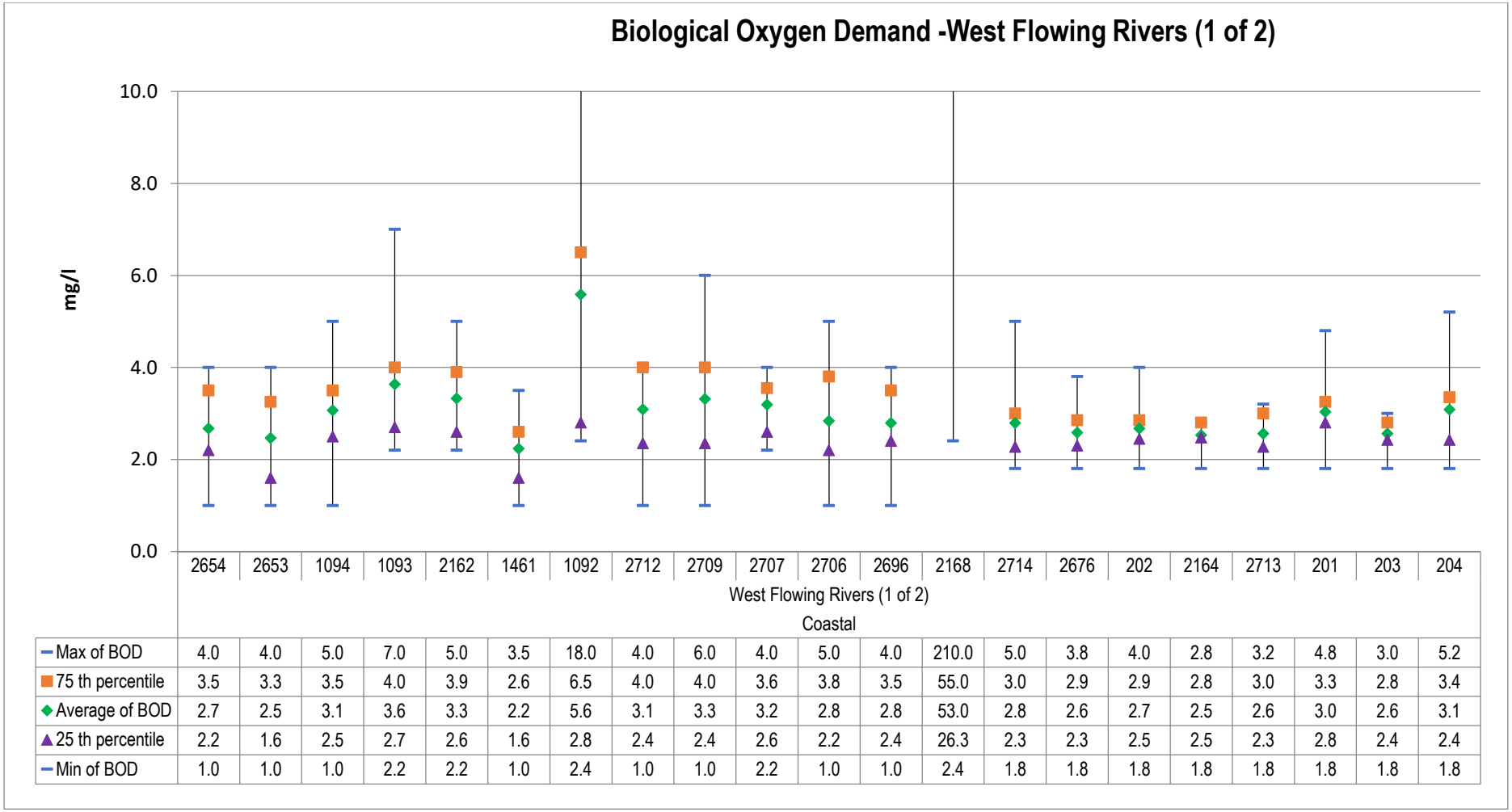
The interbasin performance of the West flowing rivers is shown in the Figure No. 35.

In West flowing rivers, 86.90% of observations were classified as 'Good to Excellent' in the Water Quality Index (WQI), marking a slight decline from 93.84% in the previous year. The number of observations in Medium to good category is increased by 1.3% as compared to previous year.In contrast, the Bad to very bad category is noted to have decline curve by 0.5% as compared to previous year. Additionally, the percentage of observations falling under the 'Dry' category increased notably to 9.92%, up from 0% in 2022-23.



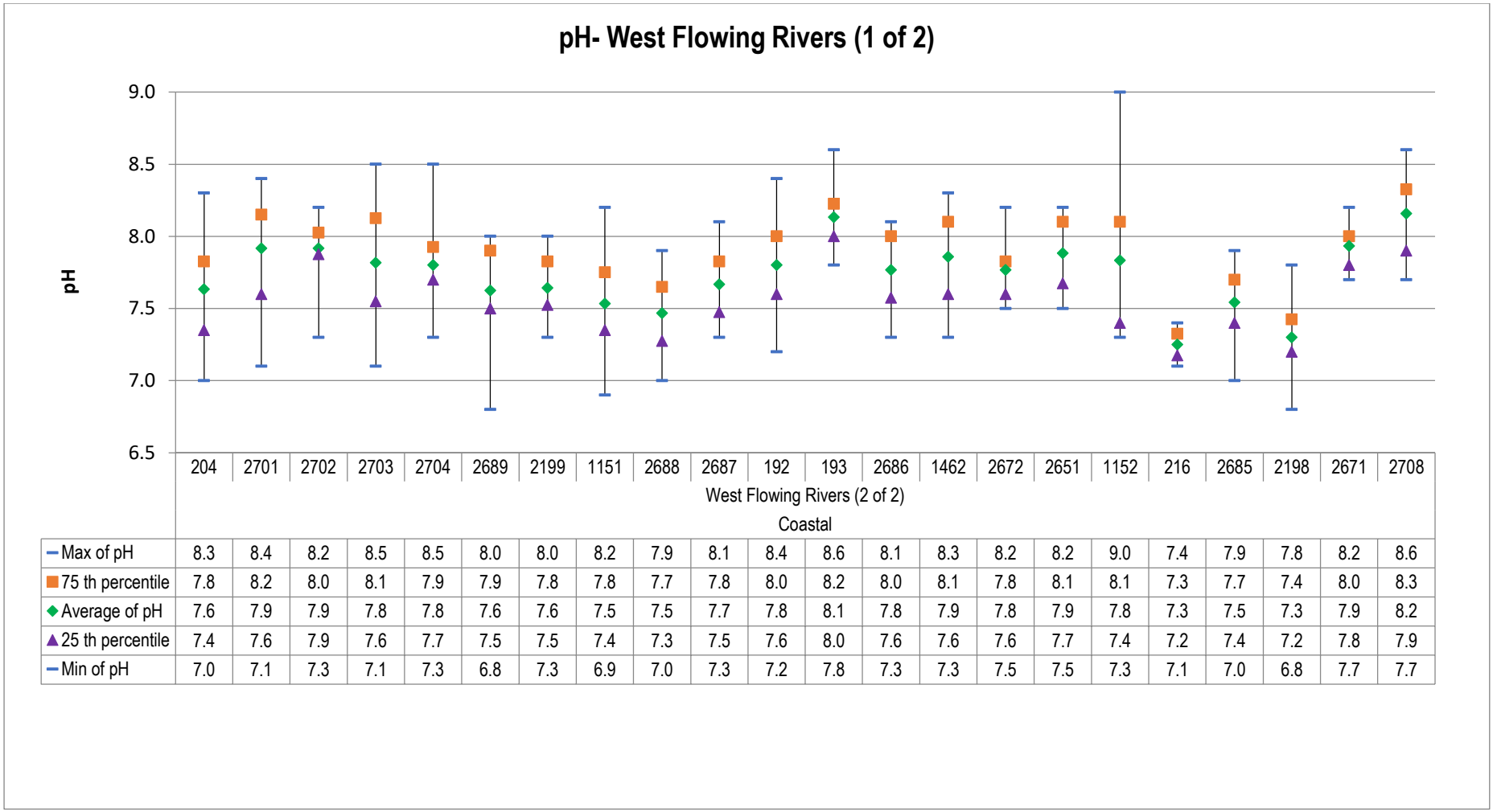
	2654	2653	1094	1093	2162	1461	1092	2712	2709	2707	2706	2696	2168	2714	2676	202	2164	2713	201	203	204
Max of Dissolved Oxygen	7.7	7.6	7.4	7.3	7.5	7.6	7.2	7.3	7.6	7.4	7.4	7.7	4.2	7.8	8.0	7.8	7.8	7.7	7.8	7.9	7.8
75th percentile	7	6.925	6.925	6.9	6.9	7	6.75	6.9	6.825	6.925	7	6.9	3.575	7.6	7.625	7.425	7.7	7.7	7.6	7.7	6.975
Average Dissolved Oxygen	6.8	6.8	6.8	6.7	6.9	6.9	6.2	6.9	6.8	6.9	6.9	6.8	2.7	7.2	7.3	7.2	7.2	7.3	6.9	7.3	6.7
25 th percentile	6.725	6.75	6.65	6.475	6.7	6.75	5.975	6.8	6.5	6.675	6.6	6.45	1.85	6.875	6.95	6.875	6.8	7	6.475	6.8	6.5
Min of Dissolved Oxygen	5.3	5.3	6.4	6.2	6.5	5.9	3.5	6.5	6.2	6.5	6.5	6.0	1.5	6.4	6.0	6.7	5.7	6.4	5.0	6.6	5.1

Figure No. 36: Trend of Dissolved Oxygen (DO) levels recorded at WQMS at West flowing rivers (Coastal basin) (1 of 2)



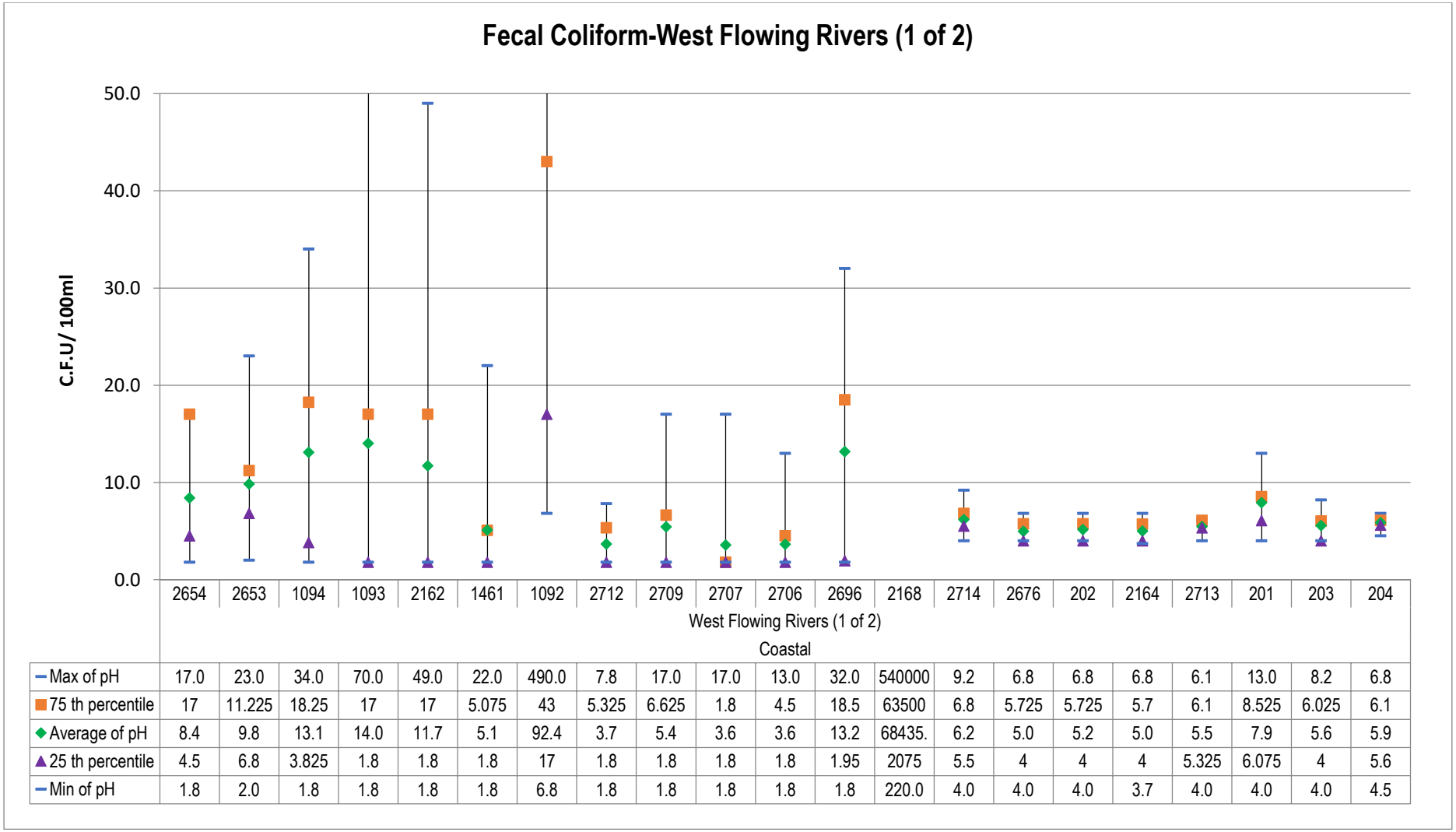
	2654	2653	1094	1093	2162	1461	1092	2712	2709	2707	2706	2696	2168	2714	2676	202	2164	2713	201	203	204
Max of BOD	4.0	4.0	5.0	7.0	5.0	3.5	18.0	4.0	6.0	4.0	5.0	4.0	210.0	5.0	3.8	4.0	2.8	3.2	4.8	3.0	5.2
75 th percentile	3.5	3.3	3.5	4.0	3.9	2.6	6.5	4.0	4.0	3.6	3.8	3.5	55.0	3.0	2.9	2.9	2.8	3.0	3.3	2.8	3.4
Average of BOD	2.7	2.5	3.1	3.6	3.3	2.2	5.6	3.1	3.3	3.2	2.8	2.8	53.0	2.8	2.6	2.7	2.5	2.6	3.0	2.6	3.1
25 th percentile	2.2	1.6	2.5	2.7	2.6	1.6	2.8	2.4	2.4	2.6	2.2	2.4	26.3	2.3	2.3	2.5	2.5	2.3	2.8	2.4	2.4
Min of BOD	1.0	1.0	1.0	2.2	2.2	1.0	2.4	1.0	1.0	2.2	1.0	1.0	2.4	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8

Figure No. 37: Trend of Biological Oxygen Demand (BOD) levels recorded at WQMS at West flowing rivers (Coastal basin) (1 of 2)



	204	2701	2702	2703	2704	2689	2199	1151	2688	2687	192	193	2686	1462	2672	2651	1152	216	2685	2198	2671	2708
	West Flowing Rivers (2 of 2)																					
	Coastal																					
Max of pH	8.3	8.4	8.2	8.5	8.5	8.0	8.0	8.2	7.9	8.1	8.4	8.6	8.1	8.3	8.2	8.2	9.0	7.4	7.9	7.8	8.2	8.6
75 th percentile	7.8	8.2	8.0	8.1	7.9	7.9	7.8	7.8	7.7	7.8	8.0	8.2	8.0	8.1	7.8	8.1	8.1	7.3	7.7	7.4	8.0	8.3
Average of pH	7.6	7.9	7.9	7.8	7.8	7.6	7.6	7.5	7.5	7.7	7.8	8.1	7.8	7.9	7.8	7.9	7.8	7.3	7.5	7.3	7.9	8.2
25 th percentile	7.4	7.6	7.9	7.6	7.7	7.5	7.5	7.4	7.3	7.5	7.6	8.0	7.6	7.6	7.6	7.7	7.4	7.2	7.4	7.2	7.8	7.9
Min of pH	7.0	7.1	7.3	7.1	7.3	6.8	7.3	6.9	7.0	7.3	7.2	7.8	7.3	7.3	7.5	7.5	7.3	7.1	7.0	6.8	7.7	7.7

Figure No. 38: Trend of pH levels recorded at WQMS at West flowing rivers (Coastal basin) (1 of 2)



	2654	2653	1094	1093	2162	1461	1092	2712	2709	2707	2706	2696	2168	2714	2676	202	2164	2713	201	203	204
Max of pH	17.0	23.0	34.0	70.0	49.0	22.0	490.0	7.8	17.0	17.0	13.0	32.0	540000	9.2	6.8	6.8	6.8	6.1	13.0	8.2	6.8
75 th percentile	17	11.225	18.25	17	17	5.075	43	5.325	6.625	1.8	4.5	18.5	63500	6.8	5.725	5.725	5.7	6.1	8.525	6.025	6.1
Average of pH	8.4	9.8	13.1	14.0	11.7	5.1	92.4	3.7	5.4	3.6	3.6	13.2	68435.	6.2	5.0	5.2	5.0	5.5	7.9	5.6	5.9
25 th percentile	4.5	6.8	3.825	1.8	1.8	1.8	17	1.8	1.8	1.8	1.8	1.95	2075	5.5	4	4	4	5.325	6.075	4	5.6
Min of pH	1.8	2.0	1.8	1.8	1.8	1.8	6.8	1.8	1.8	1.8	1.8	1.8	220.0	4.0	4.0	4.0	3.7	4.0	4.0	4.0	4.5

Figure No. 39: Trend of Fecal Coliform recorded at WQMS at West flowing rivers (Coastal basin) (1 of 2)

Water Quality Index for WQMS in West Flowing Rivers (1 of 2)

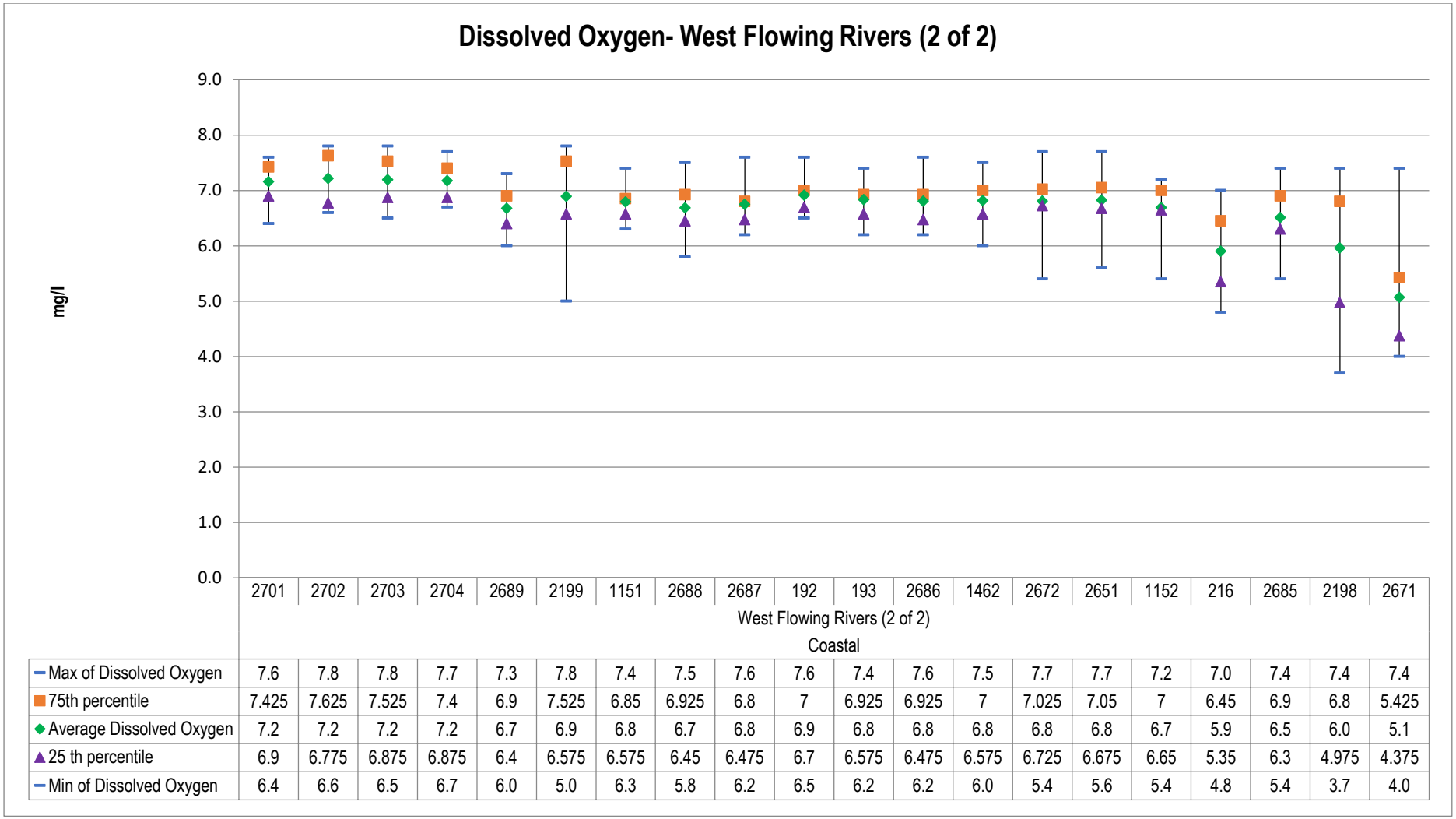
Apr	74	73	80	91	85	85	80	NA	NA	91	90	91	47	86	88	87	86	89	90	87	87
May	84	78	81	85	82	86	78	NA	NA	85	86	84	24	86	89	85	85	86	88	87	84
Jun	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	79	86	84	86	86	79	80	82
Jul	85	83	92	83	91	87	83	86	86	84	85	86	33	89	89	87	89	89	70	87	87
Aug	86	83	87	89	93	84	84	86	91	88	86	82	47	88	89	84	90	88	77	85	85
Sep	83	85	80	82	82	86	78	80	80	86	88	91	NA	84	82	85	84	83	81	86	87
Oct	83	80	81	75	77	85	75	82	79	84	86	90	27	85	87	85	88	87	77	84	89
Nov	84	84	84	91	90	92	62	85	85	83	79	79	27	81	80	81	82	82	74	83	83
Dec	81	82	77	76	80	88	70	83	83	83	81	90	NA	84	86	83	84	83	81	82	84
Jan	85	87	78	84	77	91	76	85	85	85	84	82	24	83	81	86	86	83	83	84	87
Feb	78	74	88	90	88	80	54	82	82	83	83	80	31	84	83	83	84	85	83	84	57
Mar	85	83	86	92	89	86	74	NA	NA	84	81	81	26	90	86	85	87	89	85	86	82
Station code	2654	2653	1094	1093	2162	1461	1092	2712	2709	2707	2706	2696	2168	2714	2676	202	2164	2713	201	203	204
Sub Basin	West Flowing Rivers (1 of 2)																				
Basin	Coastal																				

Legend

Good to Excellent	Medium to Good	Bad	Bad to Very Bad	Dry	No Data	Not Available

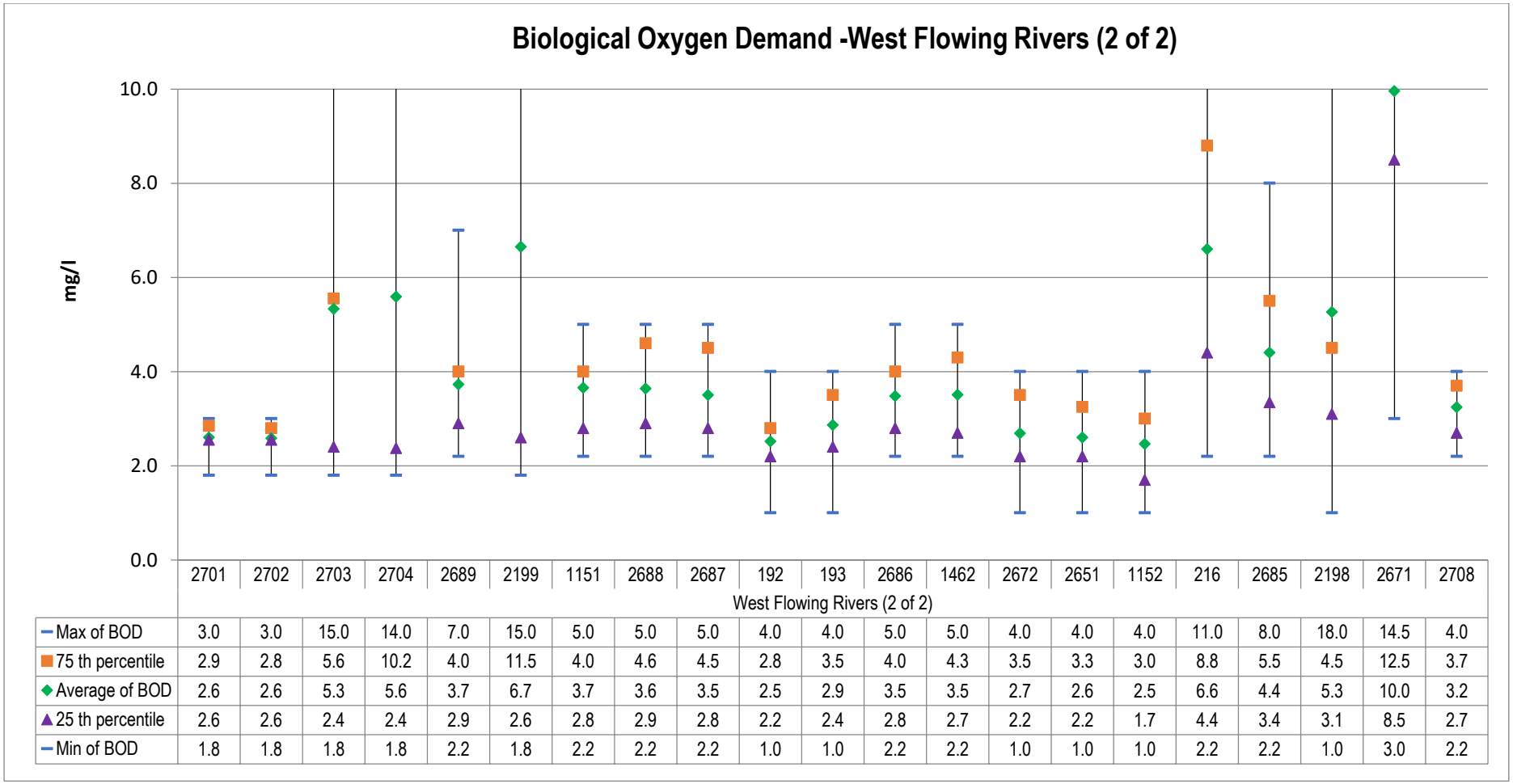
Table No. 23 : Surface water monitoring stations at West Flowing Rivers (1 of 2)

Program	Station ID	River	Station Name	Village	Taluka	District
NWMP	2654	Bhatsa	Bhatsa at D/s of Liberty Oil Mills	Satne	Shahapur	Thane
NWMP	2653	Bhatsa	Bhatsa at D/s of Liberty Oil Mills	Satne	Shahapur	Thane
NWMP	1094	Ulhas	Ulhas at U/s of Badlapur water works	Kulgaon	Ambernath	Thane
NWMP	1093	Ulhas	Ulhas at U/s of NRC Bund	Mohane	Kalyan	Thane
NWMP	2162	Ulhas	Ulhas at Jambhul water works	Jambhul	Ambernath	Thane
NWMP	1461	Bhatsa	Bhatsa at D/s of Pise Dam	Pise	Bhiwandi	Thane
NWMP	1092	Kalu	Kalu at Atale village	Atale	Kalyan	Thane
NWMP	2712	Vaitarna	Vaitarna near Road Bridge	Gandhare	Wada	Thane
NWMP	2709	Tansa	Tansa near road bridge	Dakewali	Wada	Thane
NWMP	2707	Surya	Surya at MIDC pumping station	Garvashet	Palghar	Thane
NWMP	2706	Surya	Surya U/s of Surya Dam	Dhamni	Vikramgad	Thane
NWMP	2696	Pelhar	Pelhar dam	Pelhar	Vasai	Palghar
NWMP	2168	Mithi	Mithi at near bridge	Mahim	Bandra	Mumbai
NWMP	2714	Vashishti	Vashishti at U/s of Pophali near Konphansawane Bridge	Pophali	Chiplun	Ratnagiri
NWMP	2676	Muchkundi	Muchkundi at Waked Ratnagiri near M/s Asahi India Glass	Waked	Lanja	Ratnagiri
SWMP	202	Vashisti	Vashisti at Khadpoli, Taluka Chiplun, District - Ratnagiri	Khadpoli	Chiplun	Ratnagiri
NWMP	2164	Vashishti	Vashishti at U/s of Three M Paper Mills near M/s Multifilms Plastic Pvt Ltd	Kherdi	Chiplun	Ratnagiri
NWMP	2713	Vashishti	Vashishti at D/s of Three M Paper Mills near Chiplun water intake Jackwell	Kherdi	Chiplun	Ratnagiri
SWMP	201	Sonpatra	Sonpatra at Kotwali Village, Taluka - Khed, District - Ratnagiri	Kotwali	Khed	Ratnagiri
SWMP	203	Jagbudi	Jagbudi, D/S of Khed City, Taluka - Khed, District Ratnagiri	Khed City	Khed	Ratnagiri
SWMP	204	Jog	Jog at Dapoli, Taluka Dapoli, District - Rantnagiri	Dapoli	Dapoli	Ratnagiri



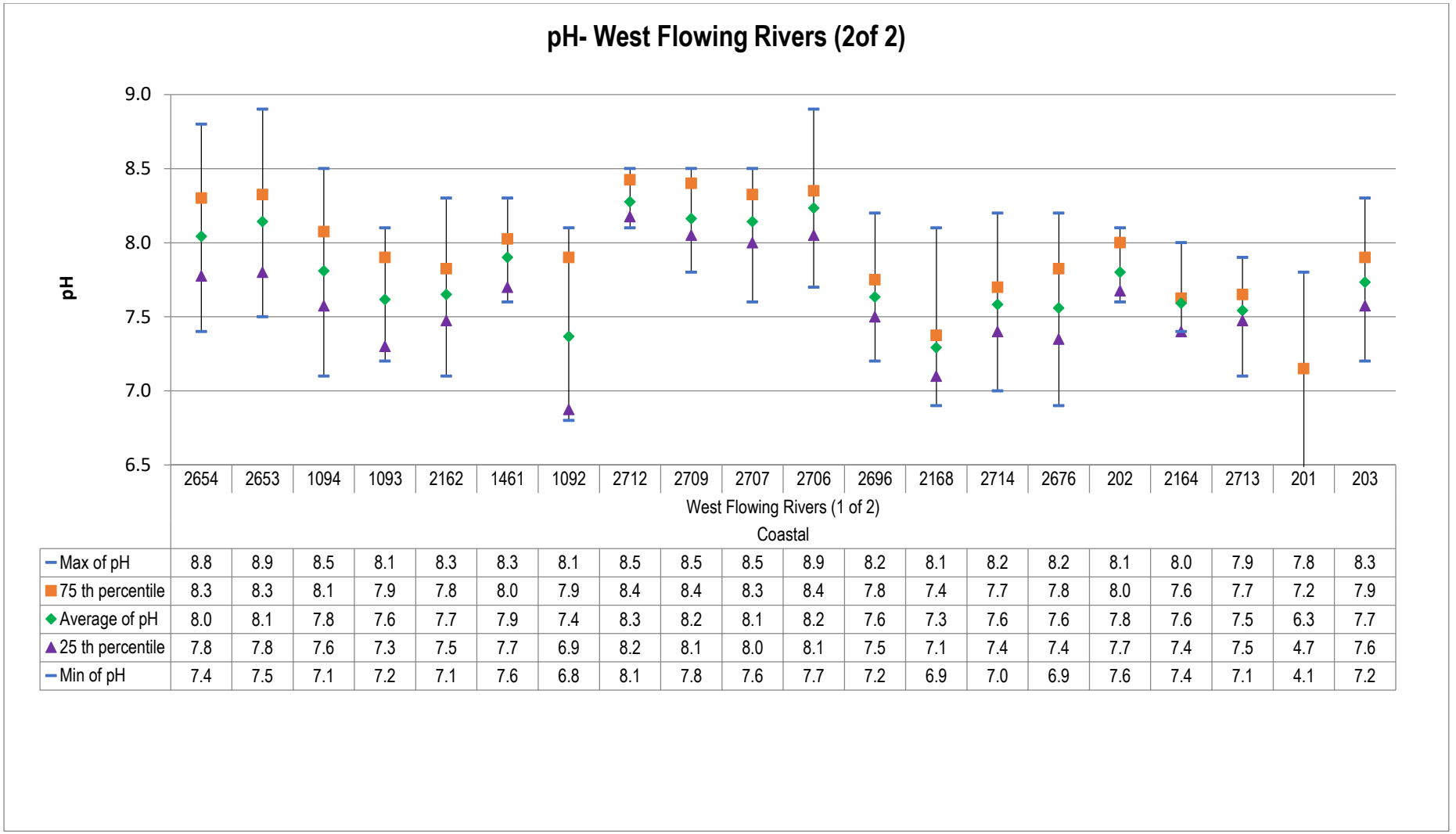
	2701	2702	2703	2704	2689	2199	1151	2688	2687	192	193	2686	1462	2672	2651	1152	216	2685	2198	2671
Max of Dissolved Oxygen	7.6	7.8	7.8	7.7	7.3	7.8	7.4	7.5	7.6	7.6	7.4	7.6	7.5	7.7	7.7	7.2	7.0	7.4	7.4	7.4
75th percentile	7.425	7.625	7.525	7.4	6.9	7.525	6.85	6.925	6.8	7	6.925	6.925	7	7.025	7.05	7	6.45	6.9	6.8	5.425
Average Dissolved Oxygen	7.2	7.2	7.2	7.2	6.7	6.9	6.8	6.7	6.8	6.9	6.8	6.8	6.8	6.8	6.8	6.7	5.9	6.5	6.0	5.1
25 th percentile	6.9	6.775	6.875	6.875	6.4	6.575	6.575	6.45	6.475	6.7	6.575	6.475	6.575	6.725	6.675	6.65	5.35	6.3	4.975	4.375
Min of Dissolved Oxygen	6.4	6.6	6.5	6.7	6.0	5.0	6.3	5.8	6.2	6.5	6.2	6.2	6.0	5.4	5.6	5.4	4.8	5.4	3.7	4.0

Figure No. 40: Trend of Dissolved Oxygen (DO) levels recorded at WQMS at West flowing rivers (Coastal basin) (2 of 2)



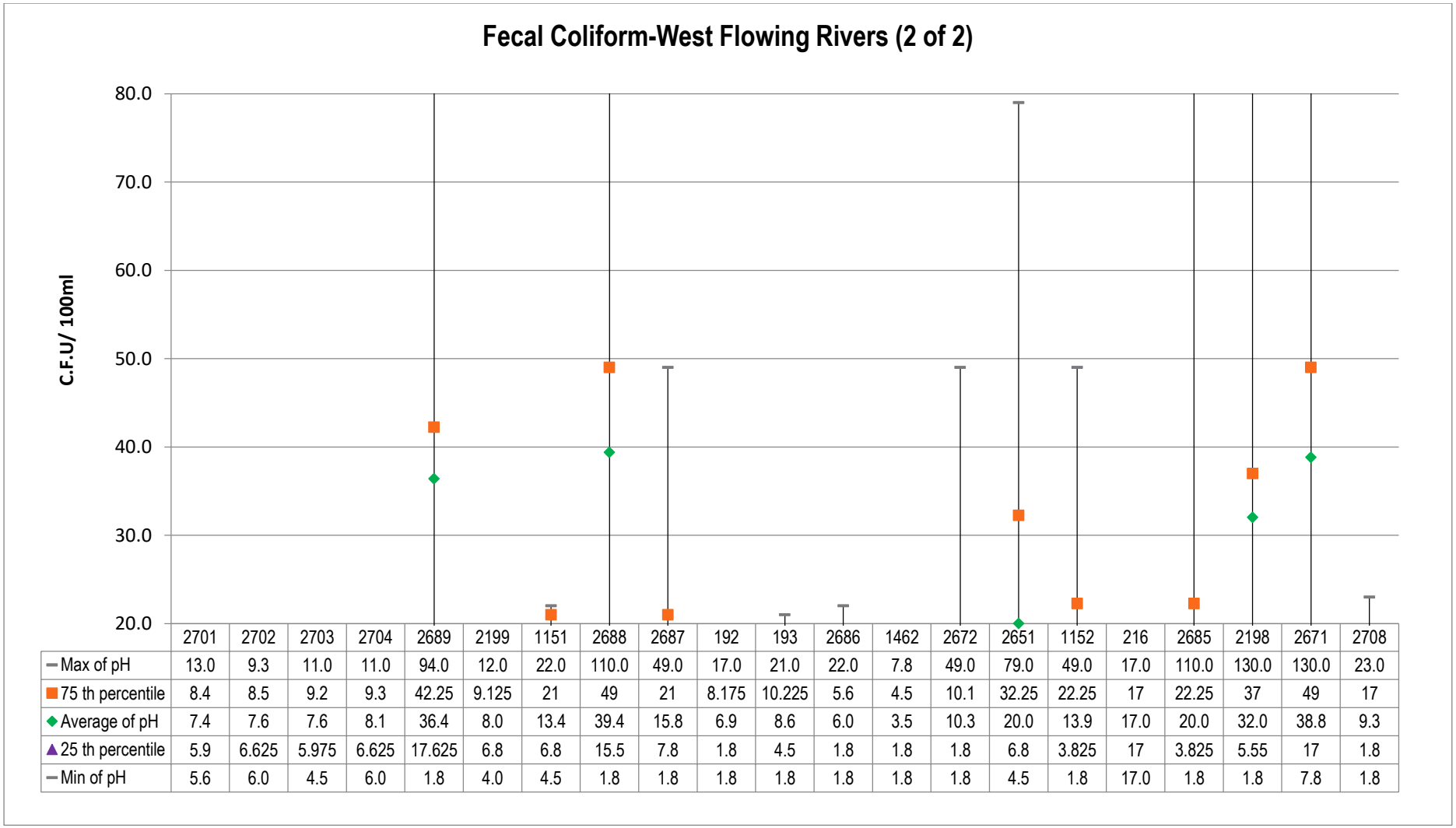
	2701	2702	2703	2704	2689	2199	1151	2688	2687	192	193	2686	1462	2672	2651	1152	216	2685	2198	2671	2708
Max of BOD	3.0	3.0	15.0	14.0	7.0	15.0	5.0	5.0	5.0	4.0	4.0	5.0	5.0	4.0	4.0	4.0	11.0	8.0	18.0	14.5	4.0
75 th percentile	2.9	2.8	5.6	10.2	4.0	11.5	4.0	4.6	4.5	2.8	3.5	4.0	4.3	3.5	3.3	3.0	8.8	5.5	4.5	12.5	3.7
Average of BOD	2.6	2.6	5.3	5.6	3.7	6.7	3.7	3.6	3.5	2.5	2.9	3.5	3.5	2.7	2.6	2.5	6.6	4.4	5.3	10.0	3.2
25 th percentile	2.6	2.6	2.4	2.4	2.9	2.6	2.8	2.9	2.8	2.2	2.4	2.8	2.7	2.2	2.2	1.7	4.4	3.4	3.1	8.5	2.7
Min of BOD	1.8	1.8	1.8	1.8	2.2	1.8	2.2	2.2	2.2	1.0	1.0	2.2	2.2	1.0	1.0	1.0	2.2	2.2	1.0	3.0	2.2

Figure No. 41: Trend of Biological Oxygen Demand (BOD) levels recorded at WQMS at West flowing rivers (Coastal basin) (2 of 2)



	2654	2653	1094	1093	2162	1461	1092	2712	2709	2707	2706	2696	2168	2714	2676	202	2164	2713	201	203
	West Flowing Rivers (1 of 2)																			
	Coastal																			
Max of pH	8.8	8.9	8.5	8.1	8.3	8.3	8.1	8.5	8.5	8.5	8.9	8.2	8.1	8.2	8.2	8.1	8.0	7.9	7.8	8.3
75 th percentile	8.3	8.3	8.1	7.9	7.8	8.0	7.9	8.4	8.4	8.3	8.4	7.8	7.4	7.7	7.8	8.0	7.6	7.7	7.2	7.9
Average of pH	8.0	8.1	7.8	7.6	7.7	7.9	7.4	8.3	8.2	8.1	8.2	7.6	7.3	7.6	7.6	7.8	7.6	7.5	6.3	7.7
25 th percentile	7.8	7.8	7.6	7.3	7.5	7.7	6.9	8.2	8.1	8.0	8.1	7.5	7.1	7.4	7.4	7.7	7.4	7.5	4.7	7.6
Min of pH	7.4	7.5	7.1	7.2	7.1	7.6	6.8	8.1	7.8	7.6	7.7	7.2	6.9	7.0	6.9	7.6	7.4	7.1	4.1	7.2

Figure No. 42: Trend of pH levels recorded at WQMS at West flowing rivers (Coastal basin) (2 of 2)



	2701	2702	2703	2704	2689	2199	1151	2688	2687	192	193	2686	1462	2672	2651	1152	216	2685	2198	2671	2708
Max of pH	13.0	9.3	11.0	11.0	94.0	12.0	22.0	110.0	49.0	17.0	21.0	22.0	7.8	49.0	79.0	49.0	17.0	110.0	130.0	130.0	23.0
75 th percentile	8.4	8.5	9.2	9.3	42.25	9.125	21	49	21	8.175	10.225	5.6	4.5	10.1	32.25	22.25	17	22.25	37	49	17
Average of pH	7.4	7.6	7.6	8.1	36.4	8.0	13.4	39.4	15.8	6.9	8.6	6.0	3.5	10.3	20.0	13.9	17.0	20.0	32.0	38.8	9.3
25 th percentile	5.9	6.625	5.975	6.625	17.625	6.8	6.8	15.5	7.8	1.8	4.5	1.8	1.8	1.8	6.8	3.825	17	3.825	5.55	17	1.8
Min of pH	5.6	6.0	4.5	6.0	1.8	4.0	4.5	1.8	1.8	1.8	1.8	1.8	1.8	1.8	4.5	1.8	17.0	1.8	1.8	7.8	1.8

Figure No. 43: Trend of Fecal Coliform recorded at WQMS at West flowing rivers (Coastal basin) (2 of 2)

Water Quality Index for WQMS in West Flowing Rivers (2 of 2)

Apr	81	82	83	87	80	82	80	83	83	86	79	91	85	85	82	68		85	61	58	83
May	80	81	89	86	80	87	79	83	83	78	80	86	80	80	81	82		69	57	62	85
Jun	78	83	88	84	NA	84	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA
Jul	88	90	86	87	89	89	85	75	86	90	88	81	92	89	85	94		79	82	60	86
Aug	87	87	86	86	89	89	82	77	81	91	85	89	89	87	86	88	85	82	80	51	85
Sep	86	83	81	82	77	81	86	80	77	90	78	88	87	82	83	81	66	85	82	69	86
Oct	83	84	84	82	83	83	88	83	79	81	85	86	86	90	86	84	NA	81	90	76	77
Nov	82	79	78	79	77	71	83	88	85	92	79	86	80	88	83	95		78	91	59	84
Dec	81	80	80	73	79	70	80	80	87	89	87	78	80	82	73	84		85	91	65	74
Jan	82	80	76	72	76	73	86	82	84	83	79	89	88	83	79	81		88	88	64	84
Feb	81	81	69	69	69	79	83	80	84	82	77	87	86	87	78	82		87	80	77	81
Mar	84	83	70	75	83	76	79	77	82	83	81	84	90	79	81	82		90	66	61	80
Station code	2701	2702	2703	2704	2689	2199	1151	2688	2687	192	193	2686	1462	2672	2651	1152	216	2685	2198	2671	2708
Sub Basin	West Flowing Rivers (2 of 2)																				
Basin	Coastal																				

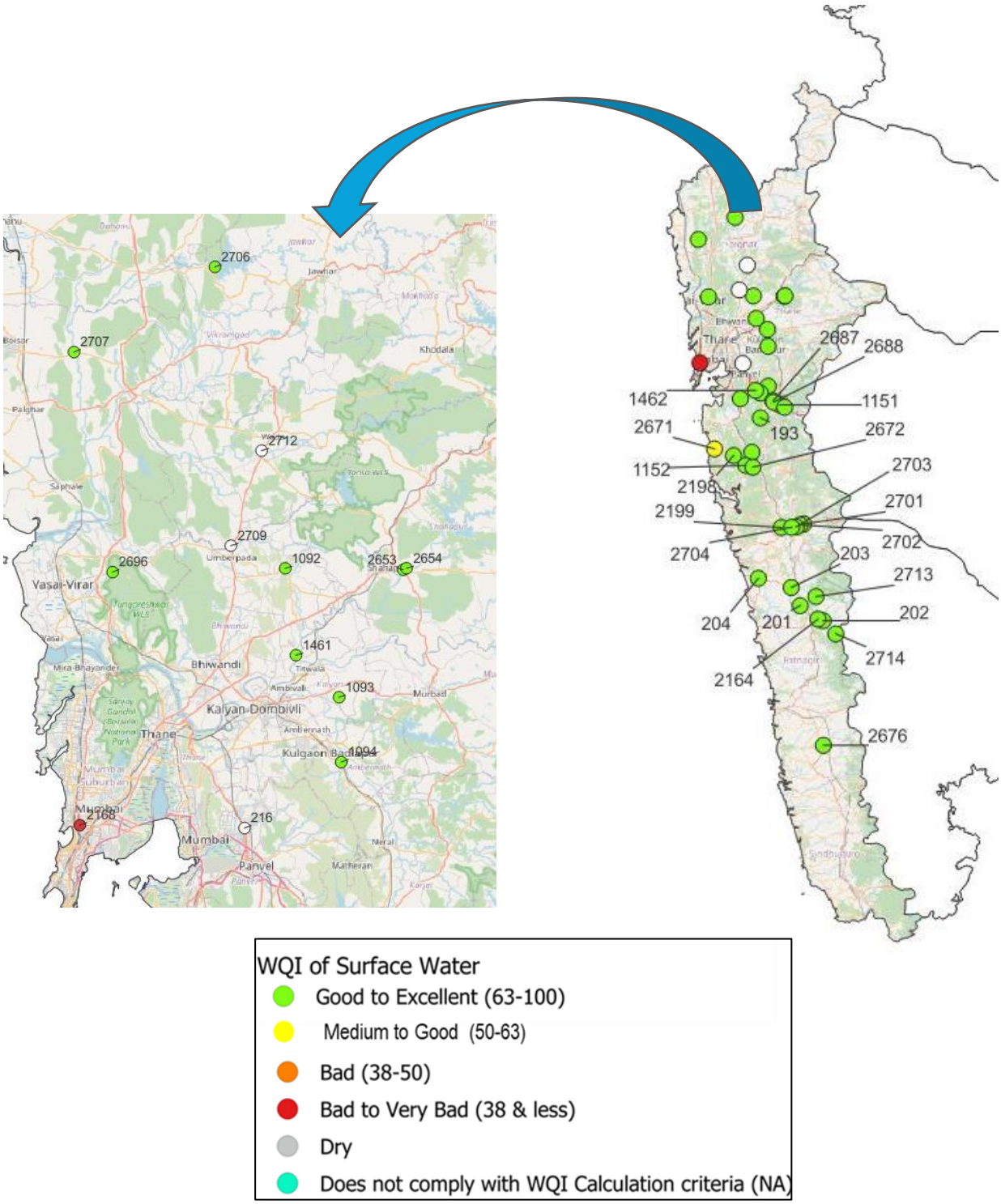
Legend

Good to Excellent	Medium to Good	Bad	Bad to Very Bad	Dry	No Data	Not Available

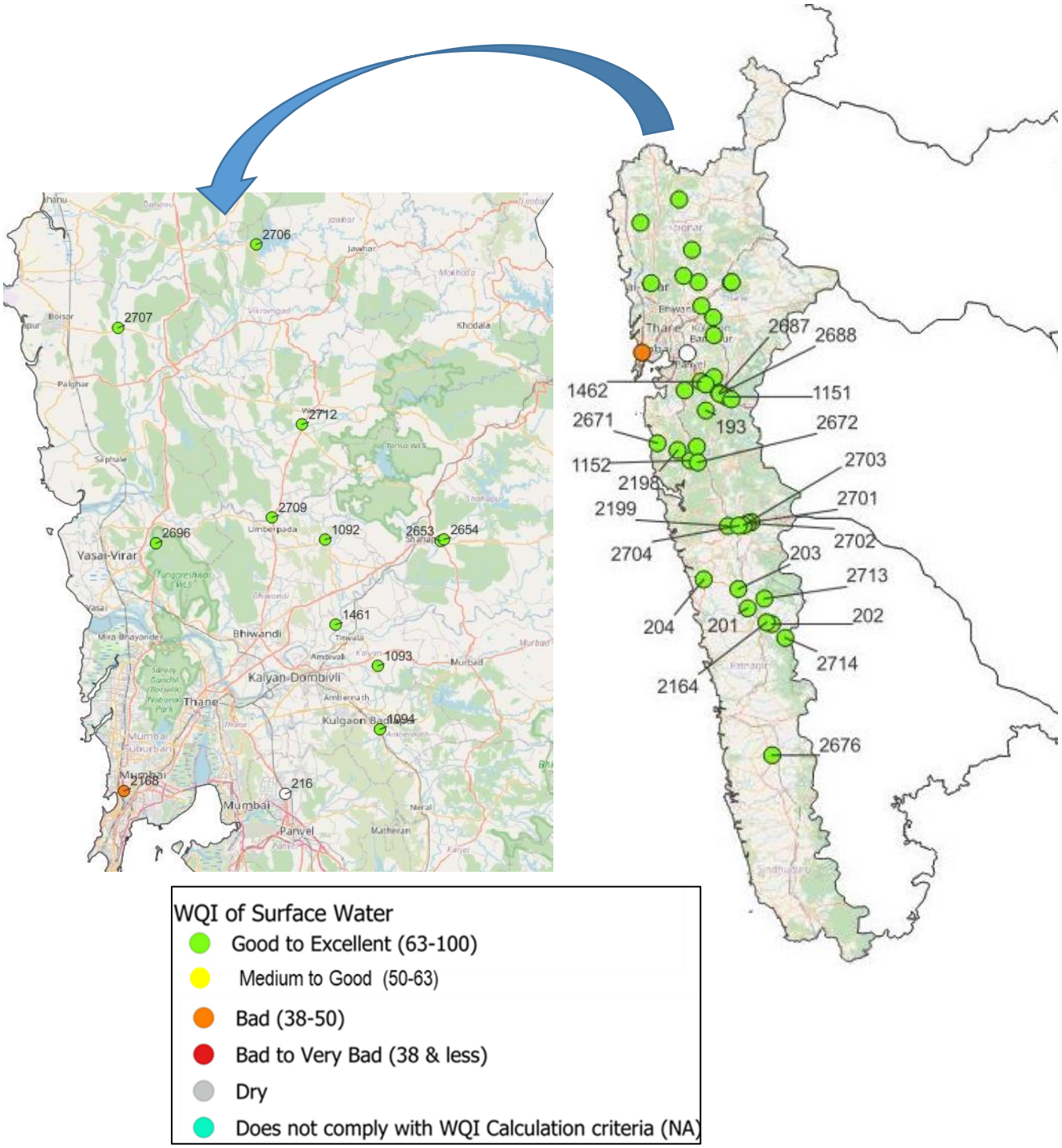
Table No. 24 : Surface water quality monitoring stations on West flowing rivers (2 of 2)

Program	Station ID	River	Station Name	Village	Taluka	District
NWMP	2701	Savitri	Savitri Jackwell at Upsa kendra	Nangalwadi	Mahad	Raigad
NWMP	2702	Savitri	Savitri at Shedav Doh	Shedav Dov	Mahad	Raigad
NWMP	2703	Savitri	Savitri at Dadli Bridge	Dadli	Mahad	Raigad
NWMP	2704	Savitri	Savitri at Muthavali village	Muthavali	Mahad	Raigad
NWMP	2689	Patalganga	Patalganga at Gagangiri Maharaj Temple	Khopoli	Khalapur	Raigad
NWMP	2199	Savitri	Savitri at Ovale village	Ovale	Mahad	Raigad
NWMP	1151	Patalganga	Patalganga at Shilphata Bridge	Khopoli	Khalapur	Raigad
NWMP	2688	Patalganga	Patalganga at Savroli Bridge	Savroli	Khalapur	Raigad
NWMP	2687	Patalganga	Patalganga at Khalapur pumping house	Khalapur	Khalapur	Raigad
SWMP	192	Dam	Morbe Dam, Taluka - Khalapur, District - Raigad	Khalapur	Khalapur	Raigad
SWMP	193	Balganga	Balganga , Village Ransai, Taluka - Khalapur, District - Raigad	Ransai	Khalapur	Raigad
NWMP	2686	Patalganga	Patalganga at Vyal pump house	Vyal	Khalapur	Raigad
NWMP	1462	Patalganga	Patalganga near intake of MIDC water works(Turade w/w)	Turade	Khalapur	Raigad
NWMP	2672	Kundalika	Kundalika at Dhatav at Jackwell	Dhatav	Roha	Raigad
NWMP	2651	Amba	Amba at D/s of Waken Bridge	Waken Phata	Roha	Raigad
NWMP	1152	Kundalika	Kundalika at Roha Bridge	Roha	Roha	Raigad
SWMP	216	Kasardi	Near Ganesh Ghat	Taloja	Panvel	Raigad
NWMP	2708	Surya	Surya at Intake of Vasai-Virar water scheme	Masvan	Palghar	Thane
NWMP	2685	Patalganga	Patalganga at D/s of Kharpada Bridge	Kharpada	Khalapur	Raigad
NWMP	2198	Kundalika	Kundalika at Are Khurd (Saline Zone)	Are Khurd	Roha	Raigad
NWMP	2671	Kundalika	Kundalika near Salav Bridge (Saline Zone)	Salav	Roha	Raigad

Spatial map of Surface WQI at West Flowing Rivers (April 2023)

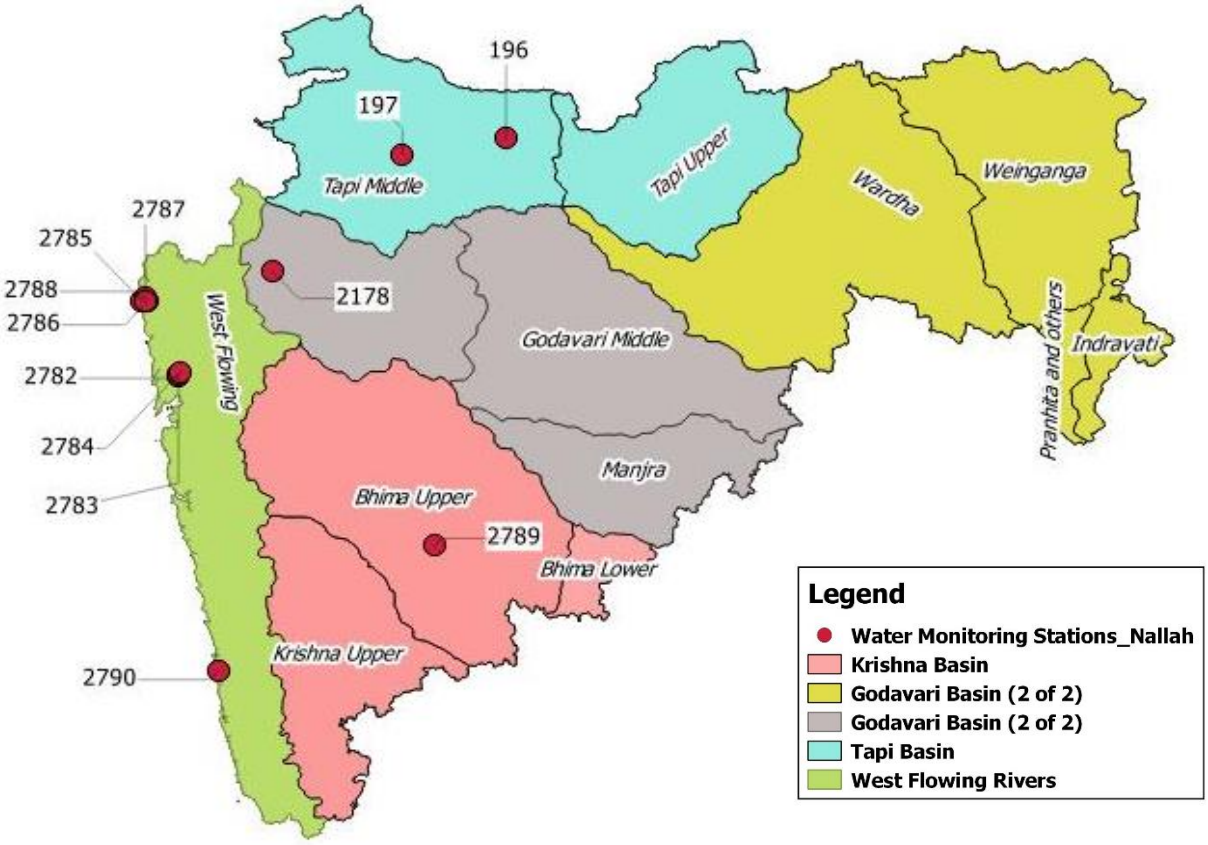


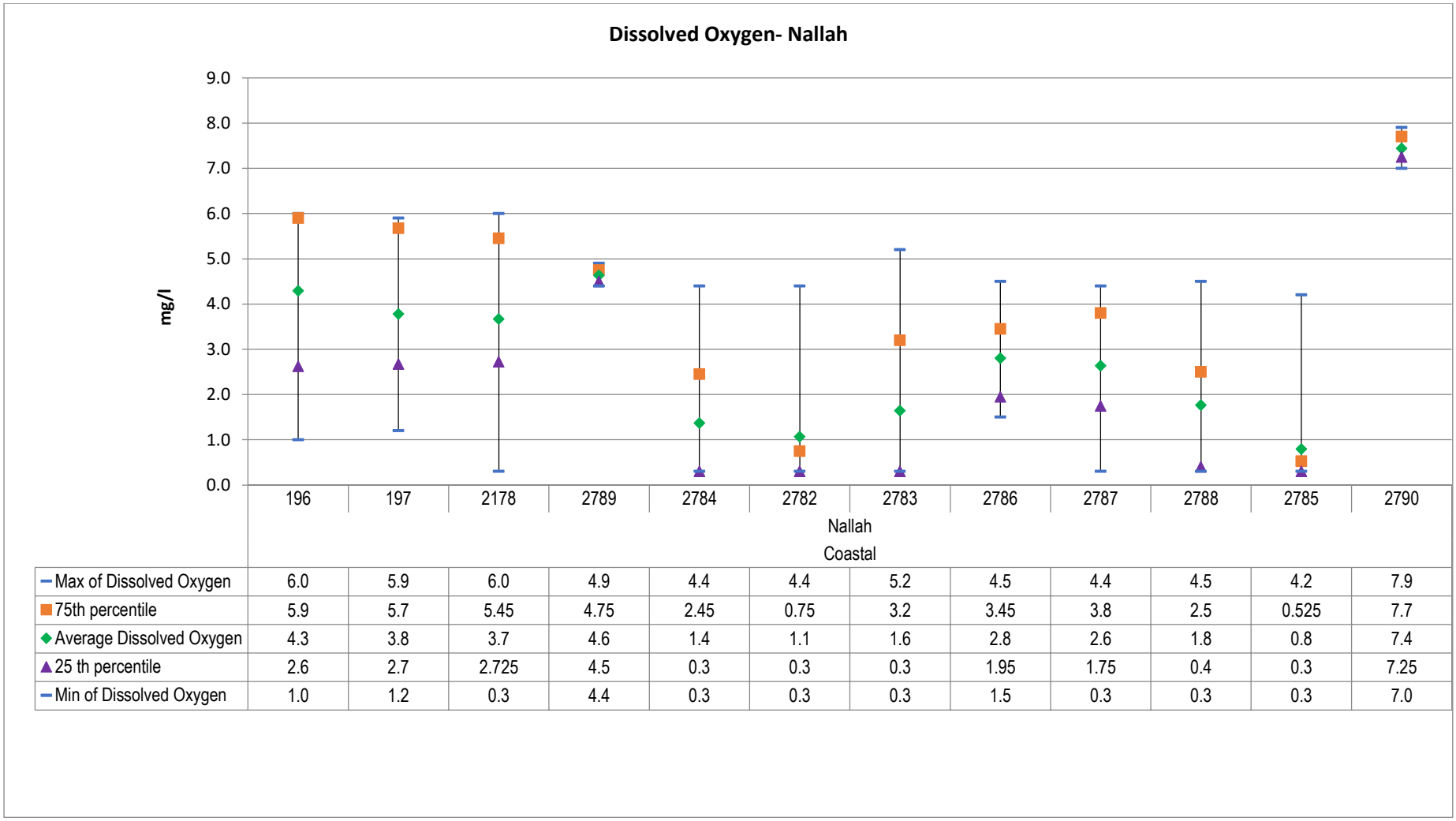
Spatial ma p of Surface WQI at West Flowing Rivers (December 2023)



Nallahs

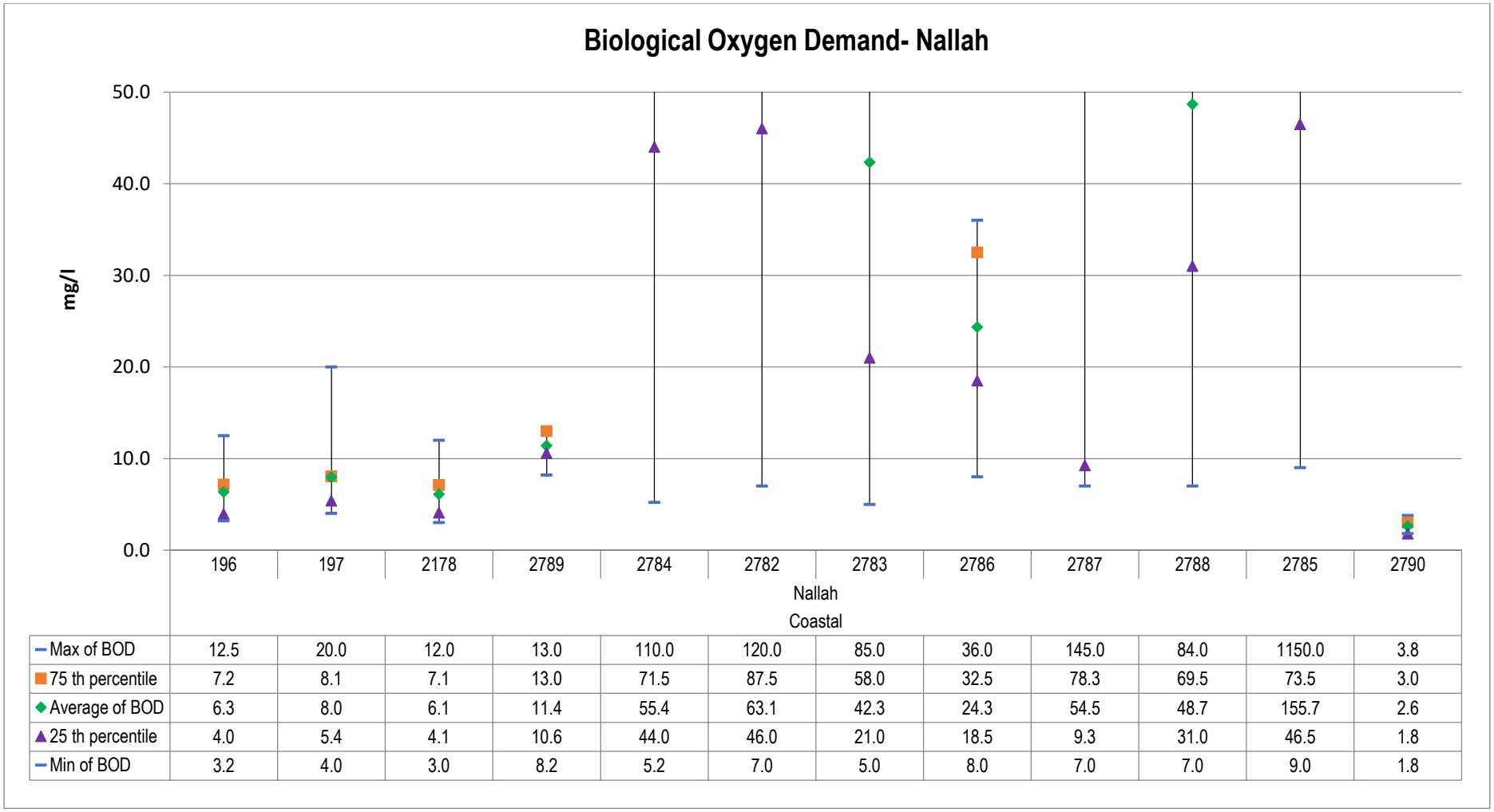
There are 12 water monitoring stations located across various nallahs in the state, with the majority of these nallahs situated in the Thane district, which lies within the coastal basin.





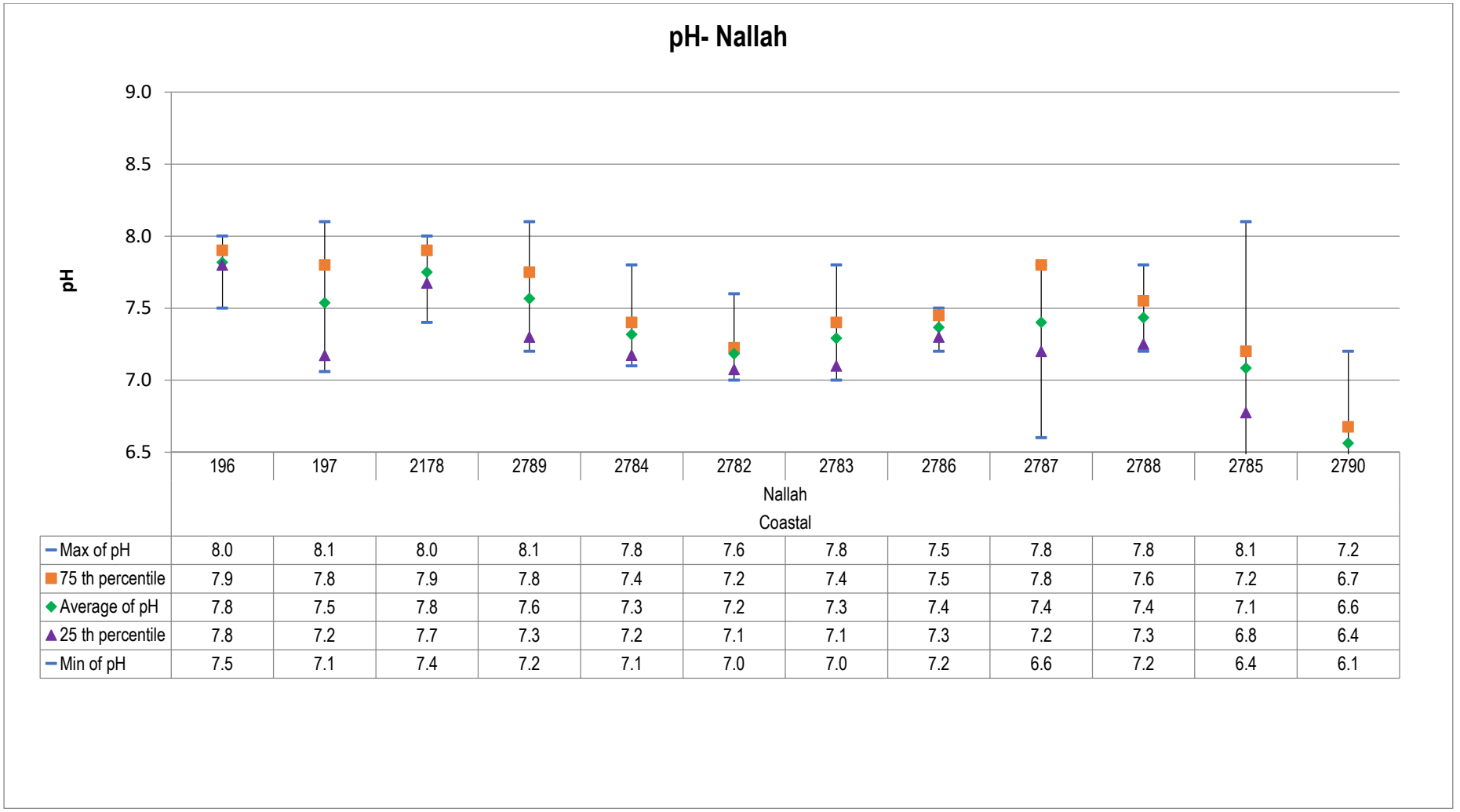
	196	197	2178	2789	2784	2782	2783	2786	2787	2788	2785	2790
Max of Dissolved Oxygen	6.0	5.9	6.0	4.9	4.4	4.4	5.2	4.5	4.4	4.5	4.2	7.9
75th percentile	5.9	5.7	5.45	4.75	2.45	0.75	3.2	3.45	3.8	2.5	0.525	7.7
Average Dissolved Oxygen	4.3	3.8	3.7	4.6	1.4	1.1	1.6	2.8	2.6	1.8	0.8	7.4
25 th percentile	2.6	2.7	2.725	4.5	0.3	0.3	0.3	1.95	1.75	0.4	0.3	7.25
Min of Dissolved Oxygen	1.0	1.2	0.3	4.4	0.3	0.3	0.3	1.5	0.3	0.3	0.3	7.0

Figure No. 44: Trend of Dissolved Oxygen (DO) levels recorded at WQMS at Nallah (Coastal basin)



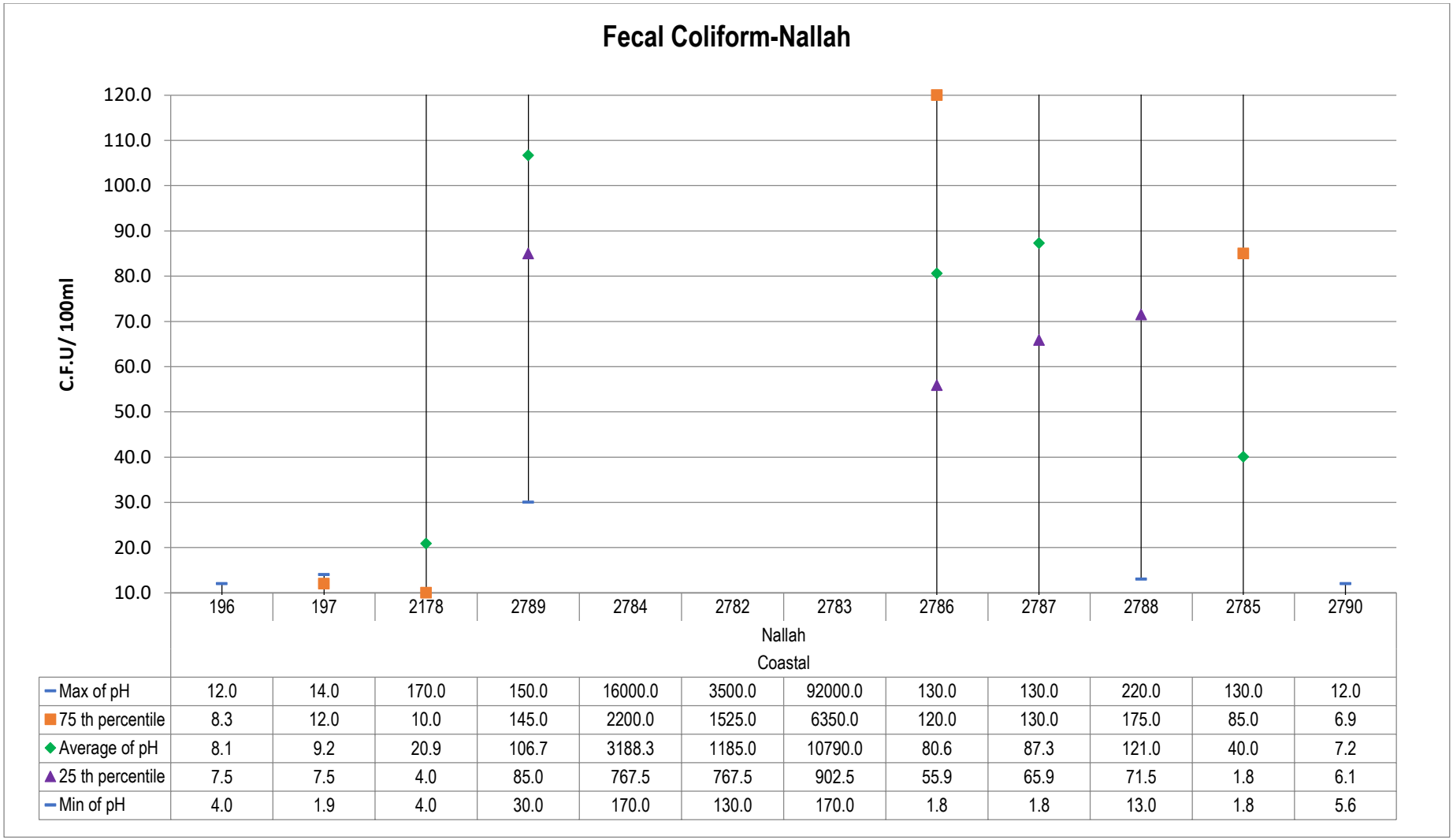
	196	197	2178	2789	2784	2782	2783	2786	2787	2788	2785	2790
Max of BOD	12.5	20.0	12.0	13.0	110.0	120.0	85.0	36.0	145.0	84.0	1150.0	3.8
75 th percentile	7.2	8.1	7.1	13.0	71.5	87.5	58.0	32.5	78.3	69.5	73.5	3.0
Average of BOD	6.3	8.0	6.1	11.4	55.4	63.1	42.3	24.3	54.5	48.7	155.7	2.6
25 th percentile	4.0	5.4	4.1	10.6	44.0	46.0	21.0	18.5	9.3	31.0	46.5	1.8
Min of BOD	3.2	4.0	3.0	8.2	5.2	7.0	5.0	8.0	7.0	7.0	9.0	1.8

Figure No. 45: Trend of Biological Oxygen Demand (BOD) levels recorded at WQMS at Nallah (Coastal basin)



	196	197	2178	2789	2784	2782	2783	2786	2787	2788	2785	2790
Max of pH	8.0	8.1	8.0	8.1	7.8	7.6	7.8	7.5	7.8	7.8	8.1	7.2
75 th percentile	7.9	7.8	7.9	7.8	7.4	7.2	7.4	7.5	7.8	7.6	7.2	6.7
Average of pH	7.8	7.5	7.8	7.6	7.3	7.2	7.3	7.4	7.4	7.4	7.1	6.6
25 th percentile	7.8	7.2	7.7	7.3	7.2	7.1	7.1	7.3	7.2	7.3	6.8	6.4
Min of pH	7.5	7.1	7.4	7.2	7.1	7.0	7.0	7.2	6.6	7.2	6.4	6.1

Figure No. 46: Trend of pH levels recorded at WQMS at Nallah (Coastal basin)



	196	197	2178	2789	2784	2782	2783	2786	2787	2788	2785	2790
Max of pH	12.0	14.0	170.0	150.0	16000.0	3500.0	92000.0	130.0	130.0	220.0	130.0	12.0
75 th percentile	8.3	12.0	10.0	145.0	2200.0	1525.0	6350.0	120.0	130.0	175.0	85.0	6.9
Average of pH	8.1	9.2	20.9	106.7	3188.3	1185.0	10790.0	80.6	87.3	121.0	40.0	7.2
25 th percentile	7.5	7.5	4.0	85.0	767.5	767.5	902.5	55.9	65.9	71.5	1.8	6.1
Min of pH	4.0	1.9	4.0	30.0	170.0	130.0	170.0	1.8	1.8	13.0	1.8	5.6

Figure No. 47: Trend of Fecal Coliform levels recorded at WQMS at Nallah (Coastal basin)

Water Quality Index for WQMS in Nallah (Coastal Basin)

Apr	61	69	59	42	33	33	51	Dry	Dry	Dry	42	84
May	45	57	Dry	67	23	26	21	Dry	Dry	Dry	43	82
Jun	58	52	Dry	45	NA	NA	NA	Dry	Dry	Dry	NA	78
Jul	52	53	Dry	73	46	47	45	37	48	35	37	NA
Aug	56	82	Dry	83	58	57	63	62	59	58	55	NA
Sep	84	78	Dry	84	29	30	28	55	44	43	48	NA
Oct	82	82	64	83	28	27	27	Dry	Dry	Dry	42	NA
Nov	80	59	Dry	64	26	27	29	Dry	Dry	Dry	47	81
Dec	76	NA	57	80	33	33	33	Dry	Dry	Dry	34	86
Jan	81	60	Dry	66	28	29	28	Dry	Dry	Dry	50	82
Feb	81	77	Dry	64	30	28	27	Dry	Dry	Dry	48	77
Mar	73	NA	Dry	46	29	29	29	Dry	Dry	Dry	33	81
Station code	196	197	2789	2178	2784	2782	2783	2786	2787	2788	2785	2790
Sub Basin	Nallah											
Basin	Coastal											

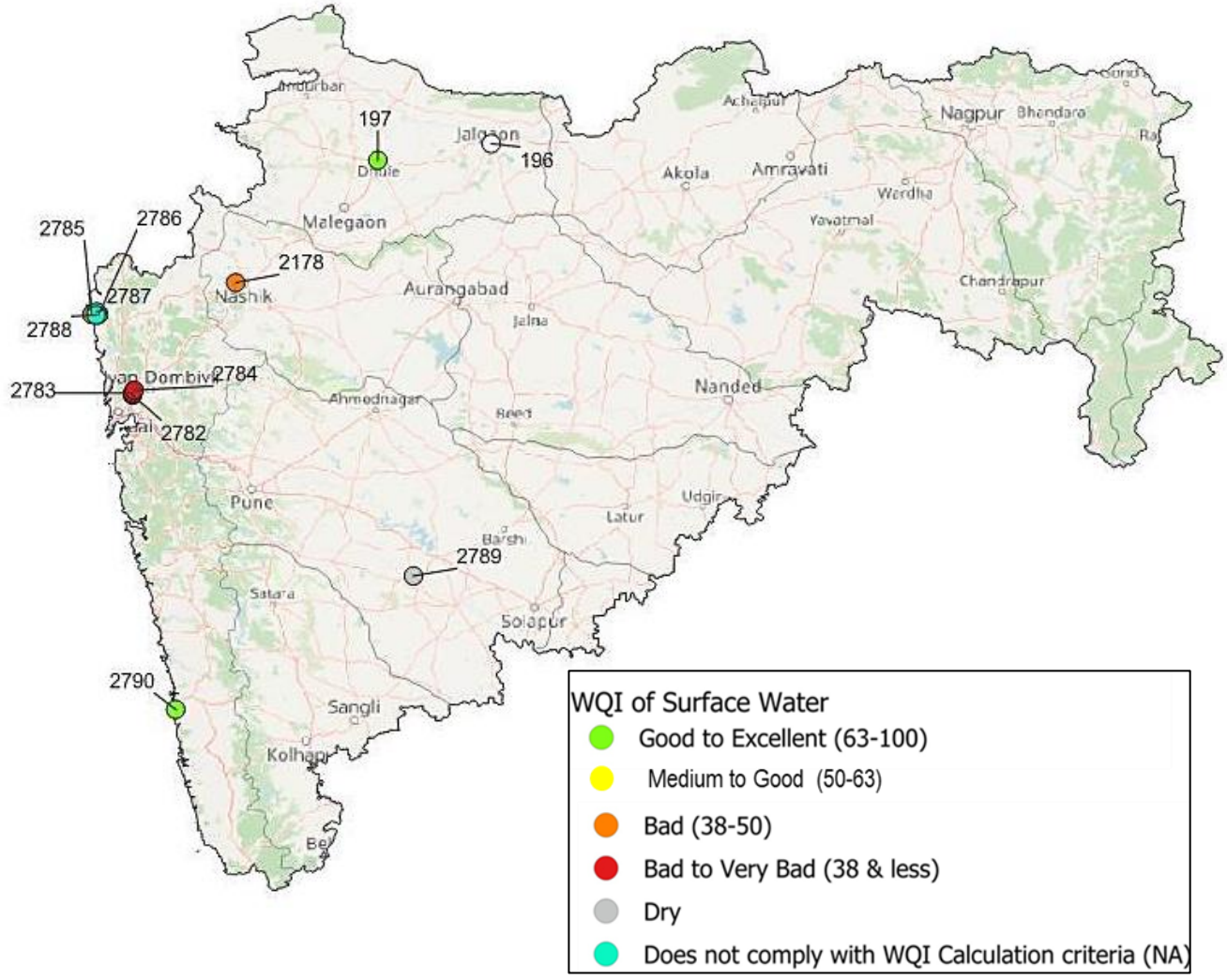
Legend

Good to Excellent	Medium to Good	Bad	Bad to Very Bad	Dry	No Data	Not Available

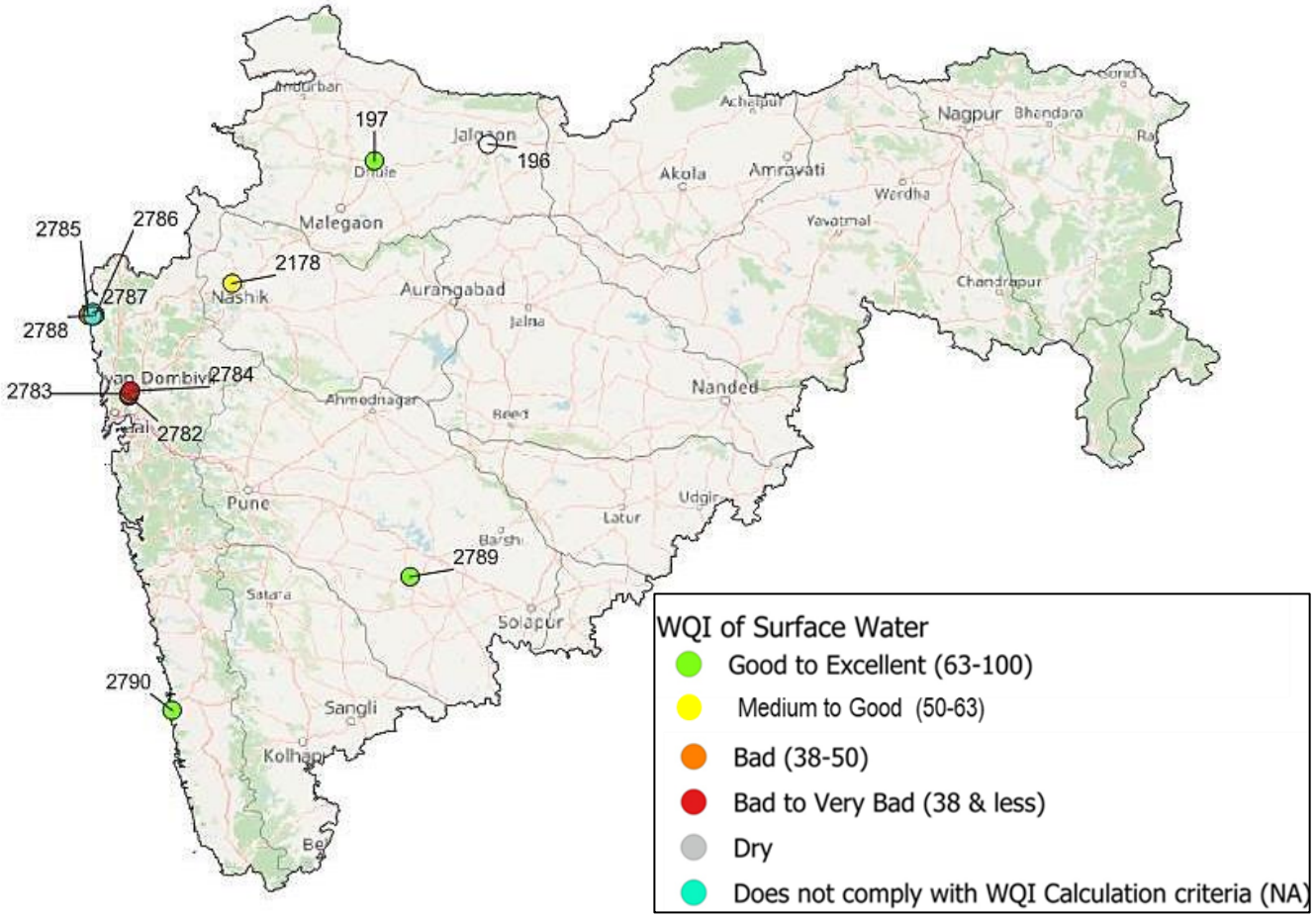
Table No. 25: Surface water monitoring stations at Nallahs

Program	Station ID	River/Nalla	Station Name	Village	Taluka	District
SWMP	196	Lowki Nalla	Lowki Nalla At Khedi, Taluka & District - Jalgaon	Khedi	Khedi	Jalgaon
SWMP	197	Moti Nalla	Moti Nalla before Confluence with Panjara Dhule, Taluka & District - Dhule	Dhule	Dhule	Dhule
NWMP	2178	Chikhali nalla	Chikhali Nalla Meets Godavari	Chikhali	Nashik	Nashik
NWMP	2789	Nalla	Nalla at D/s of Alkai Mandir, Solapur	Aklai	Malshiras	Solapur
NWMP	2784	Sandoz nalla	Sandoz Nalla	Sandozbaug	Thane	Thane
NWMP	2782	Rabodi nalla	Rabodi Nalla	Rabodi	Thane	Thane
NWMP	2783	Colour Chem nalla	Colour Chem Nalla	Majiwada	Thane	Thane
NWMP	2786	Tarapur MIDC nalla	Tarapur MIDC Nalla, near sump No1	MIDC Tarapur	Palghar	Palghar
NWMP	2787	Tarapur MIDC nalla	Tarapur MIDC Nalla	MIDC Tarapur	Palghar	Palghar
NWMP	2788	Tarapur MIDC nalla	Tarapur MIDC Nalla near sump-III	MIDC Tarapur	Palghar	Palghar
NWMP	2785	BPT Navapur	BPT Navapur	Navapur	Palghar	Palghar
NWMP	2790	Pimpal-Paneri nalla	Pimpal-Paneri Nalla at Ratnagiri near Finolex Industries	Yahganigaon	Ratnagiri	Ratnagiri

Spatial map of Surface WQI at Nallahs (April 2023)



Spatial map of Surface WQI at Nallahs (December 2023)



Saline (Sea and Creek) Water Quality

Maharashtra's coastline stretches for approximately 720 km, from the Arabian Sea along the Western Ghats to the Deccan Plateau. The coastal region features beaches, rocky cliffs, estuaries, and mangrove patches, and is home to diverse flora and fauna. It supports marine fisheries, which are crucial for livelihood, employment, and food security. However, the coastal areas face challenges like coastal erosion, water pollution, siltation, and pressures on mangroves and salt marshes. Effective management strategies are essential for the sustainable development of these coastal ecosystems.

To monitor pollution levels in the coastal regions, the Maharashtra Pollution Control Board (MPCB) has set up a network of 45 monitoring stations. Of these, 36 are located along the sea and creeks, particularly in sensitive and pollution-prone areas of the state's coastline, while 12 stations are situated along the nallahs. The following section provides an illustrative presentation of the data on Dissolved Oxygen (DO), Feacal Coliform (FC), pH, and Biochemical Oxygen Demand (BOD) recorded at the sea and creek Water Quality Monitoring Stations (WQMS)

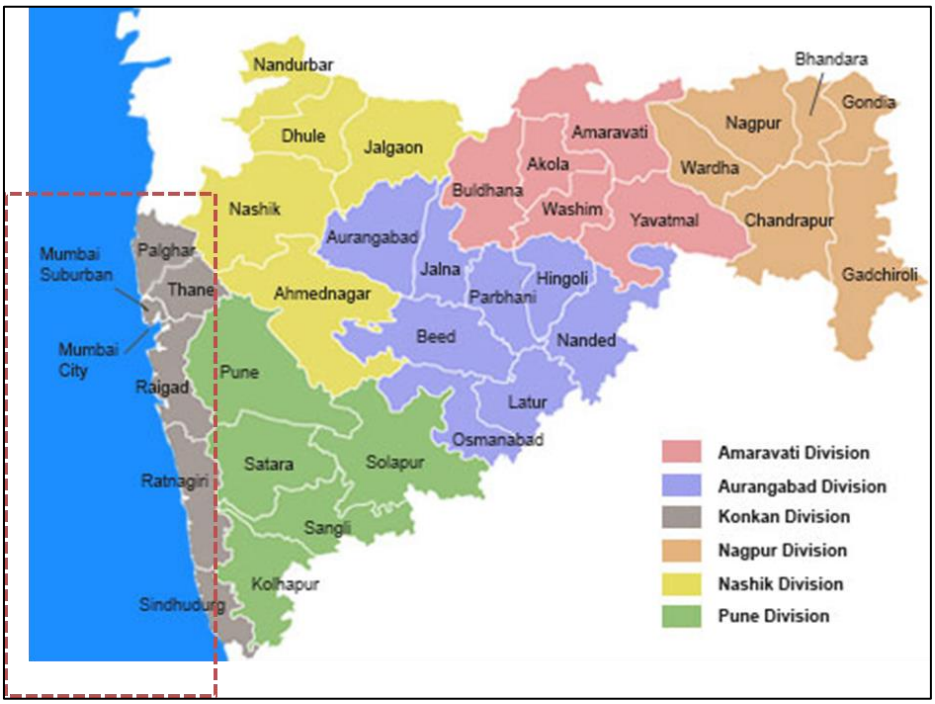


Figure No. 48: Map representing Coastal areas of Mahrashtra
Source of Map: http://divcomkonkan.gov.in/Document/en/page/MapGallery.aspx

Coastal Basin (Sea/ Creek Water Samples)

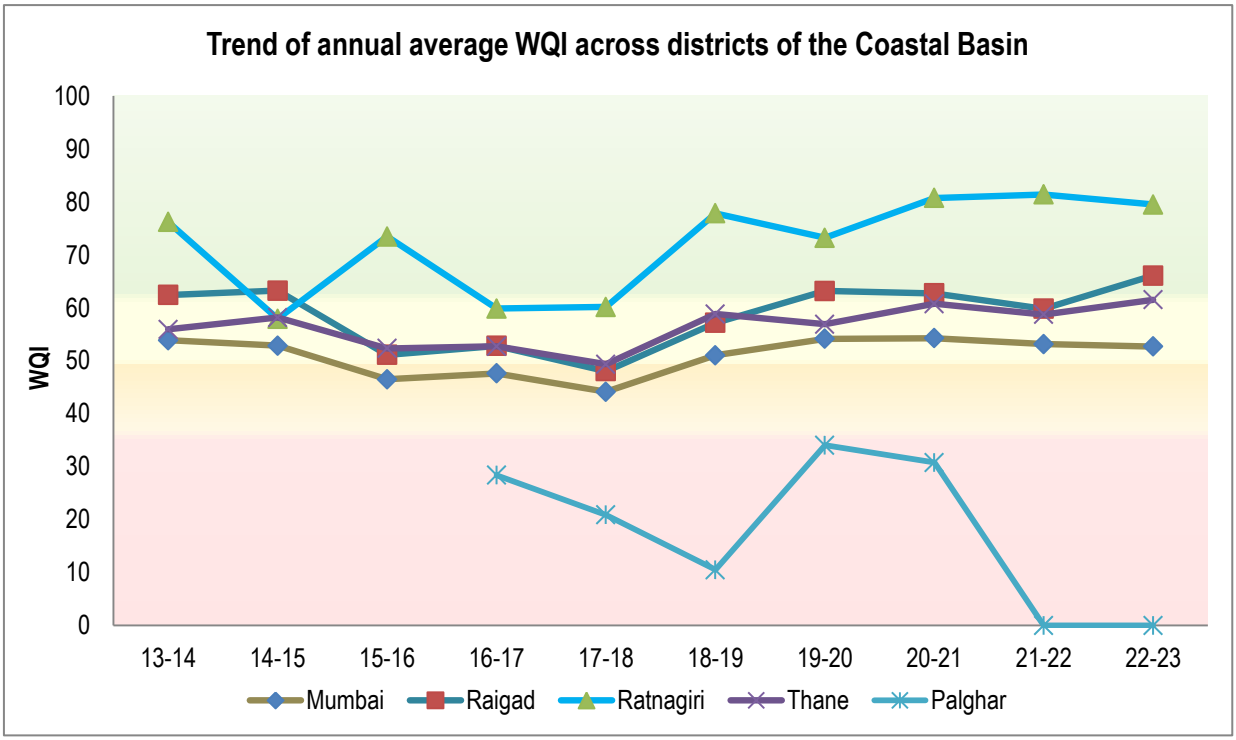


Figure No. 49: Trend of the annual average of WQI across districts of the Coastal basin

WQI	WQI Category	Class by CPCB	Represented in the above graph
63-100	Good to Excellent	A	Non-polluted
50-63	Medium to Good	B	Non-polluted
38-50	Bad	C	Polluted
38 & less	Bad to Very Bad	D, E	Heavily polluted

Note: This graph considers the average WQI for all the monitoring stations in that particular district and hence may include some bias. This graph is only for an overview and monitoring station-wise data may be analyzed to pinpoint the most affected and polluted patches of rivers in that district.

The intrabasin analysis of the Coastal basin is depicted in Figure No. 49. In the year 2023-24; though recorded a slight dip, the annual average WQI recorded by WQMS installed at Ratnagiri was found to be in the 'Good to Excellent' category (from 79.48 to 73.40). Further, the annual average WQI recorded by WQMS installed at Mumbai (51.99), Raigad (60.56) and Thane (57.17) was found to be under the 'Medium to Good' category

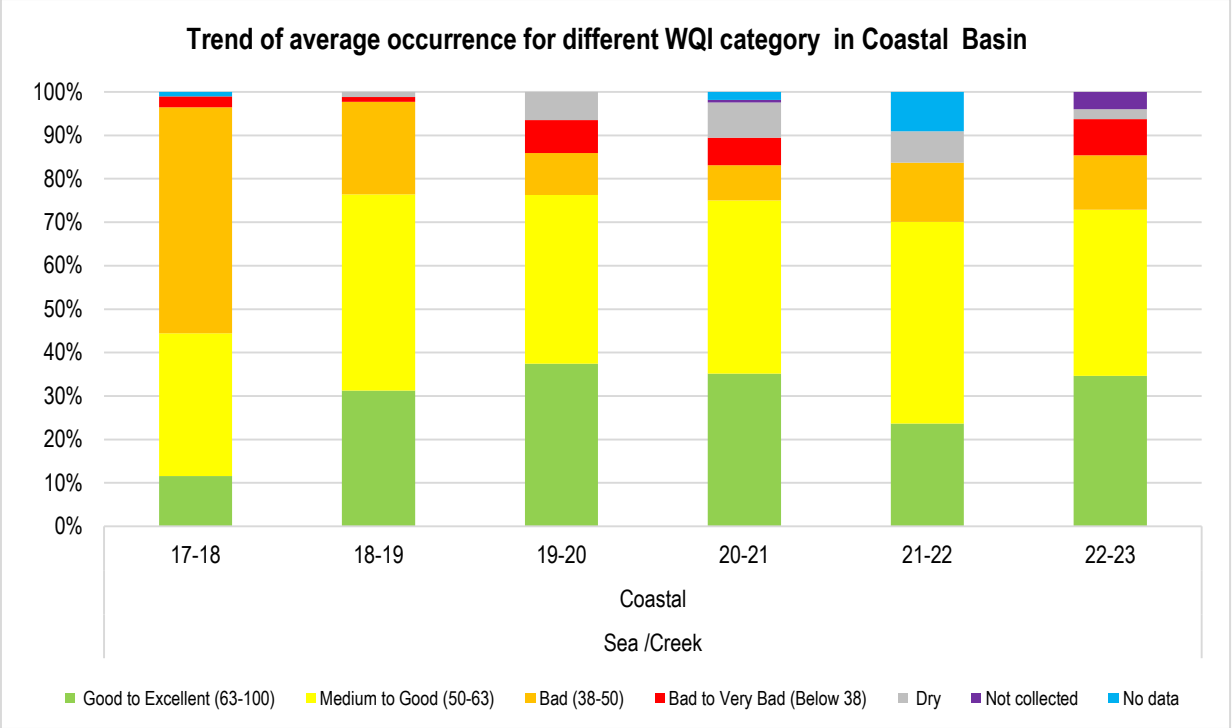
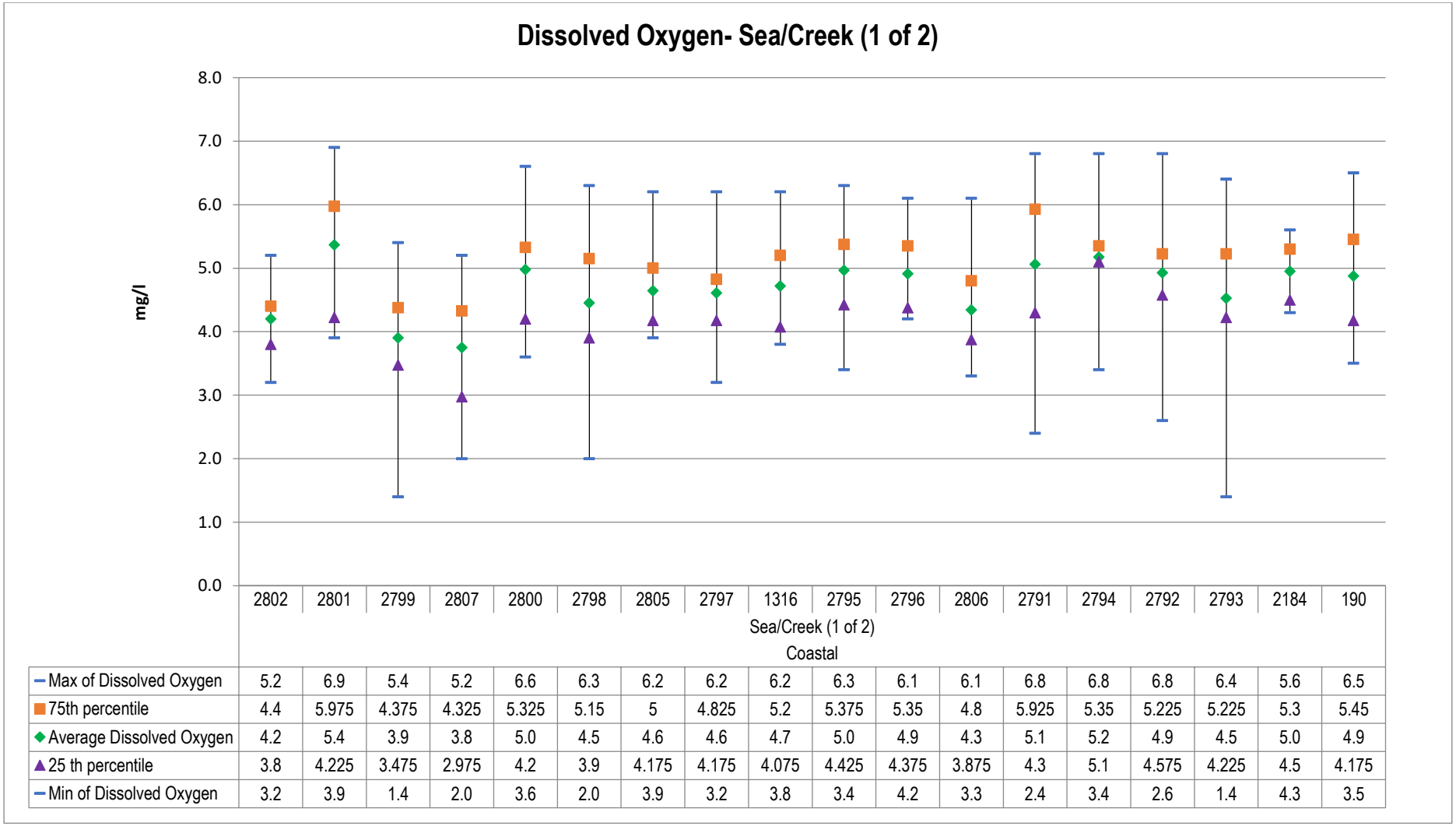


Figure No. 50: Trend of average occurrence for different WQI categories in the Coastal basin

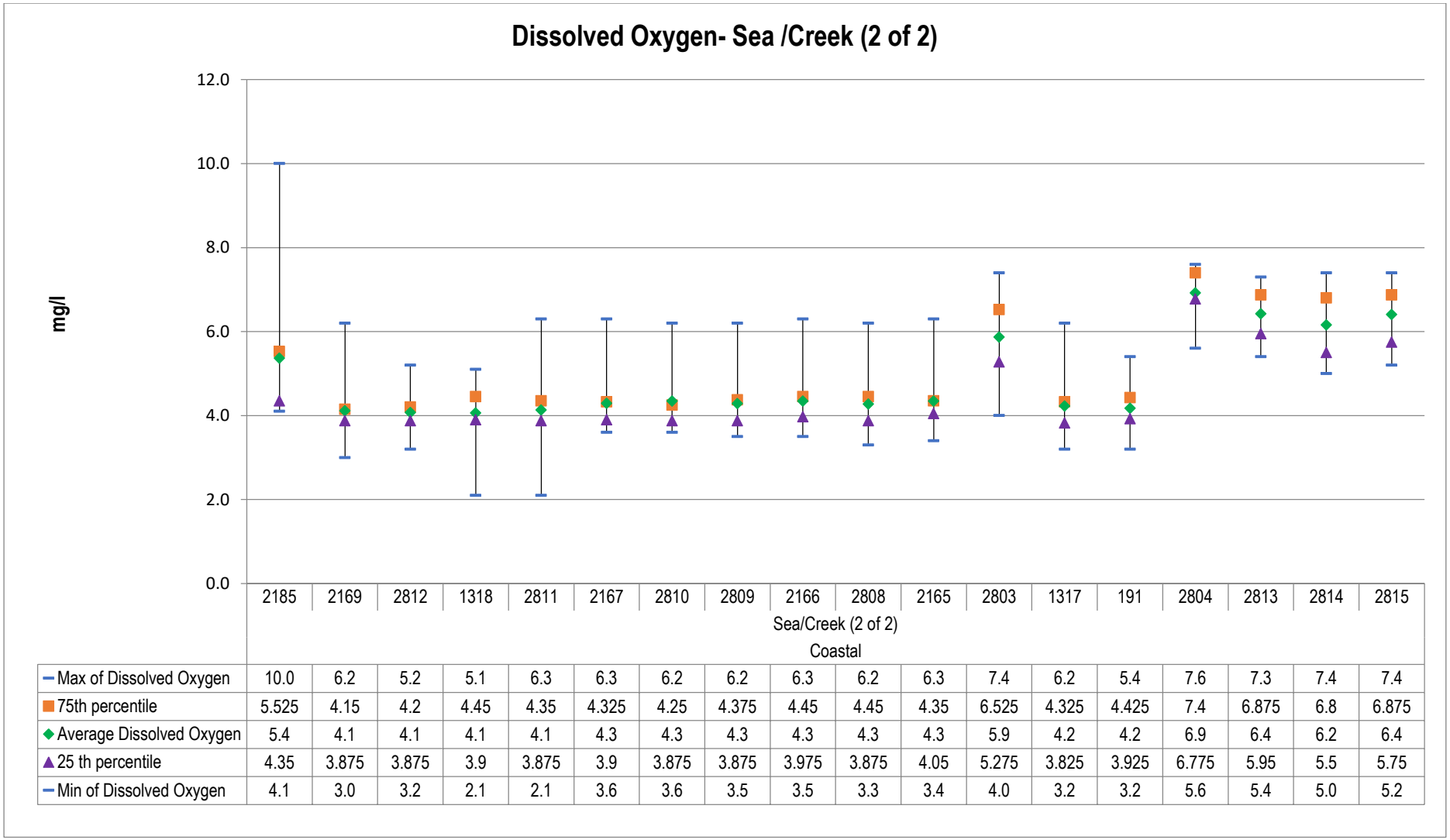
The interbasin performance of the Sea/ Creek is shown in the Figure No. 50.

In the Coastal region, 30.90% of the observations were categorized under the 'Good to Excellent' Water Quality Index (WQI) in 2023-24, showing a slight decrease from 34.65% in 2022-23. Notably, there was an 11% increase in observations classified under the 'Bad to Very Bad' category compared to the previous year. Additionally, the percentage of observations in the 'Dry' category saw a significant rise to 14.06% in 2023-24 from just 2.27% as compared to previous year 2022-23..



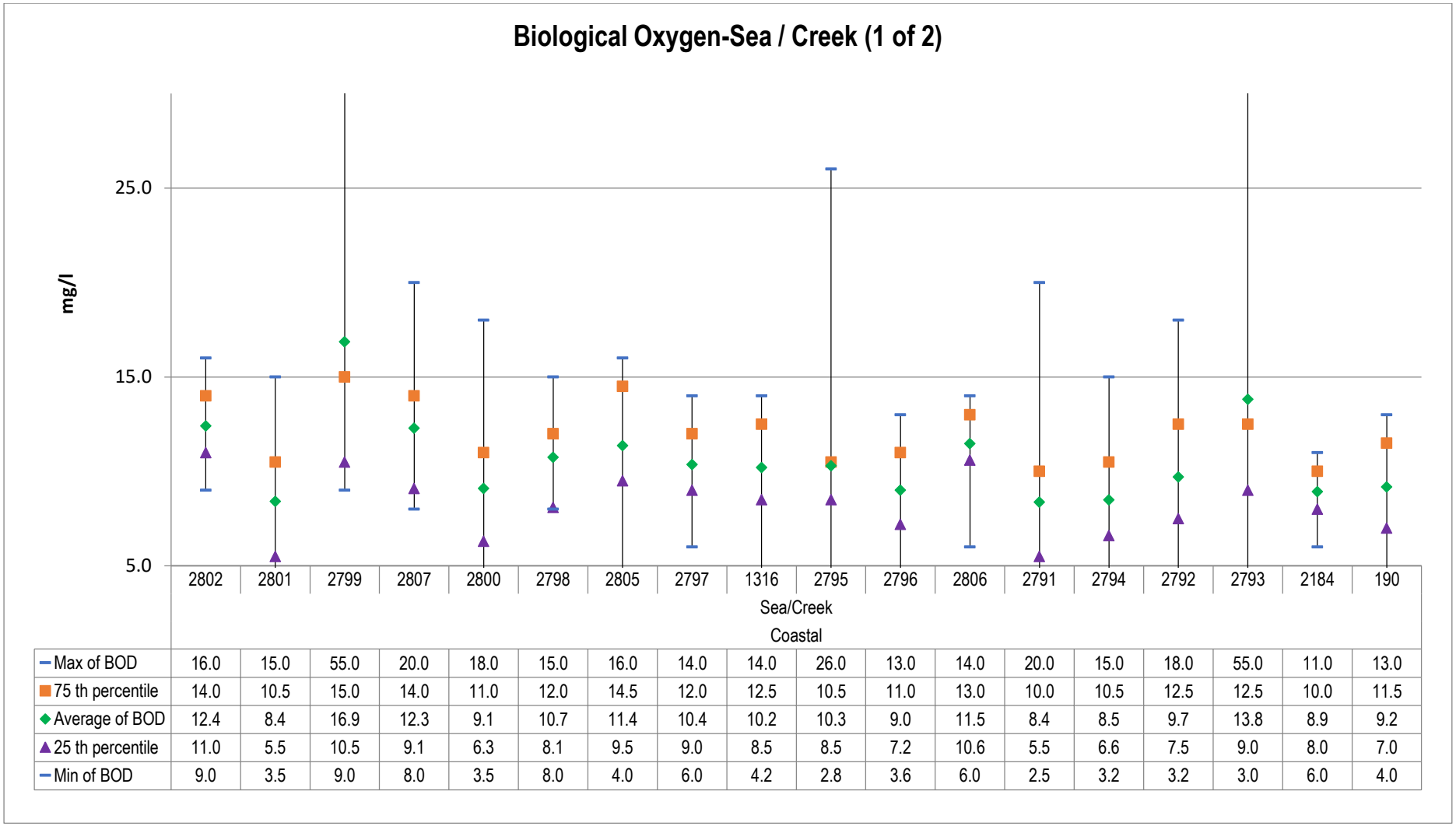
	2802	2801	2799	2807	2800	2798	2805	2797	1316	2795	2796	2806	2791	2794	2792	2793	2184	190
Max of Dissolved Oxygen	5.2	6.9	5.4	5.2	6.6	6.3	6.2	6.2	6.2	6.3	6.1	6.1	6.8	6.8	6.8	6.4	5.6	6.5
75th percentile	4.4	5.975	4.375	4.325	5.325	5.15	5	4.825	5.2	5.375	5.35	4.8	5.925	5.35	5.225	5.225	5.3	5.45
Average Dissolved Oxygen	4.2	5.4	3.9	3.8	5.0	4.5	4.6	4.6	4.7	5.0	4.9	4.3	5.1	5.2	4.9	4.5	5.0	4.9
25 th percentile	3.8	4.225	3.475	2.975	4.2	3.9	4.175	4.175	4.075	4.425	4.375	3.875	4.3	5.1	4.575	4.225	4.5	4.175
Min of Dissolved Oxygen	3.2	3.9	1.4	2.0	3.6	2.0	3.9	3.2	3.8	3.4	4.2	3.3	2.4	3.4	2.6	1.4	4.3	3.5

Figure No. 51: Trend of Dissolved Oxygen (DO) levels recorded at WQMS monitoring sea and creek water (1 of 2)



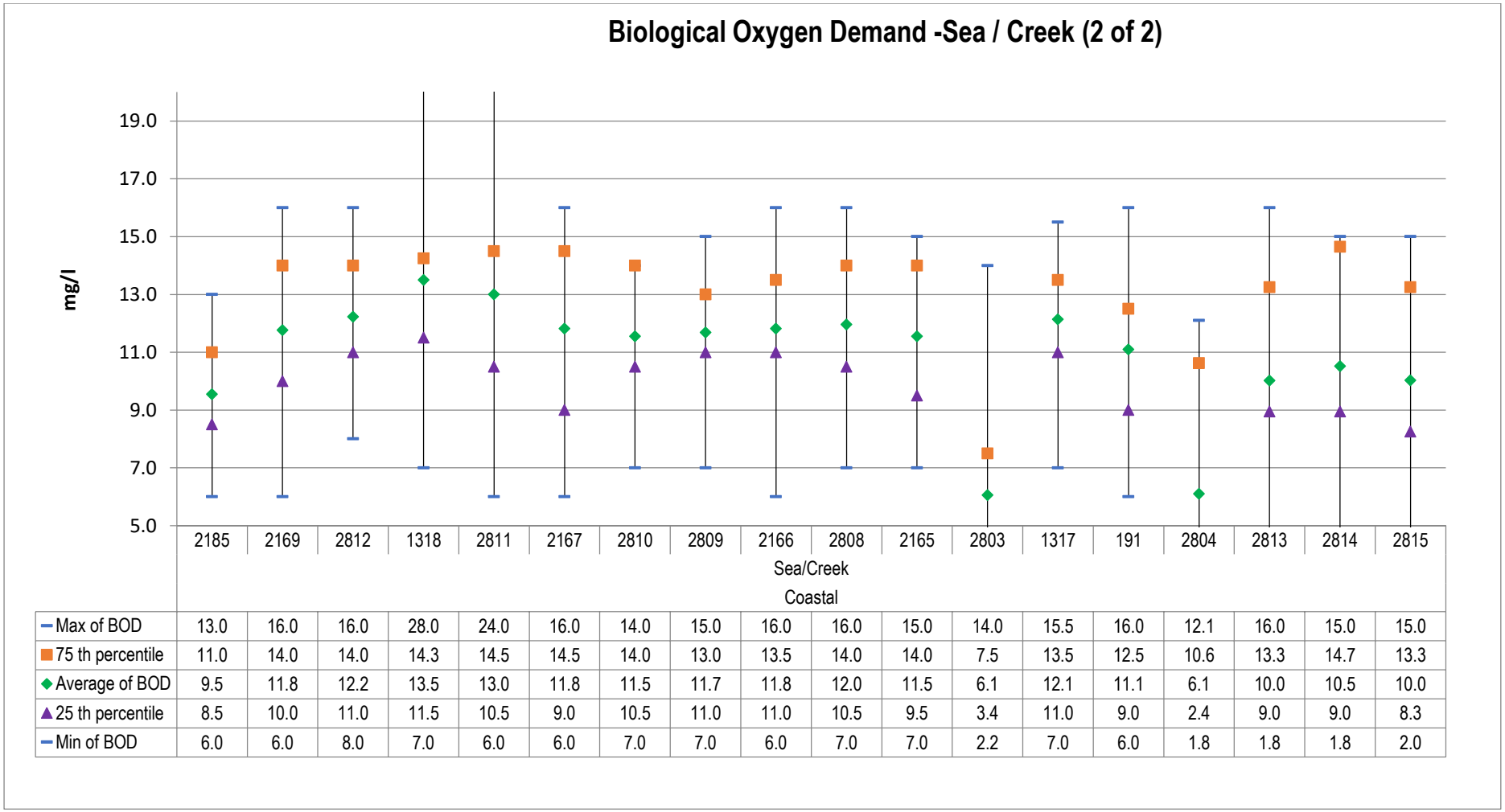
	2185	2169	2812	1318	2811	2167	2810	2809	2166	2808	2165	2803	1317	191	2804	2813	2814	2815
Max of Dissolved Oxygen	10.0	6.2	5.2	5.1	6.3	6.3	6.2	6.2	6.3	6.2	6.3	7.4	6.2	5.4	7.6	7.3	7.4	7.4
75th percentile	5.525	4.15	4.2	4.45	4.35	4.325	4.25	4.375	4.45	4.45	4.35	6.525	4.325	4.425	7.4	6.875	6.8	6.875
Average Dissolved Oxygen	5.4	4.1	4.1	4.1	4.1	4.3	4.3	4.3	4.3	4.3	4.3	5.9	4.2	4.2	6.9	6.4	6.2	6.4
25 th percentile	4.35	3.875	3.875	3.9	3.875	3.9	3.875	3.875	3.975	3.875	4.05	5.275	3.825	3.925	6.775	5.95	5.5	5.75
Min of Dissolved Oxygen	4.1	3.0	3.2	2.1	2.1	3.6	3.6	3.5	3.5	3.3	3.4	4.0	3.2	3.2	5.6	5.4	5.0	5.2

Figure No. 52: Trend of Dissolved Oxygen (DO) levels recorded at WQMS monitoring sea and creek water (2 of 2)



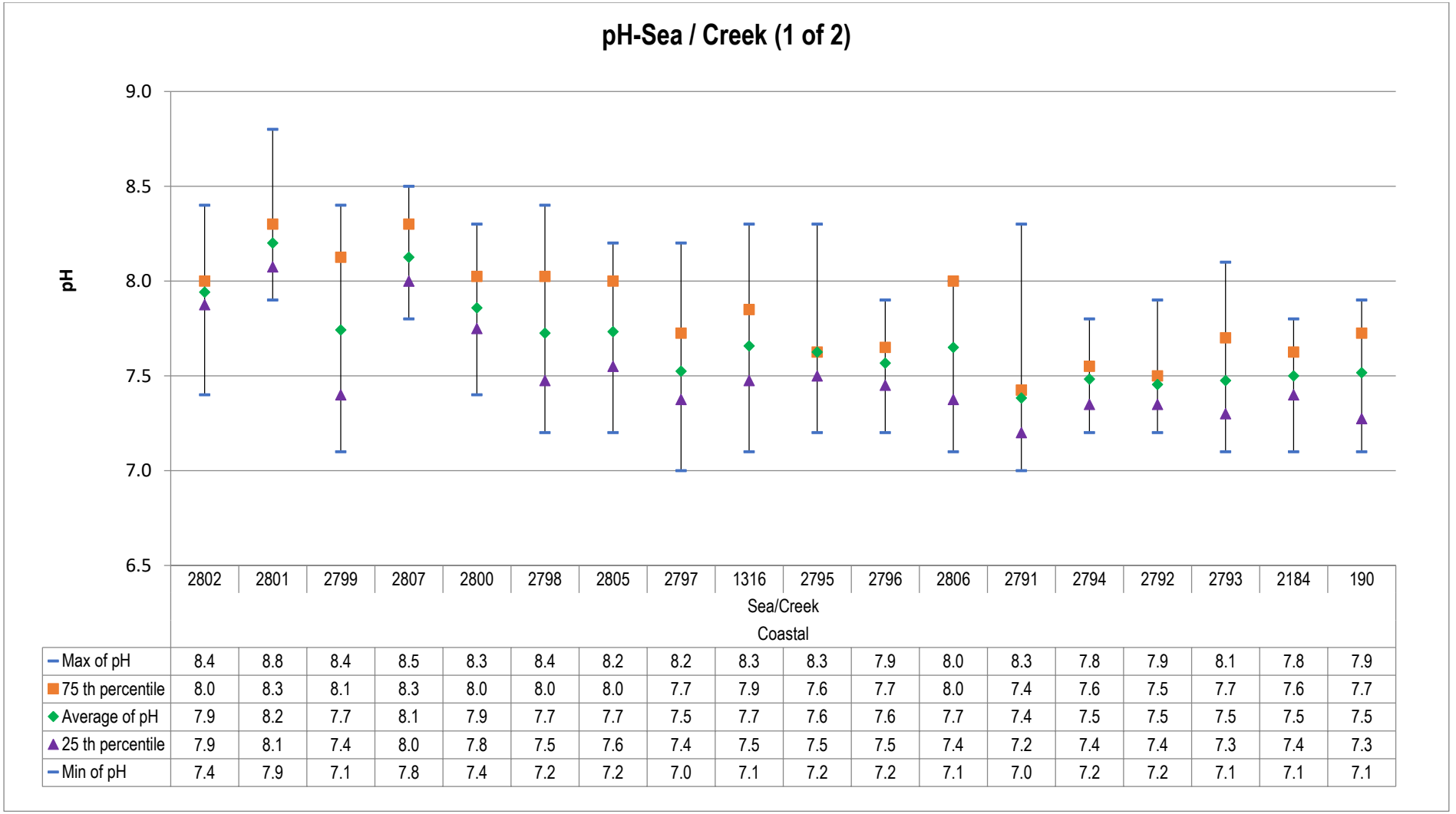
	2802	2801	2799	2807	2800	2798	2805	2797	1316	2795	2796	2806	2791	2794	2792	2793	2184	190
Max of BOD	16.0	15.0	55.0	20.0	18.0	15.0	16.0	14.0	14.0	26.0	13.0	14.0	20.0	15.0	18.0	55.0	11.0	13.0
75 th percentile	14.0	10.5	15.0	14.0	11.0	12.0	14.5	12.0	12.5	10.5	11.0	13.0	10.0	10.5	12.5	12.5	10.0	11.5
Average of BOD	12.4	8.4	16.9	12.3	9.1	10.7	11.4	10.4	10.2	10.3	9.0	11.5	8.4	8.5	9.7	13.8	8.9	9.2
25 th percentile	11.0	5.5	10.5	9.1	6.3	8.1	9.5	9.0	8.5	8.5	7.2	10.6	5.5	6.6	7.5	9.0	8.0	7.0
Min of BOD	9.0	3.5	9.0	8.0	3.5	8.0	4.0	6.0	4.2	2.8	3.6	6.0	2.5	3.2	3.2	3.0	6.0	4.0

Figure No. 53: Trend of Biological Oxygen Demand (BOD) levels recorded at WQMS monitoring sea and creek water (1 of 2)



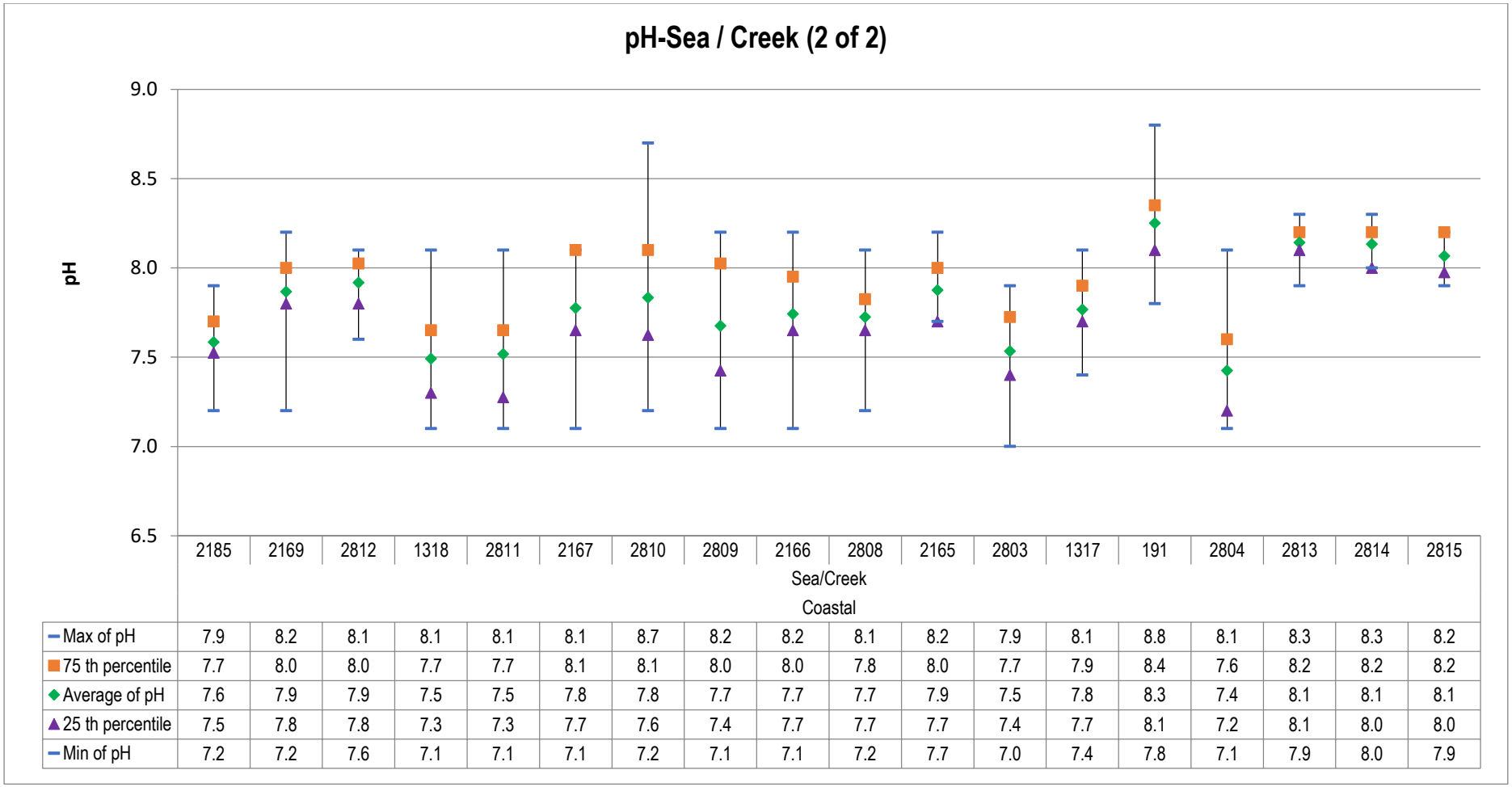
	2185	2169	2812	1318	2811	2167	2810	2809	2166	2808	2165	2803	1317	191	2804	2813	2814	2815
Max of BOD	13.0	16.0	16.0	28.0	24.0	16.0	14.0	15.0	16.0	16.0	15.0	14.0	15.5	16.0	12.1	16.0	15.0	15.0
75 th percentile	11.0	14.0	14.0	14.3	14.5	14.5	14.0	13.0	13.5	14.0	14.0	7.5	13.5	12.5	10.6	13.3	14.7	13.3
Average of BOD	9.5	11.8	12.2	13.5	13.0	11.8	11.5	11.7	11.8	12.0	11.5	6.1	12.1	11.1	6.1	10.0	10.5	10.0
25 th percentile	8.5	10.0	11.0	11.5	10.5	9.0	10.5	11.0	11.0	10.5	9.5	3.4	11.0	9.0	2.4	9.0	9.0	8.3
Min of BOD	6.0	6.0	8.0	7.0	6.0	6.0	7.0	7.0	6.0	7.0	7.0	2.2	7.0	6.0	1.8	1.8	1.8	2.0

Figure No. 54: Trend of Biological Oxygen Demand (BOD) levels recorded at WQMS monitoring sea and creek water (2 of 2)



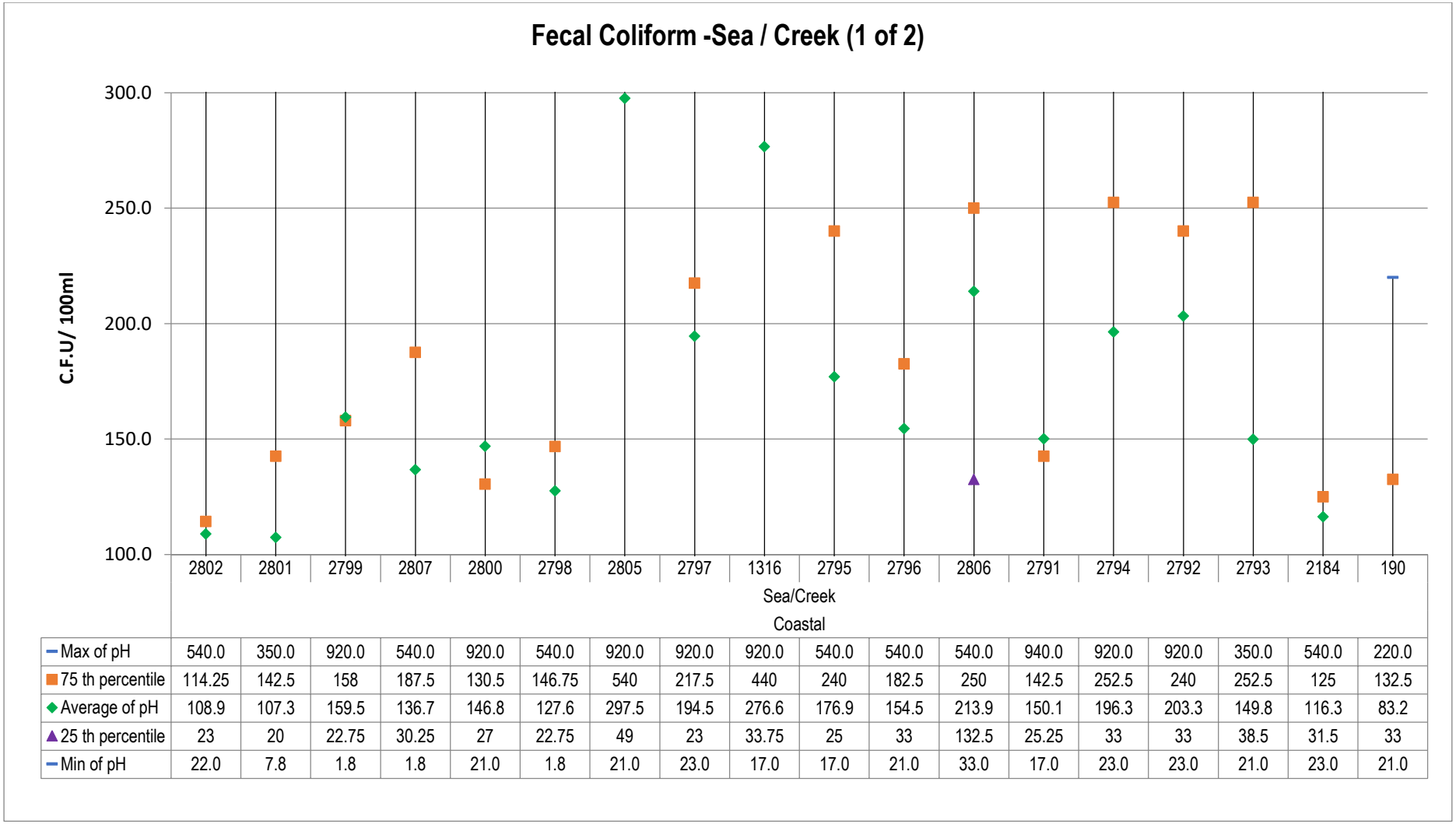
	2802	2801	2799	2807	2800	2798	2805	2797	1316	2795	2796	2806	2791	2794	2792	2793	2184	190
Max of pH	8.4	8.8	8.4	8.5	8.3	8.4	8.2	8.2	8.3	8.3	7.9	8.0	8.3	7.8	7.9	8.1	7.8	7.9
75 th percentile	8.0	8.3	8.1	8.3	8.0	8.0	8.0	7.7	7.9	7.6	7.7	8.0	7.4	7.6	7.5	7.7	7.6	7.7
Average of pH	7.9	8.2	7.7	8.1	7.9	7.7	7.7	7.5	7.7	7.6	7.6	7.7	7.4	7.5	7.5	7.5	7.5	7.5
25 th percentile	7.9	8.1	7.4	8.0	7.8	7.5	7.6	7.4	7.5	7.5	7.5	7.4	7.2	7.4	7.4	7.3	7.4	7.3
Min of pH	7.4	7.9	7.1	7.8	7.4	7.2	7.2	7.0	7.1	7.2	7.2	7.1	7.0	7.2	7.2	7.1	7.1	7.1

Figure No. 55: Trend of pH levels recorded at WQMS monitoring sea and creek water (1 of 2)



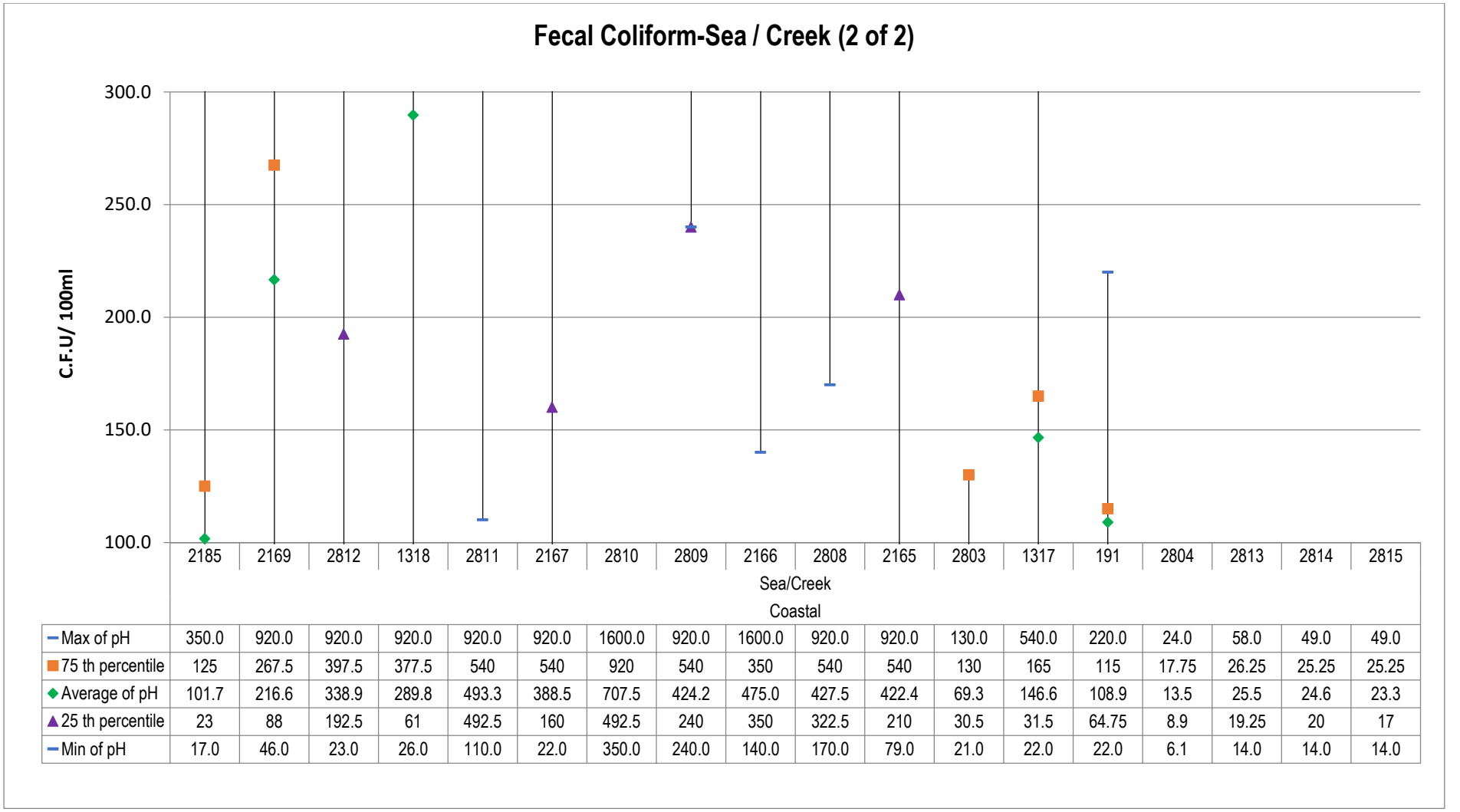
	2185	2169	2812	1318	2811	2167	2810	2809	2166	2808	2165	2803	1317	191	2804	2813	2814	2815
Max of pH	7.9	8.2	8.1	8.1	8.1	8.1	8.7	8.2	8.2	8.1	8.2	7.9	8.1	8.8	8.1	8.3	8.3	8.2
75 th percentile	7.7	8.0	8.0	7.7	7.7	8.1	8.1	8.0	8.0	7.8	8.0	7.7	7.9	8.4	7.6	8.2	8.2	8.2
Average of pH	7.6	7.9	7.9	7.5	7.5	7.8	7.8	7.7	7.7	7.7	7.9	7.5	7.8	8.3	7.4	8.1	8.1	8.1
25 th percentile	7.5	7.8	7.8	7.3	7.3	7.7	7.6	7.4	7.7	7.7	7.7	7.4	7.7	8.1	7.2	8.1	8.0	8.0
Min of pH	7.2	7.2	7.6	7.1	7.1	7.1	7.2	7.1	7.1	7.2	7.7	7.0	7.4	7.8	7.1	7.9	8.0	7.9

Figure No. 56: Trend of pH levels recorded at WQMS monitoring sea and creek water (2 of 2)



	2802	2801	2799	2807	2800	2798	2805	2797	1316	2795	2796	2806	2791	2794	2792	2793	2184	190
Max of pH	540.0	350.0	920.0	540.0	920.0	540.0	920.0	920.0	920.0	540.0	540.0	540.0	940.0	920.0	920.0	350.0	540.0	220.0
75 th percentile	114.25	142.5	158	187.5	130.5	146.75	540	217.5	440	240	182.5	250	142.5	252.5	240	252.5	125	132.5
Average of pH	108.9	107.3	159.5	136.7	146.8	127.6	297.5	194.5	276.6	176.9	154.5	213.9	150.1	196.3	203.3	149.8	116.3	83.2
25 th percentile	23	20	22.75	30.25	27	22.75	49	23	33.75	25	33	132.5	25.25	33	33	38.5	31.5	33
Min of pH	22.0	7.8	1.8	1.8	21.0	1.8	21.0	23.0	17.0	17.0	21.0	33.0	17.0	23.0	23.0	21.0	23.0	21.0

Figure No. 57: Trend of Fecal coliform levels recorded at WQMS monitoring sea and creek water (1 of 2)



	2185	2169	2812	1318	2811	2167	2810	2809	2166	2808	2165	2803	1317	191	2804	2813	2814	2815
Max of pH	350.0	920.0	920.0	920.0	920.0	920.0	1600.0	920.0	1600.0	920.0	920.0	130.0	540.0	220.0	24.0	58.0	49.0	49.0
75 th percentile	125	267.5	397.5	377.5	540	540	920	540	350	540	540	130	165	115	17.75	26.25	25.25	25.25
Average of pH	101.7	216.6	338.9	289.8	493.3	388.5	707.5	424.2	475.0	427.5	422.4	69.3	146.6	108.9	13.5	25.5	24.6	23.3
25 th percentile	23	88	192.5	61	492.5	160	492.5	240	350	322.5	210	30.5	31.5	64.75	8.9	19.25	20	17
Min of pH	17.0	46.0	23.0	26.0	110.0	22.0	350.0	240.0	140.0	170.0	79.0	21.0	22.0	22.0	6.1	14.0	14.0	14.0

Figure No. 58: Trend of Fecal coliform levels recorded at WQMS monitoring sea and creek water (2 of 2)

Water Quality Index for WQMS Monitoring Sea and Creek Water (1 of 2)

Apr	57	72	57	56	52	57	50	54	58	54	63	51	62	60	62	60	67	61
May	55	60	55	42	54	55	53	57	58	47	54	49	57	54	NA	58	65	58
Jun	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Jul	47	49	53	56	62	62	49	55	47	53	63	57	77	64	61	54	62	62
Aug	48	47	48	52	61	52	59	51	61	71	63	48	76	68	69	70	53	55
Sep	64	78	63	52	83	66	70	55	71	71	75	51	74	68	69	68	68	83
Oct	NA	75	40	61	75	69	72	78	75	77	75	69	82	81	83	76	70	68
Nov	57	64	62	54	58	57	51	78	59	58	61	60	66	61	65	57	71	60
Dec	51	66	59	59	64	57	56	62	61	64	67	59	60	66	62	38	72	74
Jan	53	70	59	48	66	62	63	64	64	67	63	63	65	66	63	68	58	54
Feb	64	64	54	42	54	72	64	67	64	72	65	59	51	72	49	54	58	75
Mar	52	66	46	42	57	54	47	53	43	56	51	43	64	60	57	58	62	59
Station code	2802	2801	2799	2807	2800	2798	2805	2797	1316	2795	2796	2806	2791	2794	2792	2793	2184	190
Sub Basin	Sea/Creek (1 of 2)																	
Basin	Coastal																	

Legend

Good to Excellent	Medium to Good	Bad	Bad to Very Bad	Dry	Not Collected

Table No. 26 : Surface water quality monitoring stations monitoring Sea/Creek water (1 of 2)

Program	Station ID	River/Nalla	Station Name	Village	Taluka	District
NWMP	2802	Dahanu creek	Dahanu Creek at Dahanu Fort	Danugaon	Dahanu	Thane
NWMP	2801	Savta creek	Savta Creek	Savta	Dahanu	Thane
NWMP	2799	Dandi creek	Dandi Creek	Dandi	Palghar	Thane
NWMP	2807	Navapur sea	Navapur Sea	Navapur	Palghar	Thane
NWMP	2800	Sarwali creek	Sarwali Creek	Sarwali	Palghar	Thane
NWMP	2798	Kharekuran Murbe creek	Kharekuran Murbe Creek	Kharekuran	Palghar	Thane
NWMP	2805	Arnala sea	Arnala Sea	Arnala	Vasai	Thane
NWMP	2797	Bhayander creek	Bhayander Creek at D/s of Railway Bridge at Jasal Park Chowpatty	Navghar	Bhayander	Thane
NWMP	1316	Bassein creek	Bassein creek at Vasai Fort, Thane	Bassein	Vasai	Thane
NWMP	2795	Ulhas creek	Ulhas Creek at Gaimukh at Nagla Bunder on Ghod Bunder Road	Nagla	Thane	Thane
NWMP	2796	Ulhas creek	Ulhas Creek at Versova Bridge	Versova	Vasai	Thane
NWMP	2806	Uttan sea	Uttan Sea at Bhayander	Uttan	Bhayander	Thane
NWMP	2791	Ulhas creek	Ulhas Creek at Reti Bunder, D/s of Kalyan-Bhiwandi Bridge	Kalyan	Kalyan	Thane
NWMP	2794	Ulhas creek	Ulhas Creek at Kolshet Reti Bunder	Kolshet	Thane	Thane
NWMP	2792	Ulhas creek	Ulhas Creek at Mumbra Reti Bunder	Mumbra	Thane	Thane
NWMP	2793	Thane creek	Thane Creek at Kalwa Road Bridge	Kalwa	Thane	Thane
NWMP	2184	Vashi creek	Vashi Creek at Airoli Bridge	Airoli	Thane	Thane
SWMP	190	Creek water	TTC Creek At Ghansoli Jetty	Ghansoli	Thane	Thane

Water Quality Index for WQMS Monitoring Sea and Creek Water (2 of 2)

Apr	60	53	48	56	51	56	51	50	48	56	52	68	56	NA	81	75	76	75
May	60	52	45	47	46	45	44	47	48	49	47	56	50	51	86	79	76	78
Jun	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	88	80	80	81
Jul	55	52	47	48	50	45	47	48	49	48	49	73	48	56	86	65	64	67
Aug	60	52	53	47	54	54	49	52	50	50	53	77	52	55	86	69	67	71
Sep	72	59	62	65	71	68	57	68	70	67	65	75	70	62	83	65	62	64
Oct	75	66	58	43	39	58	60	55	60	59	57	77	65	52	88	65	62	66
Nov	62	57	56	51	53	52	51	53	48	49	50	72	61	51	68	66	67	67
Dec	66	52	48	59	55	49	52	49	54	47	54	69	60	53	71	68	70	68
Jan	64	46	47	58	44	54	50	52	49	50	48	77	55	46	76	69	69	71
Feb	72	46	46	63	52	51	49	57	55	51	52	80	58	52	70	66	68	67
Mar	56	45	45	61	51	41	42	43	45	41	43	70	44	45	74	69	66	67
Station code	2185	2169	2812	1318	2811	2167	2810	2809	2166	2808	2165	2803	1317	191	2804	2813	2814	2815
Sub Basin	Sea/Creek (2 of 2)																	
Basin	Coastal																	

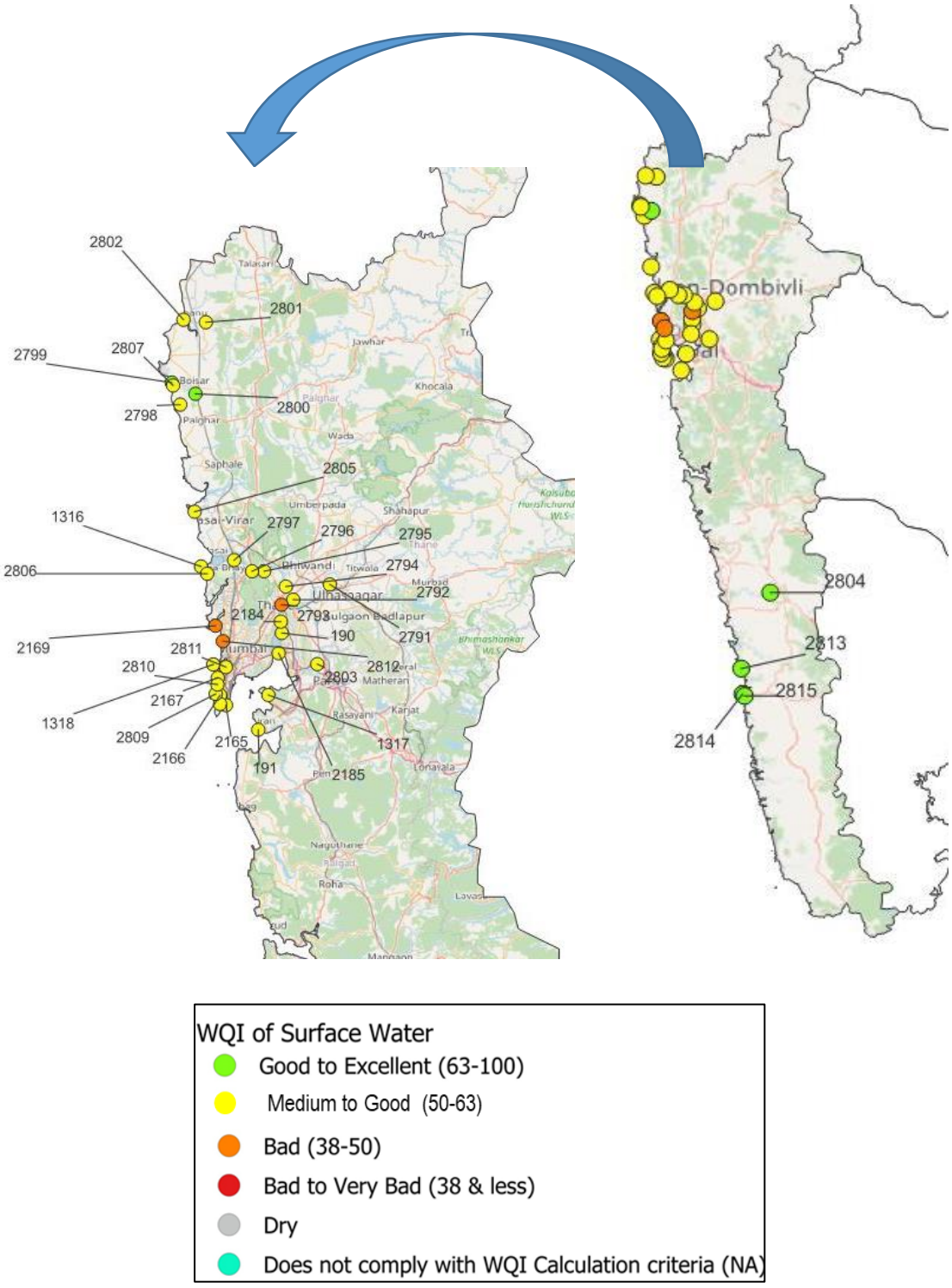
Legend

Good to Excellent	Medium to Good	Bad	Bad to Very Bad	Dry	Not Collected

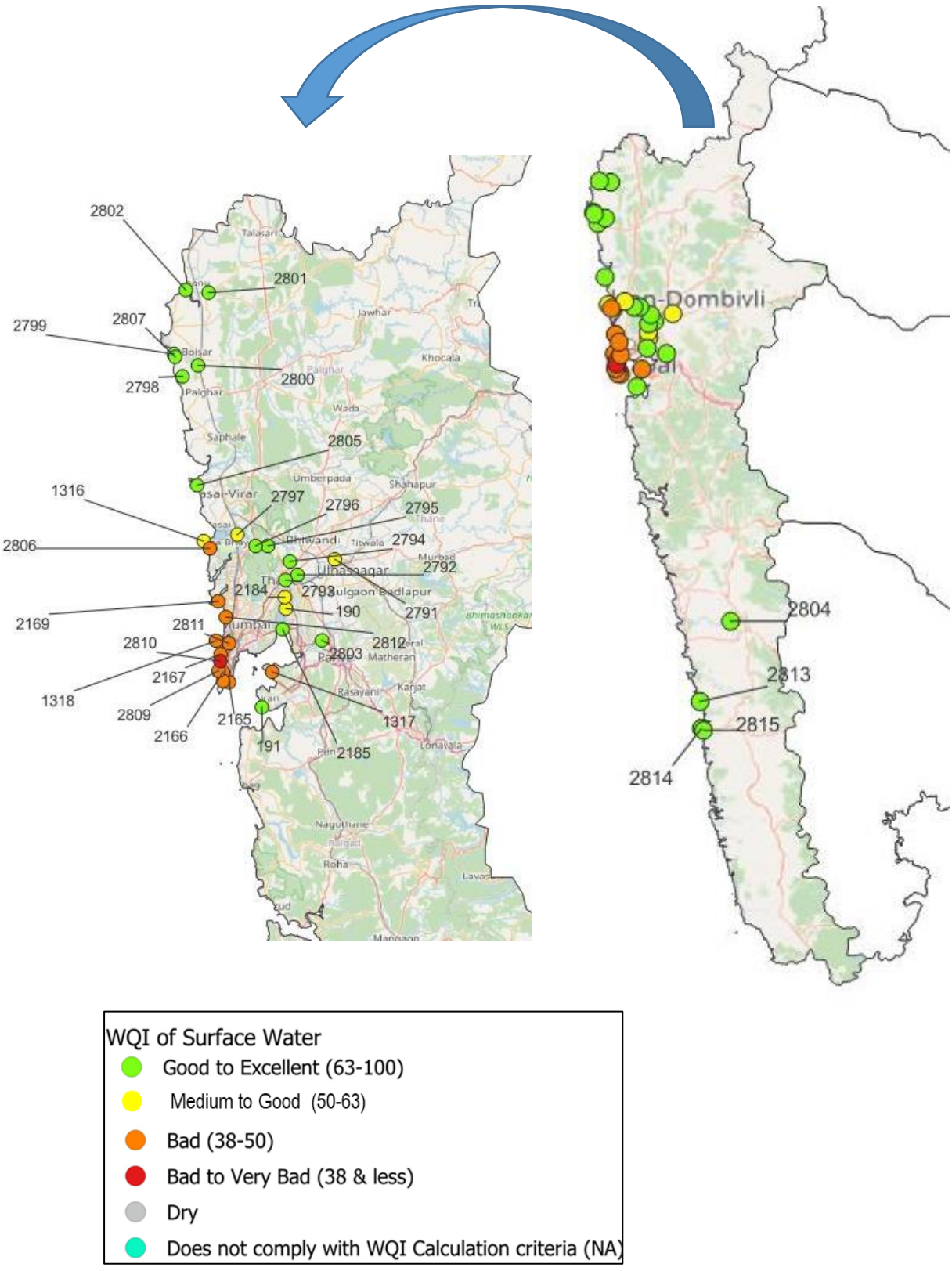
Table No. 27 : Surface water quality monitoring stations monitoring Sea/Creek water (2 of 2)

Program	Station ID	River/Nalla	Station Name	Village	Taluka	District
NWMP	2185	Vashi creek	Vashi Creek at Vashi Bridge	Vashi	Thane	Thane
NWMP	2169	Sea	Sea Water at Versova Beach	Versova	Andheri	Mumbai
NWMP	2812	Sea	Sea Water at Juhu Beach	Juhugaon	Santacruz	Mumbai
NWMP	1318	Mahim creek	Mahim creek at Mahim Bay	Mahim	Bandra	Mumbai
NWMP	2811	Sea	Sea Water at Shivaji Park (Dadar Chowpatty)	Dadar	Dadar	Mumbai
NWMP	2167	Sea	Sea Water at Worli Seaface	Worli	Worli	Mumbai
NWMP	2810	Sea	Sea Water at Haj Ali	Worli	Worli	Mumbai
NWMP	2809	Sea	Sea Water at Malabar Hill	Walkeshwar	Mumbai	Mumbai
NWMP	2166	Sea	Sea Water at Charni Road Chowpatty	Girgaon	Mumbai	Mumbai
NWMP	2808	Sea	Sea Water at Nariman Point	Colaba	Colaba	Mumbai
NWMP	2165	Sea	Sea Water at Gateway of India	Colaba	Colaba	Mumbai
NWMP	2803	Panvel creek	Panvel Creek at Kopra Bridge	Kopra	Panvel	Raigad
NWMP	1317	Thane creek	Thane creek at Elephanta Island	Gharapuri,Elephanta Island	Uran	Raigad
SWMP	191	Sea Water	Arabian Sea behind ONGC Uran	Uran	Uran	Raigad
NWMP	2804	Karambavane creek	Karambavane Creek at Chiplun	Karambavane	Chiplun	Ratnagiri
NWMP	2813	Sea	Sea Water at Ganapatipule	Ganapatipule	Ratnagiri	Ratnagiri
NWMP	2814	Sea	Sea Water at Bhagwati Bunder, Ratnagiri near Ultra Tech Cement Jetty	Mirkarwada	Ratnagiri	Ratnagiri
NWMP	2815	Madvi sea	Madvi Sea Water at Ratnagiri near Jodhale Maruti Temple	Madvigaon	Ratnagiri	Ratnagiri

Spatial map of Surface WQI at Saline/Creek (April 2023)



Spatial map of Surface WQI at Saline/Creek (December 2023)



GROUND WATER QUALITY

Groundwater is water that is stored beneath the Earth's surface in soil pore spaces and rock formations known as aquifers. It is a vital source of fresh water for drinking, irrigation, and industrial purposes, particularly in regions where surface water is scarce. In estimation by scientists there is 100 times as much groundwater on Earth as there is freshwater on its surface[22]. China, India, Iran, Mexico, Pakistan, Saudi Arabia, and the United States account for 74% of global groundwater withdrawals, from which India accounts for one-fourth of the global groundwater use[23].

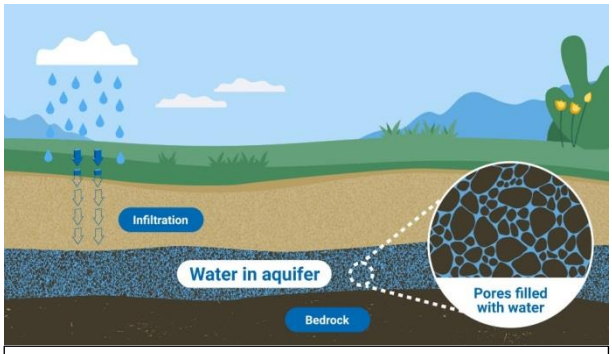


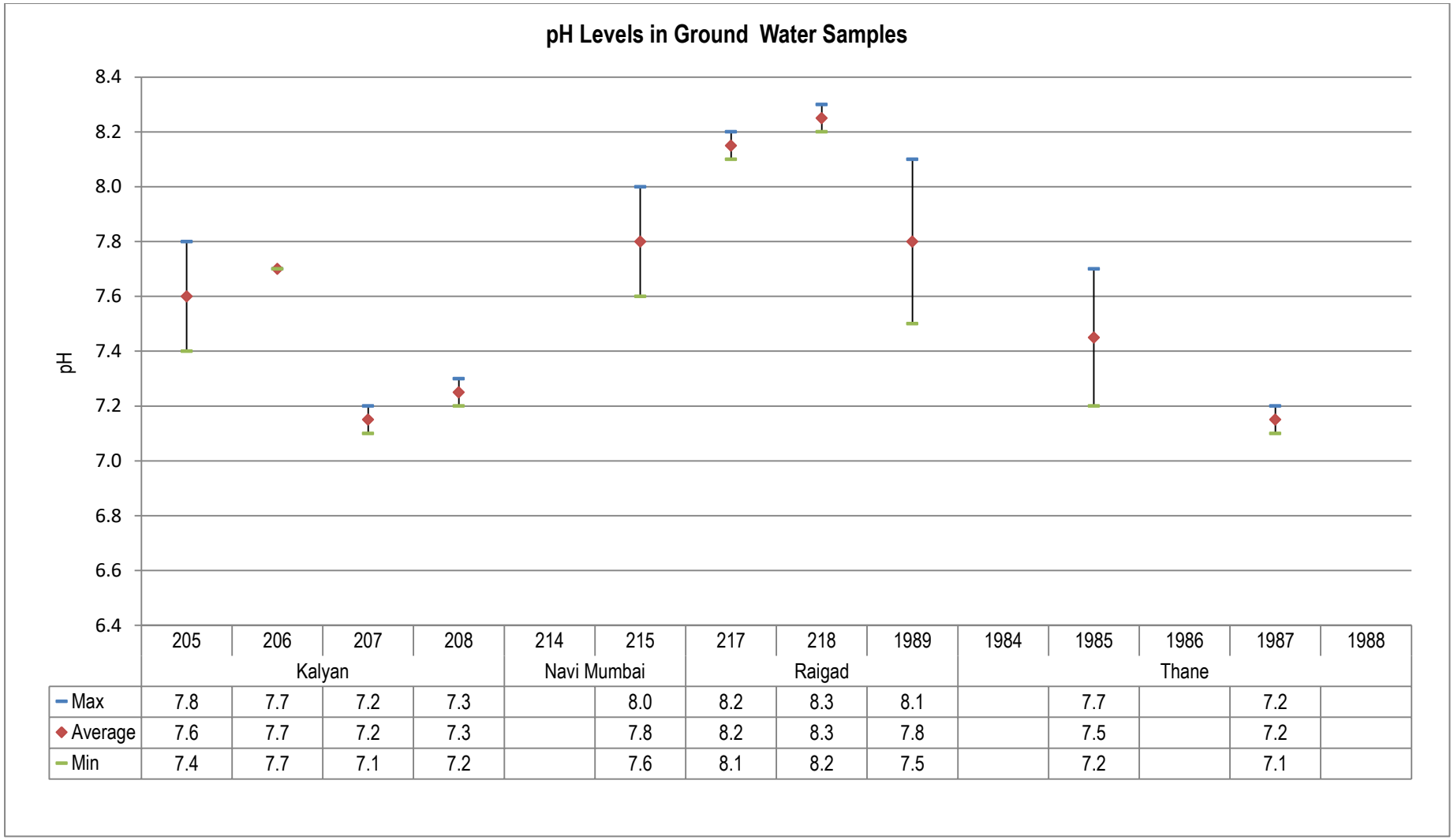
Image No. 1: Presence of Ground water in Aquifer
Source: https://www.iaea.org/newscenter/news/pollution-

Public and private wells and aquifers in Maharashtra state in India dry up, leading villagers to receive water trucked in every day24 or travel two miles a day to find water[24]. The Maharashtra Pollution Control Board (MPCB) monitors water quality across the state through a network of 66 Water Quality Monitoring Stations (WQMS) located strategically to cover both surface and groundwater sources. Water samples are collected biannually to monitor changes in water quality and detect pollution at early stages. The samples are analyzed based on nine key parameters: pH, Total Hardness, Total Dissolved Solids (TDS), Calcium, Magnesium, Chloride, Fluoride, Sulphate, and Nitrate. The Groundwater Surveys and Development Agency (GSDA) is a Maharashtra government organization known for its expertise in groundwater management. It focuses on groundwater surveys, monitoring, development, and regulation for irrigation, drinking, and industrial use[25].

Table No. 28: List of Groundwater Quality Monitoring stations

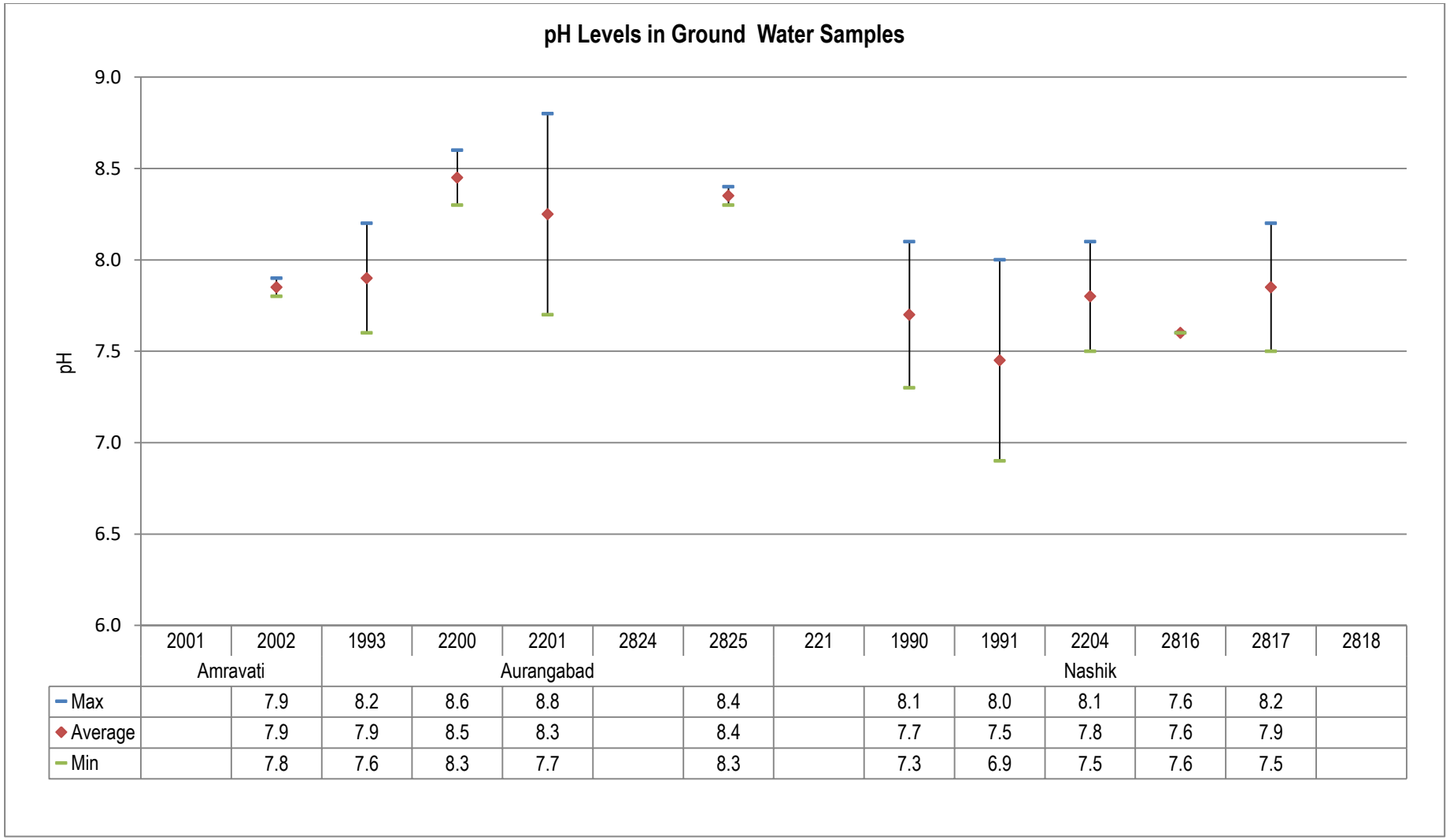
Water Quality Monitoring Stations	
Water Bodies	**2023-24**
Bore well	29
Dug well	35
Tube well	1
Hand pump	1
Total	**66**

[22] https://www.worldbank.org/en/topic/water/publication/seeing-the-invisible-a-strategic-report-on-groundwater-quality
[23] https://www.un-igrac.org/sites/default/files/resources/files/Infographic%20final%20-%20revised.pdf
[24] https://www.un-igrac.org/sites/default/files/resources/files/Infographic%20final%20-%20revised.pdf
[25] https://gsda.maharashtra.gov.in/en-about-us/



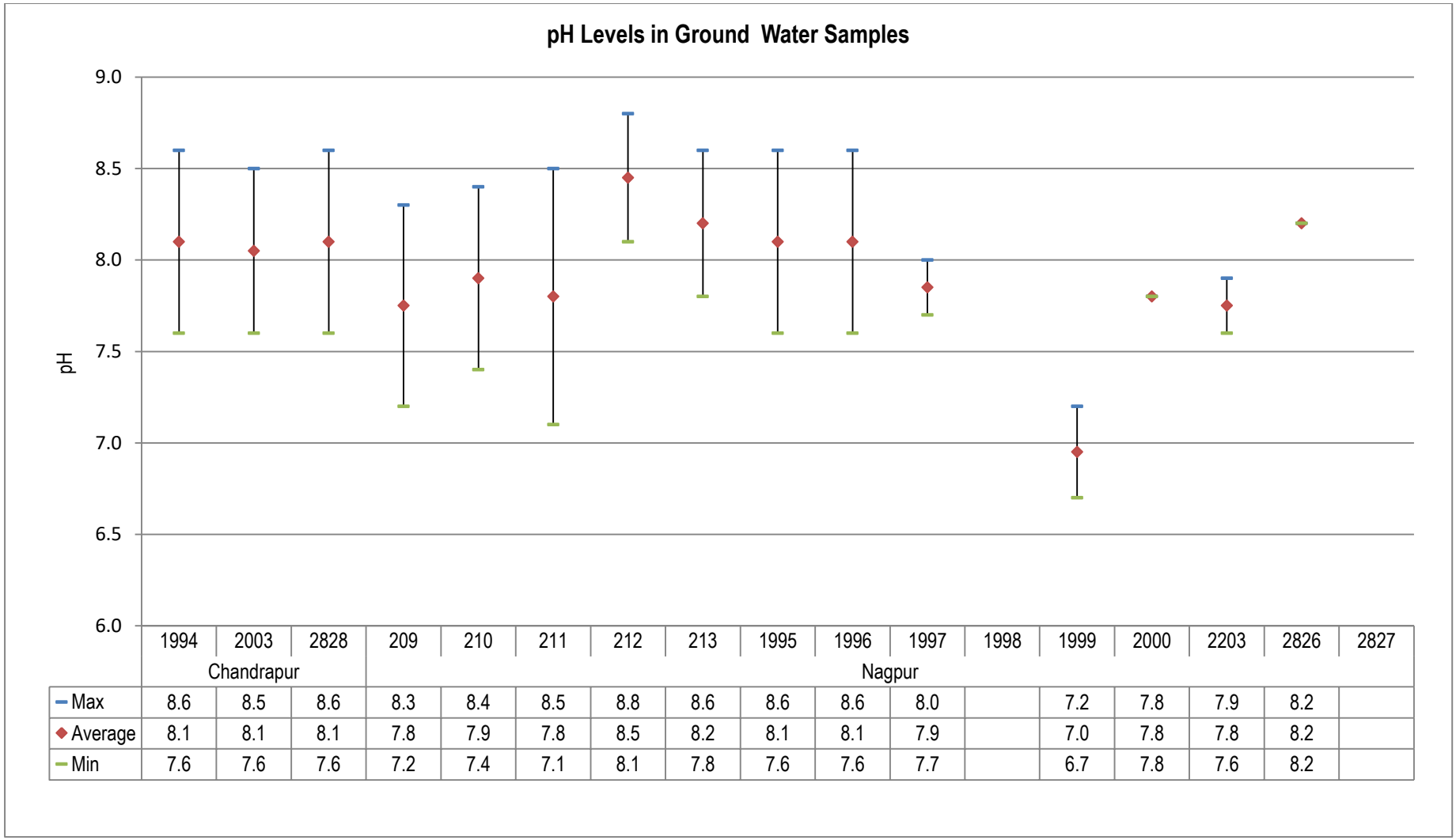
	205	206	207	208	214	215	217	218	1989	1984	1985	1986	1987	1988
	Kalyan				Navi Mumbai		Raigad			Thane				
Max	7.8	7.7	7.2	7.3		8.0	8.2	8.3	8.1		7.7		7.2	
Average	7.6	7.7	7.2	7.3		7.8	8.2	8.3	7.8		7.5		7.2	
Min	7.4	7.7	7.1	7.2		7.6	8.1	8.2	7.5		7.2		7.1	

Figure No. 59: Parametric values of pH recorded at WQMS monitoring ground water at Kalyan, Navi Mumbai, Raigad and Thane



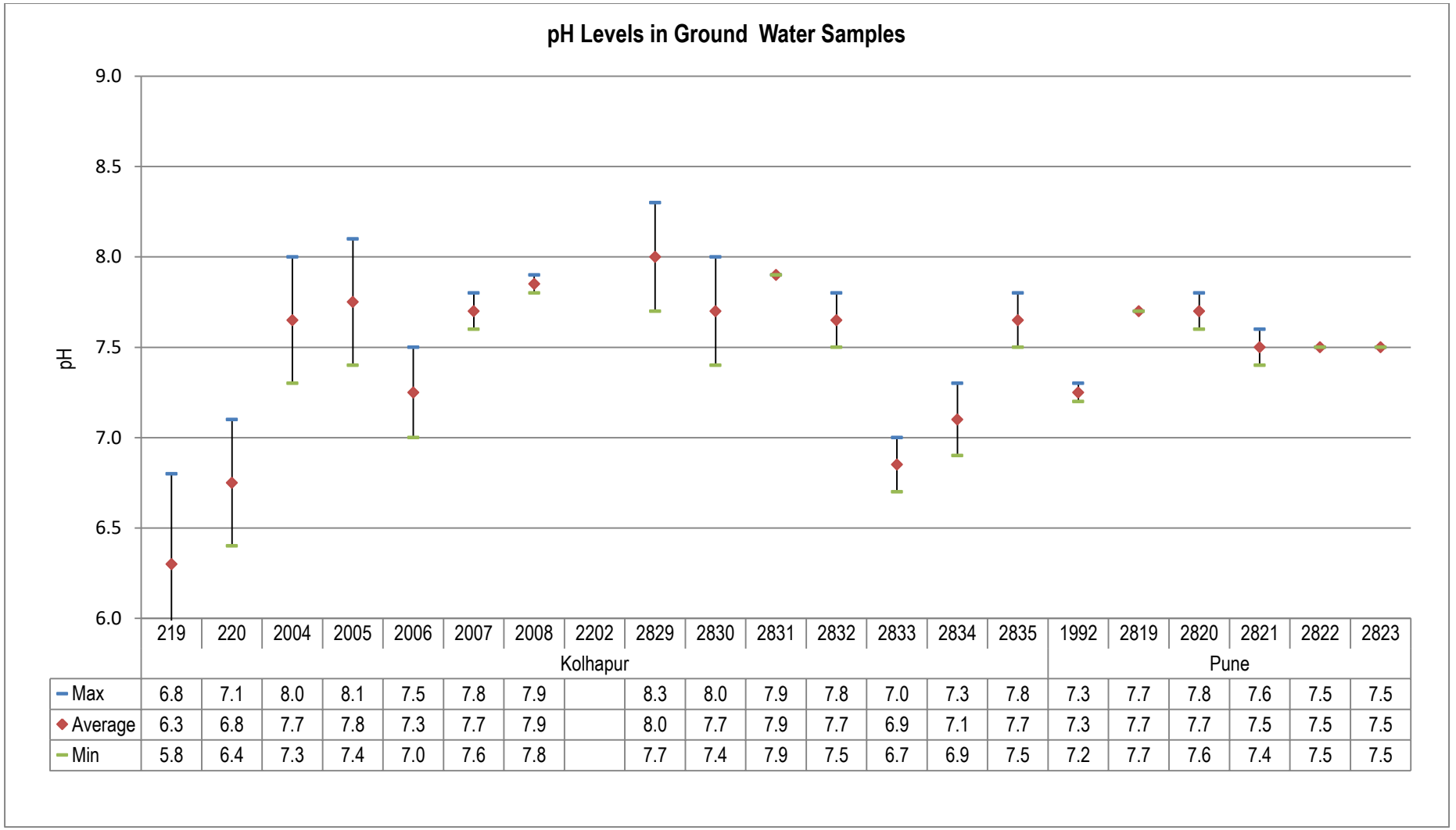
	2001	2002	1993	2200	2201	2824	2825	221	1990	1991	2204	2816	2817	2818
	Amravati		Aurangabad					Nashik						
Max		7.9	8.2	8.6	8.8		8.4		8.1	8.0	8.1	7.6	8.2	
Average		7.9	7.9	8.5	8.3		8.4		7.7	7.5	7.8	7.6	7.9	
Min		7.8	7.6	8.3	7.7		8.3		7.3	6.9	7.5	7.6	7.5	

Figure No. 60: Parametric values of pH recorded at WQMS monitoring ground water at Amravati, Aurangabad and Nashik



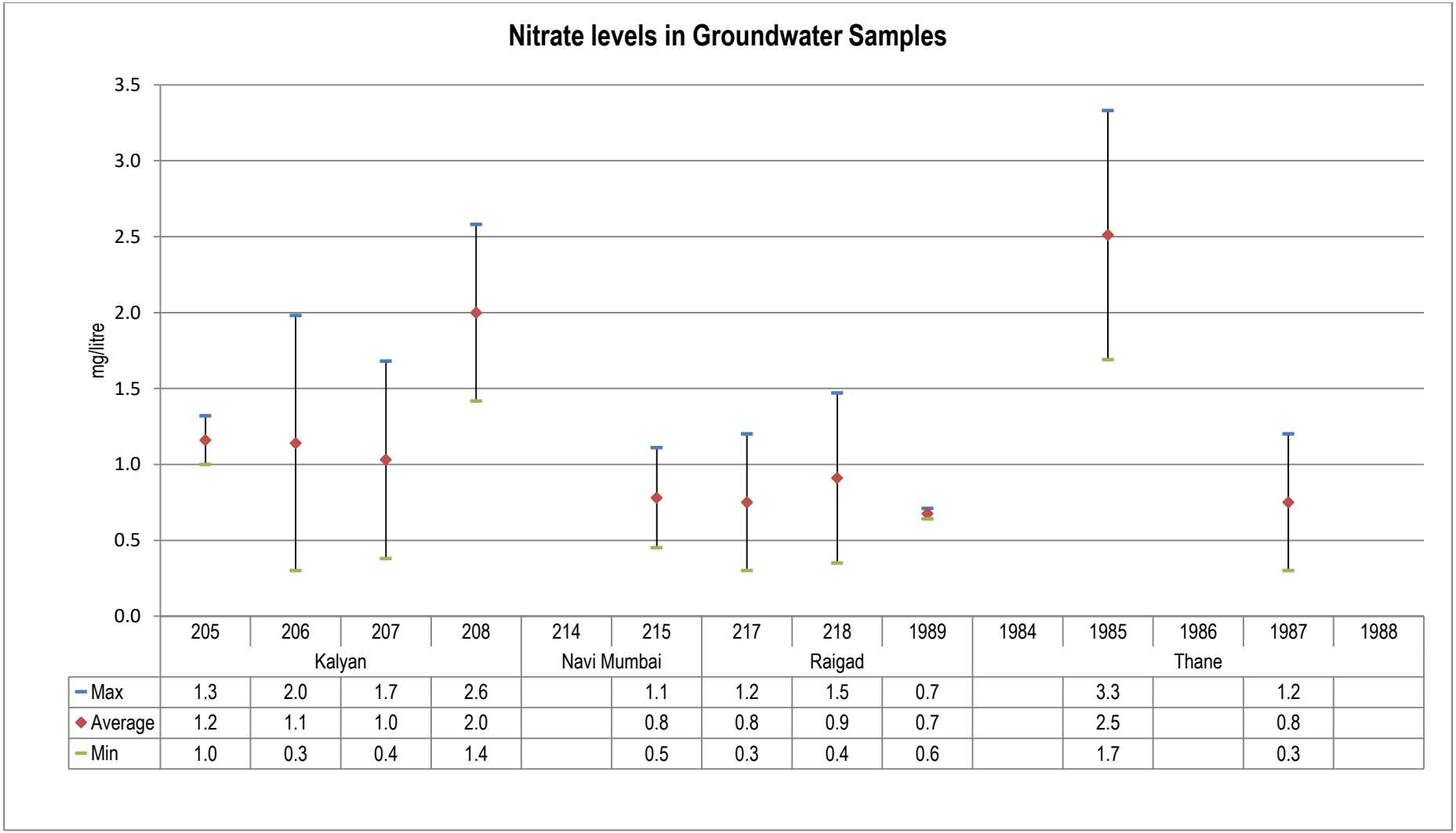
	1994	2003	2828	209	210	211	212	213	1995	1996	1997	1998	1999	2000	2203	2826	2827
	Chandrapur			Nagpur													
Max	8.6	8.5	8.6	8.3	8.4	8.5	8.8	8.6	8.6	8.6	8.0		7.2	7.8	7.9	8.2	
Average	8.1	8.1	8.1	7.8	7.9	7.8	8.5	8.2	8.1	8.1	7.9		7.0	7.8	7.8	8.2	
Min	7.6	7.6	7.6	7.2	7.4	7.1	8.1	7.8	7.6	7.6	7.7		6.7	7.8	7.6	8.2	

Figure No. 61: Parametric values of pH recorded at WQMS monitoring ground water at Chandrapur and Nagpur



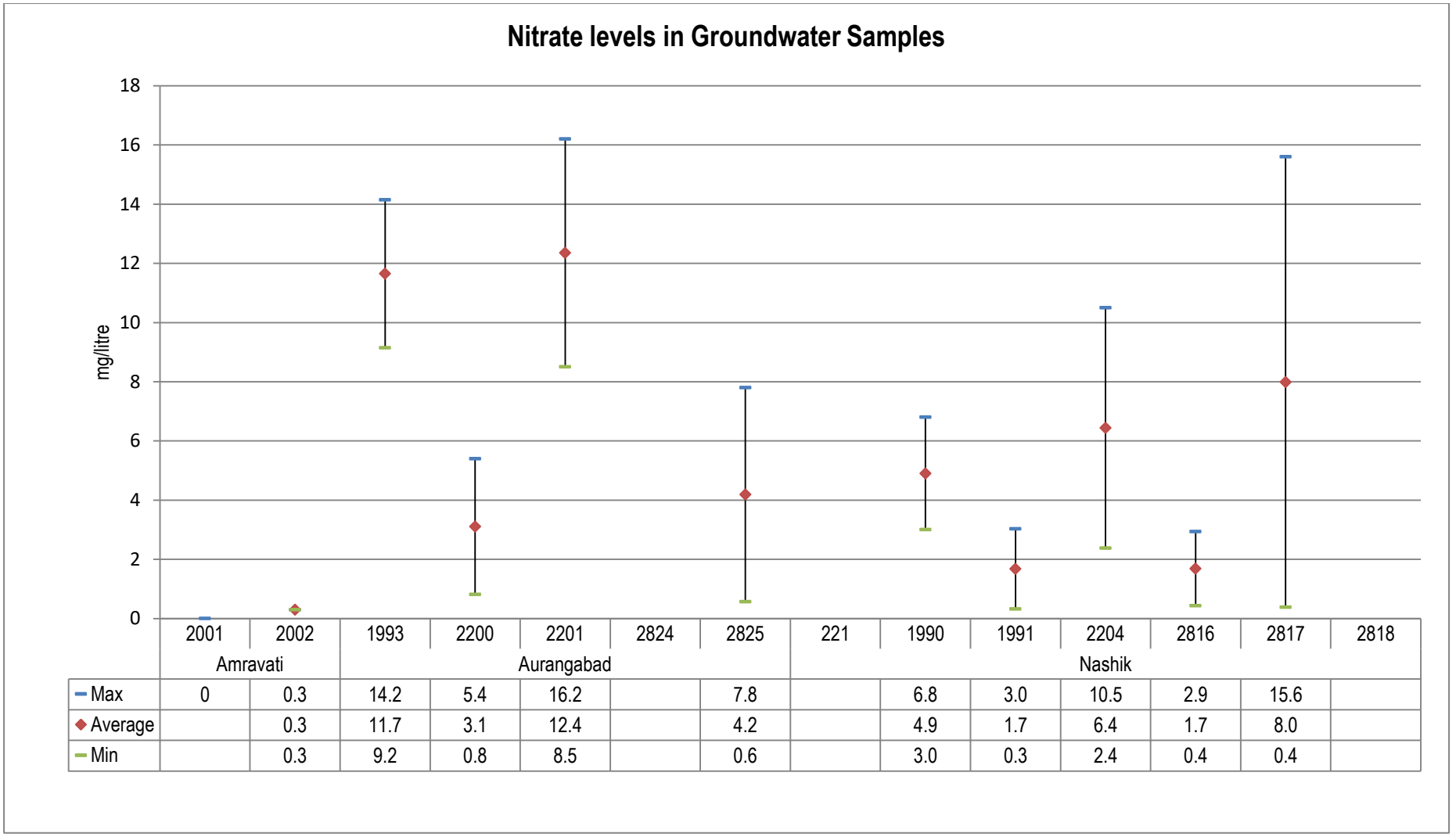
	219	220	2004	2005	2006	2007	2008	2202	2829	2830	2831	2832	2833	2834	2835	1992	2819	2820	2821	2822	2823
	Kolhapur															Pune					
Max	6.8	7.1	8.0	8.1	7.5	7.8	7.9		8.3	8.0	7.9	7.8	7.0	7.3	7.8	7.3	7.7	7.8	7.6	7.5	7.5
Average	6.3	6.8	7.7	7.8	7.3	7.7	7.9		8.0	7.7	7.9	7.7	6.9	7.1	7.7	7.3	7.7	7.7	7.5	7.5	7.5
Min	5.8	6.4	7.3	7.4	7.0	7.6	7.8		7.7	7.4	7.9	7.5	6.7	6.9	7.5	7.2	7.7	7.6	7.4	7.5	7.5

Figure No. 62: Parametric values of pH recorded at WQMS monitoring ground water at Kolhapur and Pune



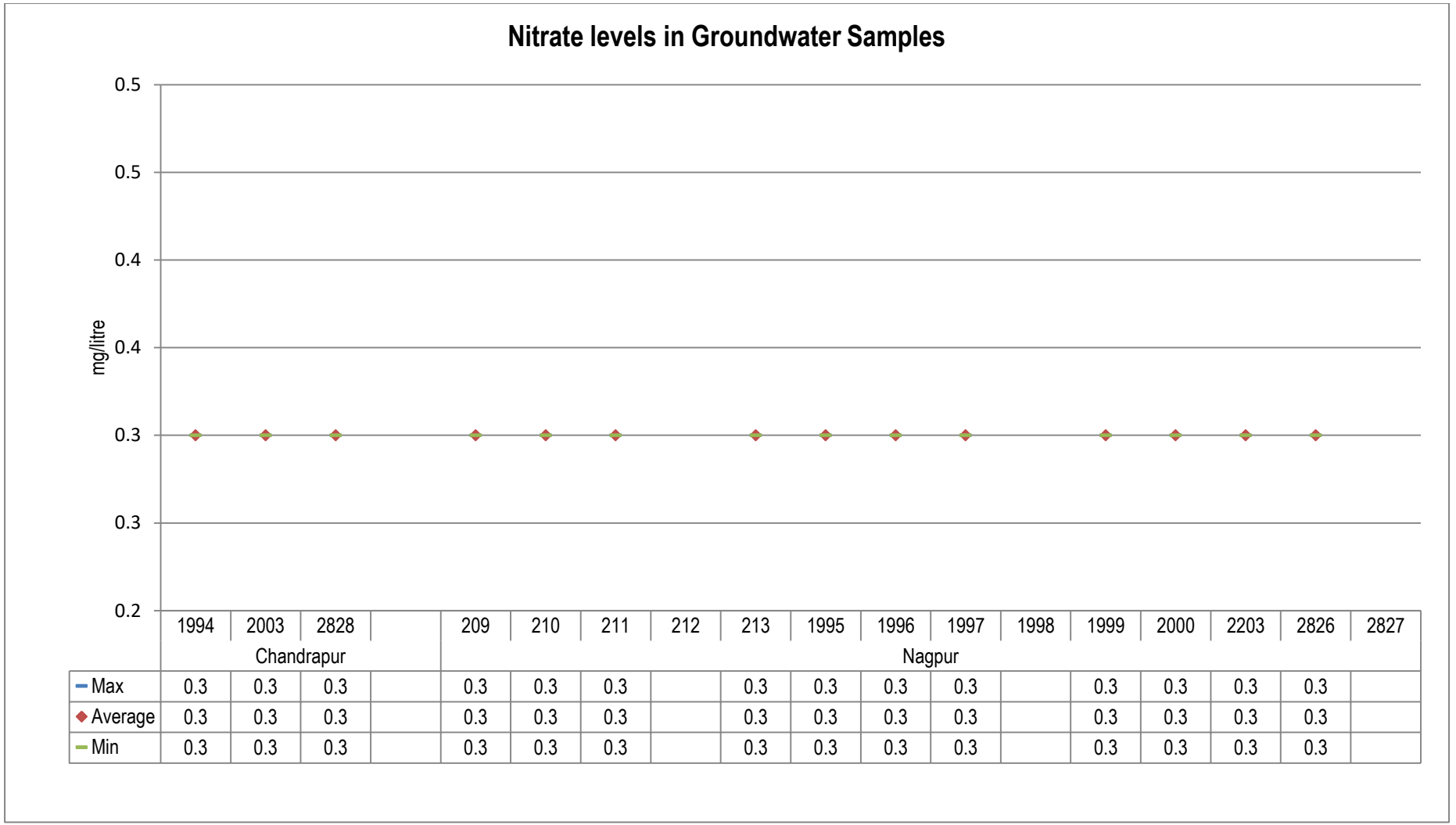
	205	206	207	208	214	215	217	218	1989	1984	1985	1986	1987	1988
	Kalyan				Navi Mumbai		Raigad			Thane				
Max	1.3	2.0	1.7	2.6		1.1	1.2	1.5	0.7		3.3		1.2	
Average	1.2	1.1	1.0	2.0		0.8	0.8	0.9	0.7		2.5		0.8	
Min	1.0	0.3	0.4	1.4		0.5	0.3	0.4	0.6		1.7		0.3	

Figure No. 63: Parametric values of Nitrate recorded at WQMS monitoring ground water at Kalyan, Navi Mumbai, Raigad and Thane



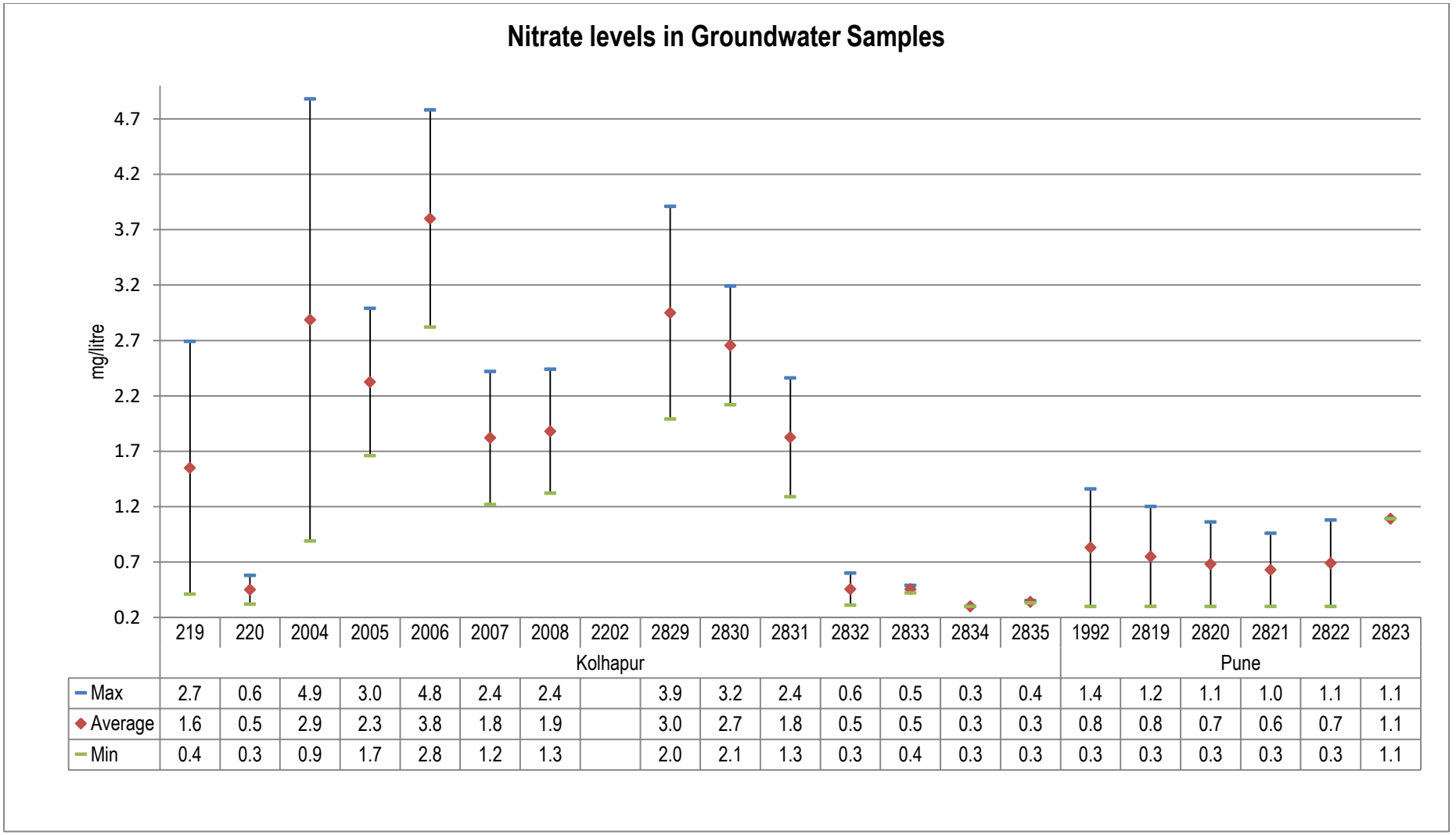
	2001	2002	1993	2200	2201	2824	2825	221	1990	1991	2204	2816	2817	2818
	Amravati		Aurangabad					Nashik						
Max	0	0.3	14.2	5.4	16.2		7.8		6.8	3.0	10.5	2.9	15.6	
Average		0.3	11.7	3.1	12.4		4.2		4.9	1.7	6.4	1.7	8.0	
Min		0.3	9.2	0.8	8.5		0.6		3.0	0.3	2.4	0.4	0.4	

Figure No. 64: Parametric values of Nitrate recorded at WQMS monitoring ground water at Amravati, Aurangabad and Nashik



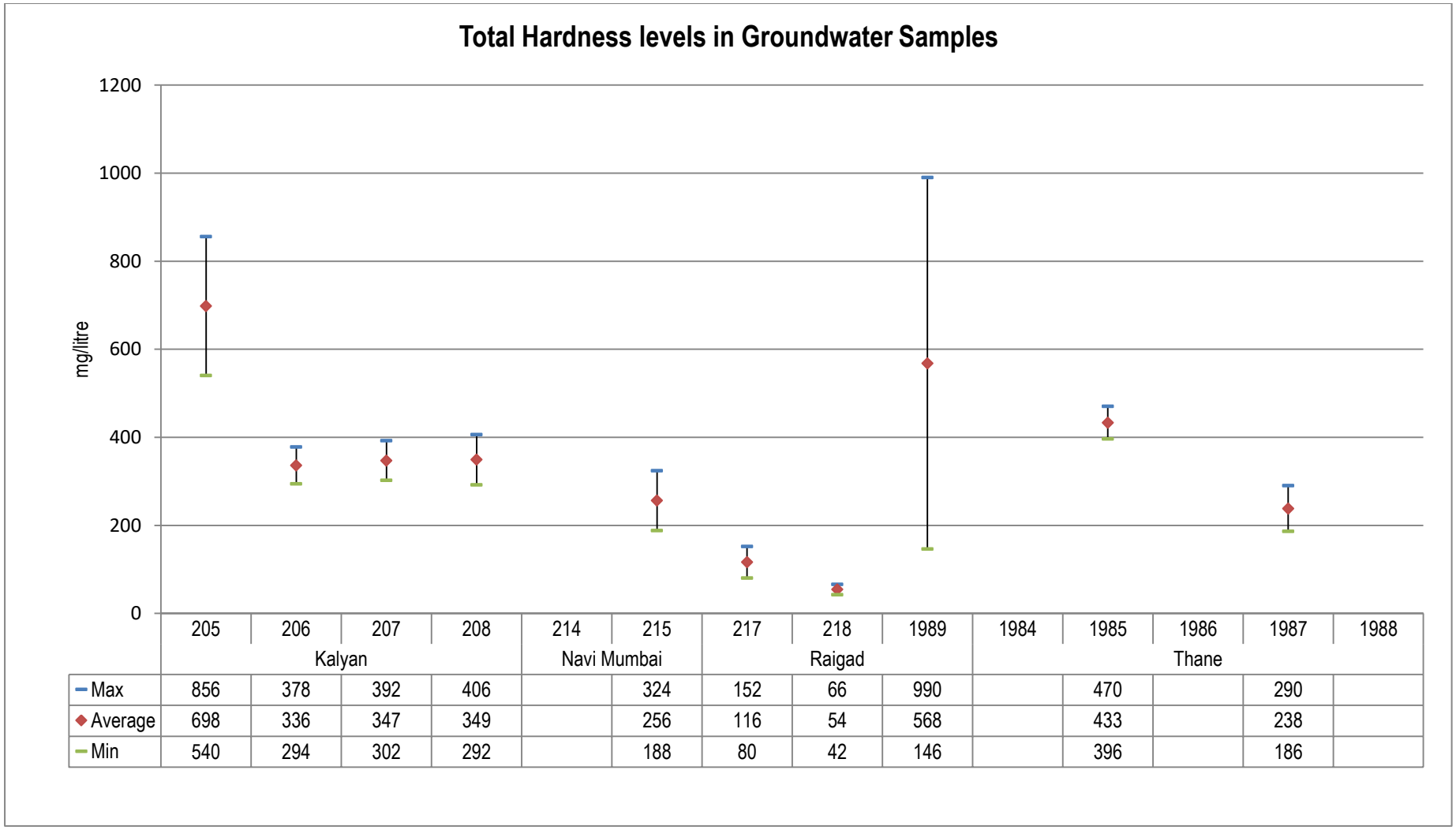
	Chandrapur				Nagpur													
	1994	2003	2828		209	210	211	212	213	1995	1996	1997	1998	1999	2000	2203	2826	2827
Max	0.3	0.3	0.3		0.3	0.3	0.3		0.3	0.3	0.3	0.3		0.3	0.3	0.3	0.3	
Average	0.3	0.3	0.3		0.3	0.3	0.3		0.3	0.3	0.3	0.3		0.3	0.3	0.3	0.3	
Min	0.3	0.3	0.3		0.3	0.3	0.3		0.3	0.3	0.3	0.3		0.3	0.3	0.3	0.3	

Figure No. 65: Parametric values of Nitrate recorded at WQMS monitoring ground water at Chandrapur and Nagpur



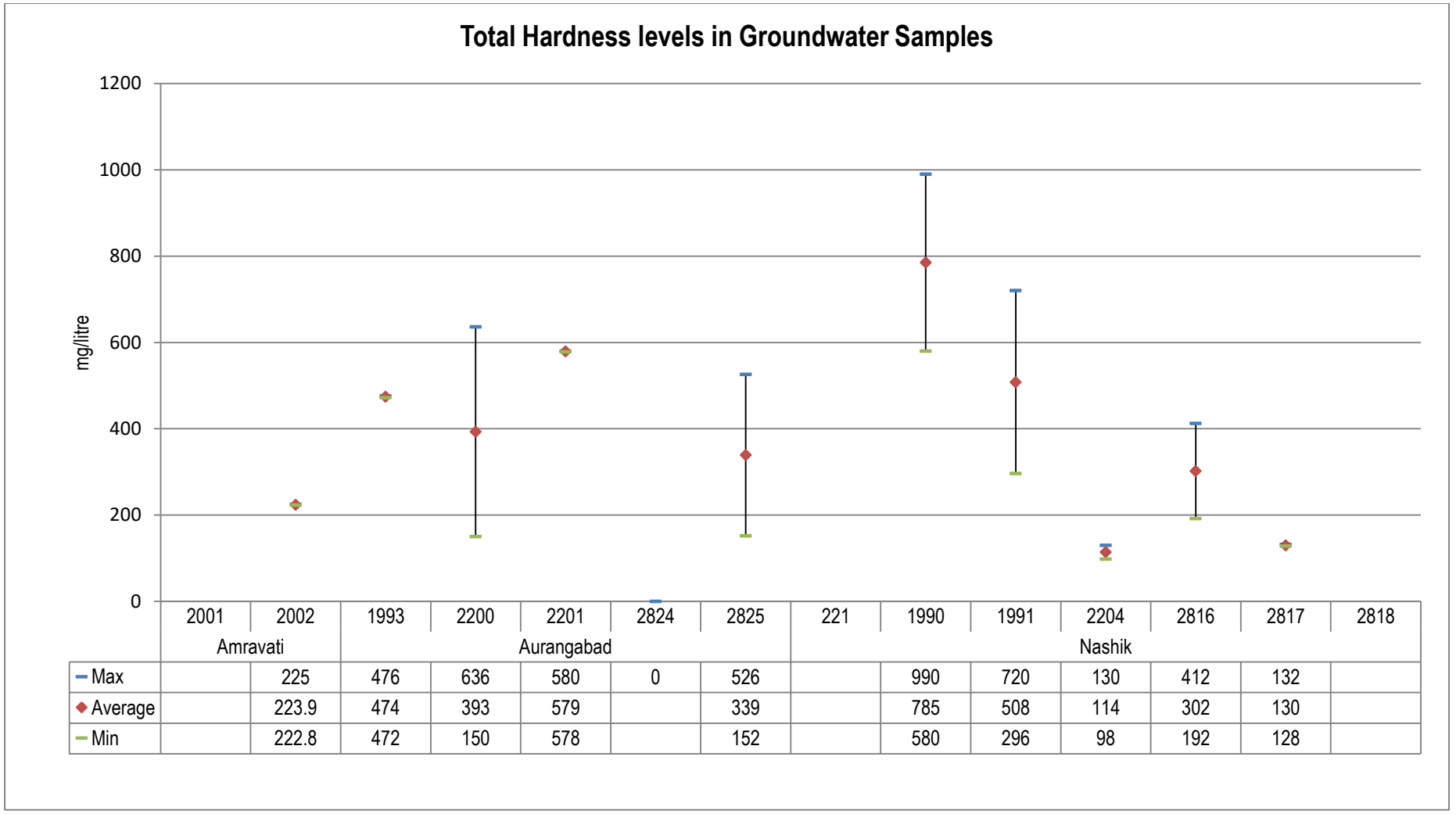
	219	220	2004	2005	2006	2007	2008	2202	2829	2830	2831	2832	2833	2834	2835	1992	2819	2820	2821	2822	2823
	Kolhapur															Pune					
Max	2.7	0.6	4.9	3.0	4.8	2.4	2.4		3.9	3.2	2.4	0.6	0.5	0.3	0.4	1.4	1.2	1.1	1.0	1.1	1.1
Average	1.6	0.5	2.9	2.3	3.8	1.8	1.9		3.0	2.7	1.8	0.5	0.5	0.3	0.3	0.8	0.8	0.7	0.6	0.7	1.1
Min	0.4	0.3	0.9	1.7	2.8	1.2	1.3		2.0	2.1	1.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	1.1

Figure No. 66: Parametric values of Nitrate recorded at WQMS monitoring ground water at Kolhapur and Pune



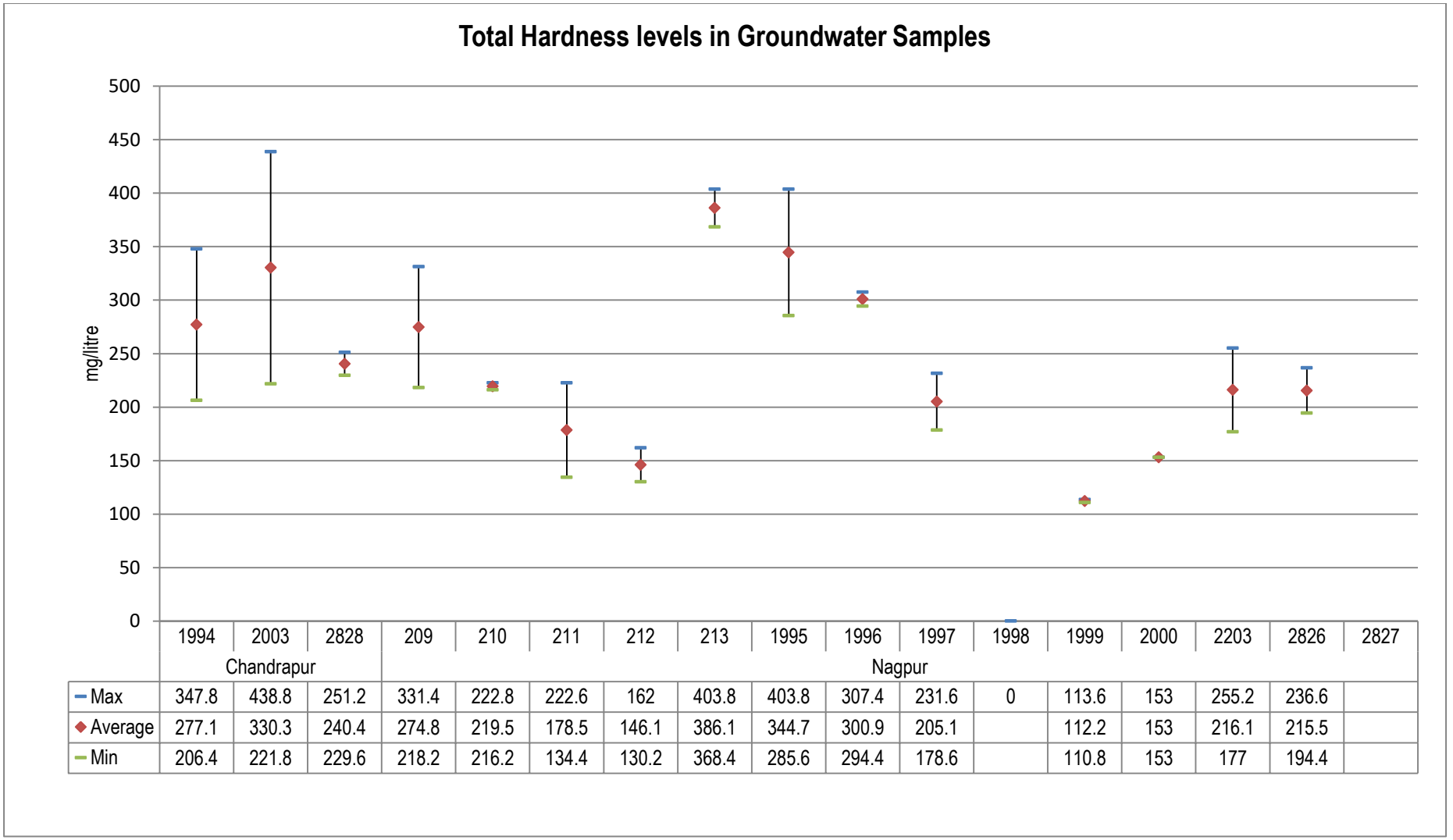
	205	206	207	208	214	215	217	218	1989	1984	1985	1986	1987	1988
	Kalyan				Navi Mumbai		Raigad			Thane				
Max	856	378	392	406		324	152	66	990		470		290	
Average	698	336	347	349		256	116	54	568		433		238	
Min	540	294	302	292		188	80	42	146		396		186	

Figure No. 67: Parametric values of Hardness at $CaCO_3$ recorded at WQMS monitoring ground water at Kalyan, Navi Mumbai, Raigad and Thane



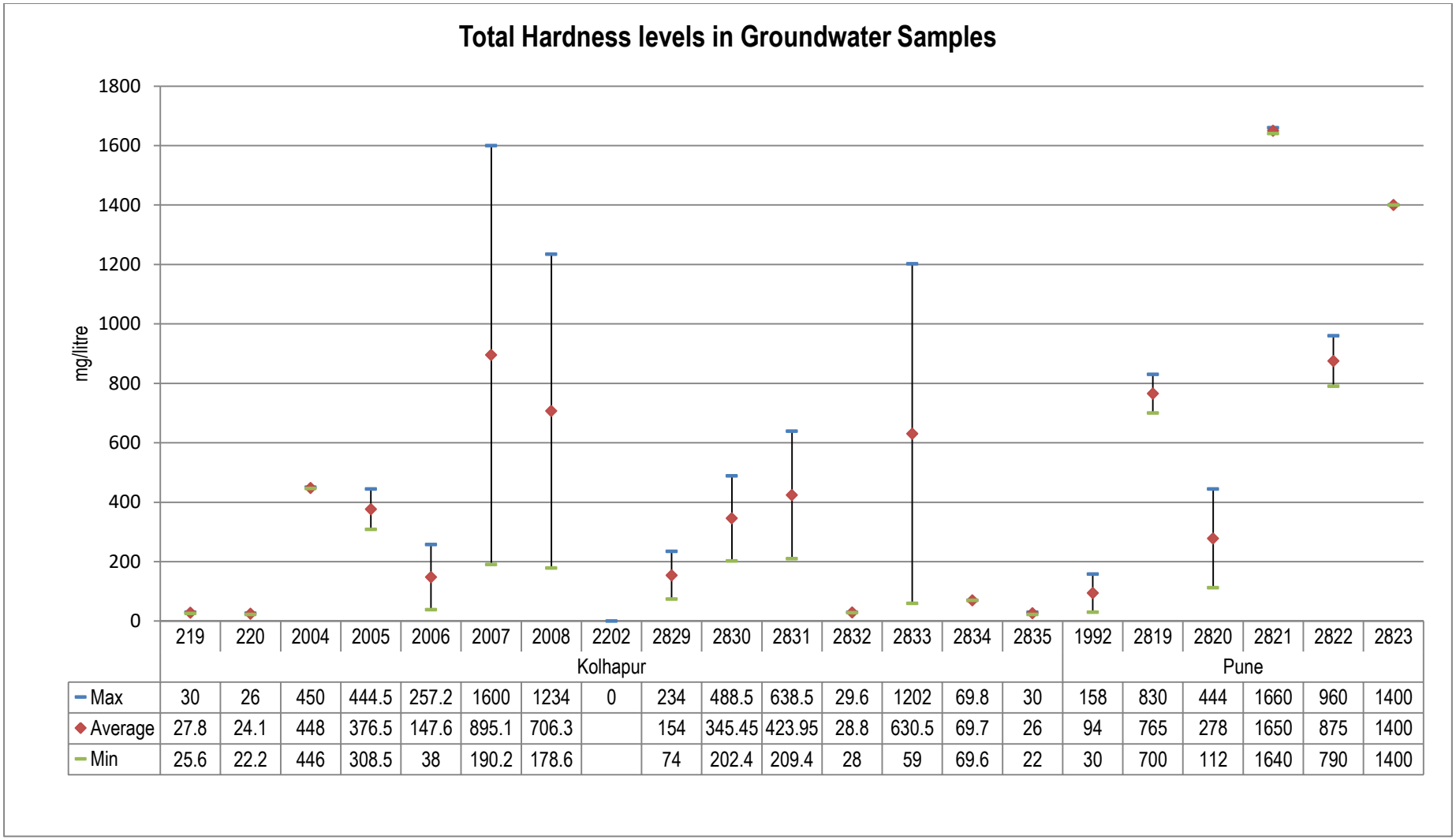
	2001	2002	1993	2200	2201	2824	2825	221	1990	1991	2204	2816	2817	2818
	Amravati		Aurangabad					Nashik						
Max		225	476	636	580	0	526		990	720	130	412	132	
Average		223.9	474	393	579		339		785	508	114	302	130	
Min		222.8	472	150	578		152		580	296	98	192	128	

Figure No. 68: Parametric values of Hardness at CaCO3 recorded at WQMS monitoring ground water at Amravati, Aurangabad and Nashik



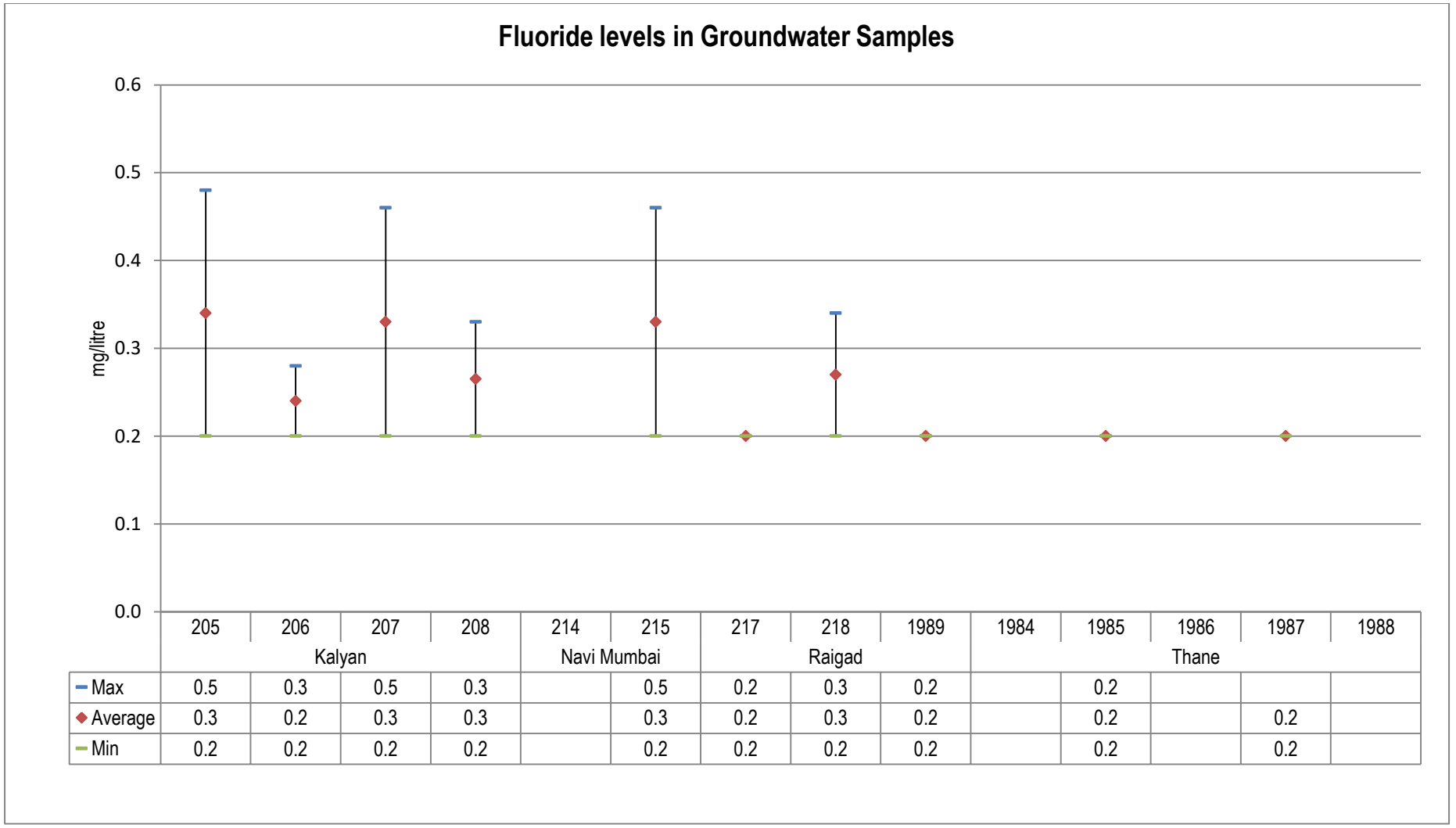
	Chandrapur			Nagpur													
	1994	2003	2828	209	210	211	212	213	1995	1996	1997	1998	1999	2000	2203	2826	2827
Max	347.8	438.8	251.2	331.4	222.8	222.6	162	403.8	403.8	307.4	231.6	0	113.6	153	255.2	236.6	
Average	277.1	330.3	240.4	274.8	219.5	178.5	146.1	386.1	344.7	300.9	205.1		112.2	153	216.1	215.5	
Min	206.4	221.8	229.6	218.2	216.2	134.4	130.2	368.4	285.6	294.4	178.6		110.8	153	177	194.4	

Figure No. 69: Parametric values of Hardness at CaCO3 recorded at WQMS monitoring ground water at Chandrapur and Nagpur



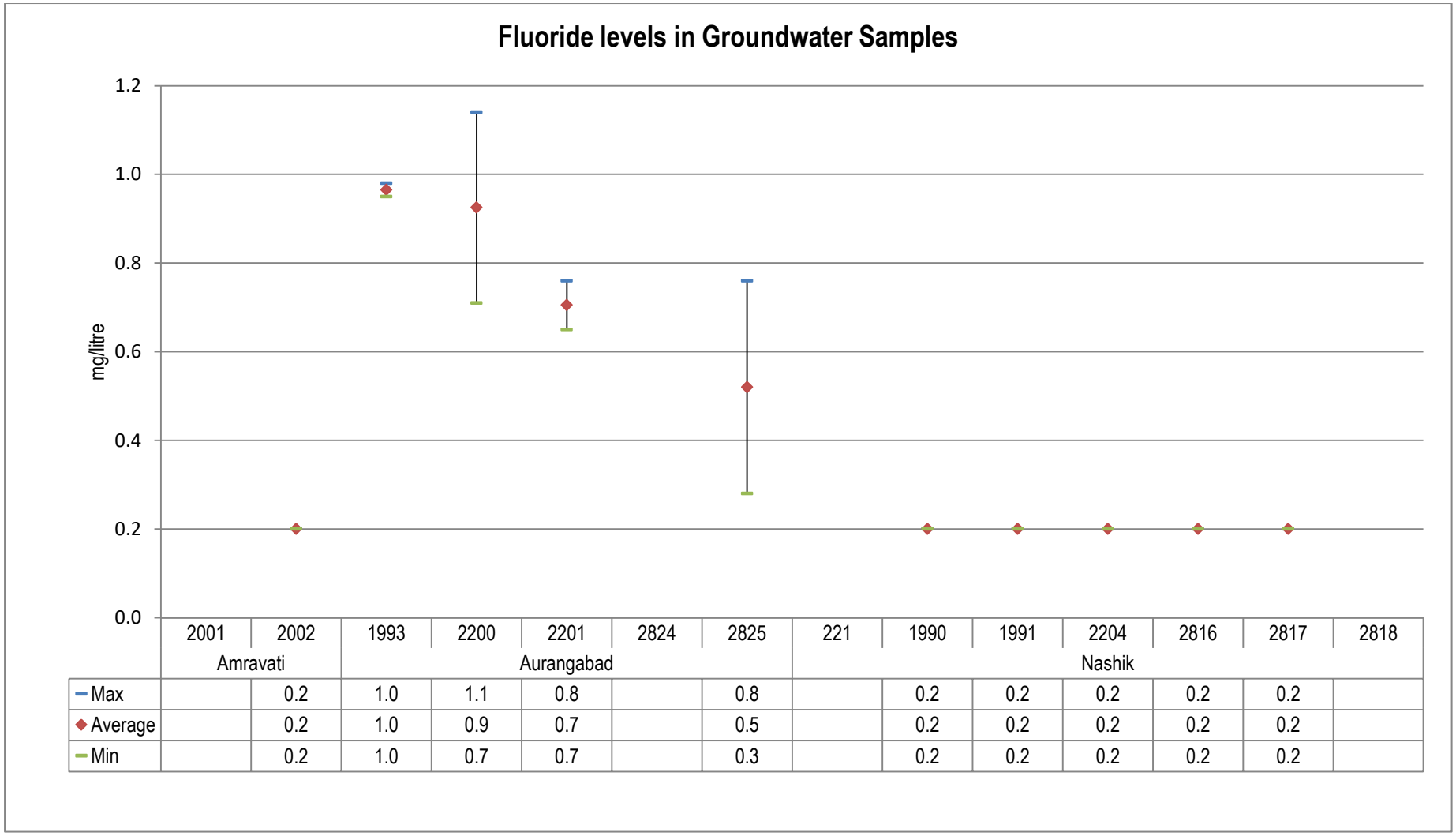
	219	220	2004	2005	2006	2007	2008	2202	2829	2830	2831	2832	2833	2834	2835	1992	2819	2820	2821	2822	2823
	Kolhapur															Pune					
Max	30	26	450	444.5	257.2	1600	1234	0	234	488.5	638.5	29.6	1202	69.8	30	158	830	444	1660	960	1400
Average	27.8	24.1	448	376.5	147.6	895.1	706.3		154	345.45	423.95	28.8	630.5	69.7	26	94	765	278	1650	875	1400
Min	25.6	22.2	446	308.5	38	190.2	178.6		74	202.4	209.4	28	59	69.6	22	30	700	112	1640	790	1400

Figure No. 70: Parametric values of Hardness at CaCO3 recorded at WQMS monitoring ground water at Kolhapur and Pune



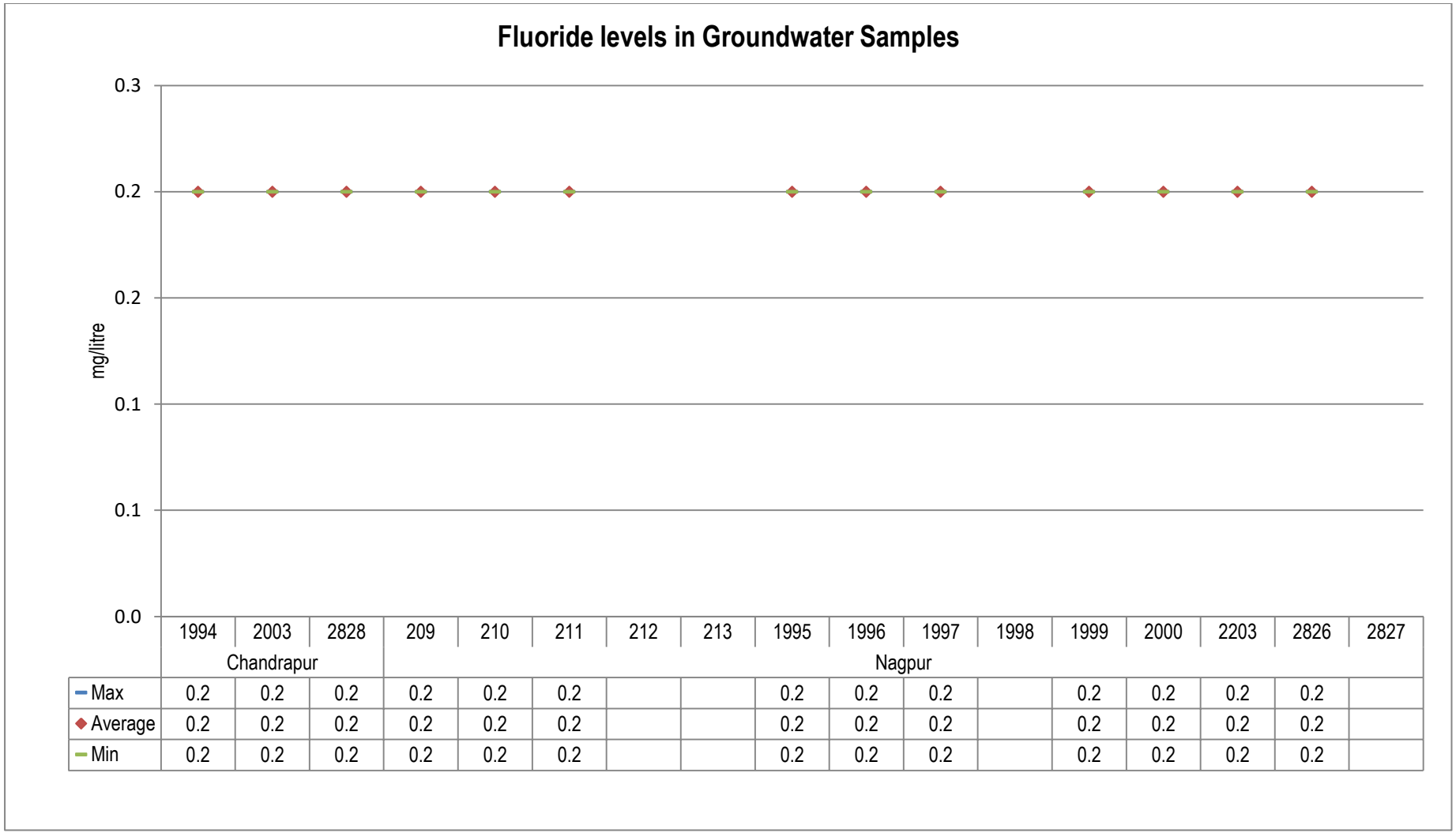
	205	206	207	208	214	215	217	218	1989	1984	1985	1986	1987	1988
	Kalyan				Navi Mumbai		Raigad			Thane				
Max	0.5	0.3	0.5	0.3		0.5	0.2	0.3	0.2		0.2			
Average	0.3	0.2	0.3	0.3		0.3	0.2	0.3	0.2		0.2		0.2	
Min	0.2	0.2	0.2	0.2		0.2	0.2	0.2	0.2		0.2		0.2	

Figure No. 71: Parametric values of Fluoride recorded at WQMS monitoring ground water at Kalyan, Navi Mumbai, Raigad and Thane



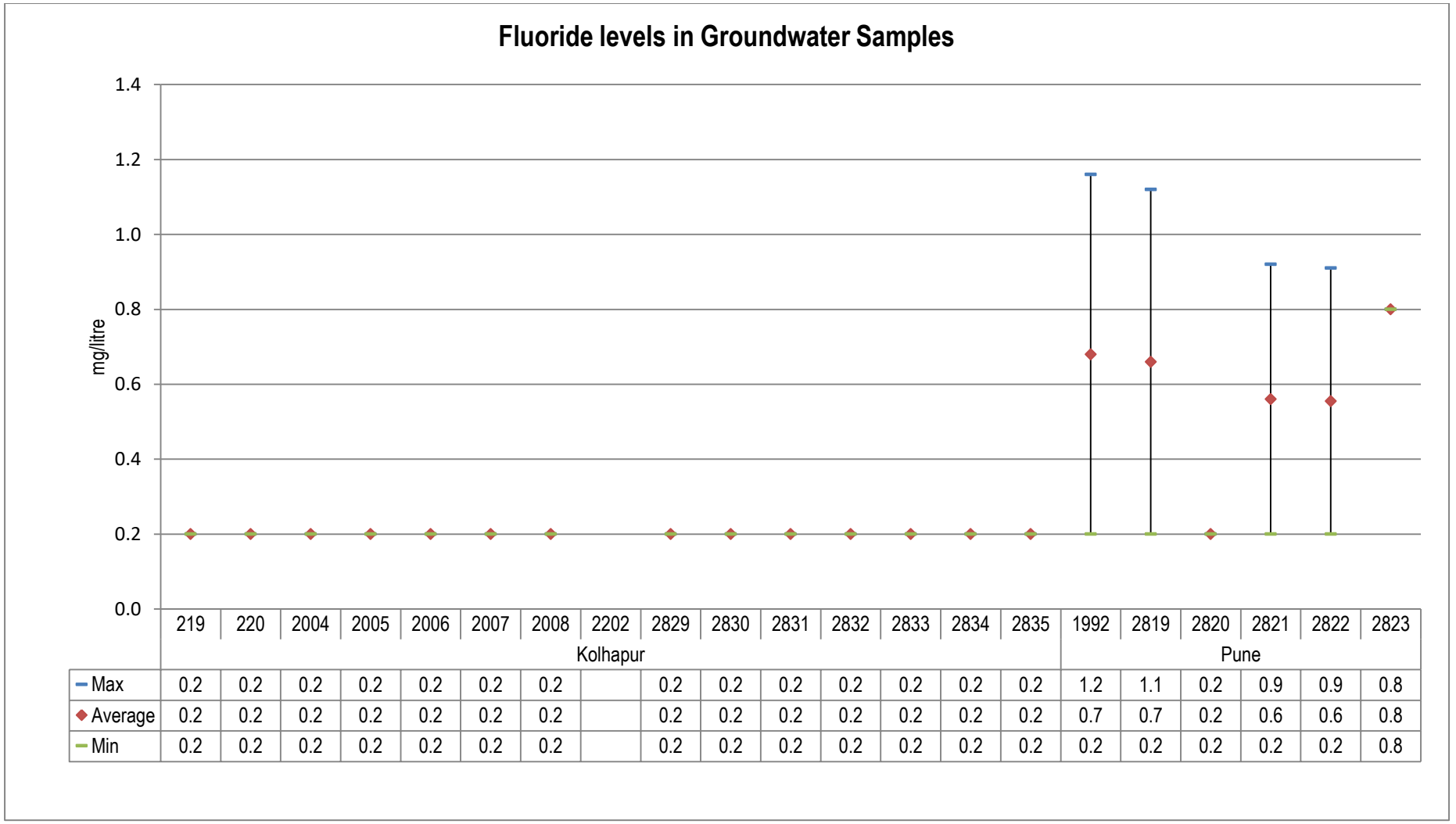
	2001	2002	1993	2200	2201	2824	2825	221	1990	1991	2204	2816	2817	2818
	Amravati		Aurangabad					Nashik						
Max		0.2	1.0	1.1	0.8		0.8		0.2	0.2	0.2	0.2	0.2	
Average		0.2	1.0	0.9	0.7		0.5		0.2	0.2	0.2	0.2	0.2	
Min		0.2	1.0	0.7	0.7		0.3		0.2	0.2	0.2	0.2	0.2	

Figure No. 72: Parametric values of Fluoride recorded at WQMS monitoring ground water at Amravati, Aurangabad and Nashik



	1994	2003	2828	209	210	211	212	213	1995	1996	1997	1998	1999	2000	2203	2826	2827
	Chandrapur			Nagpur													
Max	0.2	0.2	0.2	0.2	0.2	0.2			0.2	0.2	0.2		0.2	0.2	0.2	0.2	
Average	0.2	0.2	0.2	0.2	0.2	0.2			0.2	0.2	0.2		0.2	0.2	0.2	0.2	
Min	0.2	0.2	0.2	0.2	0.2	0.2			0.2	0.2	0.2		0.2	0.2	0.2	0.2	

Figure No. 73: Parametric values of Fluoride recorded at WQMS monitoring ground water at Chandrapur and Nagpur



	Kolhapur															Pune					
	219	220	2004	2005	2006	2007	2008	2202	2829	2830	2831	2832	2833	2834	2835	1992	2819	2820	2821	2822	2823
Max	0.2	0.2	0.2	0.2	0.2	0.2	0.2		0.2	0.2	0.2	0.2	0.2	0.2	0.2	1.2	1.1	0.2	0.9	0.9	0.8
Average	0.2	0.2	0.2	0.2	0.2	0.2	0.2		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.7	0.7	0.2	0.6	0.6	0.8
Min	0.2	0.2	0.2	0.2	0.2	0.2	0.2		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.8

Figure No. 74: Parametric values of Fluoride recorded at WQMS monitoring ground water at Kolhapur and Pune

Water Quality Index for Ground Water at Kalyan, Navi Mumbai, Raigad and Thane.

Apr	229	112	121	123	Dry	106	49	58	50	Dry	158	Dry	83	Dry
Oct	177	86	95	91	Dry	64	37	42	284	Dry	171	Dry	63	Dry
Station code	205	206	207	208	214	215	217	218	1989	1984	1985	1986	1987	1988
District	Kalyan				Navi Mumbai		Raigad			Thane				

Legend

Excellent	Good	Poor	Very Poor	Not suitable for drinking	Dry	No data	NA

Table No. 29: Ground water quality monitoring stations installed in the areas of Kalyan, Navi Mumbai, Raigad and Thane RO

Programme	Regional Office	Station code	Station name	Type of water	District	Taluka	Village
SWMP	Kalyan	205	Dug well opp. KAMA office, MIDC Ph-I, Dombivali	Well water	Kalyan	Dombivali	MIDC,Dombivali
SWMP	Kalyan	206	Dug well near Mamta Hospital, Milap Nagar, Dombivali	Well water	Kalyan	Dombivali	MIDC,Dombivali
SWMP	Kalyan	207	Dug well at pimpleshwar Temple, MIDC Ph-II, Dombivali	Well water	Kalyan	Dombivali	MIDC,Dombivali
SWMP	Kalyan	208	Dug well addjusent to M/S. Altra pure chem., Sr. No. 45, Hissa No. 3, MIDC Ph-II, Dombivali.	Well water	Kalyan	Dombivali	MIDC,Dombivali
SWMP	Navi Mumbai	214	Borewell at TTCWMA, Mahape	Well water	Thane	Thane	TTCWMA,Mahape
SWMP	Navi Mumbai	215	Well water at Turbhe Store, Turbhe	Well water	Thane	Thane	Turbhe
SWMP	Raigad	217	Borewell water at village Milgaon, Taluka - Khalapur, District - Raigad.	BoreWell	Raigad	Khalapur	Milgaon
SWMP	Raigad	218	Borewell water near MSW site, Murud - Janjira.	Well water	Murud	Murud	Murud Janjira
NWMP	Raigad	1989	Bore well at MWML Site at Taloja	Bore Well	Raigad	Panvel	Karawla- Taloja
NWMP	Thane	1984	Bore well at M/s Tata Iron {} Steel Co. Ltd, S-76	Bore Well	Thane	Palghar	MIDC Tarapur, Industrial Estate, Tarapur
NWMP	Thane	1985	Dug well at 5 Star Industrial Estate	Dug well	Thane	Mira-Bhayander	Kashimira
NWMP	Thane	1986	Bore well at Motapada	Bore Well	Thane	Dahanu	Motapada
NWMP	Thane	1987	Bore well at Vasai	Bore Well	Thane	Vasai	Gokhiware
NWMP	Thane	1988	Bore well at Gharatwadi, Palghar	Bore Well	Thane	Palghar	Aliyali

Water Quality Index for Ground Water at Amravati, Aurangabad and Nashik.

Apr	Dry	83	157	76	189	Dry	72	NA	77	NA	Dry	Dry	NA	91
Oct	Dry	81	164	217	218	Dry	203	48	140	57	Dry	Dry	329	216
Station code	2001	2002	1993	2200	2201	2824	2825	2204	2816	2817	2818	221	1990	1991
District	Amravati		Aurangabad					Nashik						

Legend

Excellent	Good	Poor	Very Poor	Not suitable for drinking	Dry	No data	NA

Table No. 30: Ground water quality monitoring stations installed in the areas of Amaravati, Aurangabad and Nashik RO

Programme	Regional Office	Station code	Station name	Type of water	District	Taluka	Village
NWMP	Amravati	2001	Tube well at water treatment plant of M.C.Achalpur near Post Office.	Tube well	Amravati	Achalpur	Paratwada
NWMP	Amravati	2002	Bore well Opp. Gajanan Maharaj Temple at Anjangaon road.	Bore well	Akola	Akot	Anjangaon
NWMP	Aurangabad	1993	Dug well at Pandarpur, Gangapur, Aurangabad	Well Water	Aurangabad	Gangapur	Pandharpur
NWMP	Aurangabad	2200	Bore Well at Katpur, Near Z.P.School	Well Water	Aurangabad	Paithan	Katpur
NWMP	Aurangabad	2201	Dug Well at Ranjangaon	Well Water	Aurangabad	Gangapur	Ranjangaon
NWMP	Aurangabad	2824	Dug Well at Naregaon	Well Water	Aurangabad	Aurangabad	Naregaon
NWMP	Aurangabad	2825	Bore Well at Wahegaon, near Zilla Parishet School	Well Water	Aurangabad	Paithan	Wahegaon
SWMP	Nashik	221	well water of Bappaji, Akolner, Ahmadnagar, Nashik	River	Nashik	Ahmadnagar	Akolner
NWMP	Nashik	1990	Bore well at BMW Site , Burudgaon	Bore well	Ahmadnagar	Ahmednagar	Burudgaon

Programme	Regional Office	Station code	Station name	Type of water	District	Taluka	Village
NWMP	Nashik	1991	Bore well at MSW Site, Pathardi, Nashik	Bore well	Nashik	Nashik	Pathardi
NWMP	Nashik	2204	Dug well at Gunjalwadi, Sangamner near Primary Health Care Center.	Dug Well	Ahmadnagar	Sangamner	Gunjalwadi
NWMP	Nashik	2816	Dug Well of Mr. Sampat Walunj, near M/s. Mahajeet Clayton	Dug Well	Nashik	Nashik	Shinde village
NWMP	Nashik	2817	Bore Well at Chitali near Wagh vasthi	Bore well	Ahmadnagar	Rahata	Chitali
NWMP	Nashik	2818	Bore Well at M/s. Spectron Ethers Rasegaon near Siddeshwar Mahadev Mandir	Bore well	Nashik	Dindori	Rasegaon

Water Quality Index for Ground Water at Chandrapur and Nagpur.

Apr	89	99	93	NA	NA	104	100	66	Dry	43	NA	66	86	Dry	82	88	87
Oct	NA	NA	NA	NA	NA	129	91	87	Dry	50	63	92	71	Dry	134	108	75
Station code	209	210	211	212	213	1995	1996	1997	1998	1999	2000	2203	2826	2827	2003	1994	2828
District	Nagpur														Chandrapur		

Legend

Excellent	Good	Poor	Very Poor	Not suitable for drinking	Dry	No data	NA

Table No. 31: Ground water quality monitoring stations installed in the areas of Chandrapur and Nagpur RO

Programme	Regional Office	Station code	Station name	Type of water	District	Taluka	Village
NWMP	Chandrapur	1994	Dug well At TPS Durgapur near Naseeb Kirana {} general Store.	Dug Well	Chandrapur	Chandrapur	Durgapur
NWMP	Chandrapur	2003	Dug well at Plot No- 4, Street No. 49-C, at Nehru Bal Udyan Azad Maidan, owned by Yavatmal M.C.	Dug Well	Yavatmal	Yavatmal	Nehru Bal Udyan Azad Maidan
NWMP	Chandrapur	2828	Dug Well near Jilla Parishad Primary School Visapur	Dug Well	Chandrapur	Ballarpur	Visapur
SWMP	Nagpur	209	Bore well near Pardhi House, Bhandewadi, Nagpur	Bore well	Nagpur	Nagpur	Bhandewadi
SWMP	Nagpur	210	Bore well near Dearao Kale House, Bhandewadi, Nagpur	Bore well	Nagpur	Nagpur	Bhandewadi
SWMP	Nagpur	211	Grampanchayat Suradevi Intake well On Kolar River At Suradevi, Taluka - Kamptee, District -Nagpur	River	Nagpur	Kamptee	Suradevi
SWMP	Nagpur	212	Grampanchayat Mhasala, Dugwell On Nalla At Mhasala, Taluka - Kamptee, District - Nagpur	Dug Well	Nagpur	Kamptee	Mhasala

Programme	Regional Office	Station code	Station name	Type of water	District	Taluka	Village
SWMP	Nagpur	213	Grampanchayat Kawtha, Dugwell At Kawtha, Taluka - Kamptee, District - Nagpur	Dug Well	Nagpur	Kamptee	Kawtha
NWMP	Nagpur	1995	Gram Panchayath Dug well , Near Balaji Gajbhiye House, Khaperkheda	Dug Well	Nagpur	Saoner	Khaperkheda(Ward No.4)
NWMP	Nagpur	1996	Gram Panchayath Dug well , Near Jagadamba G M S Mandir Sahakari Sanstha	Dug Well	Nagpur	Kamptee	Koradi
NWMP	Nagpur	1997	Bore well near Primary Health Centre, Raipur(Hingna)	Hand pump	Nagpur	Hingna	Raipur
NWMP	Nagpur	1998	Gram Panchayat Dug well near Gram Panchayat Office, Brahmni	Dug Well	Nagpur	Kalmeshwar	Brahmni
NWMP	Nagpur	1999	Bore well Near Gram Panchayat,Changera.	Bore well	Gondia	Gondia	Changera
NWMP	Nagpur	2000	Dug well near Sarode Kirana Store, Bhandewadi, Nagpur	Dug Well	Nagpur	Nagpur	Bhandewadi
NWMP	Nagpur	2203	Hand Pump in the premises of Z.P.Primary School	Ground water	Wardha	wardha	Bhugaon
NWMP	Nagpur	2826	Dug Well near Railway Station, Cottaon Market	Dug Well	Wardha	wardha	Wardha
NWMP	Nagpur	2827	Bore Well near Railway crossing at Dongi Buzurg	Bore well	Bandara	Tumsar	Dongri-Buzurg

Water Quality Index for Ground Water at Kolhapur and Pune.

Apr	21	20	138	106	70	61	61	Dry	66	140	68	25	460	29	25	38	263	49	549	279	491
Oct	21	21	139	144	26	424	301	Dry	41	61	344	24	28	29	22	63	256	146	538	326	Dry
Station code	219	220	2004	2005	2006	2007	2008	2202	2829	2830	2831	2832	2833	2834	2835	1992	2819	2820	2821	2822	2823
District	Kolhapur																	Pune			

Legend

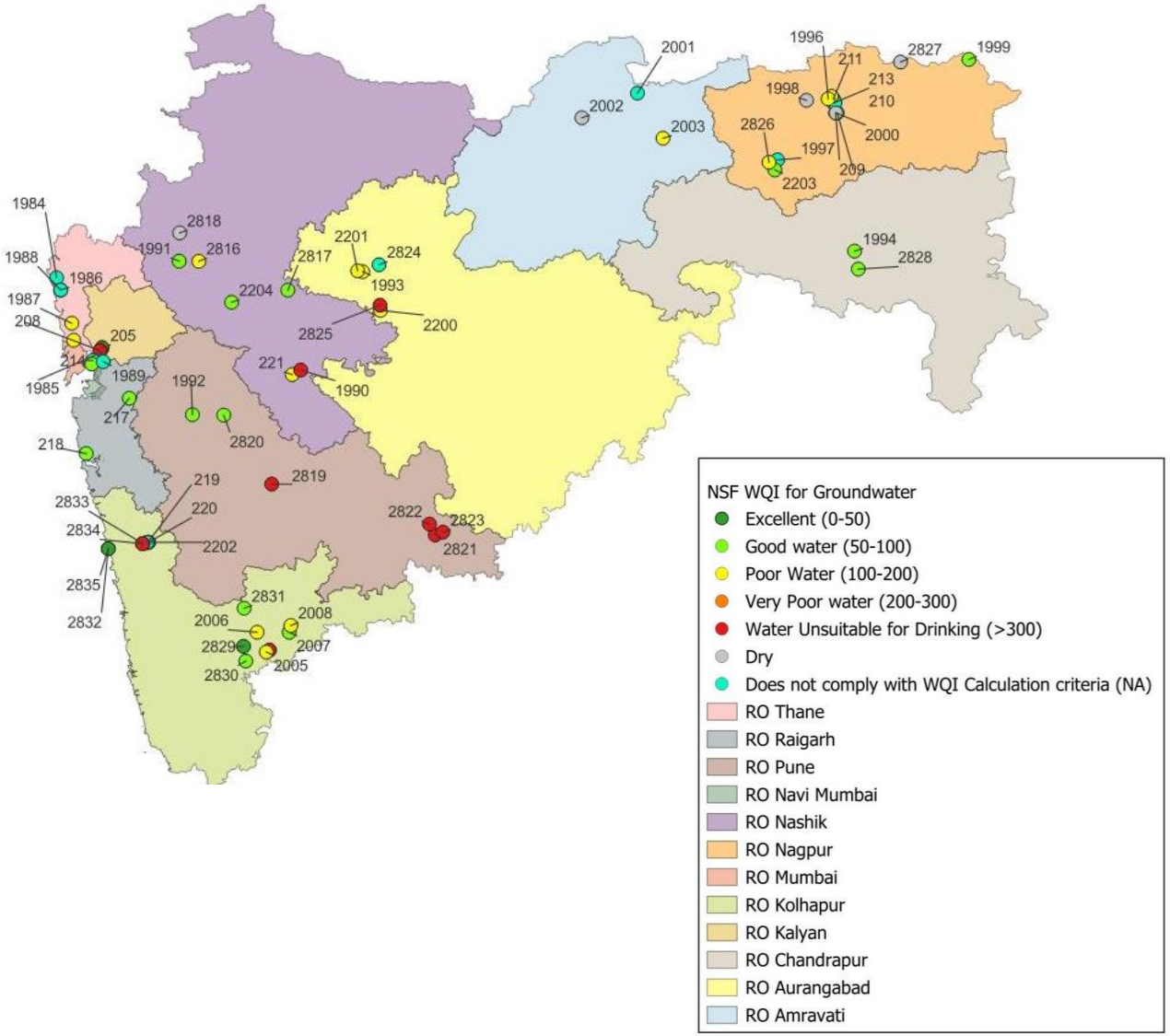
Excellent	Good	Poor	Very Poor	Not suitable for drinking	Dry	No data	NA

Table No. 32: Ground water quality monitoring stations installed in the areas of Kolhapur and Pune RO

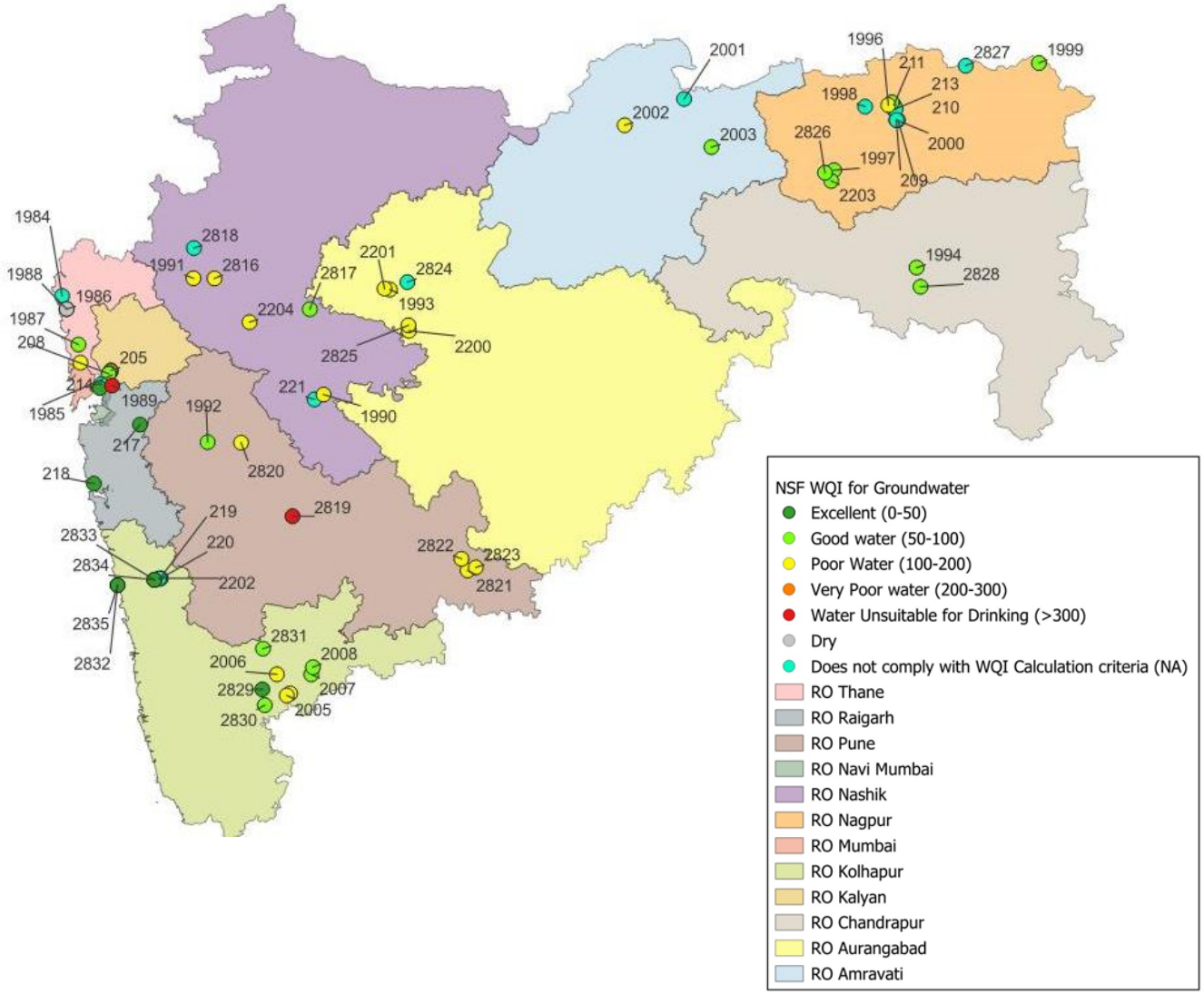
Programme	Regional Office	Station code	Station name	Type of water	District	Taluka	Village
SWMP	Kolhapur	219	Common well Water At Patwardhan, Lote, Taluka - Khed, District - Rantnagiri	Well water	Ratnagiri	Khed	Lote
SWMP	Kolhapur	220	Dugwell backside Excel India At Chalkewadi, Taluka - Khed, District - Ratnagiri.	Well water	Ratnagiri	Khed	Chalkewadi
NWMP	Kolhapur	2004	Bore well at Parvati Industrial Estate, Yadrav, Kolhapur	Bore Well Water	Kolhapur	Shirol	Yadrav
NWMP	Kolhapur	2005	Bore well at Khanjirenagar, Kolhapur	Bore Well Water	Kolhapur	Hatkananga le	Khanjirenagar
NWMP	Kolhapur	2006	Bore well at Shinoli near M/s Aqua Alloy Steel.	Bore Well Water	Kolhapur	Chandgad	Shinoli

Programme	Regional Office	Station code	Station name	Type of water	District	Taluka	Village
NWMP	Kolhapur	2007	Bore well at Savali, near Gram Panchayat office.	Bore Well Water	Sangli	Miraj	Savali
NWMP	Kolhapur	2008	Dug well at Sambarwadi, owned by Shri. Kishan Hali Rajput.	Dug Well Water	Sangli	Miraj	Sambarwadi
NWMP	Kolhapur	2202	Dug Well at Ghane Kunt, near Awashi, onwed by shri Rajendra Amre	Dug Well Water	Ratnagiri	Khed	Ghane Kunt
NWMP	Kolhapur	2829	Bore Well at MIDC Shiroli near M/s. Pratibha Enterprises	Bore Well Water	Kolhapur	Hatkananga le	Shiroli
NWMP	Kolhapur	2830	Bore Well at MIDC Gokul Shirgaon	Bore Well Water	Kolhapur	Karvir	Gokul-Shirgaon
NWMP	Kolhapur	2831	Dug Well at Sakharali near MIDC Islampur near Krishna Milk Industry	Bore Well Water	Sangli	Walwa	Sakharali
NWMP	Kolhapur	2832	Dug Well No.1 at Brahmanwadi-Anjanwel, owned by Shri Vaidya	Dug Well Water	Ratnagiri	Guhagar	Anjanwel
NWMP	Kolhapur	2833	Dug Well No.1 at Group Gram Panchayat at Arketwadi, near Masjid	Dug Well Water	Ratnagiri	Khed	Arketwadi
NWMP	Kolhapur	2834	Dug Well No.2 at Arketwadi	Dug Well Water	Ratnagiri	Khed	Arketwadi
NWMP	Kolhapur	2835	Dug Well No.2 at owned by Group Gram Panchayat, Brahmanwadi-Anjanwel	Dug Well Water	Ratnagiri	Guhagar	Anjanwel
NWMP	Pune	1992	Dug well at MSW Site,owned by Shri.Dattu Kondiba Borate at Borate Vasthi.	Dug Well	Pune	Haveli	Moshi
NWMP	Pune	2819	Dug Well Owned by Shri Deshmukh	Dug Well	Pune	Baramati	Malegaon
NWMP	Pune	2820	Dug Well Owned by Shri Shivaji Baban Darekar	Dug well	Pune	Shirur	Sanaswadi
NWMP	Pune	2821	Bore Well at Bale Railway Station premises Owned by Shri Digambar Joshi	Bore Well	Solapur	North Solapur	Dahegaon
NWMP	Pune	2822	Bore Well near Chincholi	Bore Well	Solapur	Mohol	Chincholi
NWMP	Pune	2823	Bore Well at Shete Vasti near old Tuljapur Road	Bore Well	Solapur	Solapur	Shete vasthi, Tuljapur Naka

Spatial map for Groundwater WQI in Maharashtra (April 2023)



Spatial map for Groundwater WQI in Maharashtra (October 2023)



CONCLUSION

MPCB has set up a robust network of 294 Water Quality Monitoring Stations (WQMS) as part of the National Water Monitoring Programme (NWMP) and State Water Monitoring Programme (SWMP). This network covers both surface water and groundwater, with 176 stations on rivers, 36 on seas/creeks, 12 on drains, and 4 on dams. Additionally, there are 29 borewells, 34 dug wells, 1 handpump, 1 tube well, and 1 well for monitoring groundwater quality, ensuring comprehensive oversight of water quality across the state.

In terms of surface water, there was no significant change in water quality compared to the previous year (2022-23). This year, the majority of the observations, based on the annual average, were classified as 'Non-Polluted'. Out of 228 Water Quality Monitoring Stations (WQMS), 212 stations (92.98%) were classified as 'Non-Polluted', while 16 stations (7.02%) were categorized as 'Polluted'. This marks a slight decline of 2 stations from the previous year, which had 214 stations (93.85%) in the 'Non-Polluted' category.

Of the 212 stations classified as 'Non-Polluted', 164 stations (79.24%) had an annual average Water Quality Index (WQI) in the 'Good to Excellent' range, while 36 stations (16.98%) fell under the 'Medium to Good' category. Among the 16 stations in the 'Polluted' category, 10 stations recorded WQI values in the 'Bad' range, and 6 stations were categorized as 'Bad to Very Bad'. Additionally, 2 WQMS were classified under the 'Dry' category, and 6 WQMS were marked as 'NA' (Not Applicable).

Further, in addition this year (2023-24), two rivers—the Pawana and Mutha rivers—were found to be in Priority 1 (with a BOD value greater than 30 mg/l) in addition to the Mithi river, which was the only river in Priority 1 in the previous year (2022-23) ranking of polluted river stretches. In 2023-24, the distribution of rivers under various priority categories was as follows: 3 rivers were placed under Priority II, 7 under Priority III, 10 under Priority IV, and 27 under Priority V. Waghur River was the only river categorized as non-polluted, with a BOD value of less than 3 mg/l. Additionally, five rivers—Amravati, Bori, Hiwara, Manjara, and Titur—were observed to be dry throughout the year.

For the 2023-24 year, in terms of Groundwater, Kolhapur district recorded the highest number of WQMS (6 stations) under 'Excellent' category, with Raigad district having 2 WQMS followed by Nashik and Nagpur RO with 1 WQMS each respectively. Nagpur had the most WQMS (9 Nos.) under 'Good Water' category followed by Pune which recorded 2 WQMS in same category. The number of stations categorized as 'Water Unsuitable for Drinking' increased from 1 to 4 compared to the previous year, with 3 stations in the Pune RO and 1 in the Nashik RO. Among these, station code 2821 (Bore Well at Bale Railway Station premises, owned by Shri Digambar Joshi) in Pune RO recorded the highest annual average WQI in the 'Water Unsuitable for Drinking' category. This was due to high levels of Total Dissolved Solids (5,237 mg/l), Magnesium (715 mg/l), Chloride (847 mg/l), Calcium (935 mg/l), and Sulphate (1,055 mg/l), all of which exceeded their standard limits.

Annex –I : RO wise Summary of WQI in 2023-24

In 1981, the Maharashtra State government adopted the Water (Prevention and Control of Pollution) Act, 1974, and established the Maharashtra Pollution Control Board (MPCB) to enforce its provisions.

The key functions of the MPCB include:

- Planning and implementing comprehensive programs for the prevention, control, or abatement of pollution.
- Collecting and disseminating information related to pollution and its prevention, control, or abatement.
- Inspecting sewage or trade effluent treatment and disposal facilities, as well as air pollution control systems, and reviewing plans and specifications related to treatment plants, disposal systems, and pollution control systems in connection with granted consents.
- Supporting and promoting developments in pollution control, waste recycling, eco-friendly practices, and related fields.
- Educating and guiding entrepreneurs in adopting appropriate pollution control technologies and techniques.
- Raising public awareness about maintaining a clean and healthy environment and addressing public complaints regarding pollution.

Given Maharashtra's high level of industrialization, population density, and urbanization, water pollution has been a major concern, particularly due to the release of sewage, industrial wastewater, and solid waste disposal, which have significantly impacted the quality of water in seas, creeks, drains, and groundwater.

To monitor and regulate pollution levels effectively, MPCB has established 12 Regional Offices (ROs) across the state. These offices play a crucial role in ensuring compliance with environmental regulations. MPCB operates under the administrative control of the Environment Department, Government of Maharashtra.

The following section provides highlights from the water quality monitoring network for the year 2023-24, presenting a summary of the water quality index at various stations throughout the year.

RO – Amravati

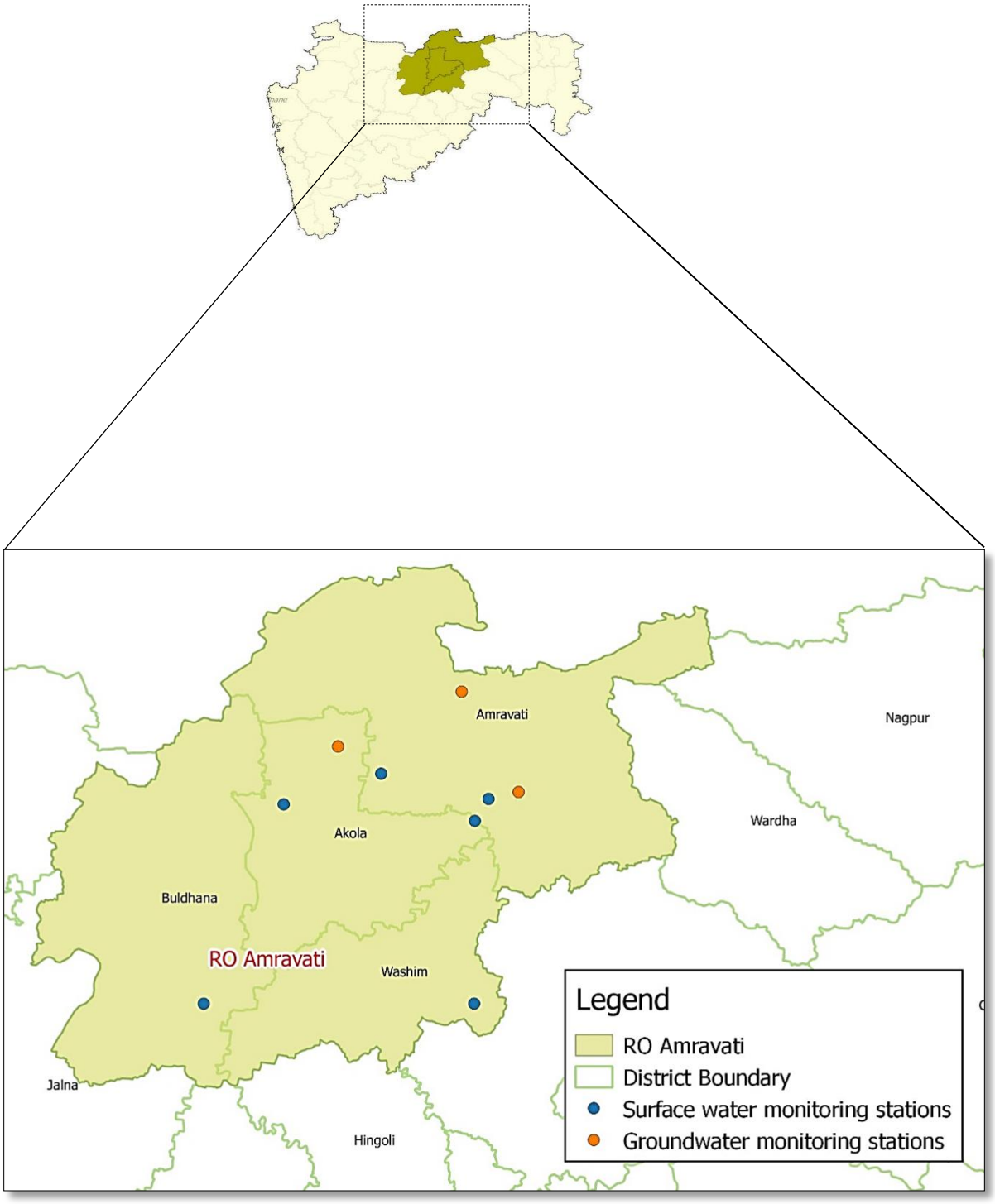

Amravati
Nagpur
Akola
Wardha
Buldhana
RO Amravati
Washim
Jalna
Hingoli
Legend
RO Amravati
District Boundary
Surface water monitoring stations
Groundwater monitoring stations

Table No. 33: Water quality Index for surface and ground water monitoring at Amravati-RO – 2023-24

Type	Station code	Station Name	April	Oct/ Dec	Avg WQI	District	Taluka	Village
SW	1913	Purna River at Dhupeshwar at U/s of Malkapur Water works	Dry	76	75	Akola	Akola	Malkapur
	2155	Purna River at D/s of confluence of Morna & Purna at Andhura village	Dry	75	74	Akola	Balapur	Andura
	2675	Morna River at D/s of Railway Bridge	Dry	75	72	Akola	Akola	Akola
	2695	Pedhi River near Road Bridge at Dadhi-Pedhi village	NA	77	74	Amravati	Chandur Bazar	Asegaon
	2697	Penganga River near water supply scheme of Umarkhed MC	72	79	75	Yavatmal	Umarkhed	Belkhed
	2698	Penganga River D/s of Isapur Dam	72	78	73	Yavatmal	Pusad	Isapur
	2699	Penganga River at Mehkar-Buldana Road Bridge	Dry	75	75	Buldana	Mehkar	Mehkar
	2700	Purna River near Achalpur-Amravati Road Bridge, Asegaon	Dry	74	74	Amravati	Chandur bazaar	Asegaon
GW	2001	Tube well at water treatment plant of M.C.Achalpur near Post Office.	Dry	Dry	Dry	Amravati	Achalpur	Paratwada
	2002	Bore well Opp. Gajanan Maharaj Temple at Anjangaon road.	83	81	82	Akola	Akot	Anjangaon
	2003	Dug well at Plot No- 4, Street No. 49-C, at Nehru Bal Udyan Azad Maidan, owned by Yavatmal M.C.	82	134	108	Yavatmal	Yavatmal	Nehru Bal Udyan Azad Maidan

Surface Water		**Good to Excellent**	**Medium to Good**	**Bad**	**Bad to Very Bad**	**Dry**	**No data**	**Does not comply with WQI Calculation criteria (NA)**
Ground Water	**Excellent**	**Good**	**Poor**	**Very Poor**	**Not suitable for drinking**	**Dry**	**No data**	**Does not comply with WQI Calculation criteria (NA)**

RO – Aurangabad

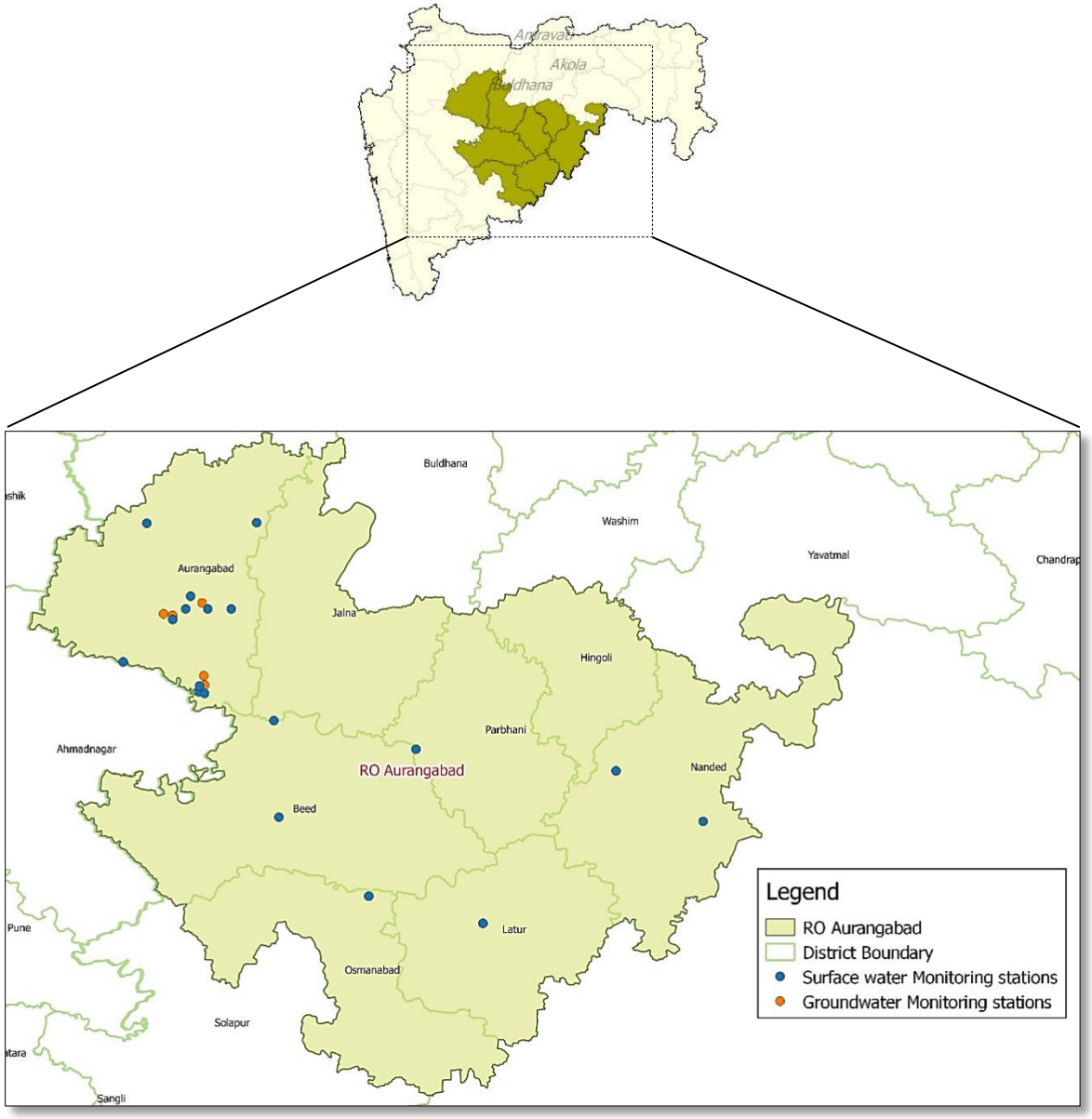


Table No. 34: Water quality Index for surface and ground water monitoring at Aurangabad-RO – 2023-24

Type	Station code	Station Name	April	Oct/ Dec	Avg WQI	District	Taluka	Village
SW	12	Godavari River at Dhalegaon	81	81	78	Parbhani	Pathari	Dhalegaon
	12	Godavari River at Dhalegaon	81	81	78	Parbhani	Pathari	Dhalegaon
	178	Kannad - D/S of Kannad near Bridge	Dry	44	67	Aurangabad	Kannad	Kannad
	178	Kannad - D/S of Kannad near Bridge	Dry	44	67	Aurangabad	Kannad	Kannad
	179	Sillod - D/S of Sillod near bridge at bhavan	Dry	42	48	Aurangabad	Sillod	Sillod
	179	Sillod - D/S of Sillod near bridge at bhavan	Dry	42	48	Aurangabad	Sillod	Sillod
	180	Aurangabad - Near Holly cross bridge	NA	54	46	Aurangabad	Aurangabad	Aurangabad
	180	Aurangabad - Near Holly cross bridge	NA	54	46	Aurangabad	Aurangabad	Aurangabad
	181	Aurangabad - Near Patoda Village	45	48	49	Aurangabad	Aurangabad	Aurangabad
	181	Aurangabad - Near Patoda Village	45	48	49	Aurangabad	Aurangabad	Aurangabad
	182	Aurangabad - Near Chikhalthana Bridge	Dry	Dry	Dry	Aurangabad	Aurangabad	Aurangabad
	182	Aurangabad - Near Chikhalthana Bridge	Dry	Dry	Dry	Aurangabad	Aurangabad	Aurangabad
	183	Aurangabad - At Sukhna Dam	58	47	58	Aurangabad	Aurangabad	Aurangabad
	183	Aurangabad - At Sukhna Dam	58	47	58	Aurangabad	Aurangabad	Aurangabad
	184	Aurangabad - Harsool Dam	65	51	68	Aurangabad	Aurangabad	Aurangabad
	184	Aurangabad - Harsool Dam	65	51	68	Aurangabad	Aurangabad	Aurangabad
	1209	Godavari River at Raher	86	72	78	Nanded	Nayagaon	Raher
	1209	Godavari River at Raher	86	72	78	Nanded	Nayagaon	Raher
	1210	Godavari River at Intake of pump house	79	NA	78	Nanded	Nanded	Vishnupuri
	1210	Godavari River at Intake of pump house	79	NA	78	Nanded	Nanded	Vishnupuri
	1312	Godavari river at Jaikwadi Dam, Paithan	76	82	81	Aurangabad	Paithan	Paithan
	1312	Godavari river at Jaikwadi Dam, Paithan	76	82	81	Aurangabad	Paithan	Paithan
	2157	Godavari River at Latur Water intake near pump house	87	75	84	Osmanabad	Kalumb	Dhamegaon
	2157	Godavari River at Latur Water intake near pump house	87	75	84	Osmanabad	Kalumb	Dhamegaon
	2158	Godavari River at Paithan U/s of Paithan Intake pump house	83	69	78	Aurangabad	Paithan	Jayakwadi
	2158	Godavari River at Paithan U/s of Paithan Intake pump house	83	69	78	Aurangabad	Paithan	Jayakwadi
	2159	Godavari River at D/s of Paithan at Pathegaon bridge	79	75	77	Aurangabad	Paithan	Pathegaon
	2159	Godavari River at D/s of Paithan at Pathegaon bridge	79	75	77	Aurangabad	Paithan	Pathegaon
	2160	Godavari River at U/s of Aurangabad Reservoir Kaigaon Tokka near, Kaigaon Bridge	80	69	74	Aurangabad	Gangapur	Kaigaon
	2160	Godavari River at U/s of Aurangabad Reservoir Kaigaon	80	69	74	Aurangabad	Gangapur	Kaigaon

Type	Station code	Station Name	April	Oct/ Dec	Avg WQI	District	Taluka	Village
		Tokka near, Kaigaon Bridge						
	2161	Godavari River at Jalna Intake water pump house Shahagad	77	74	73	Jalna	Ambad	Shahabad
	2161	Godavari River at Jalna Intake water pump house Shahagad	77	74	73	Jalna	Ambad	Shahabad
	2657	Bindusara River at Beed, near Intake water pump house at Dam	78	71	72	Beed	Beed	Paligaon
	2657	Bindusara River at Beed, near Intake water pump house at Dam	78	71	72	Beed	Beed	Paligaon
SW	2673	Manjra River at D/s of Latur, near Latur-Nanded Bridge	NA	Dry	NA	Latur	Latur	Bhatkheda
	2673	Manjra River at D/s of Latur, near Latur-Nanded Bridge	NA	Dry	NA	Latur	Latur	Bhatkheda
GW	1993	Dug well at Pandarpur, Gangapur, Aurangabad	157	164	160	Aurangabad	Gangapur	Pandharpur
	2200	Bore Well at Katpur, Near Z.P.School	76	217	147	Aurangabad	Paithan	Katpur
	2201	Dug Well at Ranjangaon	189	218	204	Aurangabad	Gangapur	Ranjangaon
	2824	Dug Well at Naregaon	Dry	Dry	Dry	Aurangabad	Aurangabad	Naregaon
	2825	Bore Well at Wahegaon, near Zilla Parishet School	72	203	138	Aurangabad	Paithan	Wahegaon

Surface Water		Good to Excellent	Medium to Good	Bad	Bad to Very Bad	Dry	No data	Does not comply with WQI Calculation criteria (NA)
Ground Water	Excellent	Good	Poor	Very Poor	Not suitable for drinking	Dry	No data	Does not comply with WQI Calculation criteria (NA)

RO – Chandrapur

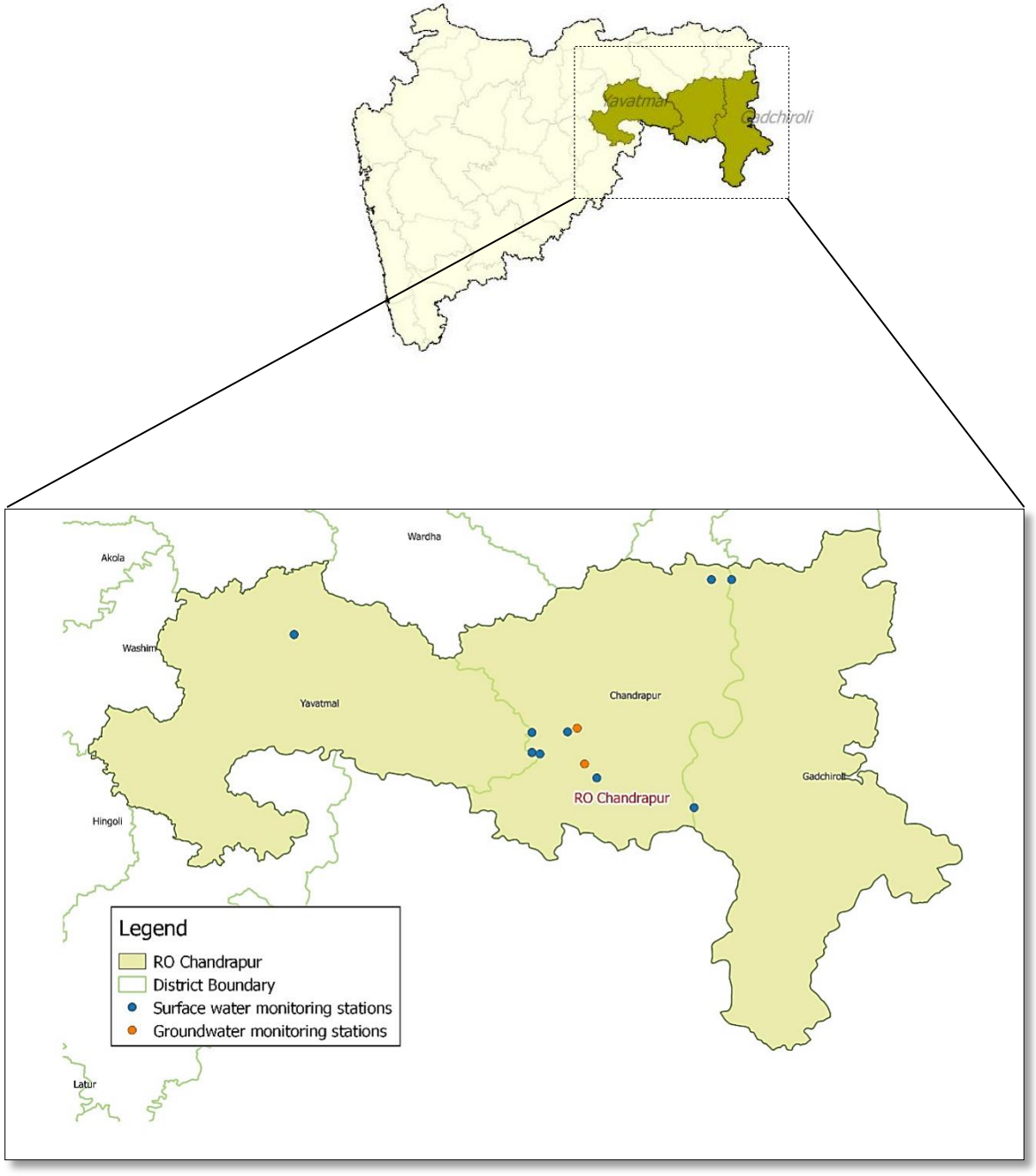


Table No. 35: Water quality Index for surface and ground water monitoring at Chandrapur RO – 2023-24

Type	Station code	Station Name	April	Oct/ Dec	Avg WQI	District	Taluka	Village
SW	2156	Wardha River at confluence point of Penganga & Wardha	72	76	74	Yavatmal	Wani	Jugad
	11	Wainganga River at Ashti	45	77	72	Chandrapur	Gondpipri	Ashti
	1212	Wardha river at Rajura bridge	75	76	74	Chandrapur	Chandrapur	Rajura
	2174	Wardha River at D/s of ACC Ghuggus	72	77	72	Chandrapur	Chandrapur	Ghuggus
	2175	Wainganga at U/s of Gaurav Paper Mills near Jack Well	75	77	75	Chandrapur	Chandrapur	Bramhpuri
	2176	Wainganga River at D/s of Gaurav Paper Mills Near Jackwell	74	76	73	Chandrapur	Chandrapur	Bramhpuri
	2719	Wardha River at D/s of Erai River	69	77	72	Chandrapur	Chandrapur	Hadasti
	2720	Wardha River at U/s of Erai River	73	77	74	Chandrapur	Chandrapur	Hadasti
	2721	Wardha River at U/s of ACC Ghuggus	74	79	75	Chandrapur	Chandrapur	Ghuggus
GW	1994	Dugwell At TPS Durgapur near Naseeb Kirana {} general Store.	88	108	98	Chandrapur	Chandrapur	Durgapur
	2828	Dug Well near Jilla Parishad Primary School Visapur	87	75	81	Chandrapur	Ballarpur	Visapur

Surface Water		**Good to Excellent**	**Medium to Good**	**Bad**	**Bad to Very Bad**	**Dry**	**No data**	**Does not comply with WQI Calculation criteria (NA)**
Ground Water	**Excellent**	**Good**	**Poor**	**Very Poor**	**Not suitable for drinking**	**Dry**	**No data**	**Does not comply with WQI Calculation criteria (NA)**

RO – Kalyan

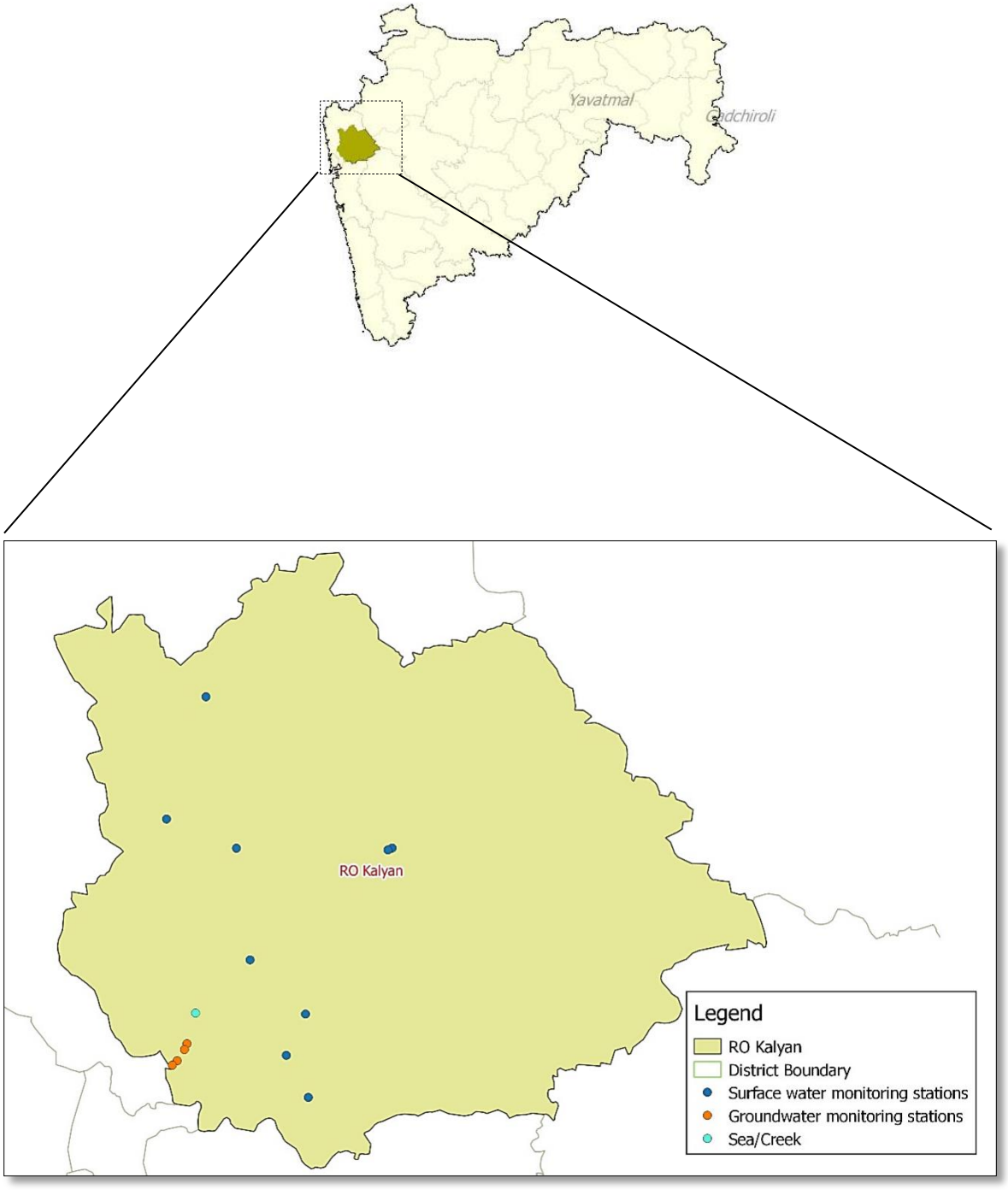

Yavatmal
RO Kalyan
Legend
RO Kalyan
District Boundary
Surface water monitoring stations
Groundwater monitoring stations
Sea/Creek

Table No. 35: Water quality Index for surface and ground water monitoring at Kalyan-RO – 2023-24

Type	Station code	Station Name	April	Oct/ Dec	Avg WQI	District	Taluka	Village
SW	1092	Kalu River at Atale village	80	75	74	Thane	Kalyan	Atale
	1092	Kalu River at Atale village	80	75	74	Thane	Kalyan	Atale
	1093	Ulhas river at U/s of NRC Bund	91	75	85	Thane	Kalyan	Mohane
	1093	Ulhas river at U/s of NRC Bund	91	75	85	Thane	Kalyan	Mohane
	1094	Ulhas River at U/s of Badlapur water works	80	81	83	Thane	Ambernath	Kulgaon
	1094	Ulhas River at U/s of Badlapur water works	80	81	83	Thane	Ambernath	Kulgaon
	1461	Bhatsa river at D/s of Pise Dam	85	85	86	Thane	Bhiwandi	Pise
	1461	Bhatsa river at D/s of Pise Dam	85	85	86	Thane	Bhiwandi	Pise
	2162	Ulhas River at Jambhul water works	85	77	85	Thane	Ambernath	Jambhul
	2162	Ulhas River at Jambhul water works	85	77	85	Thane	Ambernath	Jambhul
	2653	Bhatsa River at D/s of Liberty Oil Mills	73	80	81	Thane	Shahapur	Satne
	2653	Bhatsa River at D/s of Liberty Oil Mills	73	80	81	Thane	Shahapur	Satne
	2654	Bhatsa River at D/s of Liberty Oil Mills	74	83	82	Thane	Shahapur	Satne
	2654	Bhatsa River at D/s of Liberty Oil Mills	74	83	82	Thane	Shahapur	Satne
	2709	Tansa River near road bridge	NA	79	84	Thane	Wada	Dakewali
	2709	Tansa River near road bridge	NA	79	84	Thane	Wada	Dakewali
	2712	Vaitarna River near Road Bridge	NA	82	84	Thane	Wada	Gandhare
	2712	Vaitarna River near Road Bridge	NA	82	84	Thane	Wada	Gandhare
	2791	Ulhas Creek at Reti Bunder, D/s of Kalyan-Bhiwandi Bridge	62	82	67	Thane	Kalyan	Kalyan
	2791	Ulhas Creek at Reti Bunder, D/s of Kalyan-Bhiwandi Bridge	62	82	67	Thane	Kalyan	Kalyan
GW	205	Dug well opp. KAMA office, MIDC Ph-I, Dombivali	229	177	203	Kalyan	Dombivali	MIDC,Dombivali
	206	Dug well near Mamta Hospital, Milap Nagar, Dombivali	112	86	99	Kalyan	Dombivali	MIDC,Dombivali
	207	Dug well at pimpleshwar Temple, MIDC Ph-II, Dombivali	121	95	108	Kalyan	Dombivali	MIDC,Dombivali
	208	Dug well addjusent to M/S. Altra pure chem., Sr. No. 45, Hissa No. 3, MIDC Ph-II, Dombivali.	123	91	107	Kalyan	Dombivali	MIDC,Dombivali

Surface Water		Good to Excellent	Medium to Good	Bad	Bad to Very Bad	Dry	No data	Does not comply with WQI Calculation criteria (NA)
Ground Water	Excellent	Good	Poor	Very Poor	Not suitable for drinking	Dry	No data	Does not comply with WQI Calculation criteria (NA)

RO – Kolhapur

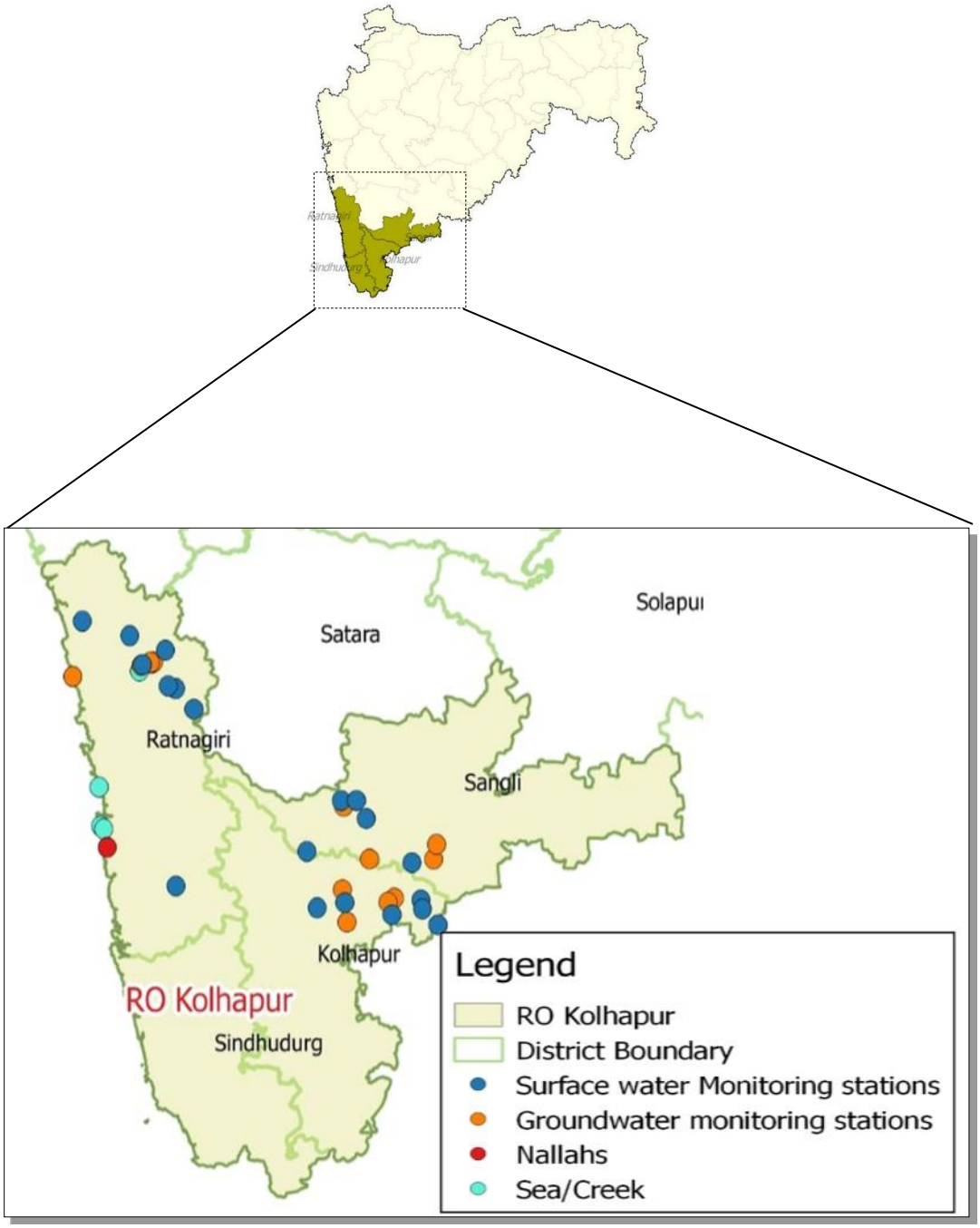

Satara
Solapur
Ratnagiri
Sangli
Kolhapur
RO Kolhapur
Sindhudurg
Legend
RO Kolhapur
District Boundary
Surface water Monitoring stations
Groundwater monitoring stations
Nallahs
Sea/Creek

Table No. 36: Water quality Index for surface and ground water monitoring at Kolhapur-RO – 2023-24

Type	Station code	Station Name	April	Oct/ Dec	Avg WQI	District	Taluka	Village
SW	37	Krishna River at Maighat, Sangli	80	82	81	Sangli	Miraj	Gawali gally
	37	Krishna River at Maighat, Sangli	80	82	81	Sangli	Miraj	Gawali gally
	198	Bahe KT Weir, Bahe, Taluka - Walwa, District - Sangli	83	82	81	Sangli	Walwa	Bahe
	198	Bahe KT Weir, Bahe, Taluka - Walwa, District - Sangli	83	82	81	Sangli	Walwa	Bahe
	199	Borgaon KT Weir, Borgaon, Taluka - Walwa, District - Sangli	83	81	81	Sangli	Walwa	Borgaon
	199	Borgaon KT Weir, Borgaon, Taluka - Walwa, District - Sangli	83	81	81	Sangli	Walwa	Borgaon
	200	Mangle Bridge, Mangle, Taluka - Shirala, District - Sangli	82	84	82	Sangli	Shirala	Mangle
	200	Mangle Bridge, Mangle, Taluka - Shirala, District - Sangli	82	84	82	Sangli	Shirala	Mangle
	201	Sonpatra River At Kotwali Village, Taluka - Khed, District - Ratnagiri	90	77	81	Ratnagiri	Khed	Kotwali
	201	Sonpatra River At Kotwali Village, Taluka - Khed, District - Ratnagiri	90	77	81	Ratnagiri	Khed	Kotwali
	202	Vashisti River At Khadpoli, Taluka Chiplun, District - Ratnagiri	87	85	85	Ratnagiri	Chiplun	Khadpoli
	202	Vashisti River At Khadpoli, Taluka Chiplun, District - Ratnagiri	87	85	85	Ratnagiri	Chiplun	Khadpoli
	203	Jagbudi River, D/S of Khed City, Taluka - Khed, District Ratnagiri	87	84	85	Ratnagiri	Khed	Khed City
	203	Jagbudi River, D/S of Khed City, Taluka - Khed, District Ratnagiri	87	84	85	Ratnagiri	Khed	Khed City
	204	Jog river at Dapoli, Taluka Dapoli, District - Rantnagiri	87	89	83	Ratnagiri	Dapoli	Dapoli
	204	Jog river at Dapoli, Taluka Dapoli, District - Rantnagiri	87	89	83	Ratnagiri	Dapoli	Dapoli
	1153	Krishna River at Rajapur Weir	78	82	81	Kolhapur	Shirol	Rajapur
	1153	Krishna River at Rajapur Weir	78	82	81	Kolhapur	Shirol	Rajapur

Type	Station code	Station Name	April	Oct/ Dec	Avg WQI	District	Taluka	Village
	1310	Krishna River at Kurundwad	86	82	83	Kolhapur	Shirol	Narshingwadi, Kurundwad
	1310	Krishna River at Kurundwad	86	82	83	Kolhapur	Shirol	Narshingwadi, Kurundwad
	1311	Panchganga River at Ichalkaranji near MIDC intake well	86	85	83	Kolhapur	Hatkanangale	Shiradhwad (Ichalkaranji ghat)
	1311	Panchganga River at Ichalkaranji near MIDC intake well	86	85	83	Kolhapur	Hatkanangale	Shiradhwad (Ichalkaranji ghat)
	1904	Panchganga River at U/s of Kolhapur town near Balinga Pumping Station	80	84	84	Kolhapur	Karvir	Balinga
	1904	Panchganga River at U/s of Kolhapur town near Balinga Pumping Station	80	84	84	Kolhapur	Karvir	Balinga
	1905	Panchaganga river at D/s of Kolhapur town at Gandhi nagar near NH-4 bridge and MIDC intake well	83	83	83	Kolhapur	Kolhapur	Uchegaon
	1905	Panchaganga river at D/s of Kolhapur town at Gandhi nagar near NH-4 bridge and MIDC intake well	83	83	83	Kolhapur	Kolhapur	Uchegaon
	1906	Krishna river at Walwa, D/s of Islampur near Vithal Temple	83	80	81	Sangli	Walwa	Walwa
	1906	Krishna river at Walwa, D/s of Islampur near Vithal Temple	83	80	81	Sangli	Walwa	Walwa
	2163	Panchganga River at Shirol near Shirol intake well	81	83	82	Kolhapur	Shirol	Shirol
	2163	Panchganga River at Shirol near Shirol intake well	81	83	82	Kolhapur	Shirol	Shirol
	2164	Vashishti River at U/s of Three M Paper Mills near M/s Multifilms Plastic Pvt Ltd	86	88	86	Ratnagiri	Chiplun	Kherdi
	2164	Vashishti River at U/s of Three M Paper Mills near M/s Multifilms Plastic Pvt Ltd	86	88	86	Ratnagiri	Chiplun	Kherdi
	2676	Muchkundi River at Waked Ratnagiri near M/s Asahi India Glass	88	87	85	Ratnagiri	Lanja	Waked
	2676	Muchkundi River at Waked Ratnagiri near M/s Asahi India Glass	88	87	85	Ratnagiri	Lanja	Waked

Type	Station code	Station Name	April	Oct/ Dec	Avg WQI	District	Taluka	Village
	2713	Vashishti River at D/s of Three M Paper Mills near Chiplun water intake Jackwell	89	87	86	Ratnagiri	Chiplun	Kherdi
	2713	Vashishti River at D/s of Three M Paper Mills near Chiplun water intake Jackwell	89	87	86	Ratnagiri	Chiplun	Kherdi
	2714	Vashishti River at U/s of Pophali near Konphansawane Bridge	86	85	85	Ratnagiri	Chiplun	Pophali
	2714	Vashishti River at U/s of Pophali near Konphansawane Bridge	86	85	85	Ratnagiri	Chiplun	Pophali
	2790	Pimpal-Paneri Nalla at Ratnagiri near Finolex Industries	84	NA	81	Ratnagiri	Ratnagiri	Yahganigaon
	2790	Pimpal-Paneri Nalla at Ratnagiri near Finolex Industries	84	NA	81	Ratnagiri	Ratnagiri	Yahganigaon
	2804	Karambavane Creek at Chiplun	81	88	80	Ratnagiri	Chiplun	Karambavane
	2804	Karambavane Creek at Chiplun	81	88	80	Ratnagiri	Chiplun	Karambavane
	2813	Sea Water at Ganapatipule	75	65	70	Ratnagiri	Ratnagiri	Ganapatipule
	2813	Sea Water at Ganapatipule	75	65	70	Ratnagiri	Ratnagiri	Ganapatipule
	2814	Sea Water at Bhagwati Bunder, Ratnagiri near Ultra Tech Cement Jetty	76	62	69	Ratnagiri	Ratnagiri	Mirkarwada
	2814	Sea Water at Bhagwati Bunder, Ratnagiri near Ultra Tech Cement Jetty	76	62	69	Ratnagiri	Ratnagiri	Mirkarwada
	2815	Madvi Sea Water at Ratnagiri near Jodhale Maruti Temple	75	66	70	Ratnagiri	Ratnagiri	Madvigaon
	2815	Madvi Sea Water at Ratnagiri near Jodhale Maruti Temple	75	66	70	Ratnagiri	Ratnagiri	Madvigaon
GW	219	Common well Water At Patwardhan, Lote, Taluka - Khed, District - Rantnagiri	21	21	21	Ratnagiri	Khed	Lote
	220	Dugwell backside Excel India At Chalkewadi, Taluka - Khed, District - Ratnagiri.	20	21	20	Ratnagiri	Khed	Chalkewadi
	2004	Bore well at Parvati Industrial Estate, Yadrav, Kolhapur	138	139	138	Kolhapur	Shirol	Yadrav
	2005	Bore well at Khanjirenagar, Kolhapur	106	144	125	Kolhapur	Hatkanangale	Khanjirenagar
	2006	Bore well at Shinoli near M/s Aqua Alloy Steel.	70	26	48	Kolhapur	Chandgad	Shinoli
	2007	Bore well at Savali, near Gram Panchayat office.	61	424	243	Sangli	Miraj	Savali

Type	Station code	Station Name	April	Oct/ Dec	Avg WQI	District	Taluka	Village
	2008	Dug well at Sambarwadi, owned by Shri. Kishan Hali Rajput.	61	301	181	Sangli	Miraj	Sambarwadi
	2202	Dug Well at Ghane Kunt, near Awashi, onwed by shri Rajendra Amre	Dry	Dry	Dry	Ratnagiri	Khed	Ghane Kunt
	2829	Bore Well at MIDC Shiroli near M/s. Pratibha Enterprises	66	41	53	Kolhapur	Hatkanangale	Shiroli
	2830	Bore Well at MIDC Gokul Shirgaon	140	61	100	Kolhapur	Karvir	Gokul-Shirgaon
	2831	Dug Well at Sakharali near MIDC Islampur near Krishna Milk Industry	68	344	206	Sangli	Walwa	Sakharali
	2832	Dug Well No.1 at Brahmanwadi-Anjanwel, owned by Shri Vaidya	25	24	25	Ratnagiri	Guhagar	Anjanwel
	2833	Dug Well No.1 at Group Gram Panchayat at Arketwadi, near Masjid	460	28	244	Ratnagiri	Khed	Arketwadi
	2834	Dug Well No.2 at Arketwadi	29	29	29	Ratnagiri	Khed	Arketwadi
	2835	Dug Well No.2 at owned by Group Gram Panchayat, Brahmanwadi-Anjanwel	25	22	23	Ratnagiri	Guhagar	Anjanwel

Surface Water		**Good to Excellent**	**Medium to Good**	**Bad**	**Bad to Very Bad**	**Dry**	**No data**	**Does not comply with WQI Calculation criteria (NA)**
Ground Water	**Excellent**	**Good**	**Poor**	**Very Poor**	**Not suitable for drinking**	**Dry**	**No data**	**Does not comply with WQI Calculation criteria (NA)**

RO – Mumbai

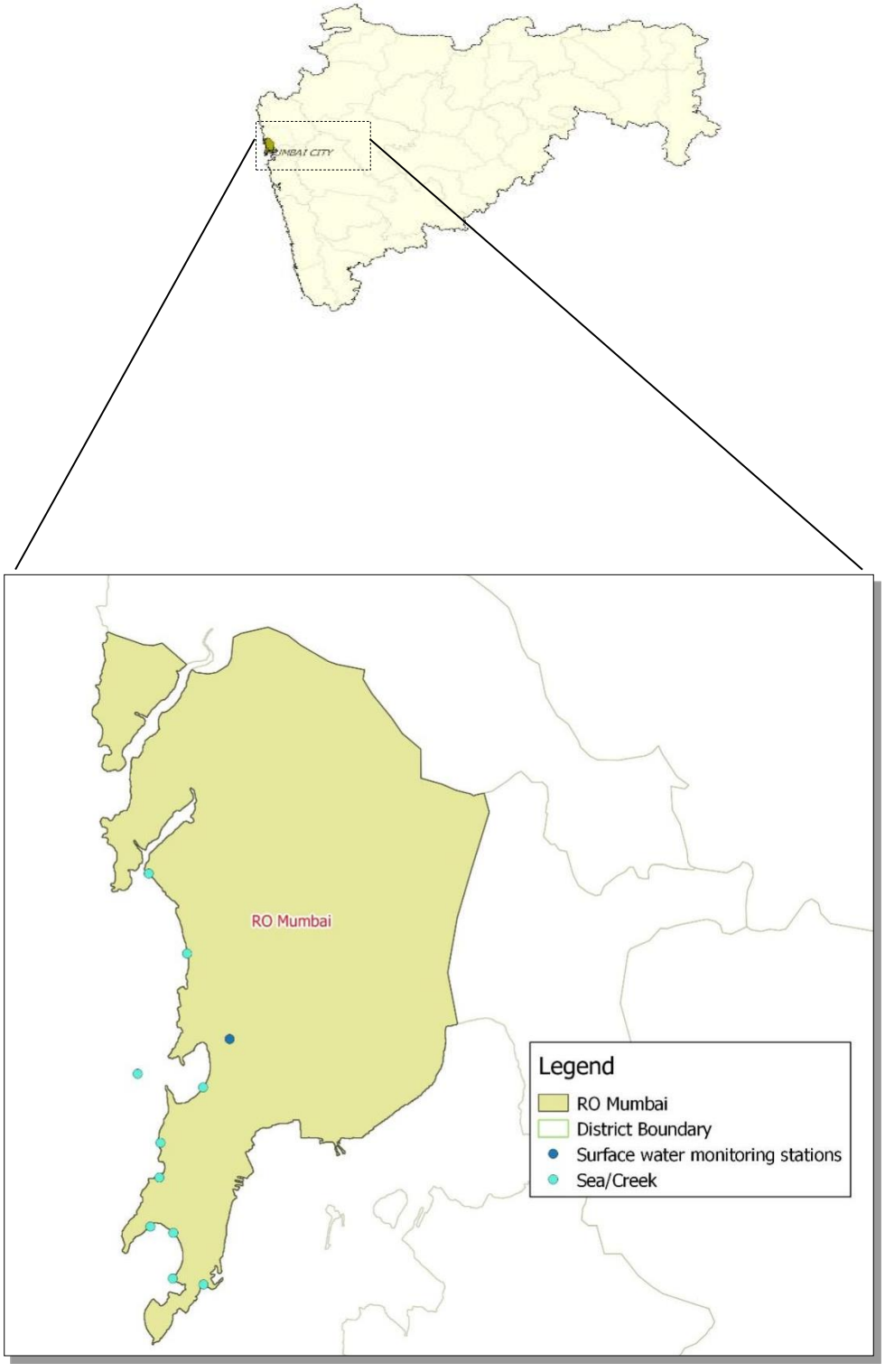

MUMBAI CITY
RO Mumbai
Legend
RO Mumbai
District Boundary
Surface water monitoring stations
Sea/Creek

Table No. 37: Water quality Index for surface and ground water monitoring at Mumbai-RO – 2023-24

TYPE	Station code	Station Name	April	Oct/ Dec	Avg WQI	District	Taluka	Village
SW	1318	Mahim creek at Mahim Bay	56	43	54	Mumbai	Bandra	Mahim
	2165	Sea Water at Gateway of India	52	57	52	Mumbai	Colaba	Colaba
	2166	Sea Water at Charni Road Choupathy	48	60	52	Mumbai	Mumbai	Girgaon
	2167	Sea Water at Worli Seaface	56	58	52	Mumbai	Worli	Worli
	2168	Mithi River at near bridge	47	NA	32	Mumbai	Bandra	Mahim
	2169	Sea Water at Versova Beach	53	66	53	Mumbai	Andheri	Versova
	2808	Sea Water at Nariman Point	56	59	52	Mumbai	Colaba	Colaba
	2809	Sea Water at Malabar Hill	50	55	52	Mumbai	Mumbai	Walkeshwar
	2810	Sea Water at Haj Ali	51	60	50	Mumbai	Worli	Worli
	2811	Sea Water at Shivaji Park (Dadar Choupathy)	51	39	52	Mumbai	Dadar	Dadar
	2812	Sea Water at Juhu Beach	48	58	50	Mumbai	Santacruz	Juhugaon

Surface Water		**Good to Excellent**	**Medium to Good**	**Bad**	**Bad to Very Bad**	**Dry**	**No data**	**Does not comply with WQI Calculation criteria (NA)**
Ground Water	**Excellent**	**Good**	**Poor**	**Very Poor**	**Not suitable for drinking**	**Dry**	**No data**	**Does not comply with WQI Calculation criteria (NA)**

RO – Nagpur

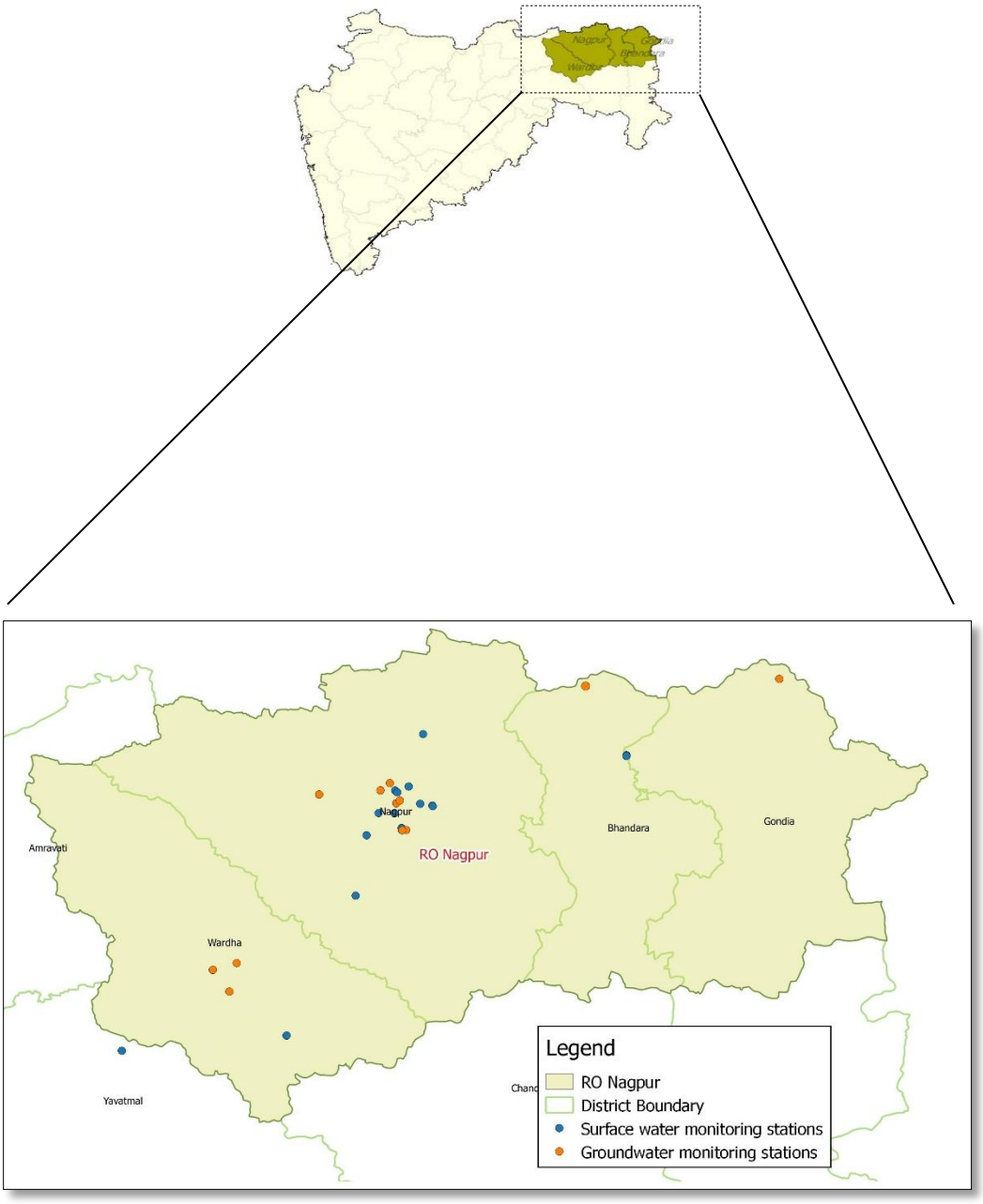

Nagpur
Gondia
Bhandara
Wardha
Nagpur
Amravati
RO Nagpur
Bhandara
Gondia
Wardha
Yavatmal
Legend
RO Nagpur
District Boundary
Surface water monitoring stations
Groundwater monitoring stations

Table No. 38: Water quality Index for surface and ground water monitoring at Nagpur-RO – 2023-24

TYPE	Station code	Station Name	April	Oct/ Dec	Avg WQI	District	Taluka	Village
SW	185	Nag River Near, Ambazari Lake, Nagpur	76	76	75	Nagpur	Nagpur	Nagpur
	186	Nag River Near, Bhandewadi Bridge, Nagpur	NA	NA	36	Nagpur	Nagpur	Nagpur
	187	Nag River Near, Asoli Bridge, Bhandara Road, Nagpur	NA	NA	36	Nagpur	Nagpur	Nagpur
	188	Pill River Near, Wanjra Layout Kamptee Road, Nagpur	NA	NA	45	Nagpur	Nagpur	Nagpur
	189	Pill River Near, Mankapur on Koradi Road, Nagpur	NA	NA	NA	Nagpur	Nagpur	Nagpur
	1315	Wardha River at Pulgaon Railway Bridge	Dry	72	75	Wardha	wardha	Pulgaon
	1908	Kolar river before confluence with Kanhan river at Waregaon Bridge	72	74	74	Nagpur	Kamptee	Waregaon
	1909	Kanhan river at D/s of Nagpur	NA	70	74	Nagpur	Kuhi	Agargaon
	1910	Wainganga river after confluence with Kanhan river	NA	69	73	Nagpur	Kuhi	Ambhora
	2170	Kanhan River (Wainganga basin) at U/s of M/s Vidharba Paper Mill	76	74	75	Nagpur	Parseoni	Sinora
	2171	Kanhan River (Wainganga basin) at D/s of M/s Vidharbha Paper Mills	71	73	74	Nagpur	Parseoni	Sinora
	2172	Wainganga River at D/s of Ellora Paper Mill	71	72	74	Bandara	Tumsar	Tumsar
	2173	Wainganga River at U/s of Ellora Paper Mills	73	75	76	Bandara	Tumsar	Tumsar
	2722	Wena River at U/s of Mohata Mills, nearby Brigde on Hinganghat Wadner Road	Dry	73	74	Wardha	Hinganghat	Hinganghat
	2723	Wena River at D/s of Mohata Mills, near Bridge on Hinganghat-Wadner Road	Dry	72	72	Wardha	Hinganghat	Hinganghat
GW	209	Bore well near Pardhi House, Bhandewadi, Nagpur	89	NA	89	Nagpur	Nagpur	Bhandewadi
	210	Bore well near Dearao Kale House, Bhandewadi, Nagpur	99	NA	99	Nagpur	Nagpur	Bhandewadi
	211	Grampanchayat Suradevi Intake well On Kolar River At Suradevi, Taluka - Kamptee, District -Nagpur	93	NA	93	Nagpur	Kamptee	Suradevi
	212	Grampanchayat Mhasala, Dugwell On Nalla At Mhasala, Taluka - Kamptee, District - Nagpur	NA	NA	NA	Nagpur	Kamptee	Mhasala
	213	Grampanchayat Kawtha, Dugwell At Kawtha, Taluka - Kamptee, District - Nagpur	NA	NA	NA	Nagpur	Kamptee	Kawtha
	1995	Gram Panchayath Dug well , Near Balaji Gajbhiye House, Khaperkheda	104	129	117	Nagpur	Saoner	Khaperkheda(Ward No.4)

TYPE	Station code	Station Name	April	Oct/ Dec	Avg WQI	District	Taluka	Village
GW	1996	Gram Panchayath Dug well , Near Jagadamba G M S Mandir Sahakari Sanstha	100	91	96	Nagpur	Kamptee	Koradi
	1997	Bore well near Primary Health Centre, Raipur(Hingna)	66	87	77	Nagpur	Hingna	Raipur
	1998	Gram Panchayat Dug well near Gram Panchayat Office, Brahmni	Dry	Dry	Dry	Nagpur	Kalmeshwar	Brahmni
	1999	Borewell Near Gram Panchayat,Changera.	43	50	47	Gondia	Gondia	Changera
	2000	Dug well near Sarode Kirana Store, Bhandewadi, Nagpur	NA	63	63	Nagpur	Nagpur	Bhandewadi
	2203	Hand Pump in the premises of Z.P.Primary School	66	92	79	Wardha	wardha	Bhugaon
	2826	Dug Well near Railway Station, Cotton Market	86	71	79	Wardha	wardha	Wardha
	2827	Bore Well near Railway crossing at Dongi Buzurg	Dry	Dry	Dry	Bandara	Tumsar	Dongri-Buzurg

Surface Water		**Good to Excellent**	**Medium to Good**	**Bad**	**Bad to Very Bad**	**Dry**	**No data**	**Does not comply with WQI Calculation criteria (NA)**
Ground Water	**Excellent**	**Good**	**Poor**	**Very Poor**	**Not suitable for drinking**	**Dry**	**No data**	**Does not comply with WQI Calculation criteria (NA)**

RO – Nashik

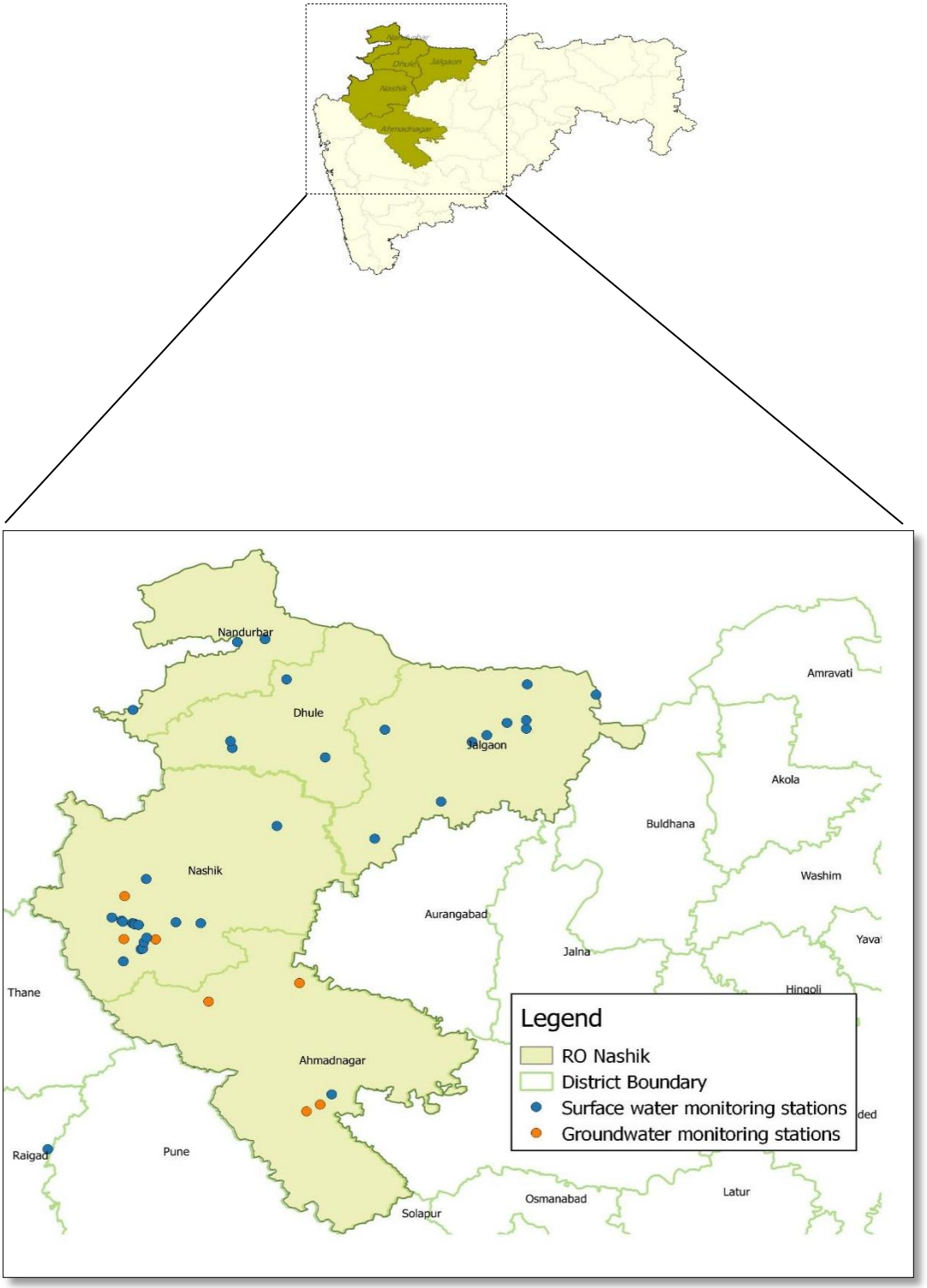

Dhule
Jalgaon
Nashik
Ahmadnagar
Nandurbar
Dhule
Jalgaon
Amravati
Akola
Buldhana
Washim
Nashik
Aurangabad
Jalna
Yava
Thane
Hingoli
Ahmadnagar
Raigad
Pune
Solapur
Osmanabad
Latur
Legend
RO Nashik
District Boundary
Surface water monitoring stations
Groundwater monitoring stations

Table No. 39: Water quality Index for surface and ground water monitoring at Nashik -RO – 2023-24

Type	Station code	Station Name	April	Oct/ Dec	Avg WQI	District	Taluka	Village
SW	194	Kadwa River at Awankhed Village, Taluka - Dindori, District - Nashik	85	No data	82	Nashik	Dindori	Awankhed Village
	195	Sina River Bridge At Burudgaon Road, A/P Ahmednagar, Taluka & District Ahmednagar	No data	No data	74	Ahmednagar	Ahmednagar	Burudgaon
	196	Lowki Nalla At Khedi, Taluka & District - Jalgaon	61	82	69	Jalgaon	Khedi	Khedi
	197	Moti Nalla before Confluence with Panjara river Dhule, Taluka & District - Dhule	69	82	67	Dhule	Dhule	Dhule
	1095	Godavari River at U/s of Gangapur Dam	80	83	86	Nashik	Nashik	Gangapur
	1096	Godavari River at Panchavati at Ramkund	74	83	80	Nashik	Nashik	Panchavati
	1211	Godavari River at Nashik D/s of near Amardham	76	85	81	Nashik	Nashik	Gadgebaba Maharaj Nagar
	1251	Tapi River at Bhusawal	83	85	84	Jalgaon	Bhusawal	Bhusawal Railway Colony
	1252	Girna river at Jalgaon at intake of Girna pump house	NA	NA	NA	Jalgaon	Jalgaon	Girna pump house area
	1253	Girna river at Malegaon at Malegaon road bridge	Dry	86	84	Nashik	Malegaon	Malegaon
	1313	Tapi River at Ajnad	86	85	85	Jalgaon	Raver	Ajnad
	1314	Tapi river at Ubad village near Gujrat border	85	85	85	Nandurbar	Shahada	Ubad
	1907	Rangavali river at D/s of Navapur near Rangavali bridge	Dry	85	85	Nandurbar	Navapur	Navapur
	2177	Godavari River near Someshwar Temple	76	88	84	Nashik	Nashik	Someshwar
	2178	Chikhali Nalla Meets Godavari River	42	83	66	Nashik	Nashik	Chikhali
	2179	Godavari River at Hanuman Ghat	78	83	83	Nashik	Nashik	Nashik city
	2180	Godavari River at near Tapovan	74	88	81	Nashik	Nashik	Tapovan
	2181	Godavari River at Kapila -Godavari confluence point	77	85	83	Nashik	Nashik	Tapovan
	2182	Godavari River at Saikheda	79	85	83	Nashik	Niphad	Saikheda
	2183	Godavari River at Nandur-Madhameshwar Dam	78	86	84	Nashik	Niphad	Nandur
	2652	Amravati River D/s of Dondaicha	Dry	Dry	Dry	Dhule	Dhule	Dondaicha

Type	Station code	Station Name	April	Oct/ Dec	Avg WQI	District	Taluka	Village
	2658	Bori River D/s of Amalner	NA	NA	NA	Jalgaon	Jalgaon	Amalner
	2659	Burai River before confluece to Tapi River	Dry	Dry	87	Dhule	Dhule	Mukudas
	2660	Darna River at Chehedi pumping station	83	84	85	Nashik	Nashik	Chehedi
	2661	Darna River at Aswali (Darna Dam)	86	85	86	Nashik	Igatpuri	Aswali
	2662	Darna River at MES site Pumping station	83	85	87	Nashik	Nashik	Bhagur
	2663	Darna River at Bhagur Pumping station near Pandhurli Bridge	88	86	86	Nashik	Nashik	Bhagur
	2664	Darna River at Sansari	85	85	85	Nashik	Nashik	Sansari
	2666	Gomai River D/s of Shahada	Dry	86	84	Dhule	Dhule	Shahada
	2667	Hiwara River D/s of Pachora	NA	NA	NA	Jalgaon	Jalgaon	Pachora
	2670	Kan River near Sakri water works	Dry	86	87	Dhule	Dhule	Sakri
	2674	Mor River near Padalshe	NA	NA	83	Jalgaon	Jalgaon	Padalashe
	2684	Panzara River near Panzarakan SSK Ltd	Dry	85	86	Dhule	Dhule	Panzare
	2689	Patalganga River at Gagangiri Maharaj Temple	80	83	80	Raigad	Khalapur	Khopoli
	2710	Titur River D/s of Chalisgaon	NA	NA	NA	Jalgaon	Jalgaon	Chalisgaon
	2718	Waghur River at Sakegaon before Confluence with Tapi River	NA	84	84	Jalgaon	Jalgaon	Sakegaon
GW	221	Well water of Bappaji, Akolner, Ahmadnagar, Nashik	Dry	Dry	Dry	Nashik	Ahmadnagar	Akolner
	1990	Bore well at BMW Site , Burudgaon	NA	329	329	Ahmadnagar	Ahmednagar	Burudgaon
	1991	Bore well at MSW Site, Pathardi, Nashik	91	216	153	Nashik	Nashik	Pathardi
	2204	Dug well at Gunjalwadi, Sangamner near Primary Health Care Center.	NA	48	48	Ahmadnagar	Sangamner	Gunjalwadi
	2816	Dug Well of Mr. Sampat Walunj, near M/s. Mahajeet Clayton	77	140	108	Nashik	Nashik	Shinde village
	2817	Bore Well at Chitali near Wagh vasthi	NA	57	57	Ahmadnagar	Rahata	Chitali
	2818	Bore Well at M/s. Spectron Ethers Rasegaon near Siddeshwar Mahadev Mandir	Dry	Dry	Dry	Nashik	Dindori	Rasegaon

Surface Water		**Good to Excellent**	**Medium to Good**	**Bad**	**Bad to Very Bad**	**Dry**	**No data**	**Does not comply with WQI Calculation criteria (NA)**
Ground Water	**Excellent**	**Good**	**Poor**	**Very Poor**	**Not suitable for drinking**	**Dry**	**No data**	**Does not comply with WQI Calculation criteria (NA)**

RO – Navi Mumbai

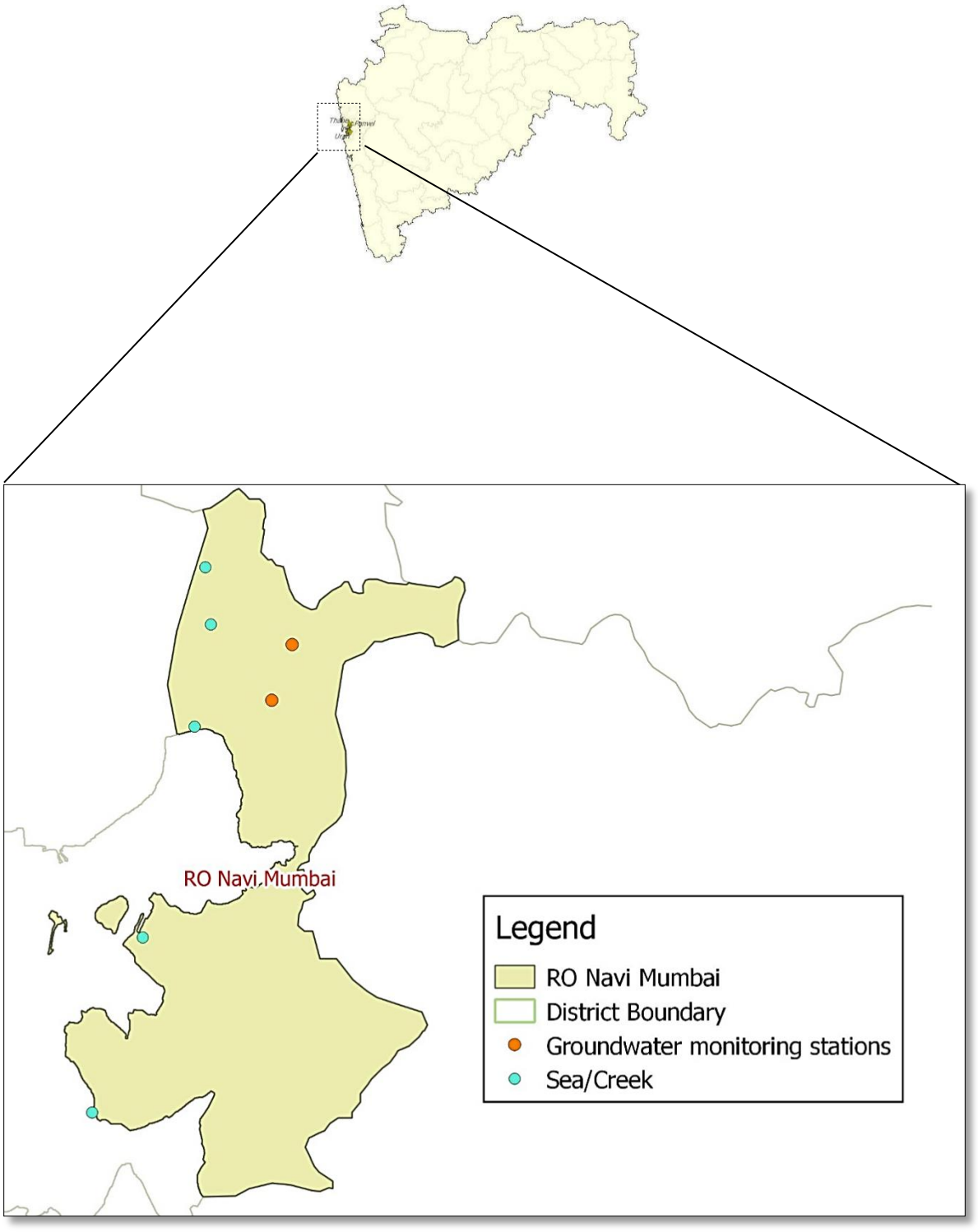


Table No. 40: Water quality Index for surface and ground water monitoring at Navi Mumbai-RO – 2023-24

TYPE	Station code	Station Name	April	Oct/ Dec	Avg WQI	District	Taluka	Village
SW	190	TTC Creek At Ghansoli Jetty	61	68	64	Thane	Thane	Ghansoli
	191	Arabian Sea behind ONGC Uran	NA	52	52	Raigad	Uran	Uran
	216	Kasardi River near Ganesh Ghat	No data	NA	75	Raigad	Panvel	Taloja
	1317	Thane creek at Elephanta Island	56	65	56	Raigad	Uran	Gharapuri, Elephanta Island
	2184	Vashi Creek at Airoli Bridge	67	70	64	Thane	Thane	Airoli
	2185	Vashi Creek at Vashi Bridge	60	75	64	Thane	Thane	Vashi
GW	214	Borewell at TTCWMA, Mahape	Dry	Dry	Dry	Thane	Thane	TTCWMA, Mahape
	215	Well water at Turbhe Store, Turbhe	106	64	85	Thane	Thane	Turbhe

Surface Water		**Good to Excellent**	**Medium to Good**	**Bad**	**Bad to Very Bad**	**Dry**	**No data**	**Does not comply with WQI Calculation criteria (NA)**
Ground Water	**Excellent**	**Good**	**Poor**	**Very Poor**	**Not suitable for drinking**	**Dry**	**No data**	**Does not comply with WQI Calculation criteria (NA)**

RO – Pune

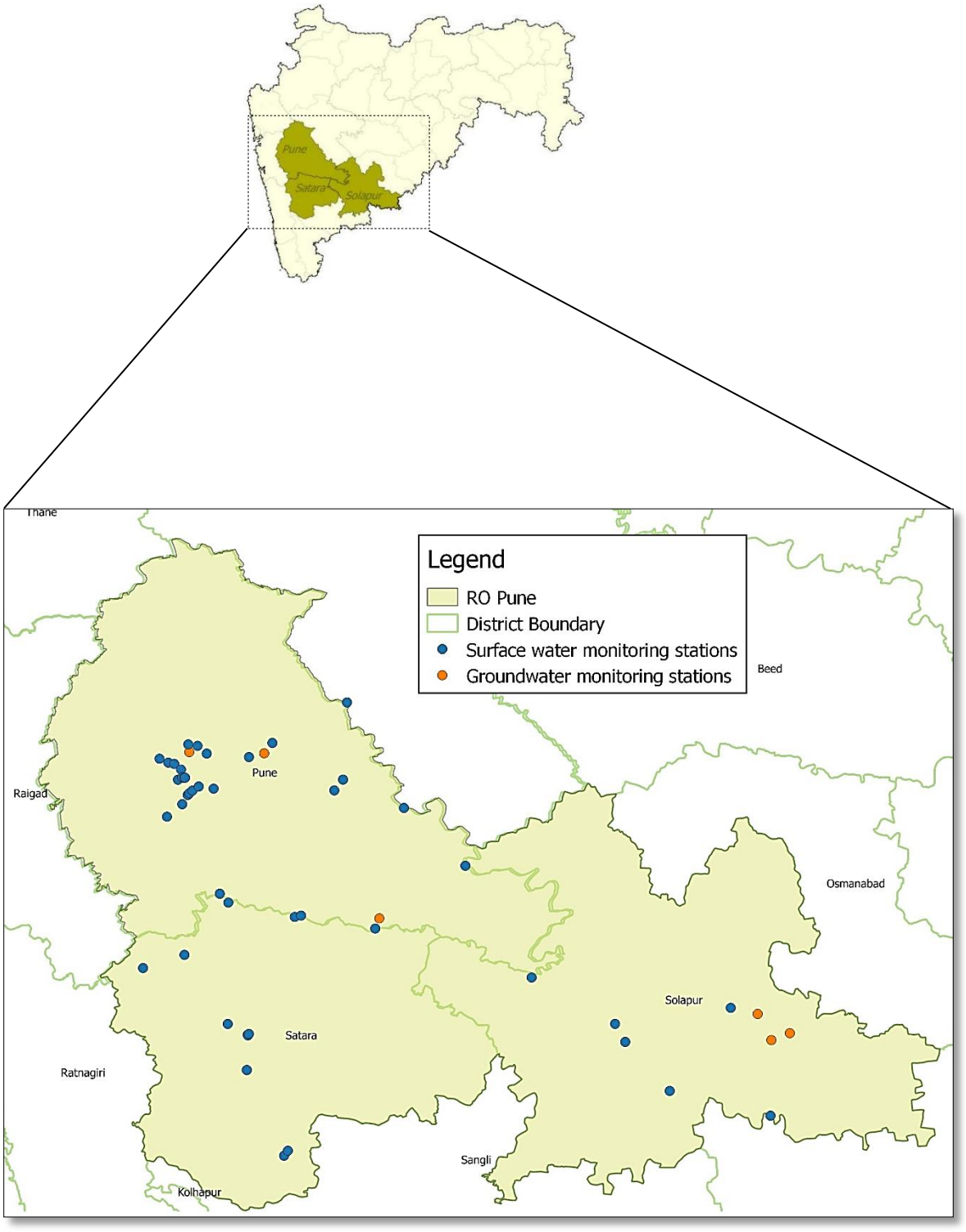

Pune
Satara
Solapur
Legend
RO Pune
District Boundary
Surface water monitoring stations
Groundwater monitoring stations
Thane
Beed
Raigad
Pune
Osmanabad
Solapur
Satara
Ratnagiri
Sangli
Kolhapur

Table No. 41: Water quality Index for surface and ground water monitoring at Pune-RO – 2023-24

Type	Station code	Station Name	April	Oct/ Dec	Avg WQI	District	Taluka	Village
SW	28	Bhima River at Takli	77	74	72	Solapur	South Solapur	Takali
	36	Krishna River at Krishna Bridge, Karad	81	78	78	Satara	Karad	Karad
	1188	Bhima River at Narshingpur near Sangam Bridge after confluence with Nira	74	61	71	Solapur	Malshiros	Narsingpur
	1189	Bhima river at Pune(Mutha river) at U/s of Vithalwadi near Sankar Mandir	53	53	49	Pune	Haweli	Vithalwadi
	1190	Bhima river at D/s of Bundgarden, Pune	52	53	52	Pune	Haweli	Yerwada
	1191	Bhima river after confluence with Mula-Mutha at Pargaon near Vasant Bandara	70	67	67	Pune	Daund	Pargaon
	1192	Bhima river at Daund near Mahadev temple	74	68	70	Pune	Daund	Daund
	1194	Krishna river at Dhom Dam	88	82	84	Satara	Mahabaleshwar	Wai
	1463	Nira river at Sarola bridge	77	74	75	Pune	Bhor	Sarola
	1911	Chandrabhaga river at U/s of Pandharpur town	78	69	72	Solapur	Pandarpur	Gursale
	1912	Chandrabhaga river at D/s of Pandharpur town near Vishnupant Mandir	74	63	66	Solapur	Pandarpur	Gopalpur
	2186	Venna River at Varya, Satara	80	70	78	Satara	Satara	Varye
	2187	Krishna River at Kshetra Mahuli Satara	76	68	75	Satara	Mahuli	Kshetra Mahuli
	2188	Krishna River at Krishna-Venna Sangam, Mahuli	77	76	73	Satara	Mahuli	Mahuli
	2189	Koyna River at Karad	79	72	77	Satara	Karad	Karad
	2190	Krishna River at Wai	83	76	78	Satara	Wai	Wai
	2191	Mutha River at Sangam Bridge Near Ganpathi Ghat	51	42	47	Pune	Pune	Shivaji Nagar
	2192	Mula-Mutha River at Mundhwa Bridge	57	55	56	Pune	Haweli	Mundhawa
	2193	Mula River at Aundh Bridge -Aundgaon	65	66	62	Pune	Haweli	Aundhgaon
	2194	Mula River at Harrison Bridge near Mula -Pawana Sangam	50	57	53	Pune	Haweli	Bopodi
	2195	Nira River at D/s of Jubilant Organosis Pune	79	73	71	Pune	Baramati	Nimbut
	2196	Pawana River at Sangavigaon, Pune	51	59	51	Pune	Haweli	Sangavigaon
	2197	Indrayani River at D/s of Alandigaon, Pune	80	69	71	Pune	Haweli	Alandigaon
	2655	Bhima River at Koregaon near Koregaon Bridge, Pune	76	73	74	Pune	Shirur	Koregaon
	2656	Bhima River Backwater of Ujani Dam near raw water pump house	77	77	75	Pune	Indapur	Kumbargaon
	2665	Ghod River at Shirur, Pune	71	76	72	Pune	Shirur	Shirur

SW	2668	Indrayani River at D/s of Moshi village	78	67	70	Pune	Haveli	Moshi
	2669	Indrayani River at U/s of Moshigaon, Pune	81	72	74	Pune	Haweli	Moshigaon
	2677	Mula-Mutha River at D/s of Theur, Pune	66	65	63	Pune	Haweli	Theur
	2678	Mutha River near Veer Savarkar Bhavan	51	48	47	Pune	Pune	Pune M.C
	2679	Mutha River at Deccan Bridge, Pune	48	47	45	Pune	Pune	Deccan
	2680	Mutha River at Khadakvasla Dam Pune	87	82	83	Pune	Haweli	Kadakvasla
	2681	Nira River at Sangavi	64	71	65	Satara	Phaltan	Sangavi
	2682	Nira River at U/s of Jubilant Organosis Pune	76	74	75	Pune	Baramati	Nira(Datta ghat)
	2683	Nira River at Shindewadi	82	75	78	Satara	Khandala	Shindewadi, Shirwal
	2690	Pawana River at Kasarwadi Pune	55	57	52	Pune	Haweli	Kasarwadi
	2691	Pawana River at Dapodi Bridge at Pawana-Mulla Sangan Pune	53	53	51	Pune	Haweli	Dapodi
	2692	Pawana River at Ravet Weir, Pune	84	79	80	Pune	Haweli	Ravet
	2693	Pawana River at Chinchwadgaon, Pune	76	71	66	Pune	Haweli	Chinchwadgaon
	2694	Pawana River at Pimprigaon, Pune	57	56	53	Pune	Haweli	Pimprigaon
	2705	Sina River near Laboti till naka Solapur	69	Dry	69	Solapur	Mohal	Laboti
	2711	Urmodi River at Nagthane Satara	84	76	76	Satara	Satara	Nagthane
	2715	Vel River at Shikrapur, Pune	Dry	61	70	Pune	Shirur	Shikrapur
	2716	Venna River at Mahabaleshwar	82	83	83	Satara	Mahabaleshwar	Mahabaleshwar
	2717	Venna River at Mahuli	77	71	76	Satara	Satara	Mahuli
	2789	Nalla at D/s of Alkai Mandir, Solapur	59	64	60	Solapur	Malshiras	Aklai
GW	1992	Dug well at MSW Site,owned by Shri.Dattu Kondiba Borate at Borate Vasthi.	38	63	50	Pune	Haveli	Moshi
	2819	Dug Well Owned by Shri Deshmukh	263	256	260	Pune	Baramati	Malegaon
	2820	Dug Well Owned by Shri Shivaji Baban Darekar	49	146	98	Pune	Shirur	Sanaswadi
	2821	Bore Well at Bale Railway Station premises Owned by Shri Digambar Joshi	549	538	544	Solapur	North Solapur	Dahegaon
	2822	Bore Well near Chincholi	279	326	303	Solapur	Mohol	Chincholi
	2823	Bore Well at Shete Vasti near old Tuljapur Road	491	Dry	491	Solapur	Solapur	Shete vasthi, Tuljapur Naka

Surface Water		**Good to Excellent**	**Medium to Good**	**Bad**	**Bad to Very Bad**	**Dry**	**No data**	**Does not comply with WQI Calculation criteria (NA)**
Ground Water	**Excellent**	**Good**	**Poor**	**Very Poor**	**Not suitable for drinking**	**Dry**	**No data**	**Does not comply with WQI Calculation criteria (NA)**

RO – Raigad

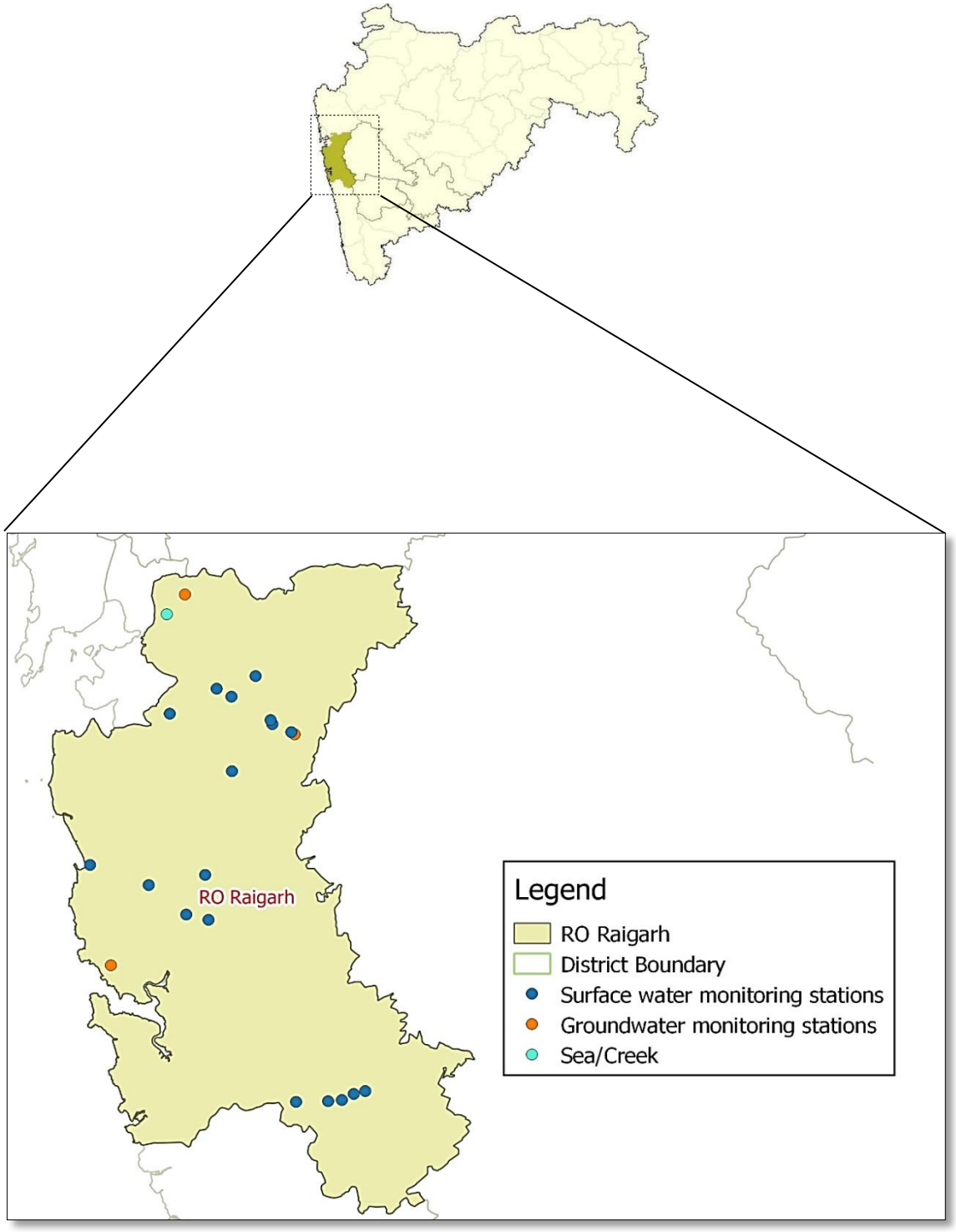

RO Raigarh
Legend
RO Raigarh
District Boundary
Surface water monitoring stations
Groundwater monitoring stations
Sea/Creek

Table No. 42: Water quality Index for surface and ground water monitoring at Raigad RO – 2023-24

Type	Station code	Station Name	April	Oct/ Dec	Avg WQI	District	Taluka	Village
SW	192	Morbe Dam, Taluka - Khalapur, District - Raigad	86	81	86	Raigad	Khalapur	Khalapur
	192	Morbe Dam, Taluka - Khalapur, District - Raigad	86	81	86	Raigad	Khalapur	Khalapur
	193	Balganga River, Village Ransai, Taluka - Khalapur, District - Raigad	79	85	82	Raigad	Khalapur	Ransai
	193	Balganga River, Village Ransai, Taluka - Khalapur, District - Raigad	79	85	82	Raigad	Khalapur	Ransai
	1151	Patalganga River at Shilphata Bridge	80	88	83	Raigad	Khalapur	Khopoli
	1151	Patalganga River at Shilphata Bridge	80	88	83	Raigad	Khalapur	Khopoli
	1152	Kundalika River at Roha Bridge	68	84	84	Raigad	Roha	Roha
	1152	Kundalika River at Roha Bridge	68	84	84	Raigad	Roha	Roha
	1462	Patalganga near intake of MIDC water works(Turade w/w)	85	86	86	Raigad	Khalapur	Turade
	1462	Patalganga near intake of MIDC water works(Turade w/w)	85	86	86	Raigad	Khalapur	Turade
	2198	Kundalika River at Are Khurd (Saline Zone)	61	90	79	Raigad	Roha	Are Khurd
	2198	Kundalika River at Are Khurd (Saline Zone)	61	90	79	Raigad	Roha	Are Khurd
	2199	Savitri River at Ovale village	82	83	80	Raigad	Mahad	Ovale
	2199	Savitri River at Ovale village	82	83	80	Raigad	Mahad	Ovale
	2651	Amba River at D/s of Waken Bridge	82	86	82	Raigad	Roha	Waken Phata
	2651	Amba River at D/s of Waken Bridge	82	86	82	Raigad	Roha	Waken Phata
	2671	Kundalik River near Salav Bridge (Saline Zone)	58	76	64	Raigad	Roha	Salav
	2671	Kundalik River near Salav Bridge (Saline Zone)	58	76	64	Raigad	Roha	Salav
	2672	Kundalika River at Dhatav at Jackwell	85	90	85	Raigad	Roha	Dhatav
	2672	Kundalika River at Dhatav at Jackwell	85	90	85	Raigad	Roha	Dhatav
	2685	Patalganga River at D/s of Kharpada Bridge	85	81	83	Raigad	Khalapur	Kharpada

SW	2685	Patalganga River at D/s of Kharpada Bridge	85	81	83	Raigad	Khalapur	Kharpada
	2686	Patalganga River at Vyal pump house	91	86	86	Raigad	Khalapur	Vyal
	2686	Patalganga River at Vyal pump house	91	86	86	Raigad	Khalapur	Vyal
	2687	Patalganga River at Khalapur pumping house	83	79	83	Raigad	Khalapur	Khalapur
	2687	Patalganga River at Khalapur pumping house	83	79	83	Raigad	Khalapur	Khalapur
	2688	Patalganga River at Savroli Bridge	83	83	81	Raigad	Khalapur	Savroli
	2688	Patalganga River at Savroli Bridge	83	83	81	Raigad	Khalapur	Savroli
	2701	Savitri River Jackwell at Upsa kendra	81	83	83	Raigad	Mahad	Nangalwadi
	2701	Savitri River Jackwell at Upsa kendra	81	83	83	Raigad	Mahad	Nangalwadi
	2702	Savitri River at Shedav Doh	82	84	83	Raigad	Mahad	Shedav Dov
	2702	Savitri River at Shedav Doh	82	84	83	Raigad	Mahad	Shedav Dov
	2703	Savitri River at Dadli Bridge	83	84	81	Raigad	Mahad	Dadli
	2703	Savitri River at Dadli Bridge	83	84	81	Raigad	Mahad	Dadli
	2704	Savitri River at Muthavali village	87	82	80	Raigad	Mahad	Muthavali
	2704	Savitri River at Muthavali village	87	82	80	Raigad	Mahad	Muthavali
	2803	Panvel Creek at Kopra Bridge	68	77	72	Raigad	Panvel	Kopra
	2803	Panvel Creek at Kopra Bridge	68	77	72	Raigad	Panvel	Kopra
GW	217	Borewell water at village Milgaon, Taluka - Khalapur, District - Raigad.	49	37	43	Raigad	Khalapur	Milgaon
	218	Borewell water near MSW site, Murud - Janjira.	58	42	50	Murud	Murud	Murud Janjira
	1989	Bore well at MWML Site at Taloja	50	284	167	Raigad	Panvel	Karawla-Taloja

Surface Water		**Good to Excellent**	**Medium to Good**	**Bad**	**Bad to Very Bad**	**Dry**	**No data**	**Does not comply with WQI Calculation criteria (NA)**
Ground Water	**Excellent**	**Good**	**Poor**	**Very Poor**	**Not suitable for drinking**	**Dry**	**No data**	**Does not comply with WQI Calculation criteria (NA)**

RO – Thane

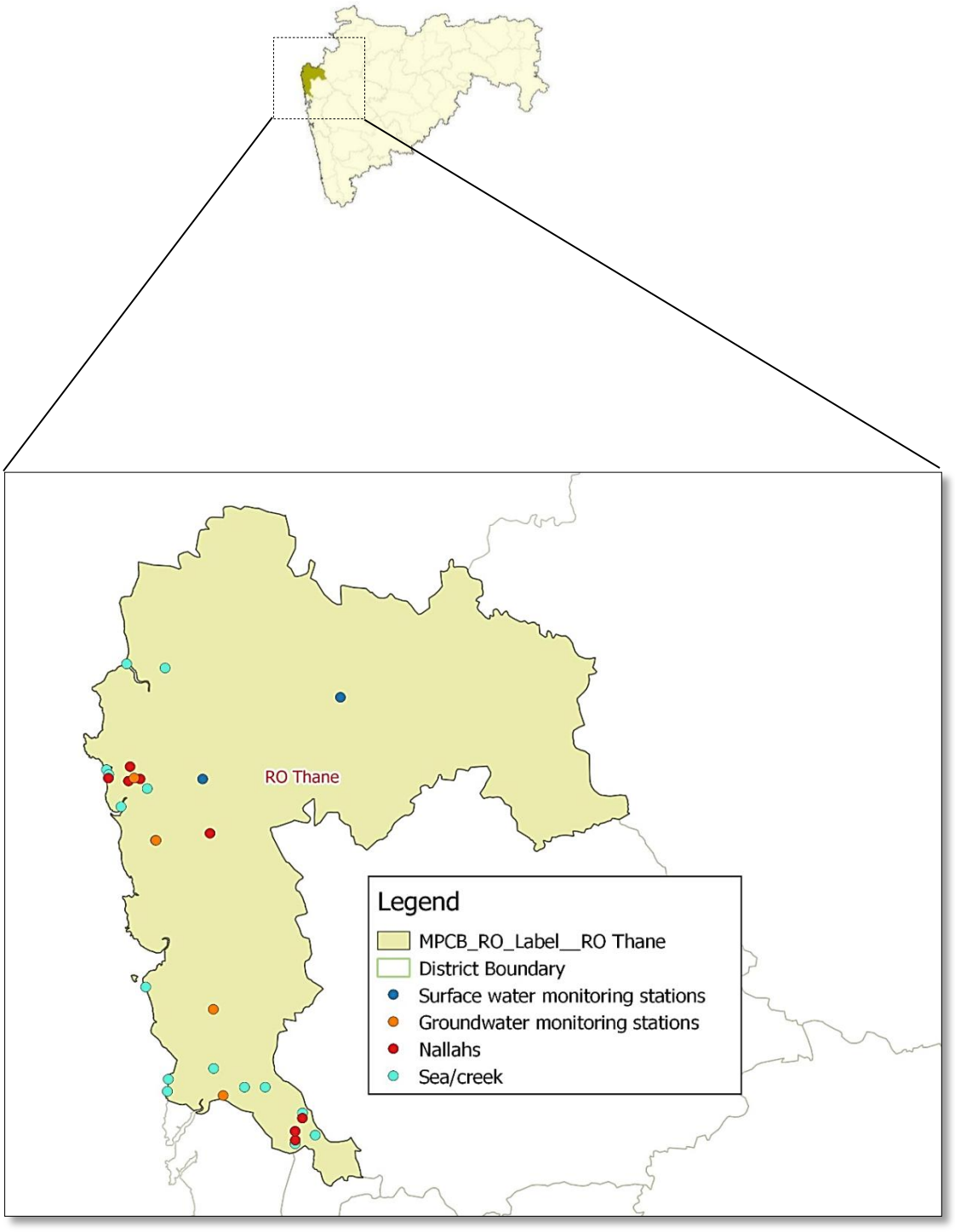

RO Thane
Legend
MPCB_RO_Label__RO Thane
District Boundary
Surface water monitoring stations
Groundwater monitoring stations
Nallahs
Sea/creek

Table No. 43: Water quality index for surface and ground water monitoring at Thane RO- 2023-24

TYPE	Station code	Station Name	April	Oct/ Dec	Avg WQI	District	Taluka	Village
SW	1316	Bassein creek at Vasai Fort, Thane	58	75	60	Thane	Vasai	Bassein
	2696	Pelhar dam	91	90	85	Palghar	Vasai	Pelhar
	2706	Surya River U/s of Surya Dam	90	86	85	Thane	Vikramgad	Dhamni
	2707	Surya River at MIDC pumping station	91	84	85	Thane	Palghar	Garvashet
	2708	Surya River at Intake of Vasai-Virar water scheme	83	77	82	Thane	Palghar	Masvan
	2782	Rabodi Nalla	33	27	33	Thane	Thane	Rabodi
	2783	Colour Chem Nalla	51	27	35	Thane	Thane	Majiwada
	2784	Sandoz Nalla	33	28	33	Thane	Thane	Sandozbaug
	2785	BPT Navapur	42	42	44	Palghar	Palghar	Navapur
	2786	Tarapur MIDC Nalla, near sump No1	Dry	Dry	51	Palghar	Palghar	MIDC Tarapur
	2787	Tarapur MIDC Nalla	Dry	Dry	51	Palghar	Palghar	MIDC Tarapur
	2788	Tarapur MIDC Nalla near sump-III	Dry	Dry	45	Palghar	Palghar	MIDC Tarapur
	2792	Ulhas Creek at Mumbra Reti Bunder	62	83	64	Thane	Thane	Mumbra
	2793	Thane Creek at Kalwa Road Bridge	60	76	60	Thane	Thane	Kalwa
	2794	Ulhas Creek at Kolshet Reti Bunder	60	81	65	Thane	Thane	Kolshet
	2795	Ulhas Creek at Gaimukh at Nagla Bunder on Ghod Bunder Road	54	77	63	Thane	Thane	Nagla
	2796	Ulhas Creek at Versova Bridge	63	75	64	Thane	Vasai	Versova
	2797	Bhayander Creek at D/s of Railway Bridge at Jasal Park Choupathy	54	78	61	Thane	Bhayander	Navghar
	2798	Kharekuran Murbe Creek	57	69	60	Thane	Palghar	Kharekuran
	2799	Dandi Creek	57	40	54	Thane	Palghar	Dandi
	2800	Sarwali Creek	52	75	62	Thane	Palghar	Sarwali
	2801	Savta Creek	72	75	65	Thane	Dahanu	Savta
	2802	Dahanu Creek at Dahanu Fort	57	NA	55	Thane	Dahanu	Danugaon

TYPE	Station code	Station Name	April	Oct/ Dec	Avg WQI	District	Taluka	Village
SW	2805	Arnala Sea	50	72	58	Thane	Vasai	Arnala
	2806	Uttan Sea at Bhayander	51	69	55	Thane	Bhayander	Uttan
	2807	Navapur Sea	56	61	51	Thane	Palghar	Navapur
GW	1984	Bore well at M/s Tata Iron {} Steel Co. Ltd, S-76	Dry	Dry	Dry	Thane	Palghar	MIDC Tarapur, Industrial Estate, Tarapur
	1985	Dug well at 5 Star Industrial Estate	158	171	165	Thane	Mira-Bhayander	Kashimira
	1986	Bore well at Motapada	Dry	Dry	Dry	Thane	Dahanu	Motapada
	1987	Bore well at Vasai	83	63	73	Thane	Vasai	Gokhiware
	1988	Bore well at Gharatwadi, Palghar	Dry	Dry	Dry	Thane	Palghar	Aliyali

Surface Water		**Good to Excellent**	**Medium to Good**	**Bad**	**Bad to Very Bad**	**Dry**	**No data**	**Does not comply with WQI Calculation criteria (NA)**
Ground Water	**Excellent**	**Good**	**Poor**	**Very Poor**	**Not suitable for drinking**	**Dry**	**No data**	**Does not comply with WQI Calculation criteria (NA)**

Annex – II : List of Pending writ petitions

List of the Applications/Appeals pending before the Hon'ble National Green Tribunal, Principal Bench, New Delhi / Western Zone, Pune, Hon'ble Supreme Court, Hon'ble High Court regd. river pollution, for the year 2023-2024

Sr. No.	Name of the Parties	Application /Appeal No.	Region	Subject matter	Status
1	News Item Published In 'The Hindu' Authored By Shri. Jacob Koshy Titled "More river stretches are now critically polluted: CPCB"	Original Application No. 673/2018	NA	"More river stretches are now critically polluted: CPCB"	Disposed
2	Paryavaran Suraksha Samiti & Anr. V/s Union of India & Ors.	Original Application No. 593/2017	NA	Establishment and functioning of ETPs/CETPs/STPs to prevent untreated sewage/effluents being discharged in water bodies, including rivers and canals meeting such rivers or otherwise.	Disposed
3	Sarang Yadwadkar & Ors V/s. Pune Municipal corporation & Ors	Original Application No. 49/2019	Pune	Dumping of construction material on the flood plains of the river flowing through Pune and Pimpri Chinchwad Cities	Pending
4	Dr. Kiran Ramdas Kamble & anr V/s. The State of Maharashtra & Ors	Original application no. 544/2019	Nashik	Disposal of sewage into river Godavari at Trimbkeshwar	Disposed
5	Devraj Bhatia v/s Pune Municipal Corporation	Original Application No.3/2020	Pune	Concrete road construction in river area causing obstruction to flow of river water.	Disposed
6	Sarang Yadwadkar & Ors. v/s Pune Municipal Corporation & Ors.	Original Application No.28/2020	Pune	Pillars construction in Pune Metro Project in the riverbed, which creates increase in flood possibility in Pune region.	Disposed
7	News item published in the Indian Exoress dated 29.12.2021 titled "The road to redisovery of Kham, the sesonal river of Auranagabad "	Original Application no. 25/2022 (WZ), Earlier Original Application No. 144/2022, NGT, PB , New Delhi	Aurangabad	The Application has raised issued of pollution of Kham River due to due to encroachment and dumping of slid waste which has reduced the seasonal river to flow of garbage.	Disposed

Sr. No.	Name of the Parties	Application /Appeal No.	Region	Subject matter	Status
8	Sunil Pharate Sangli District Head of Swatantra Bharat Paksh V/s. State of Maharashtra & Ors	Original Application No. 69/2022 , NGT, WZ, Pune	Sangli , Kolhapur	The present Application pertains to the substantial issue of environment due to mixing of untreated hazardous waste water directly into river Krishna which resulting into lakhs of fish were found dead and floating in the river with the permanent , irreversible damage caused to the bio diversity of river Krishna.	Pending
9	Raju Alias Devavappa Anna Shetty & Ors v/s. Shri Dutta India Pvt Ltd.,& Ors	Original Application No. 32/2023, NGT, WZ	Kolhapur	The Applicant has contended that Krishna River gets polluted in Sangli District on a large scale because of various drainage outlets released in the river while it passes from Sangli Miraj and Kupwad Cities.	Pending
10	Shivdipsing Hatesing Jagtap & Anr V/s. The State of Maharashtra & Ors	PIL. No. 35/2022	Nashik	The Petition being aggrieved by the construction work carrying in flood line without marking the red line as well as blue line of river Girna and at some place in the riverbed itself with any environment impact assessment the blue line is marked considering maximum flood discharge in 25 years, while the red line is marked considering maximum floods in over 100 years. The area between the blue line and the river bank is prohibitive zone	Pending
11	Arif Nawaz M. M. Iraqi V/s. State of Maharashtra	O.A. No. 63/2023 (WZ) Earlier O.A. No.105/2022 (PB)	Thane	Ulhas river & Desai Creek in Mumbra and Diva, Dist-Thane.	Disposed
12	Dombivli Better Environment System Association V/s. Vanashakti & Ors	Civil Appeal No. 4635/2022	Kalyan	This Civil Appeal is flled against the order dated 18.04.2022passed by the Hon'ble NGT , Special Bench, New Delhi in Original Application No. 37/2013 (Ulhas river Pollution due to discharge of untreated effluents ,sewage	Pending

Annex – III : List of Polluted Stretches across Maharashtra

Priority wise list of Rivers declared by CPCB in SEPTEMBER 2018 based on data of 2016 and 2017				
Priority I (9 Nos.)	**Priority II (6 Nos.)**	**Priority III (14 Nos.)**	**Priority IV (10 Nos.)**	**Priority V (14 Nos.)**
Godavari	Bhima	Ghod	Bindusara	Amba
Kalu	Indrayani	Kanhan	Bori	Bhatsa
Kundalika	Mula-Mutha	Kolar (MAH)	Chandrabhaga	Gomai
Mithi	Pawna	Krishna	Darna	Kan, Manjara
Morna	Wainganga	Mor	Girna	Panchaganga
Mula	Wardha	Patalganga, Pedhi	Hiwara	Panzara
Mutha		Penganga, Purna	Koyna	Rangavali
Nira		Tapi, Urmodi	Pelhar	Savitri, Surya
Vel		Venna, Waghur	Sina	Tansa, Ulhas
		Wena	Titur	Vaitarna, Vashishti
Polluted River Stretches in Maharashtra Declared by CPCB in 2022 based on data of 2019 & 2021				
Priority I (4 Nos.)	**Priority II (5 Nos.)**	**Priority III (18 Nos.)**	**Priority IV (17 Nos.)**	**Priority V (11 Nos.)**
Bhima	Godavari	Chandrabhaga	Bhatsa	Amba
Mithi	Kanhan	Darna	Burai	Amravati
Mutha	Mula	Ghod	Kalu	Bindusara
Savitri	Mula-Mutha	Girna	Kan	Bori
	Pawna	Indrayani	Koyana	Gomai
		Krishna	Manjara	Hiwara
		Kundalika	Mor	Kolar
		Morna	Pelhar	Tansa
		Muchkundi	Panzara	Ulhas
		Nira	Pedhi	Vaitarna
		PatalGanga	Penganga	Vashishti
		Rangavali	Purna	
		Surya	Sina	
		Tapi	Urmodi	
		Titur	Vel	
		Waghur	Venna	
		Wainganga	Wena	
		Wardha		
Non Polluted (1 Nos.) : Panchganga				
Priority wise list of Rivers on data of (April 2023-March 2024)				
Priority (3 Nos.)	**Priority II (3 Nos.)**	**Priority III (7 Nos.)**	**Priority IV (10 Nos.)**	**Priority V (27 Nos.)**
Mithi	Bhima	Bindusara	Chandrabhaga	Amba,Bhatsa,,Burai
Mutha	Mula,	Ghod, Godavari,	Indrayani, Panchganga,	Darna,Girna,Gomai,
Pawana	Mula-Mutha	Kalu, Kundalika	Krishna,Patalganga,	Kanhan
		Nira, Savitri	Sina,Ulhas, Vel,Venna	Kan,Kolar, Koyna
			Wainganga	Mor,Morna
				Muchkundi, Pedhi
				Panzara
				Pelhar, Penganga,Purna
				Rangavli, Surya
				Tansa,Tapi,Urmodi
				Vaitarna,Vashishthi
				Wardha,Wena
Non-Polluted (1 Nos.) : Waghur				
Dry Rivers (5) : Amravati,Bori, Hiwara,Manjara,Titur,				

Source : MPCB

Annex - IV : Status Of Sewage Treatment Of Maharashtra

Municipal Corporations

Sr No.	Name of Municipal Corporation	Class	District	Total Sewage Generated in (MLD)	Installed Capacity (MLD)	Operational Capacity (MLD)	% of sewage treated
1	Greater Mumbai Municipal Corporation	A	Greater Mumbai	2632.0	1500.0	1500.0	57.0
2	Nagpur Municipal Corporation	A	Nagpur	520.0	403.5	403.5	77.6
3	Pune Municipal Corporation	A	Pune	856.0	487.0	477.0	55.7
4	Nashik Municipal Corporation	B	Nashik	365.0	392.5	350.9	96.1
5	Pimpri-Chinchwad Municipal Corporation	B	Pune	384.0	363.0	300.0	78.1
6	Thane Municipal Corporation	B	Thane	327.0	318.0	327.0	100.0
7	Aurangabad Municipal Corporation	C	Aurangabad	96.0	211.0	80.0	83.3
8	Kalyan Dombivali Municipal Corporation	C	Thane	216.0	149.5	105.5	48.8
9	Navi Mumbai Municipal Corporation	C	Thane	235.0	454.0	235.0	100.0
10	Vasai-virar Municipal Corporation	C	Palghar	179.2	30.0	30.0	16.7
11	Ahmednagar Municipal Corporation	D	Ahmednagar	81.0	57.0	0.0	0.0
12	Akola Municipal Corporation	D	Akola	64.0	37.0	37.0	57.8
13	Amravati Municipal Corporation	D	Amravati	100.1	74.5	74.5	74.4
14	Bhiwandi Municipal Corporation	D	Thane	80.0	43.0	35.0	43.8
15	Chandrapur Municipal Corporation	D	Chandrapur	36.0	70.0	36.0	100.0
16	Dhule Municipal Corporation	D	Dhule	19.4	0.0	0.0	0.0
17	Ichalkaranji Municipal Corporation	D	Kolhapur	38.0	20.0	20.0	52.6
18	Jalgaon Municipal Corporation	D	Jalgaon	64.0	48.0	0.0	0.0
19	Jalna Municipal Corporation	D	Jalna	31.0	0.0	0.0	0.0
20	Kolhapur Municipal Corporation	D	Kolhapur	149.1	97.0	106.7	71.6
21	Latur Municipal Corporation	D	Latur	48.0	32.0	0.0	0.0

Sr No.	Name of Municipal Corporation	Class	District	Total Sewage Generated in (MLD)	Installed Capacity (MLD)	Operational Capacity (MLD)	% of sewage treated
22	Malegaon Municipal Corporation	D	Nashik	64.0	63.0	0.0	0.0
23	Mira Bhayandar Municipal Corporation	D	Thane	147.8	94.0	93.5	63.3
24	Nanded Municipal Corporation	D	Nanded	92.8	132.0	76.3	82.2
25	Panvel Municipal Corporation	D	Raigad	142.0	253.0	142.0	100.0
26	Parbhani Municipal Corporation	D	Parbhani	43.2	0.0	0.0	0.0
27	Sangli Miraj Kupwad Municipal Corporation	D	Sangli	68.0	82.0	52.0	76.5
28	Solapur Municipal Corporation	D	Solapur	144.0	102.5	102.5	71.2
29	Ulhasnagar Municipal Corporation	D	Thane	75.0	75.0	44.0	58.7

Municipal Councils

Status of Sewage Treatment in A Class Municipal Council in Maharashtra							
SN	Name of Municipal Council	Class	District	Total Sewage Generated in (MLD)	Installed Capacity (MLD)	Operational Capacity (MLD)	% of sewage treated
1	Achalpur Municipal Council	A	Amravati	12.0	0.0	0.0	0.0
2	Ambarnath Municipal Council	A	Thane	31.1	54.0	25.0	80.4
3	Badlapur Municipal Council	A	Thane	26.0	34.0	22.0	84.6
4	Baramati Municipal Council	A	Pune	11.5	11.5	11.5	100.4
5	Barshi Municipal Council	A	Solapur	15.1	18.5	18.5	122.3
6	Beed Municipal Council	A	Beed	41.6	0.0	0.0	0.0
7	Bhusawal Municipal Council	A	Jalgaon	9.0	0.0	0.0	0.0
8	Gondia Municipal Council	A	Gondia	12.0	12.0	0.0	0.0
9	Hinganghat Municipal Council	A	Wardha	13.6	13.5	9.5	69.9
10	Nandurbar Municipal Council	A	Nandurbar	10.0	17.5	10.0	100.0
11	Osmanabad Municipal Council	A	Osmanabad	12.8	0.0	0.0	0.0

Status of Sewage Treatment in A Class Municipal Council in Maharashtra							
12	Satara Municipal Council	A	Satara	57.2	0.0	0.0	0.0
13	Udgir Municipal Council	A	Latur	15.0	0.0	0.0	0.0
14	Wardha Municipal Council	A	Wardha	13.5	17.0	5.0	37.0
15	Yavatmal Municipal Council	A	Yavatmal	40.0	0.0	0.0	0.0

Status of Sewage Treatment in B Class Municipal Council in Maharashtra							
SN	Name of Municipal Council	Category	District	Total Sewage Generated in (MLD)	Installed Capacity (MLD)	Operational Capacity (MLD)	% of sewage treated
1	Ahmedpur Municipal Council	B	Latur	11.5	0.0	0.0	0.0
2	Akkalkot Municipal Council	B	Solapur	3.2	0.0	0.0	0.0
3	Akot Municipal Council	B	Akola	18.3	0.0	0.0	0.0
4	Amalner Municipal Council	B	Jalgaon	11.3	12.7	0.0	0.0
5	Ambajogai Municipal Council	B	Beed	6.6	0.0	0.0	0.0
6	Anjangaon Municipal Council	B	Amravati	3.7	0.0	0.0	0.0
7	Arvi Municipal Council	B	Wardha	6.0	0.0	0.0	0.0
8	Balapur Municipal Council	B	Akola	3.6	0.0	0.0	0.0
9	Ballarpur Municipal Council	B	Chandrapur	5.6	0.0	0.0	0.0
10	Basmath Municipal Council	B	Hingoli	8.5	0.0	0.0	0.0
11	Bhadravati Municipal Council	B	Chandrapur	6.4	0.0	0.0	0.0
12	Bhandara Municipal Council	B	Bhandara	8.0	0.0	0.0	0.0
13	Buldana Municipal Council	B	Buldana	12.3	0.0	0.0	0.0
14	Chalisgaon Municipal Council	B	Jalgaon	9.6	0.0	0.0	0.0
15	Chikhli Municipal Council	B	Buldana	6.2	0.0	0.0	0.0
16	Chiplun Municipal Council	B	Ratnagiri	24.4	0.0	0.0	0.0
17	Chopada Municipal Council	B	Jalgaon	15.1	0.0	0.0	0.0
18	Dahanu Municipal Council	B	Palghar	2.2	0.0	0.0	0.0
19	Daund Municipal Council	B	Pune	4.5	10.5	0.0	0.0
20	Deglur Municipal Council	B	Nanded	8.2	8.0	0.0	0.0

Status of Sewage Treatment in B Class Municipal Council in Maharashtra							
21	Digras Municipal Council	B	Yavatmal	7.4	0.0	0.0	0.0
22	Dondaicha Warwade Municipal Council	B	Dhule	10.0	0.0	0.0	0.0
23	Gadchiroli Municipal Council	B	Gadchiroli	7.6	11.5	0.0	0.0
24	Gangakhed Municipal Council	B	Parbhani	4.4	0.0	0.0	0.0
25	Hingoli Municipal Council	B	Hingoli	8.1	15.0	4.0	49.4
26	Jamner Municipal Council	B	Jalgaon	8.0	5.3	0.5	6.3
27	Jaysingpur Municipal Council	B	Kolhapur	4.6	0.0	0.0	0.0
28	Jintur Municipal Council	B	Parbhani	7.0	0.0	0.0	0.0
29	Kamptee Municipal Council	B	Nagpur	14.2	2.0	2.0	14.1
30	Kannad Municipal Council	B	Aurangabad	1.9	0.0	0.0	0.0
31	Karad Municipal Council	B	Satara	13.6	12.5	12.5	91.9
32	Karanja Municipal Council	B	Washim	2.2	0.0	0.0	0.0
33	Katol Municipal Council	B	Nagpur	4.2	0.0	0.0	0.0
34	Khamgaon Municipal Council	B	Buldana	8.0	0.0	0.0	0.0
35	Khopoli Municipal Council	B	Raigad	13.0	0.0	0.0	0.0
36	Kopargaon Municipal Council	B	Ahmednagar	7.8	0.0	0.0	0.0
37	Lonavala Municipal Council	B	Pune	19.0	6.0	6.0	31.6
38	Majalgaon Municipal Council	B	Beed	0.9	0.0	0.0	0.0
39	Malkapur_B Municipal Council	B	Buldana	4.6	0.0	0.0	0.0
40	Manmad Municipal Council	B	Nashik	4.1	0.0	0.0	0.0
41	Mehkar Municipal Council	B	Buldana	3.4	0.0	0.0	0.0
42	Murtijapur Municipal Council	B	Akola	6.0	0.0	0.0	0.0
43	Nandura Municipal Council	B	Buldana	4.8	0.0	0.0	0.0
44	Ozar Municipal Council	B	Nashik	4.0	0.0	0.0	0.0
45	Pachora Municipal Council	B	Jalgaon	7.5	9.0	0.0	0.0
46	Paithan Municipal Council	B	Aurangabad	2.2	0.0	0.0	0.0
47	Palghar Municipal Council	B	Palghar	6.3	0.0	0.0	0.0

Status of Sewage Treatment in B Class Municipal Council in Maharashtra							
48	Pandharpur Municipal Council	B	Solapur	25.6	18.0	18.0	70.3
49	Parli Municipal Council	B	Beed	8.9	17.5	0.0	0.0
50	Phaltan Municipal Council	B	Satara	3.6	8.0	2.0	55.6
51	Pusad Municipal Council	B	Yavatmal	17.7	0.0	0.0	0.0
52	Ratnagiri Municipal Council	B	Ratnagiri	23.6	0.0	0.0	0.0
53	Sailu Municipal Council	B	Parbhani	5.0	0.0	0.0	0.0
54	Sangamner Municipal Council	B	Ahmednagar	14.0	0.0	0.0	0.0
55	Shahada Municipal Council	B	Nandurbar	3.4	0.0	0.0	0.0
56	Shegaon Municipal Council	B	Buldana	8.5	9.0	5.5	64.7
57	Shirpur Warwade Municipal Council	B	Dhule	5.4	12.5	4.1	75.9
58	Shrirampur Municipal Council	B	Ahmednagar	12.0	6.0	6.0	50.0
59	Sillod Municipal Council	B	Aurangabad	4.4	12.5	0.0	0.0
60	Sinnar Municipal Council	B	Nashik	17.7	0.0	0.0	0.0
61	Talegaon Dabhade Municipal Council	B	Pune	14.7	0.0	0.0	0.0
62	Tumsar Municipal Council	B	Bhandara	1.9	0.0	0.0	0.0
63	Umarkhed Municipal Council	B	Yavatmal	2.0	0.0	0.0	0.0
64	Umred Municipal Council	B	Nagpur	8.0	0.0	0.0	0.0
65	Uran Islampur Municipal Council	B	Sangli	9.2	0.0	0.0	0.0
66	Vaijapur Municipal Council	B	Aurangabad	4.0	4.5	4.0	100.0
67	Vita Municipal Council	B	Sangli	4.4	0.0	0.0	0.0
68	Wadi Municipal Council	B	Nagpur	8.9	9.1	9.1	103.2
69	Wani Municipal Council	B	Yavatmal	2.6	0.0	0.0	0.0
70	Warora Municipal Council	B	Chandrapur	5.6	0.0	0.0	0.0
71	Warud Municipal Council	B	Amravati	4.2	0.0	0.0	0.0
72	Washim Municipal Council	B	Washim	5.0	8.0	5.0	100.0
73	Yevla Municipal Council	B	Nashik	7.4	0.0	0.0	0.0

Status of Sewage Treatment in C Class Municipal Council in Maharashtra							
SN	Name of Municipal Council	Class	District	Total Sewage Generated in (MLD)	Installed Capacity (MLD)	Operational Capacity (MLD)	% of sewage treated
1	Alandi Municipal Council	C	Pune	5.5	10.0	2.8	50.9
2	Alibag Municipal Council	C	Raigad	8.3	0.0	0.0	0.0
3	Ambad Municipal Council	C	Jalna	2.4	0.0	0.0	0.0
4	Amgaon Municipal Council	C	Gondia	2.9	0.0	0.0	0.0
5	Armori Municipal Council	C	Gadchiroli	4.4	0.0	0.0	0.0
6	Arni Municipal Council	C	Yavatmal	6.4	0.0	0.0	0.0
7	Ashta Municipal Council	C	Sangli	6.4	0.0	0.0	0.0
8	Ausa Municipal Council	C	Latur	3.9	0.0	0.0	0.0
9	Bhadgaon Municipal Council	C	Jalgaon	5.1	0.0	0.0	0.0
10	Bhagur Municipal Council	C	Nashik	1.6	0.0	0.0	0.0
11	Bhokar Municipal Council	C	Nanded	4.6	0.0	0.0	0.0
12	Bhokardan Municipal Council	C	Jalna	2.2	0.0	0.0	0.0
13	Bhoom Municipal Council	C	Osmanabad	1.7	0.0	0.0	0.0
14	Bhor Municipal Council	C	Pune	3.9	0.0	0.0	0.0
15	Biloli Municipal Council	C	Nanded	1.7	0.0	0.0	0.0
16	Brahmapuri Municipal Council	C	Chandrapur	5.4	0.0	0.0	0.0
17	Butibori Municipal Council	C	Nagpur	1.6	0.75	0.75	46.6
18	Chakan Municipal Council	C	Pune	4.2	0.0	0.0	0.0
19	Chandur Railway Municipal Council	C	Amravati	1.4	0.0	0.0	0.0
20	Chandurbazar Municipal Council	C	Amravati	3.2	0.0	0.0	0.0
21	Chandwad Municipal Council	C	Nashik	2.1	0.0	0.0	0.0
22	Chikhaldara Municipal Council	C	Amravati	0.3	0.0	0.0	0.0
23	chimur Municipal Council	C	Chandrapur	2.4	0.0	0.0	0.0

Status of Sewage Treatment in C Class Municipal Council in Maharashtra							
24	Darwha Municipal Council	C	Yavatmal	4.8	0.0	0.0	0.0
25	Daryapur Municipal Council	C	Amravati	1.0	0.0	0.0	0.0
26	Deolali Pravara Municipal Council	C	Ahmednagar	4.1	5.5	0.0	0.0
27	Deoli Municipal Council	C	Wardha	1.1	0.0	0.0	0.0
28	Desaiganj Municipal Council	C	Gadchiroli	1.6	0.0	0.0	0.0
29	Deulgaon Raja Municipal Council	C	Buldana	2.3	0.0	0.0	0.0
30	Dhamangaon Railway Municipal Council	C	Amravati	1.6	0.0	0.0	0.0
31	Dharangaon Municipal Council	C	Jalgaon	3.2	0.0	0.0	0.0
32	Dharmabad Municipal Council	C	Nanded	3.9	0.0	0.0	0.0
33	Dharur Municipal Council	C	Beed	1.5	0.0	0.0	0.0
34	Digdoh (Devi) Municipal Council	C	Nagpur	1.5	0.0	0.0	0.0
35	Dudhani Municipal Council	C	Solapur	1.3	0.0	0.0	0.0
36	Erandol Municipal Council	C	Jalgaon	4.5	0.0	0.0	0.0
37	Faizpur Municipal Council	C	Jalgaon	2.0	0.0	0.0	0.0
38	Gadchandur Municipal Council	C	Chandrapur	1.6	0.0	0.0	0.0
39	Gadhinglaj Municipal Council	C	Kolhapur	2.8	0.0	0.0	0.0
40	Gangapur Municipal Council	C	Aurangabad	6.4	4.2	0.0	0.0
41	Georai Municipal Council	C	Beed	3.7	0.0	0.0	0.0
42	Ghatanji Municipal Council	C	Yavatmal	1.4	0.0	0.0	0.0
43	Ghugghus Municipal Council	C	Chandrapur	3.6	0.0	0.0	0.0
44	Hadgaon Municipal Council	C	Nanded	10.8	0.0	0.0	0.0
45	Hiwarkhed Municipal Council	C	Akola	3.0	0.0	0.0	0.0
46	Hupari Municipal Council	C	Kolhapur	8.5	0.0	0.0	0.0
47	Igatpuri Municipal Council	C	Nashik	5.0	0.0	0.0	0.0
48	Indapur Municipal Council	C	Pune	5.8	0.0	0.0	0.0

Status of Sewage Treatment in C Class Municipal Council in Maharashtra							
49	Jalgaon Jamod Municipal Council	C	Buldana	3.2	0.0	0.0	0.0
50	Jamkhed Municipal Council	C	Ahmednagar	1.6	0.0	0.0	0.0
51	Jat Municipal Council	C	Sangli	0.3	0.0	0.0	0.0
52	Jawhar Municipal Council	C	Palghar	1.1	0.0	0.0	0.0
53	Jejuri Municipal Council	C	Pune	2.8	0.0	0.0	0.0
54	Junnar Municipal Council	C	Pune	6.3	0.0	0.0	0.0
55	Kagal Municipal Council	C	Kolhapur	3.2	1.0	0.8	25.0
56	Kalamb_O Municipal Council	C	Osmanabad	4.5	0.0	0.0	0.0
57	Kalameshwar Municipal Council	C	Nagpur	6.9	0.0	0.0	0.0
58	Kalamnuri Municipal Council	C	Hingoli	2.8	0.0	0.0	0.0
59	Kandhar Municipal Council	C	Nanded	2.1	0.0	0.0	0.0
60	Kanhan Municipal Council	C	Nagpur	2.6	0.0	0.0	0.0
61	Karjat_R Municipal Council	C	Raigad	8.4	0.0	0.0	0.0
62	Karmala Municipal Council	C	Solapur	1.4	0.0	0.0	0.0
63	Khapa Municipal Council	C	Nagpur	33.4	0.0	0.0	0.0
64	Khed Municipal Council	C	Ratnagiri	2.1	0.0	0.0	0.0
65	Khuldabad Municipal Council	C	Aurangabad	3.2	0.0	0.0	0.0
66	Kinwat Municipal Council	C	Nanded	1.8	0.0	0.0	0.0
67	Kundalwadi Municipal Council	C	Nanded	0.7	0.0	0.0	0.0
68	Kurduwadi Municipal Council	C	Solapur	1.8	0.0	0.0	0.0
69	Kurundwad Municipal Council	C	Kolhapur	1.5	0.0	0.0	0.0
70	Loha Municipal Council	C	Nanded	1.4	0.0	0.0	0.0
71	Lonar Municipal Council	C	Buldana	1.4	5.5	1.0	73.5
72	Mahabaleshwar Municipal Council	C	Satara	2.2	5.0	1.9	87.1
73	Mahad Municipal Council	C	Raigad	5.7	0.0	0.0	0.0

Status of Sewage Treatment in C Class Municipal Council in Maharashtra							
74	Maindargi Municipal Council	C	Solapur	3.2	0.0	0.0	0.0
75	Malkapur_K Municipal Council	C	Kolhapur	0.5	0.0	0.0	0.0
76	Malvan Municipal Council	C	Sindhudurg	1.6	0.0	0.0	0.0
77	Mangalwedha Municipal Council	C	Solapur	2.7	0.0	0.0	0.0
78	Mangrulpir Municipal Council	C	Washim	2.4	0.0	0.0	0.0
79	Manwath Municipal Council	C	Parbhani	2.1	0.0	0.0	0.0
80	Matheran Municipal Council	C	Raigad	0.6	0.0	0.0	0.0
81	Mhaswad Municipal Council	C	Satara	2.8	0.0	0.0	0.0
82	Mohol Municipal Council	C	Solapur	1.0	0.0	0.0	0.0
83	Mohpa Municipal Council	C	Nagpur	1.2	0.0	0.0	0.0
84	Morshi Municipal Council	C	Amravati	10.4	0.0	0.0	0.0
85	Mowad Municipal Council	C	Nagpur	0.6	0.0	0.0	0.0
86	Mudkhed Municipal Council	C	Nanded	2.7	0.0	0.0	0.0
87	Mukhed Municipal Council	C	Nanded	2.5	0.0	0.0	0.0
88	Mul Municipal Council	C	Chandrapur	3.4	0.0	0.0	0.0
89	Murgud Municipal Council	C	Kolhapur	1.6	1.0	1.0	63.3
90	Murud Municipal Council	C	Raigad	3.2	0.0	0.0	0.0
91	Murum Municipal Council	C	Osmanabad	0.6	0.0	0.0	0.0
92	Nagbhir Municipal Council	C	Chandrapur	6.1	0.0	0.0	0.0
93	Naldurg Municipal Council	C	Osmanabad	0.7	0.0	0.0	0.0
94	Nandgaon Municipal Council	C	Nashik	2.5	0.0	0.0	0.0
95	Narkhed Municipal Council	C	Nagpur	1.4	0.0	0.0	0.0
96	Nashirabad Municipal Council	C	Jalgaon	4.0	0.0	0.0	0.0
97	Navapur Municipal Council	C	Nandurbar	1.2	0.0	0.0	0.0
98	Ner Municipal Council	C	Yavatmal	3.4	0.0	0.0	0.0
99	Nilanga Municipal Council	C	Latur	6.0	0.0	0.0	0.0
100	Omerga Municipal Council	C	Osmanabad	5.4	0.0	0.0	0.0

Status of Sewage Treatment in C Class Municipal Council in Maharashtra							
101	Palus Municipal Council	C	Sangli	2.1	0.0	0.0	0.0
102	Panchgani Municipal Council	C	Satara	1.5	2.5	1.4	96.2
103	Pandharkaoda Municipal Council	C	Yavatmal	3.1	0.0	0.0	0.0
104	Panhala Municipal Council	C	Kolhapur	0.2	0.0	0.0	0.0
105	Paranda Municipal Council	C	Osmanabad	0.9	0.0	0.0	0.0
106	Parola Municipal Council	C	Jalgaon	7.0	0.0	0.0	0.0
107	Partur Municipal Council	C	Jalna	2.5	5.0	2.0	80.6
108	Pathardi Municipal Council	C	Ahmednagar	1.9	0.0	0.0	0.0
109	Pathri Municipal Council	C	Parbhani	1.9	0.0	0.0	0.0
110	Patur Municipal Council	C	Akola	1.8	0.0	0.0	0.0
111	Pauni Municipal Council	C	Bhandara	2.0	0.0	0.0	0.0
112	Pen Municipal Council	C	Raigad	15.4	0.0	0.0	0.0
113	Peth Umri Municipal Council	C	Nanded	0.8	0.0	0.0	0.0
114	Pulgaon Municipal Council	C	Wardha	3.5	0.0	0.0	0.0
115	Purna Municipal Council	C	Parbhani	2.0	0.0	0.0	0.0
116	Rahata Municipal Council	C	Ahmednagar	2.2	3.0	0.0	0.0
117	Rahimatpur Municipal Council	C	Satara	27.0	0.0	0.0	0.0
118	Rahuri Municipal Council	C	Ahmednagar	5.2	0.0	0.0	0.0
119	Rajapur Municipal Council	C	Ratnagiri	1.4	0.0	0.0	0.0
120	Rajgurunagar Municipal Council	C	Pune	3.5	6.7	0.0	0.0
121	Rajura Municipal Council	C	Chandrapur	5.8	0.0	0.0	0.0
122	Ramtek Municipal Council	C	Nagpur	2.7	0.0	0.0	0.0
123	Raver Municipal Council	C	Jalgaon	5.8	0.0	0.0	0.0
124	Risod Municipal Council	C	Washim	1.7	0.0	0.0	0.0
125	Roha Municipal Council	C	Raigad	3.8	0.0	0.0	0.0
126	Sakoli Municipal Council	C	Bhandara	1.4	0.0	0.0	0.0
127	Sangola Municipal Council	C	Solapur	5.8	0.0	0.0	0.0

Status of Sewage Treatment in C Class Municipal Council in Maharashtra							
128	Sasvad Municipal Council	C	Pune	4.6	3.0	3.0	65.2
129	Satana Municipal Council	C	Nashik	4.5	0.0	0.0	0.0
130	Savda Municipal Council	C	Jalgaon	2.4	0.0	0.0	0.0
131	Savner Municipal Council	C	Nagpur	3.3	0.0	0.0	0.0
132	Sawantwadi Municipal Council	C	Sindhudurg	1.8	0.0	0.0	0.0
133	Shendurjana Municipal Council	C	Amravati	2.4	0.0	0.0	0.0
134	Shevgaon Municipal Council	C	Ahmednagar	4.7	1.0	0.0	0.0
135	Shirol Municipal Council	C	Kolhapur	1.6	0.0	0.0	0.0
136	Shirur Municipal Council	C	Pune	10.1	6.0	6.0	59.5
137	Shrigonda Municipal Council	C	Ahmednagar	3.4	0.0	0.0	0.0
138	Shrivardhan Municipal Council	C	Raigad	2.3	0.0	0.0	0.0
139	Sindi Municipal Council	C	Wardha	3.6	0.0	0.0	0.0
140	Sindkhed Raja Municipal Council	C	Buldana	2.4	0.0	0.0	0.0
141	Sonpeth Municipal Council	C	Parbhani	0.7	0.0	0.0	0.0
142	Taloda Municipal Council	C	Nandurbar	3.5	0.0	0.0	0.0
143	Tasgaon Municipal Council	C	Sangli	6.0	0.0	0.0	0.0
144	Telhara Municipal Council	C	Akola	2.8	0.0	0.0	0.0
145	Tiroda Municipal Council	C	Gondia	4.5	0.0	0.0	0.0
146	Trimbak Municipal Council	C	Nashik	1.8	1.9	1.9	105.6
147	Tuljapur Municipal Council	C	Osmanabad	5.6	0.0	0.0	0.0
148	Uran Municipal Council	C	Raigad	3.1	0.0	0.0	0.0
149	Vadgaon Kasba Municipal Council	C	Kolhapur	7.1	0.0	0.0	0.0
150	Varangaon Municipal Council	C	Jalgaon	3.2	0.0	0.0	0.0
151	Vengurla Municipal Council	C	Sindhudurg	0.6	0.0	0.0	0.0
152	Wai Municipal Council	C	Satara	10.9	0.0	0.0	0.0
153	Wanadongri Municipal Council	C	Nagpur	5.3	0.0	0.0	0.0
154	Yawal Municipal Council	C	Jalgaon	3.1	0.0	0.0	0.0

Nagar Parishad and Nagar Panchyat

SN	Name of Nagar Parishad /Panchyat	District	Class	Total Sewage Generated in (MLD)	Installed Capacity (MLD)	Operational Capacity (MLD)	% of sewage treated
1	Aheri Municipal Council	Gadchiroli	NP	0.9	0.0	0.0	0.0
2	Ajara Municipal Council	Kolhapur	NP	1.8	0.0	0.0	0.0
3	Akluj Municipal Council	Solapur	NP	6.5	0.0	0.0	0.0
4	Akole Municipal Council	Ahmednagar	NP	1.0	0.0	0.0	0.0
5	Anghar Municipal Council	Solapur	NP	1.2	0.0	0.0	0.0
6	Ardhapur Municipal Council	Nanded	NP	6.0	15.0	0.0	0.0
7	Arjuni Municipal Council	Gondia	NP	0.9	0.0	0.0	0.0
8	Ashti_B Municipal Council	Beed	NP	0.2	0.0	0.0	0.0
9	Ashti_W Municipal Council	Wardha	NP	1.5	0.0	0.0	0.0
10	Atpadi Municipal Council	Sangli	NP	6.0	0.0	0.0	0.0
11	Aundha Municipal Council	Hingoli	NP	1.7	0.0	0.0	0.0
12	Babhulgaon Municipal Council	Yavatmal	NP	0.4	0.0	0.0	0.0
13	Badnapur Municipal Council	Jalna	NP	12.0	0.0	0.0	0.0
14	Bahadura Municipal Council	Nagpur	NP	5.0	0.0	0.0	0.0
15	Barshi Takli Municipal Council	Akola	NP	1.4	0.0	0.0	0.0
16	Besa-Pipada Municipal Council	Nagpur	NP	6.7	0.0	0.0	0.0
17	Bhamragad Municipal Council	Gadchiroli	NP	0.8	0.0	0.0	0.0
18	Bhatakuli Municipal Council	Amravati	NP	0.5	0.0	0.0	0.0
19	Bhisi Municipal Council	Chandrapur	NP	0.8	0.0	0.0	0.0
20	Bhiwapur Municipal Council	Nagpur	NP	0.4	0.0	0.0	0.0
21	Bidgaon-Tarodi (Khurd) - Pandhurna Municipal Council	Nagpur	NP	1.8	0.0	0.0	0.0
22	Bodwad Municipal Council	Jalgaon	NP	4.8	0.0	0.0	0.0
23	Chakur Municipal Council	Latur	NP	2.0	0.0	0.0	0.0
24	Chamorshi Municipal Council	Gadchiroli	NP	1.0	0.0	0.0	0.0
25	Chandgad Municipal Council	Kolhapur	NP	1.0	0.0	0.0	0.0
26	Dahiwadi Municipal Council	Satara	NP	0.6	0.0	0.0	0.0
27	Dapoli Camp Municipal Council	Ratnagiri	NP	1.0	0.0	0.0	0.0
28	Dehu Municipal Council	Pune	NP	2.4	3.2	2.0	83.3
29	Deola Municipal Council	Nashik	NP	0.5	0.0	0.0	0.0
30	Deoni Municipal Council	Latur	NP	12.8	0.0	0.0	0.0

SN	Name of Nagar Parishad /Panchyat	District	Class	Total Sewage Generated in (MLD)	Installed Capacity (MLD)	Operational Capacity (MLD)	% of sewage treated
31	Deori Municipal Council	Gondia	NP	1.6	0.0	0.0	0.0
32	Devgad Municipal Council	Sindhudurg	NP	1.0	0.0	0.0	0.0
33	Devrukh Municipal Council	Ratnagiri	NP	1.1	0.0	0.0	0.0
34	Dhadgaon-Vadphalya Municipal Council	Nandurbar	NP	2.5	0.0	0.0	0.0
35	Dhanaki Municipal Council	Yavatmal	NP	21.2	0.0	0.0	0.0
36	Dhanora Municipal Council	Gadchiroli	NP	0.4	0.0	0.0	0.0
37	Dharni Municipal Council	Amravati	NP	0.4	0.0	0.0	0.0
38	Dindori Municipal Council	Nashik	NP	4.0	0.0	0.0	0.0
39	Etapalli Municipal Council	Gadchiroli	NP	0.4	0.0	0.0	0.0
40	Ghansawangi Municipal Council	Jalna	NP	0.3	0.0	0.0	0.0
41	Gondpimpri Municipal Council	Chandrapur	NP	0.6	0.0	0.0	0.0
42	Goregaon Municipal Council	Gondia	NP	1.1	0.0	0.0	0.0
43	Guhagar Municipal Council	Ratnagiri	NP	0.8	0.0	0.0	0.0
44	Hatkanangale Municipal Council	Kolhapur	NP	8.3	0.0	0.0	0.0
45	Himayatnagar Municipal Council	Nanded	NP	1.0	0.0	0.0	0.0
46	Hingana Municipal Council	Nagpur	NP	2.0	0.0	0.0	0.0
47	Jafrabad Municipal Council	Jalna	NP	1.9	0.0	0.0	0.0
48	Jalkot Municipal Council	Latur	NP	0.6	0.0	0.0	0.0
49	Jivati Municipal Council	Chandrapur	NP	0.7	0.0	0.0	0.0
50	Kadegaon Municipal Council	Sangli	NP	2.4	0.0	0.0	0.0
51	Kaij Municipal Council	Beed	NP	1.4	0.0	0.0	0.0
52	Kalamb_Y Municipal Council	Yavatmal	NP	1.1	0.0	0.0	0.0
53	Kalwan Municipal Council	Nashik	NP	2.5	0.6	0.6	23.8
54	Kandir (Kanhan) Municipal Council	Nagpur	NP	0.5	0.0	0.0	0.0
55	Kankavali Municipal Council	Sindhudurg	NP	3.2	0.0	0.0	0.0
56	Karanja_W Municipal Council	Wardha	NP	0.4	0.0	0.0	0.0
57	Karjat_A Municipal Council	Ahmednagar	NP	5.1	0.0	0.0	0.0
58	Kasai - Dodamarg Municipal Council	Sindhudurg	NP	0.4	0.0	0.0	0.0
59	KavatheMahakal Municipal Council	Sangli	NP	1.2	0.0	0.0	0.0
60	Khalapur Municipal Council	Raigad	NP	4.1	0.0	0.0	0.0
61	Khanapur Municipal Council	Sangli	NP	1.2	0.0	0.0	0.0
62	Khandala Municipal Council	Satara	NP	1.3	0.0	0.0	0.0
63	Kondhadi Municipal Council	Nagpur	NP	1.2	0.0	0.0	0.0

SN	Name of Nagar Parishad /Panchyat	District	Class	Total Sewage Generated in (MLD)	Installed Capacity (MLD)	Operational Capacity (MLD)	% of sewage treated
64	Korchi Municipal Council	Gadchiroli	NP	2.2	0.0	0.0	0.0
65	Koregaon Municipal Council	Satara	NP	4.5	0.0	0.0	0.0
66	Korpana Municipal Council	Chandrapur	NP	0.3	0.0	0.0	0.0
67	Kudal Municipal Council	Sindhudurg	NP	0.4	0.0	0.0	0.0
68	Kuhi Municipal Council	Nagpur	NP	0.5	0.0	0.0	0.0
69	Kurkheda Municipal Council	Gadchiroli	NP	0.4	0.0	0.0	0.0
70	Lakhandur Municipal Council	Bhandara	NP	0.2	0.0	0.0	0.0
71	Lakhani Municipal Council	Bhandara	NP	0.5	0.0	0.0	0.0
72	Lanja Municipal Council	Ratnagiri	NP	2.4	0.0	0.0	0.0
73	Lohara Municipal Council	Osmanabad	NP	0.7	0.0	0.0	0.0
74	Lonand Municipal Council	Satara	NP	6.2	0.0	0.0	0.0
75	Madha Municipal Council	Solapur	NP	1.2	0.0	0.0	0.0
76	Mahadula Municipal Council	Nagpur	NP	3.2	0.0	0.0	0.0
77	Mahagaon Municipal Council	Yavatmal	NP	1.2	0.0	0.0	0.0
78	Mahalung Shripur Municipal Council	Solapur	NP	2.8	0.0	0.0	0.0
79	Mahur Municipal Council	Nanded	NP	1.7	0.0	0.0	0.0
80	Malegaon Zahangir Municipal Council	Washim	NP	1.6	0.4	0.4	25.0
81	Malegaon_P Municipal Council	Pune	NP	2.8	0.0	0.0	0.0
82	Malkapur_S Municipal Council	Satara	NP	5.6	8.0	5.6	100.0
83	Malshiras Municipal Council	Solapur	NP	0.8	0.0	0.0	0.0
84	Manchar Municipal Council	Pune	NP	2.5	0.0	0.0	0.0
85	Mandangad Municipal Council	Ratnagiri	NP	0.4	0.0	0.0	0.0
86	Mangaon Municipal Council	Raigad	NP	4.6	0.0	0.0	0.0
87	Manora Municipal Council	Washim	NP	0.6	0.0	0.0	0.0
88	Mantha Municipal Council	Jalna	NP	2.2	0.0	0.0	0.0
89	Maregaon Municipal Council	Yavatmal	NP	0.8	0.0	0.0	0.0
90	Mauda Municipal Council	Nagpur	NP	2.1	0.0	0.0	0.0
91	Medha Municipal Council	Satara	NP	0.7	0.0	0.0	0.0
92	Mhasala Municipal Council	Raigad	NP	2.9	0.0	0.0	0.0
93	Mohadi Municipal Council	Bhandara	NP	0.5	0.0	0.0	0.0
94	Mokhada Municipal Council	Palghar	NP	0.5	0.0	0.0	0.0
95	Motala Municipal Council	Buldana	NP	0.9	0.0	0.0	0.0
96	Muktai Nagar Municipal Council	Jalgaon	NP	3.0	0.0	0.0	0.0

SN	Name of Nagar Parishad /Panchyat	District	Class	Total Sewage Generated in (MLD)	Installed Capacity (MLD)	Operational Capacity (MLD)	% of sewage treated
97	Mulchera Municipal Council	Gadchiroli	NP	0.7	0.0	0.0	0.0
98	Murbad Municipal Council	Thane	NP	3.2	0.0	0.0	0.0
99	Naigaon Municipal Council	Nanded	NP	4.4	0.0	0.0	0.0
100	Nandgaon Khandeshwar Municipal Council	Amravati	NP	1.5	0.0	0.0	0.0
101	Natepute Municipal Council	Solapur	NP	4.2	0.0	0.0	0.0
102	Nevasa Municipal Council	Ahmednagar	NP	1.9	0.0	0.0	0.0
103	Nildoh Municipal Council	Nagpur	NP	1.5	0.0	0.0	0.0
104	Niphad Municipal Council	Nashik	NP	2.6	0.0	0.0	0.0
105	Palam Municipal Council	Parbhani	NP	0.4	0.0	0.0	0.0
106	Pali Municipal Council	Raigad	NP	19.2	0.0	0.0	0.0
107	Parner Municipal Council	Ahmednagar	NP	0.7	0.0	0.0	0.0
108	Parsivni Municipal Council	Nagpur	NP	0.9	0.0	0.0	0.0
109	Patan Municipal Council	Satara	NP	1.6	3.0	1.6	100.0
110	Patoda Municipal Council	Beed	NP	2.2	0.0	0.0	0.0
111	Peth Municipal Council	Nashik	NP	1.0	0.0	0.0	0.0
112	Phulambri Municipal Council	Aurangabad	NP	1.4	0.0	0.0	0.0
113	Poladpur Municipal Council	Raigad	NP	0.5	0.0	0.0	0.0
114	Pombhurna Municipal Council	Chandrapur	NP	0.3	0.0	0.0	0.0
115	Ralegaon Municipal Council	Yavatmal	NP	3.0	0.0	0.0	0.0
116	Renapur Municipal Council	Latur	NP	1.0	0.0	0.0	0.0
117	Sadak Arjuni Municipal Council	Gondia	NP	81.0	0.0	0.0	0.0
118	Sakri Municipal Council	Dhule	NP	1.1	0.0	0.0	0.0
119	Salekasa Municipal Council	Gondia	NP	0.5	0.0	0.0	0.0
120	Samudrapur Municipal Council	Wardha	NP	0.6	0.0	0.0	0.0
121	Sangrampur Municipal Council	Buldana	NP	0.4	0.0	0.0	0.0
122	Sawali Municipal Council	Chandrapur	NP	0.6	0.0	0.0	0.0
123	Selu Municipal Council	Wardha	NP	1.5	0.0	0.0	0.0
124	Sengaon Municipal Council	Hingoli	NP	1.2	0.0	0.0	0.0
125	Shahapur Municipal Council	Thane	NP	0.4	0.0	0.0	0.0
126	Shendurni Municipal Council	Jalgaon	NP	2.2	0.0	0.0	0.0
127	Shindkheda Municipal Council	Dhule	NP	3.3	0.0	0.0	0.0
128	Shirala Municipal Council	Sangli	NP	1.2	0.0	0.0	0.0

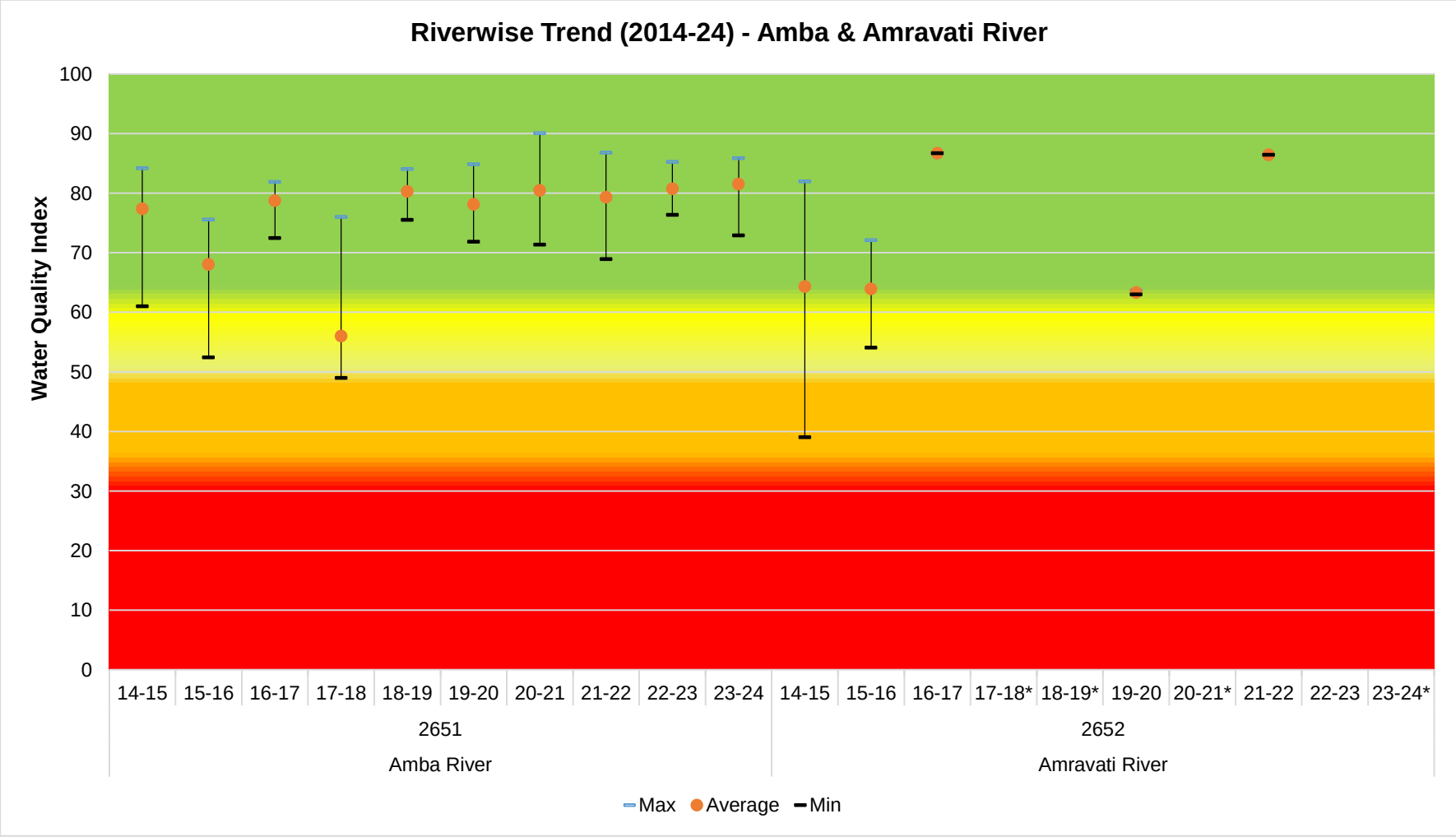
SN	Name of Nagar Parishad /Panchyat	District	Class	Total Sewage Generated in (MLD)	Installed Capacity (MLD)	Operational Capacity (MLD)	% of sewage treated
129	Shirdi Municipal Council	Ahmednagar	NP	5.0	16.0	5.0	101.0
130	Shirur Anantpal Municipal Council	Latur	NP	0.7	0.0	0.0	0.0
131	Shirur Kasar Municipal Council	Beed	NP	7.2	0.0	0.0	0.0
132	Sindewahi Municipal Council	Chandrapur	NP	4.0	0.0	0.0	0.0
133	Sironcha Municipal Council	Gadchiroli	NP	1.2	0.0	0.0	0.0
134	Soigaon Municipal Council	Aurangabad	NP	0.5	0.0	0.0	0.0
135	Surgana Municipal Council	Nashik	NP	4.8	0.0	0.0	0.0
136	Tala Municipal Council	Raigad	NP	0.4	0.0	0.0	0.0
137	Talasari Municipal Council	Palghar	NP	0.3	0.0	0.0	0.0
138	Tirthpuri Municipal Council	Jalna	NP	2.0	0.0	0.0	0.0
139	Tiwasa Municipal Council	Amravati	NP	5.2	0.0	0.0	0.0
140	Vadgaon Municipal Council	Pune	NP	6.4	0.0	0.0	0.0
141	Vaduj Municipal Council	Satara	NP	3.2	0.0	0.0	0.0
142	Vaibhavwadi Municipal Council	Sindhudurg	NP	0.2	0.0	0.0	0.0
143	Vairag Municipal Council	Solapur	NP	6.2	0.0	0.0	0.0
144	Vashi Municipal Council	Osmanabad	NP	0.8	0.0	0.0	0.0
145	Vikramgad Municipal Council	Palghar	NP	0.8	0.0	0.0	0.0
146	Wada Municipal Council	Palghar	NP	2.4	0.0	0.0	0.0
147	Wadwani Municipal Council	Beed	NP	4.0	0.0	0.0	0.0
148	Zari Municipal Council	Yavatmal	NP	0.1	0.0	0.0	0.0

Cantonment

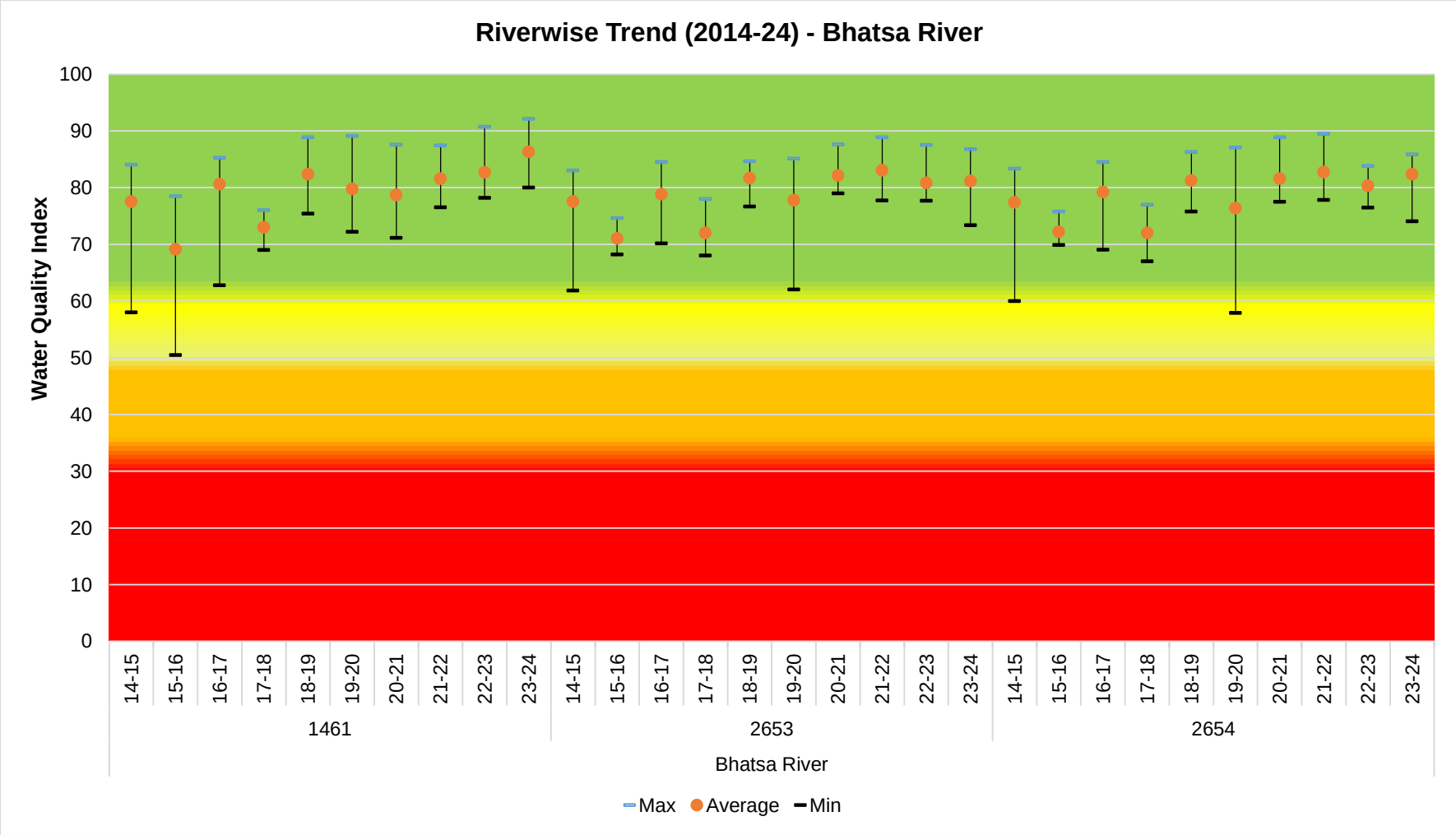
Sr. No.	Name of Municipal Council	Class	District	Sewage Generation MLD	Sewage Treatment Plant (STP) Installed Capacity	Sewage Treatment (MLD)	% of Sewage Treatment
1	Ahmednagar Cantonment	**Cant.**	Ahmednagar	1.128	0	0.0	0.0
2	Aurangabad Cantonment	Cant.	Aurangabad	3.601	0	0	0.0
3	Bhinagar Cantonment	Cant.	Ahmednagar				
4	Dehu Cantonment	Cant.	Pune	3.872	0	0	0.0
5	Devalali Cantonment	Cant.	Nashik	1.08	0	0	0.0
6	Kamptee Cantonment	Cant.	Nagpur	0.751	0	0	0.0
7	Khadki Cantonment	Cant.	Pune	2.08	17.2	2	96.2
8	Pune Cantonment	Cant.	Pune	115.36	20	20	17.3

Annex – V : Data Sets Of Water Quality Monitored in 2022-2023

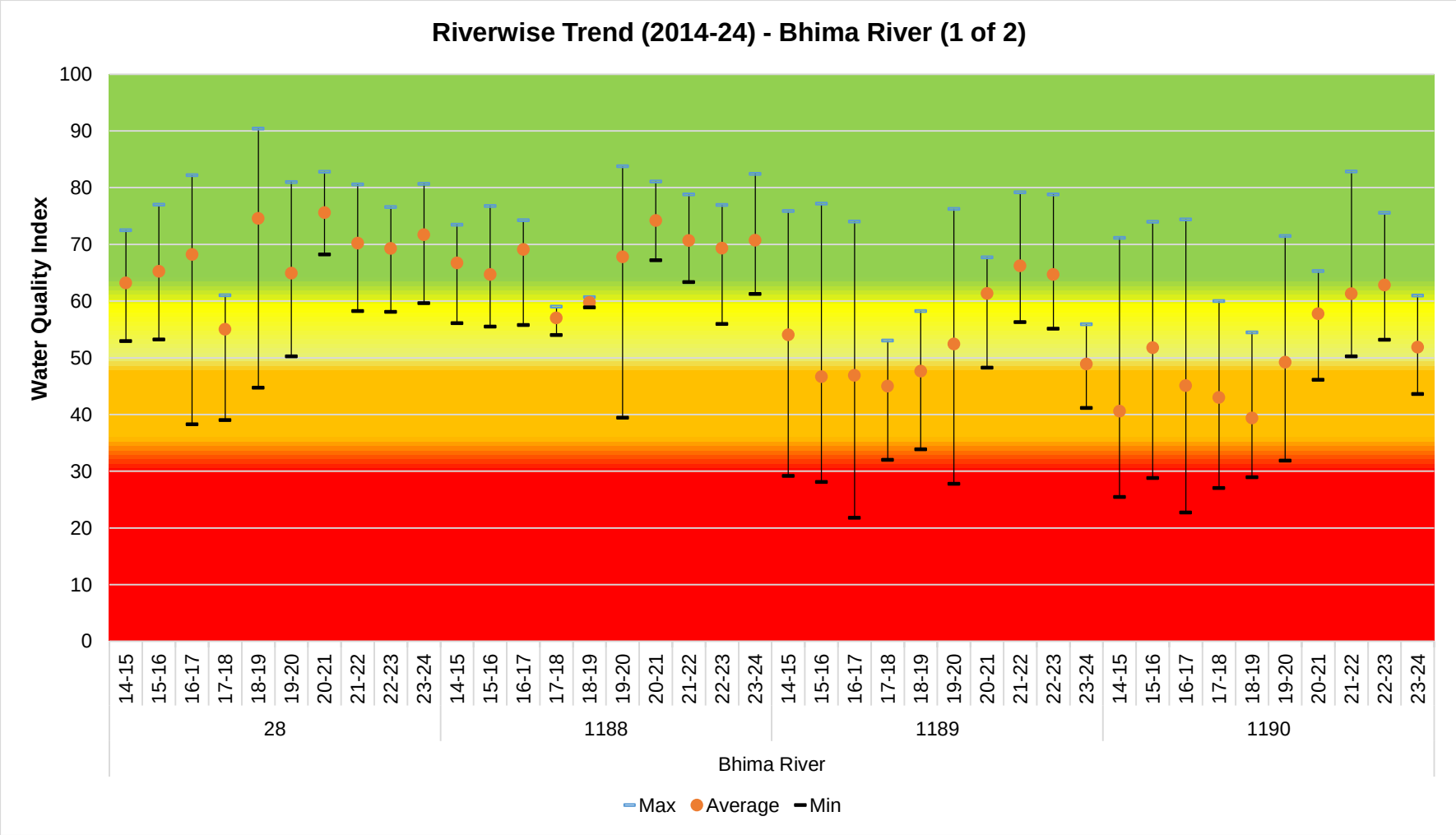
Annex - VI : Riverwise Trend In WQI (2014-24)



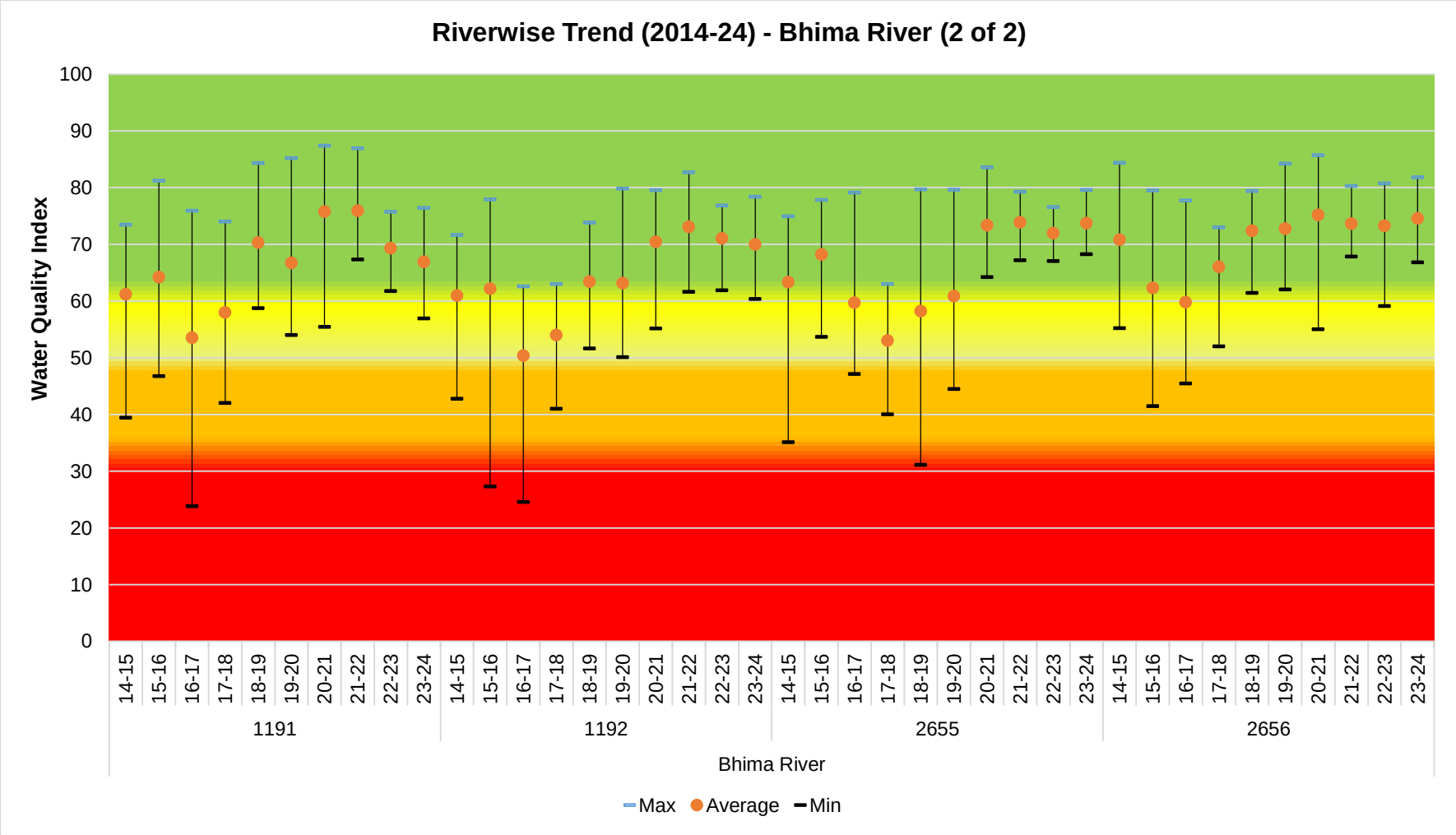
Note:* Stations are Dry/ No data available for respective year



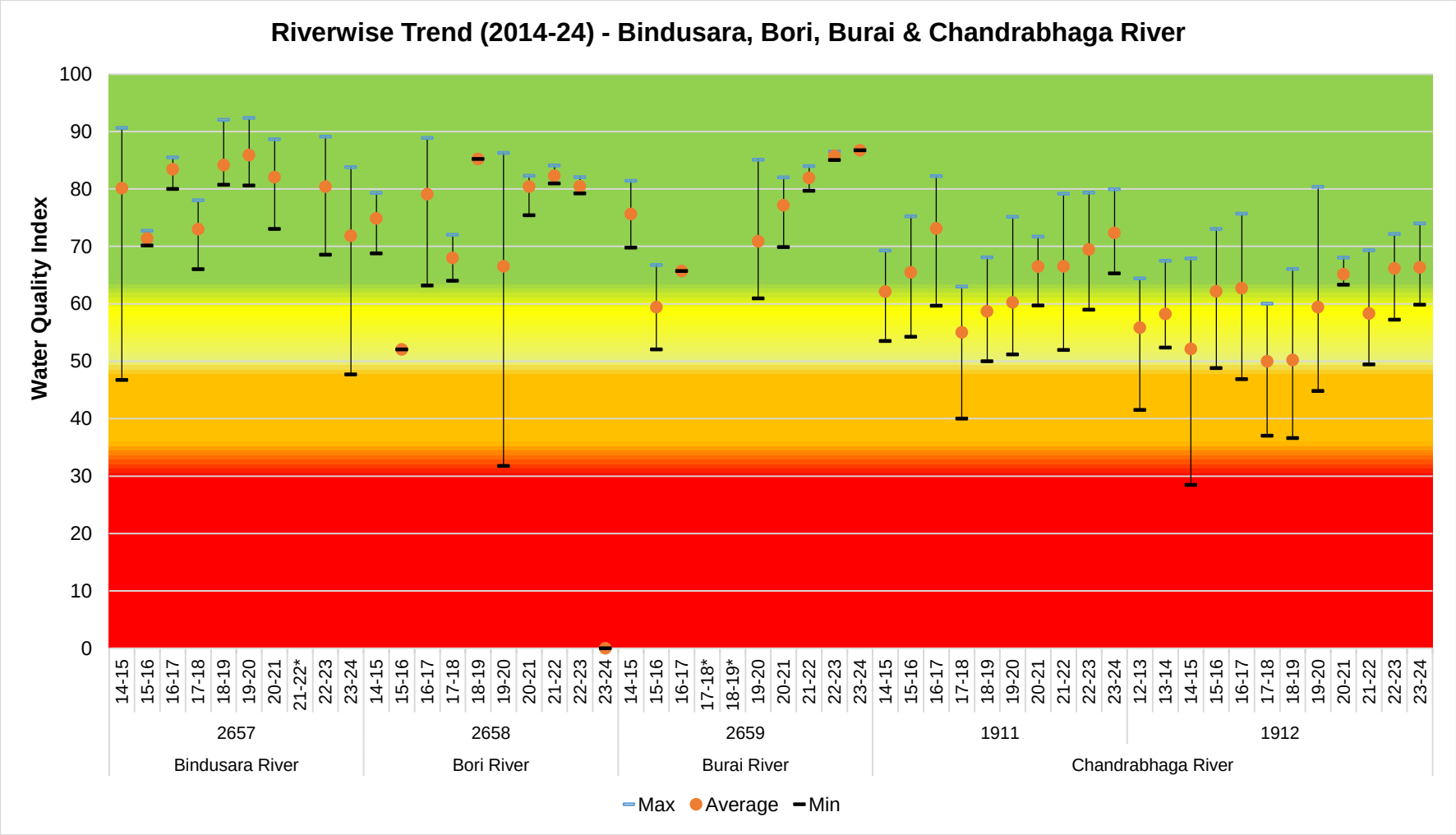
Note:* Stations are Dry/ No data available for respective year



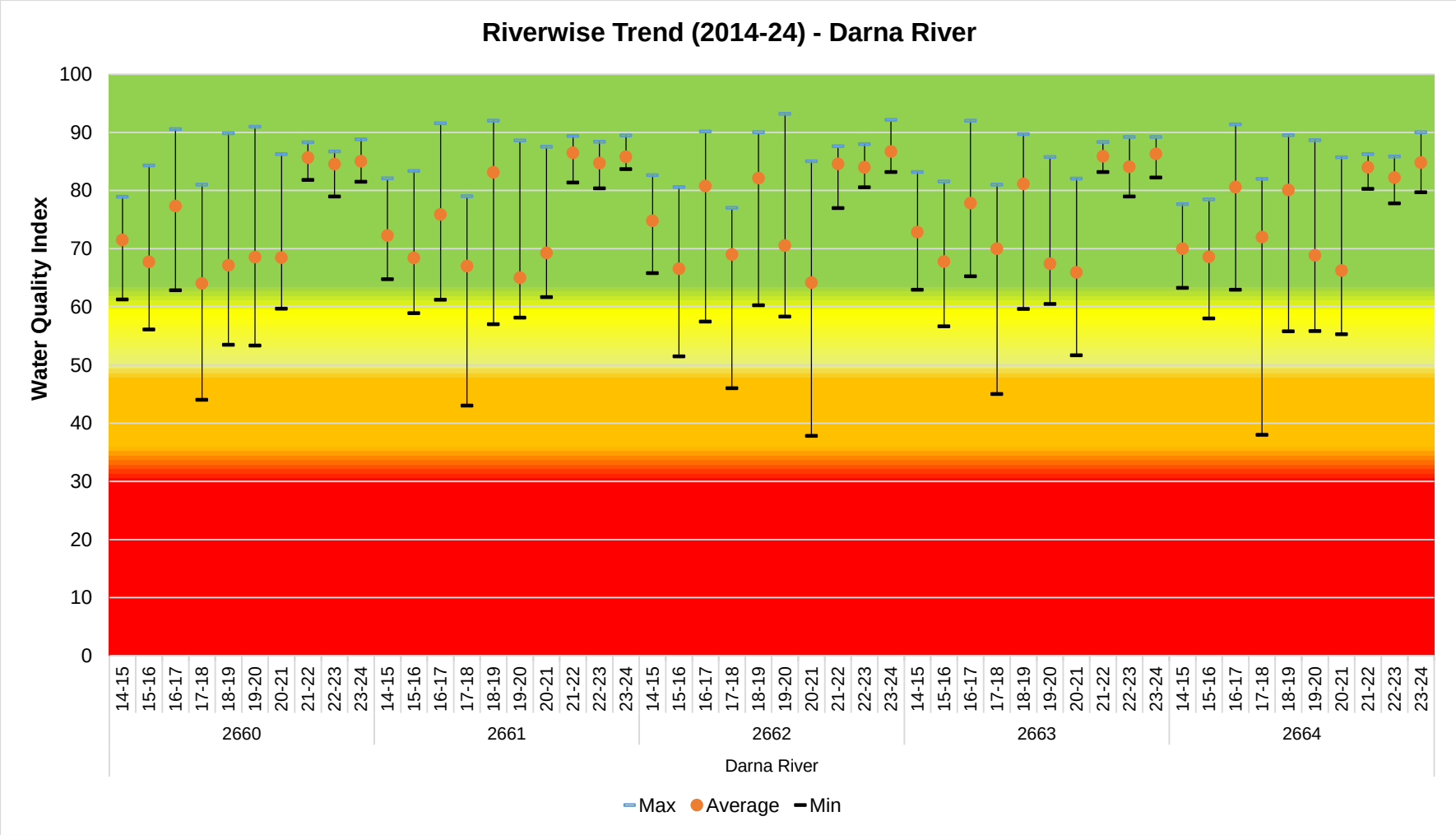
Note:* Stations are Dry/ No data available for respective year



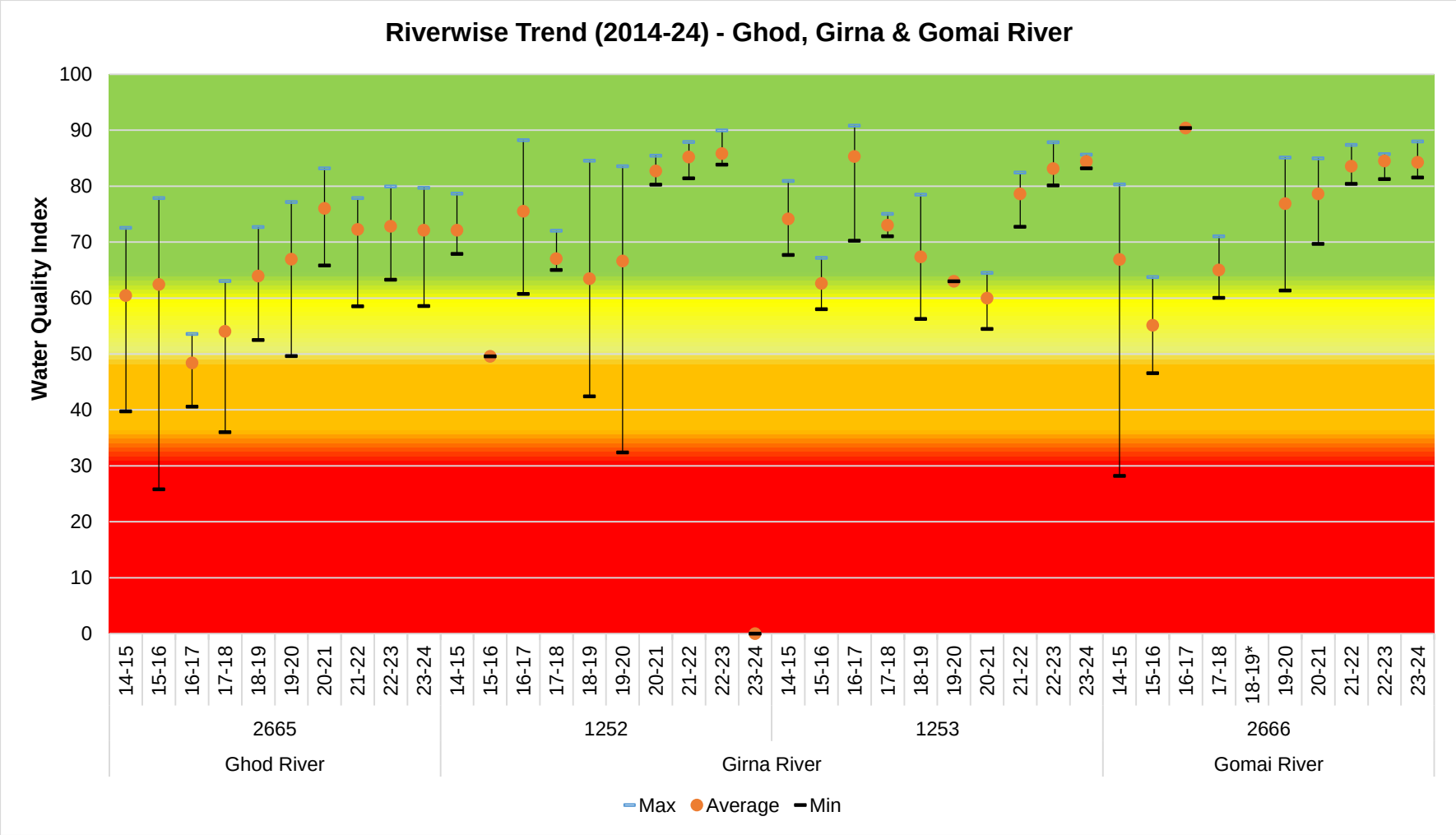
Note:* Stations are Dry/ No data available for respective year



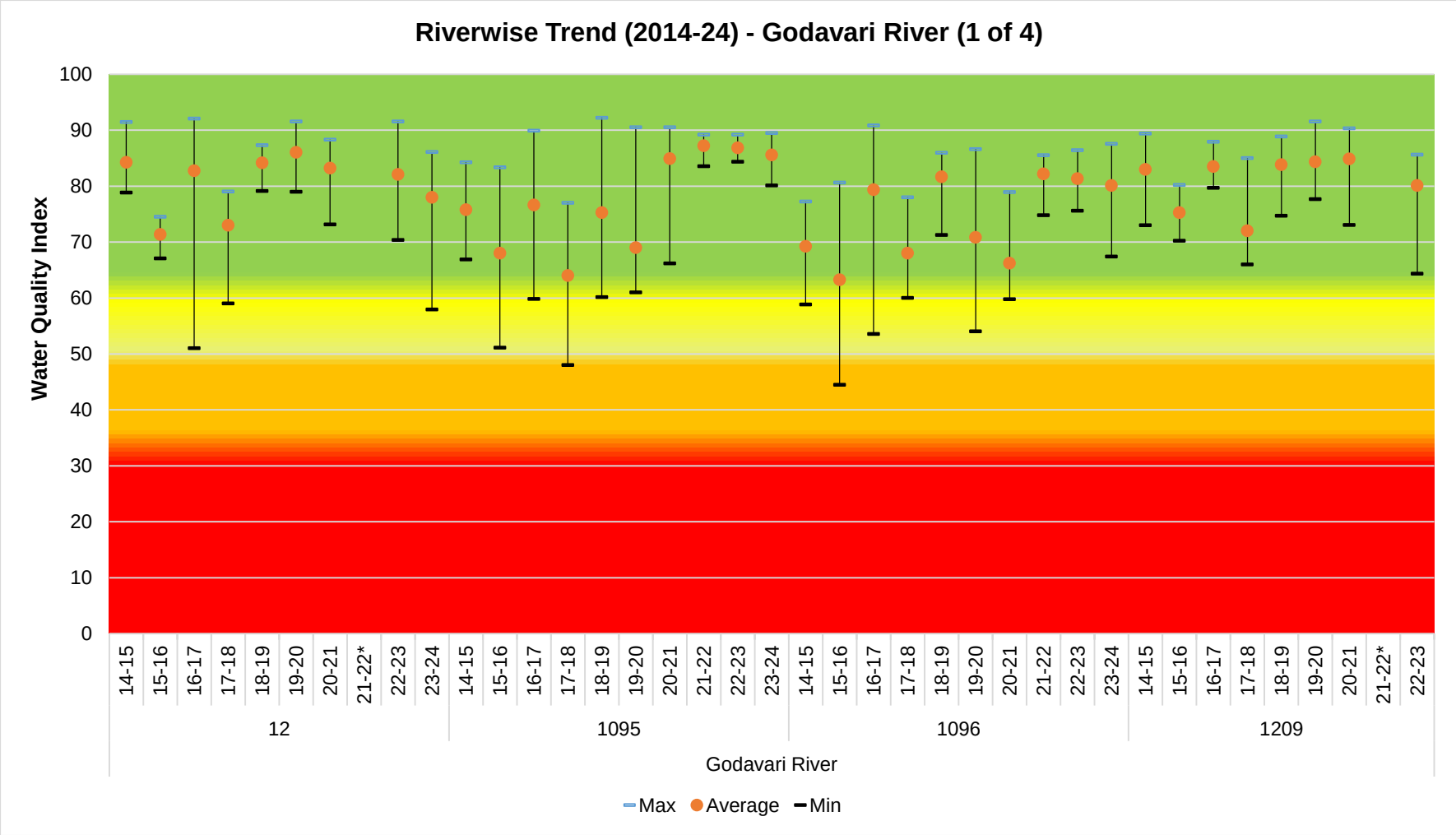
Note:* Stations are Dry/ No data available for respective year



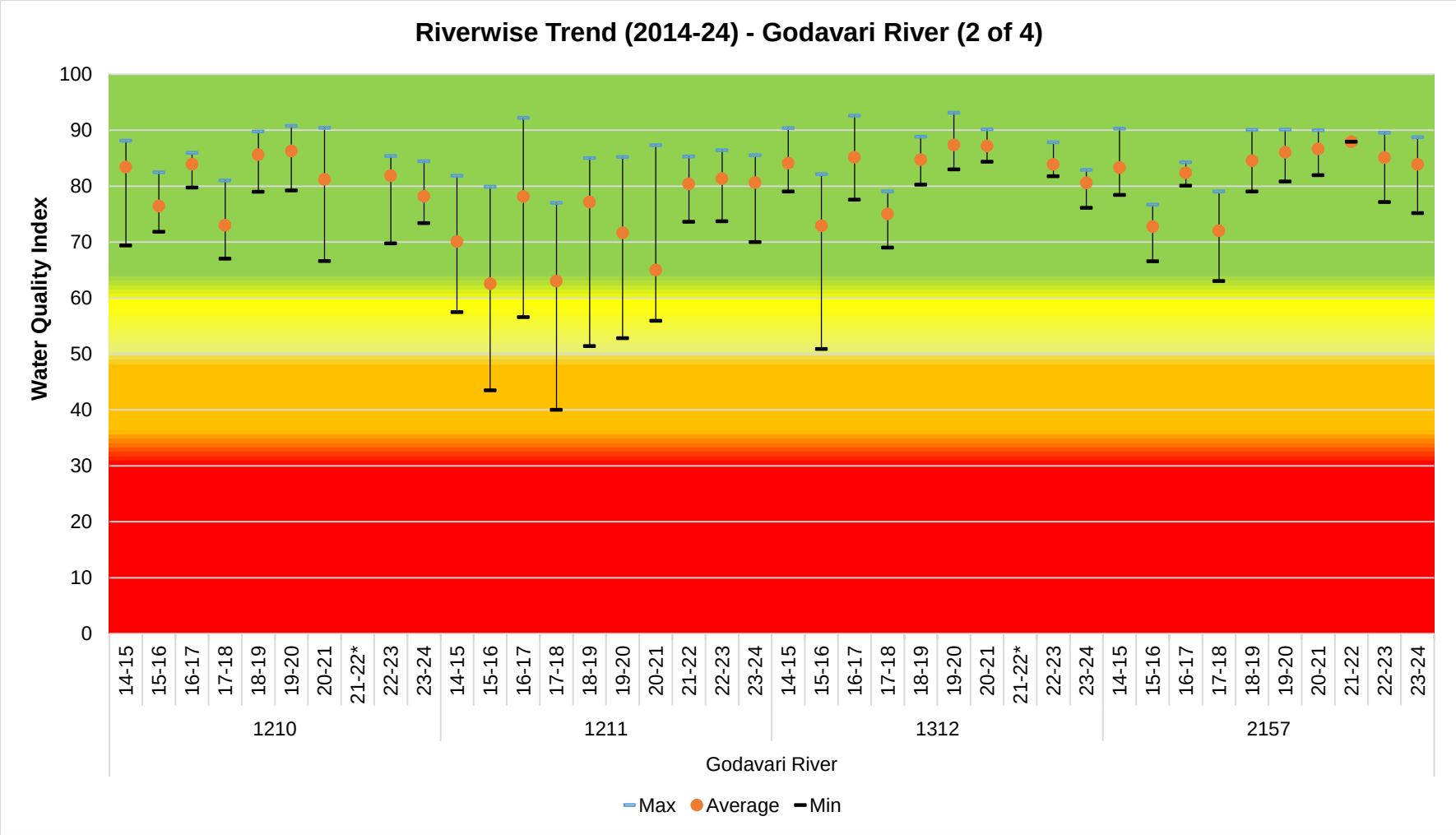
Note:* Stations are Dry/ No data available for respective year



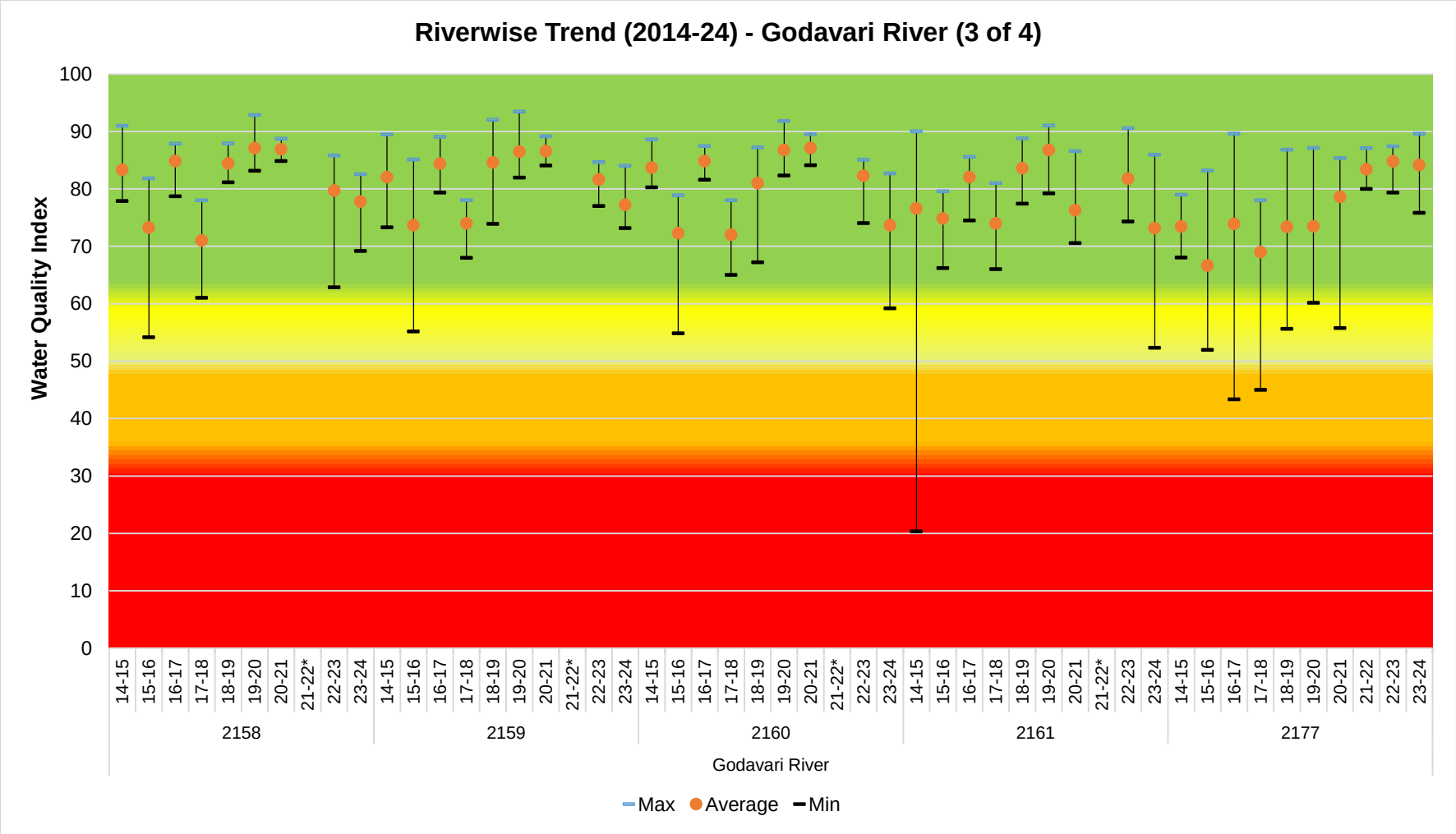
Note:* Stations are Dry/ No data available for respective year



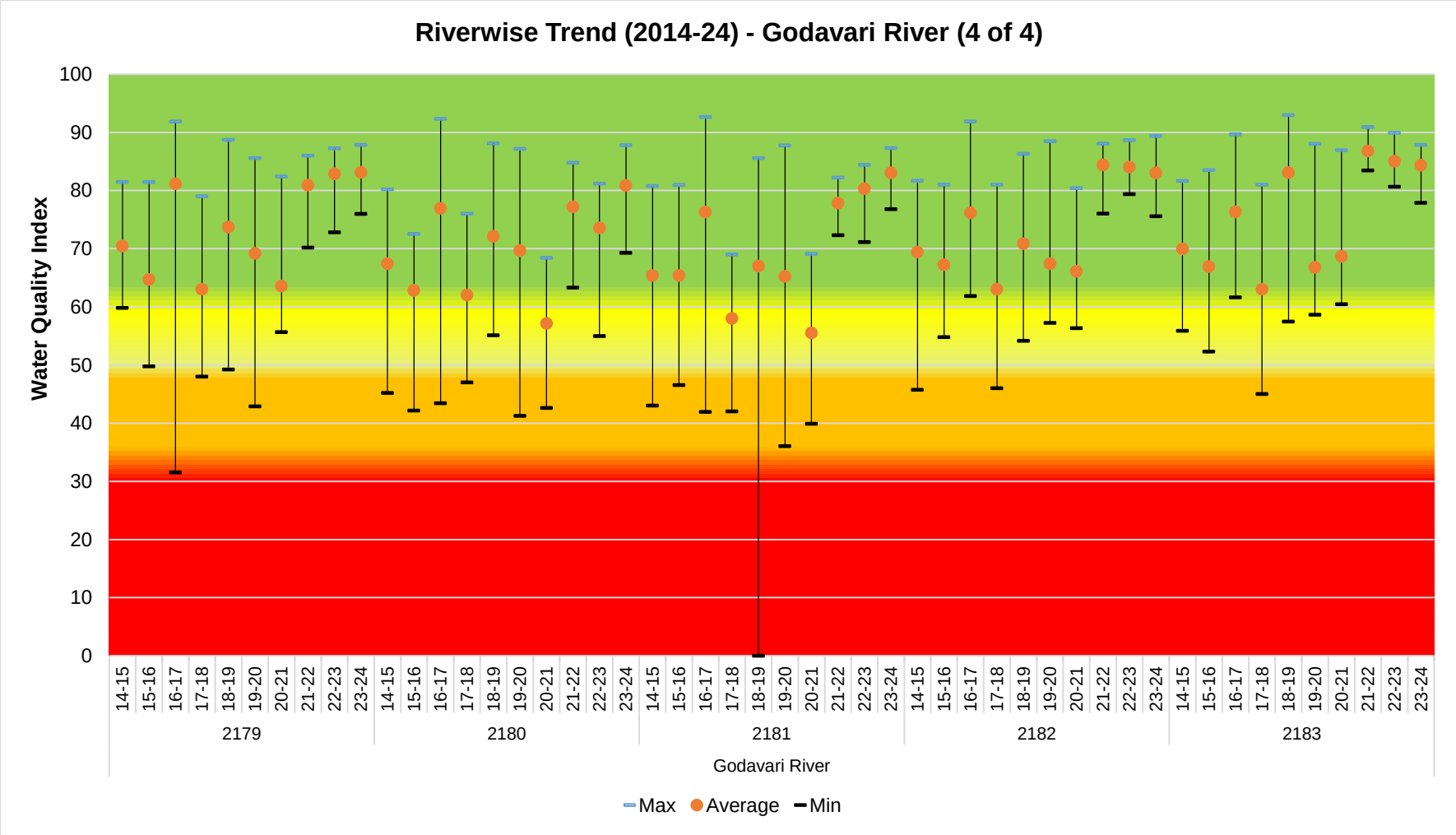
Note:* Stations are Dry/ No data available for respective year



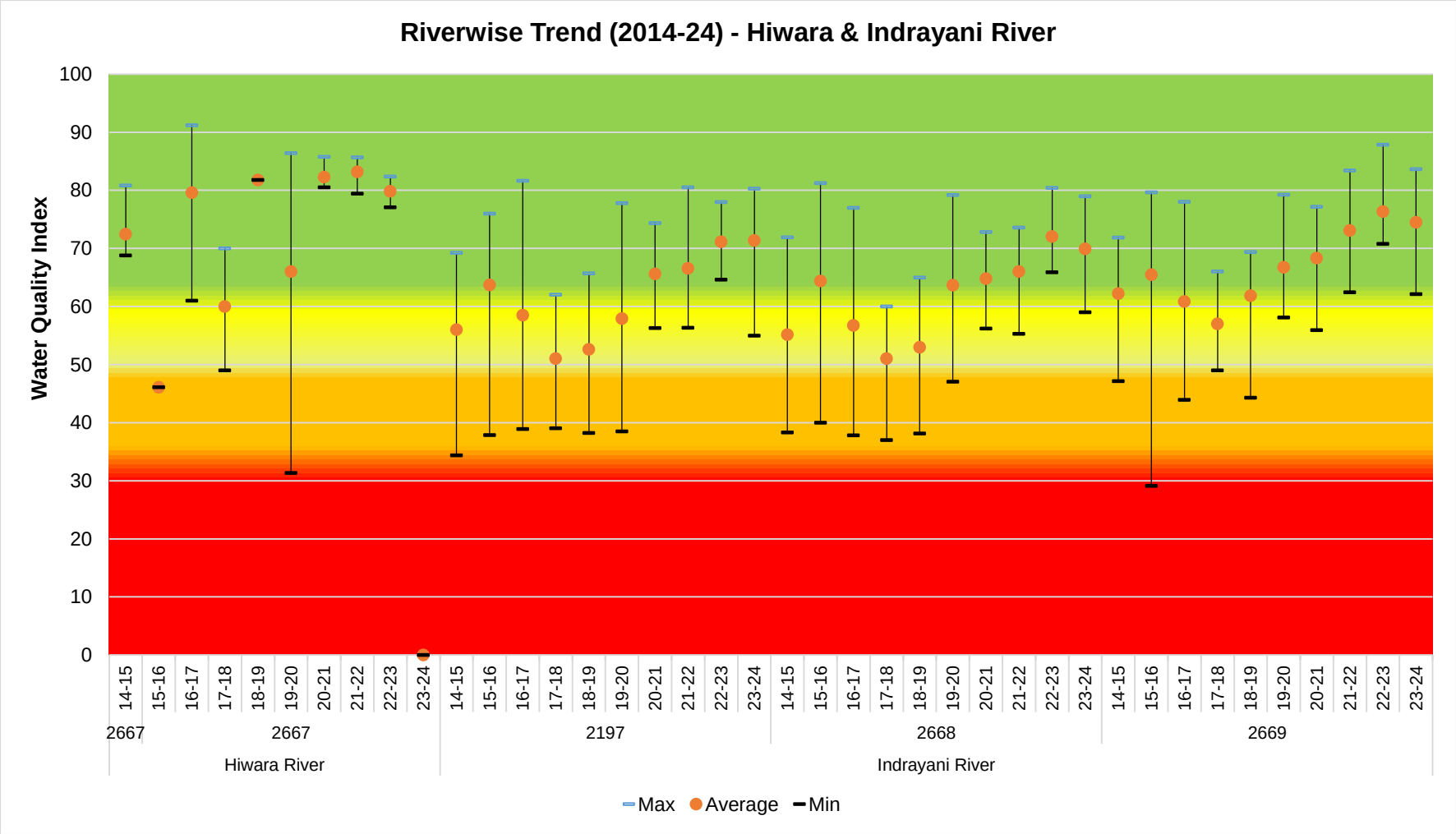
Note:* Stations are Dry/ No data available for respective year



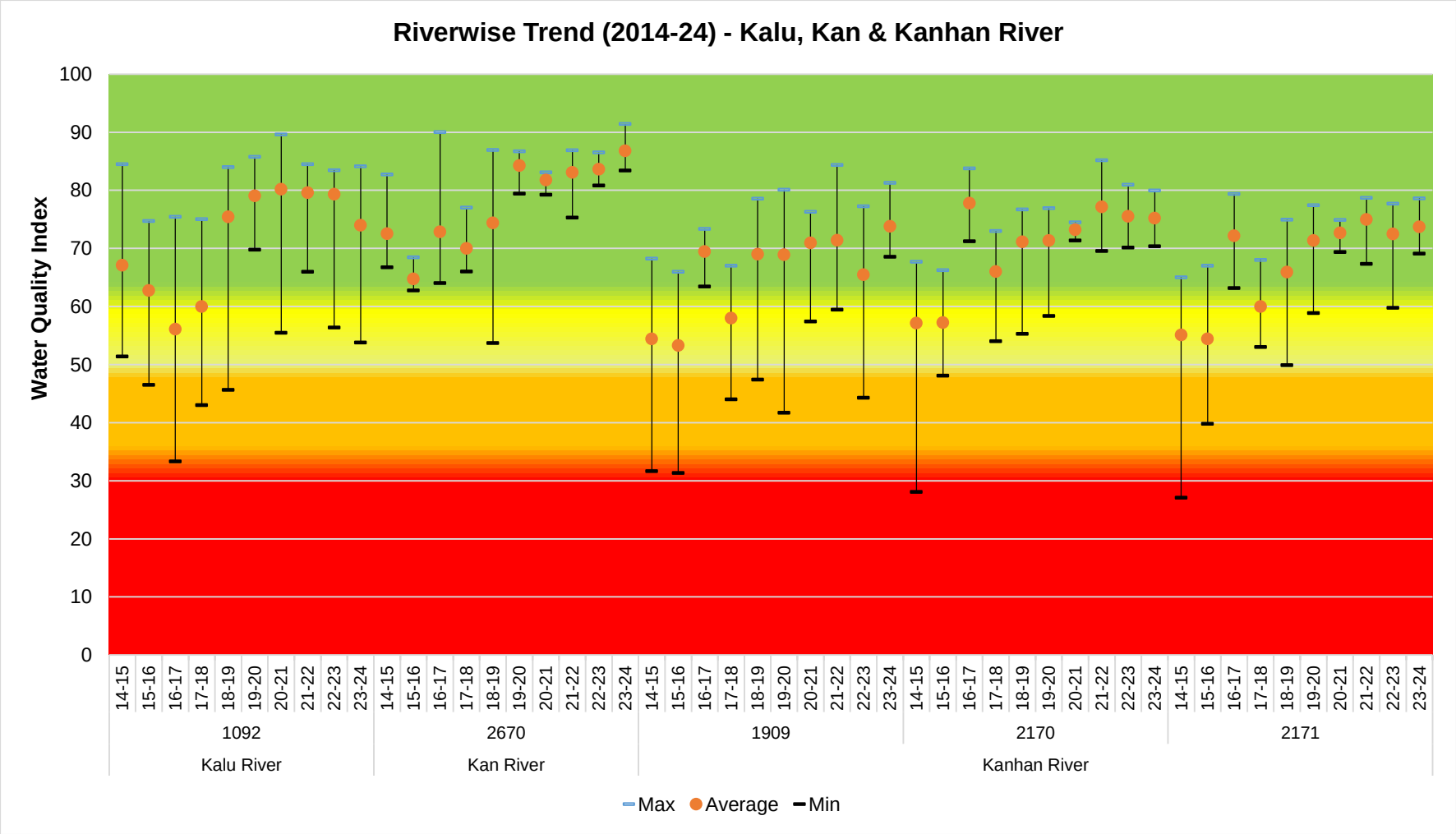
Note:* Stations are Dry/ No data available for respective year



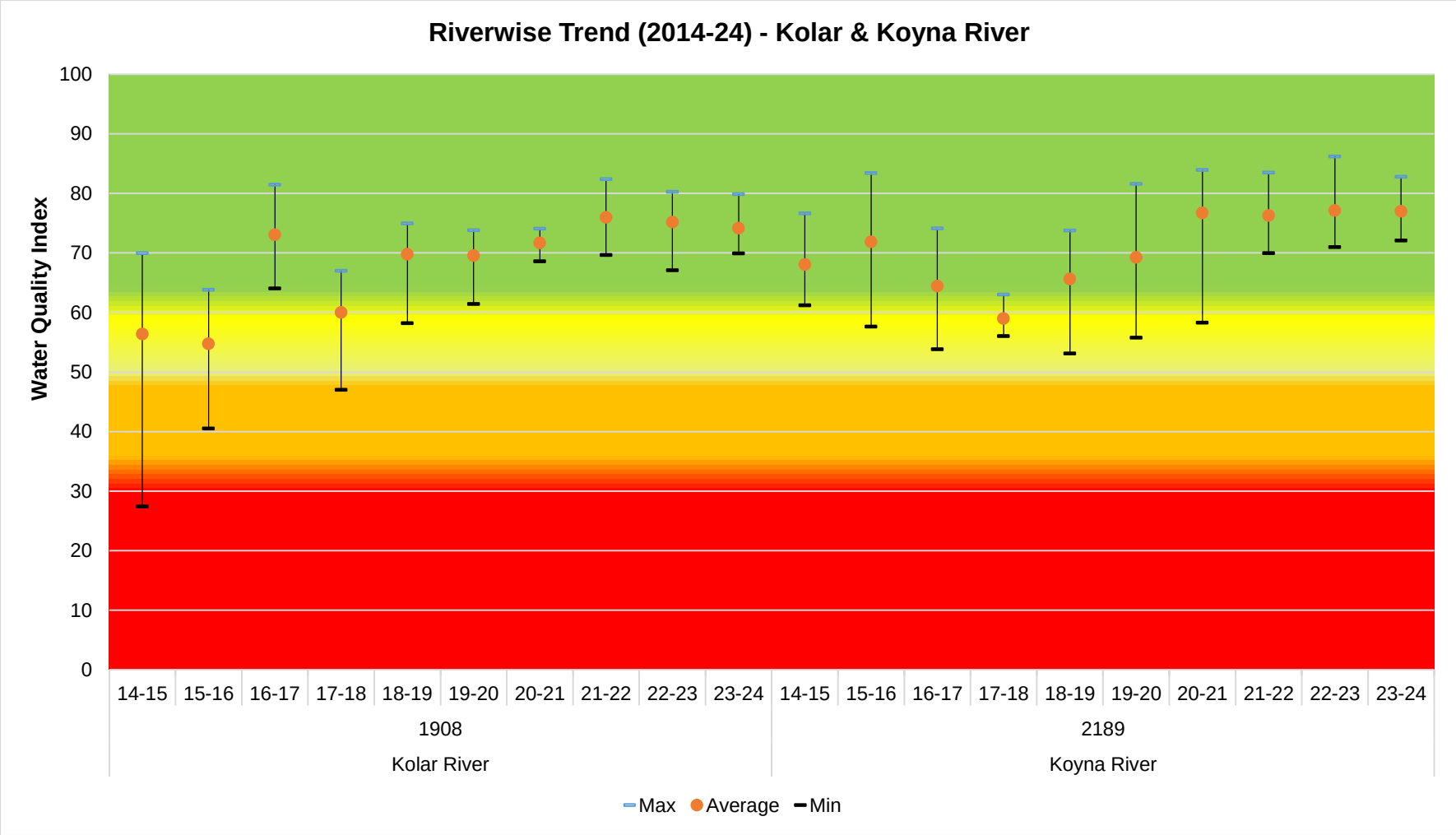
Note:* Stations are Dry/ No data available for respective year



Note:* Stations are Dry/ No data available for respective year



Note:* Stations are Dry/ No data available for respective year



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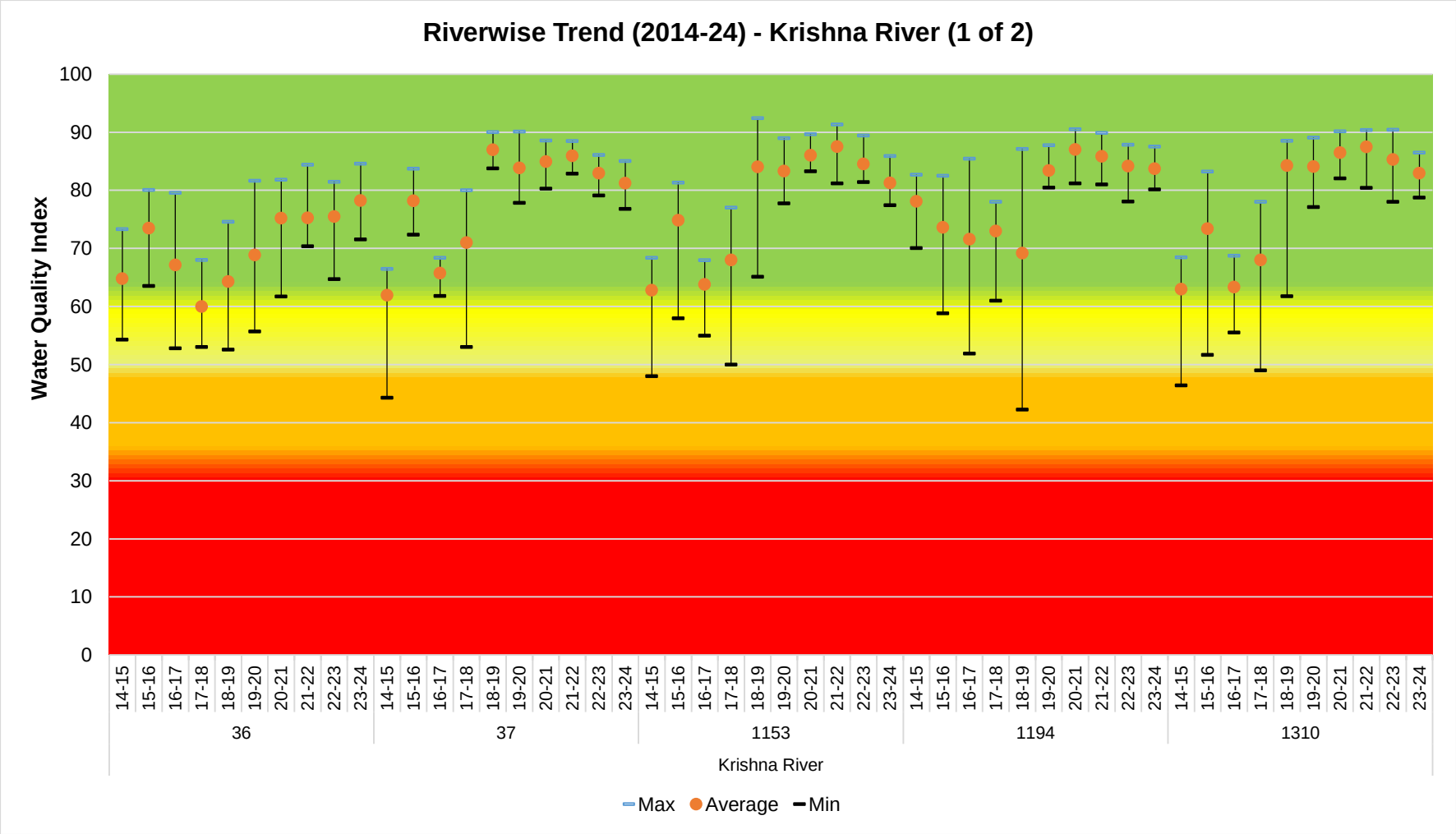
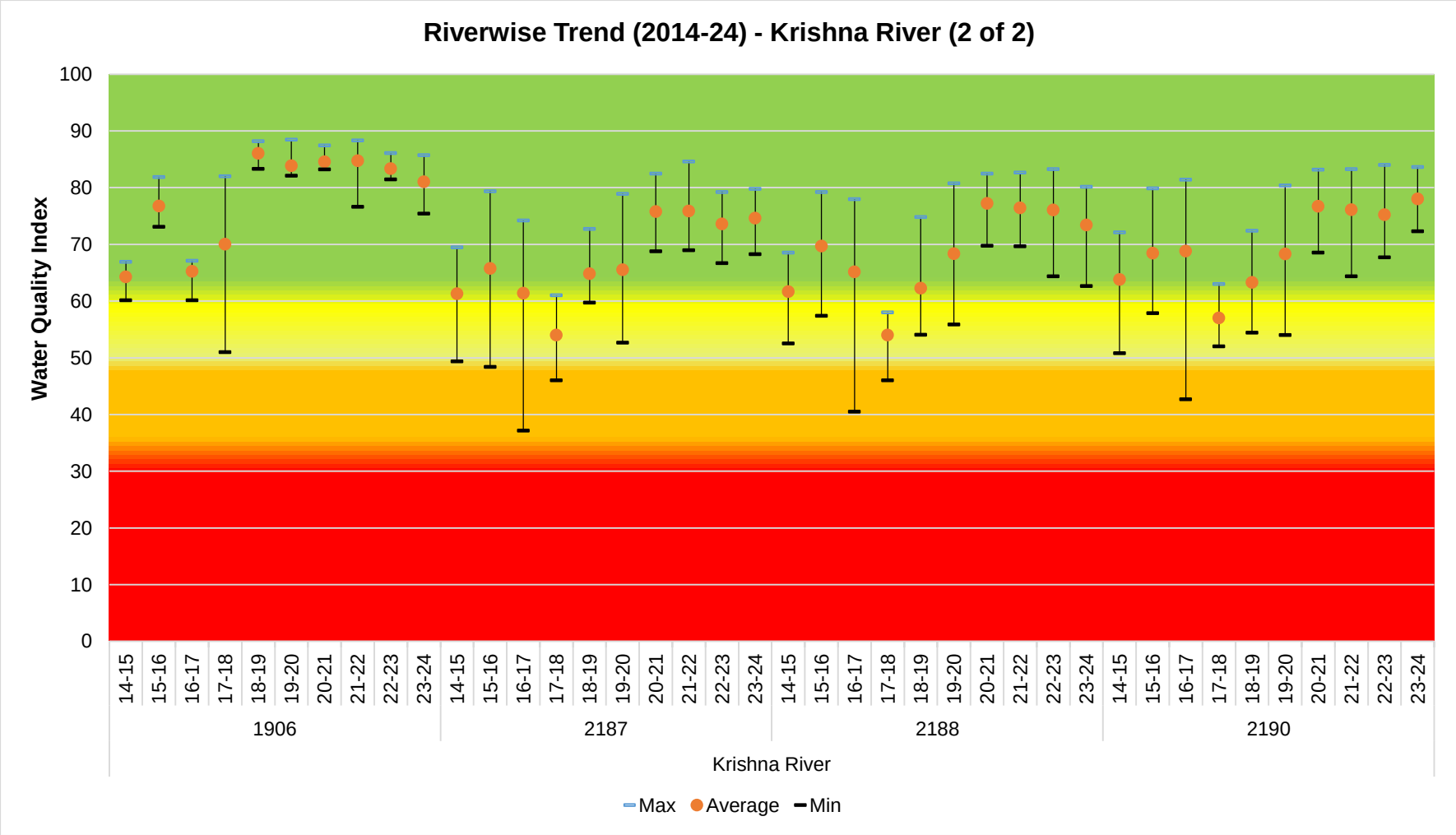
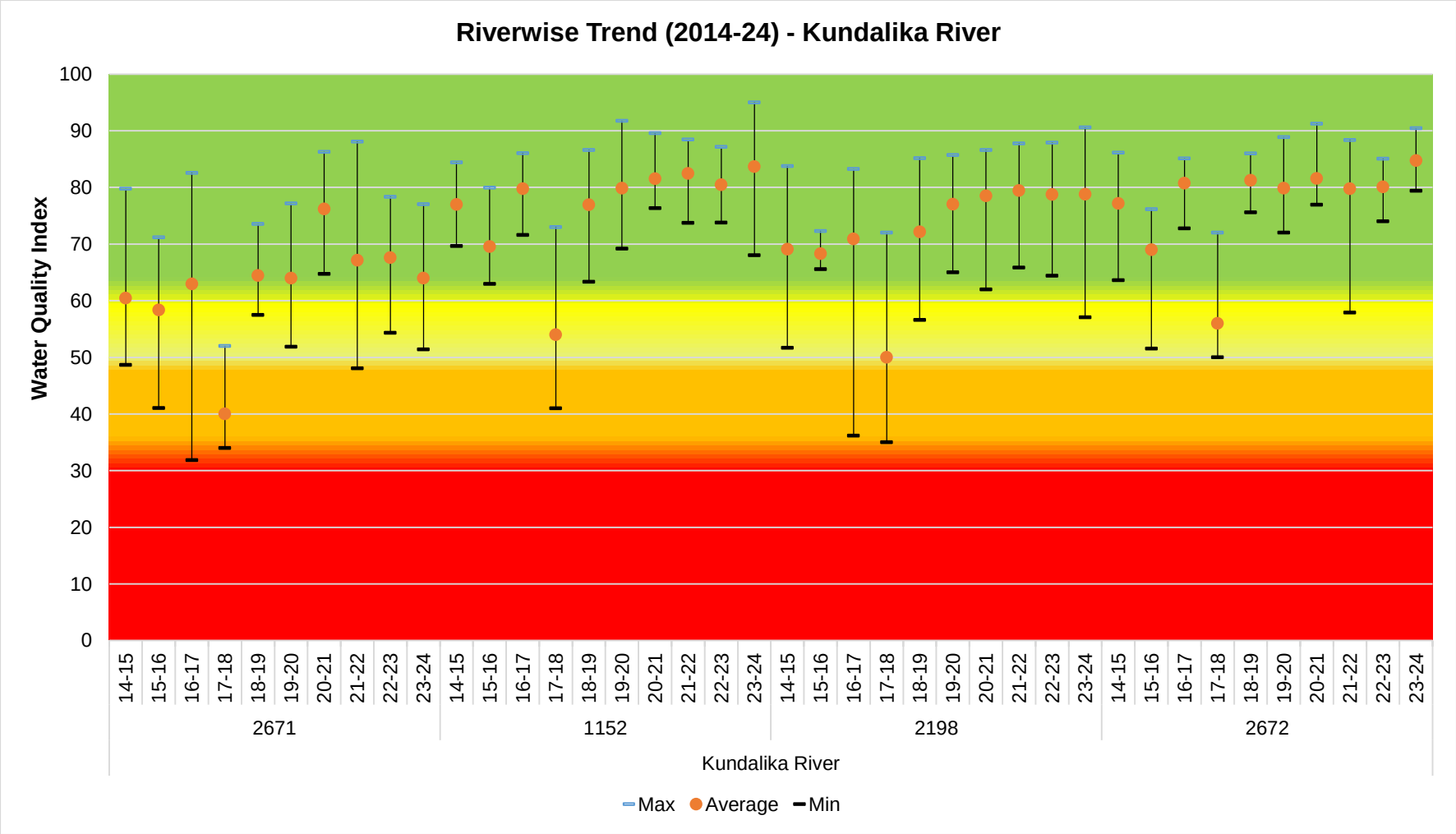


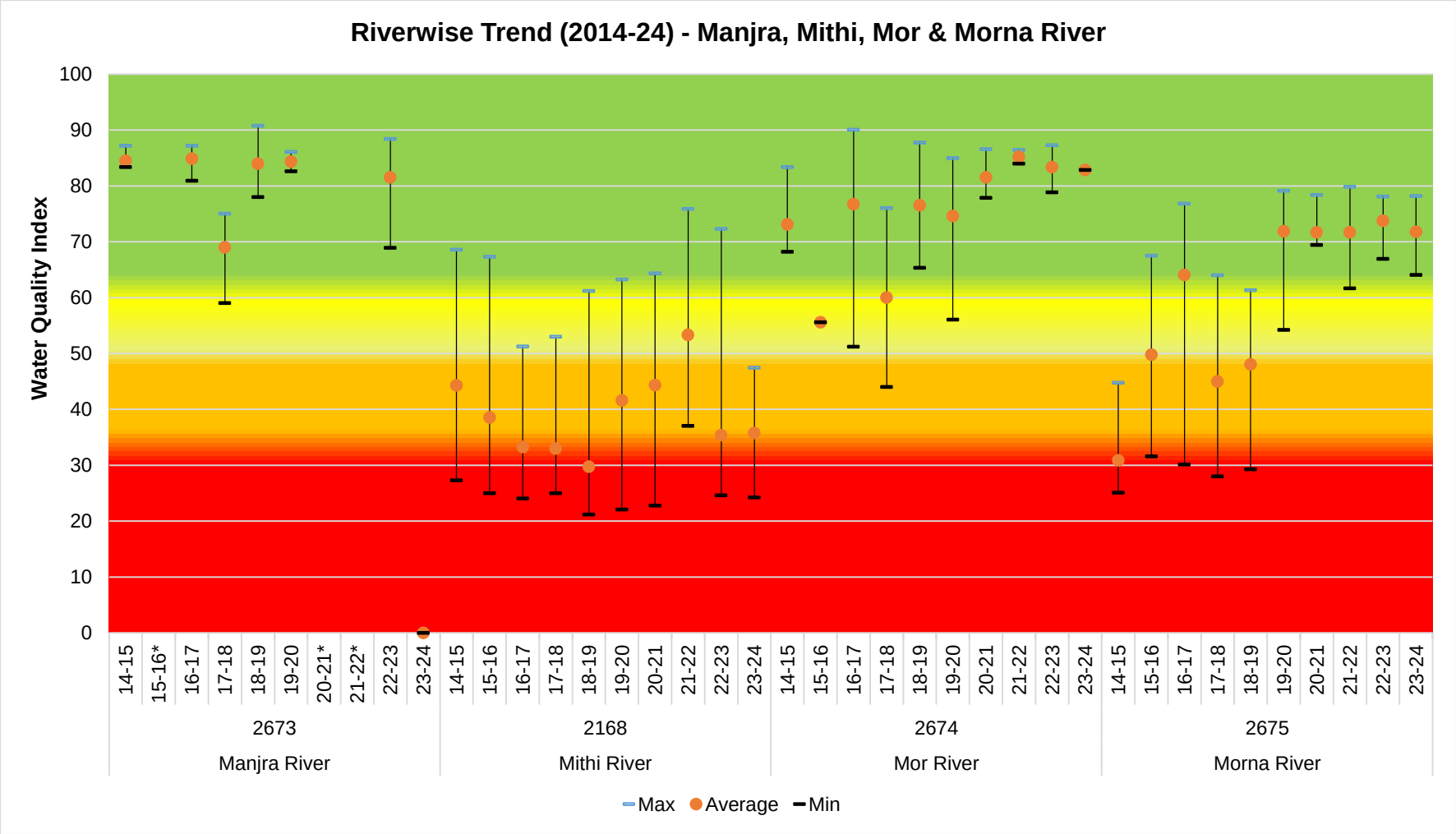
Note:* Stations are Dry/ No data available for respective year



Note:* Stations are Dry/ No data available for respective year



Note:* Stations are Dry/ No data available for respective year



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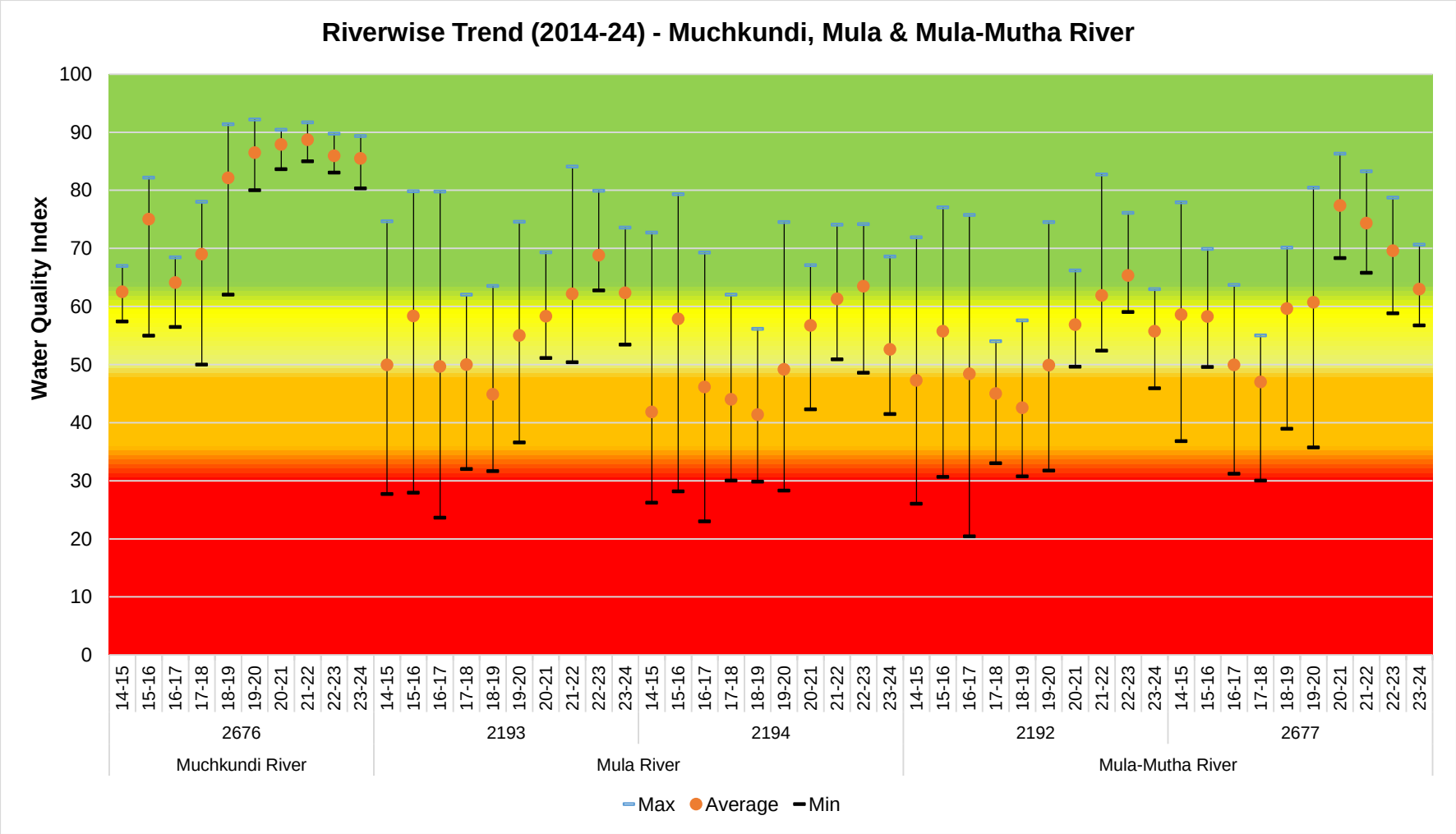

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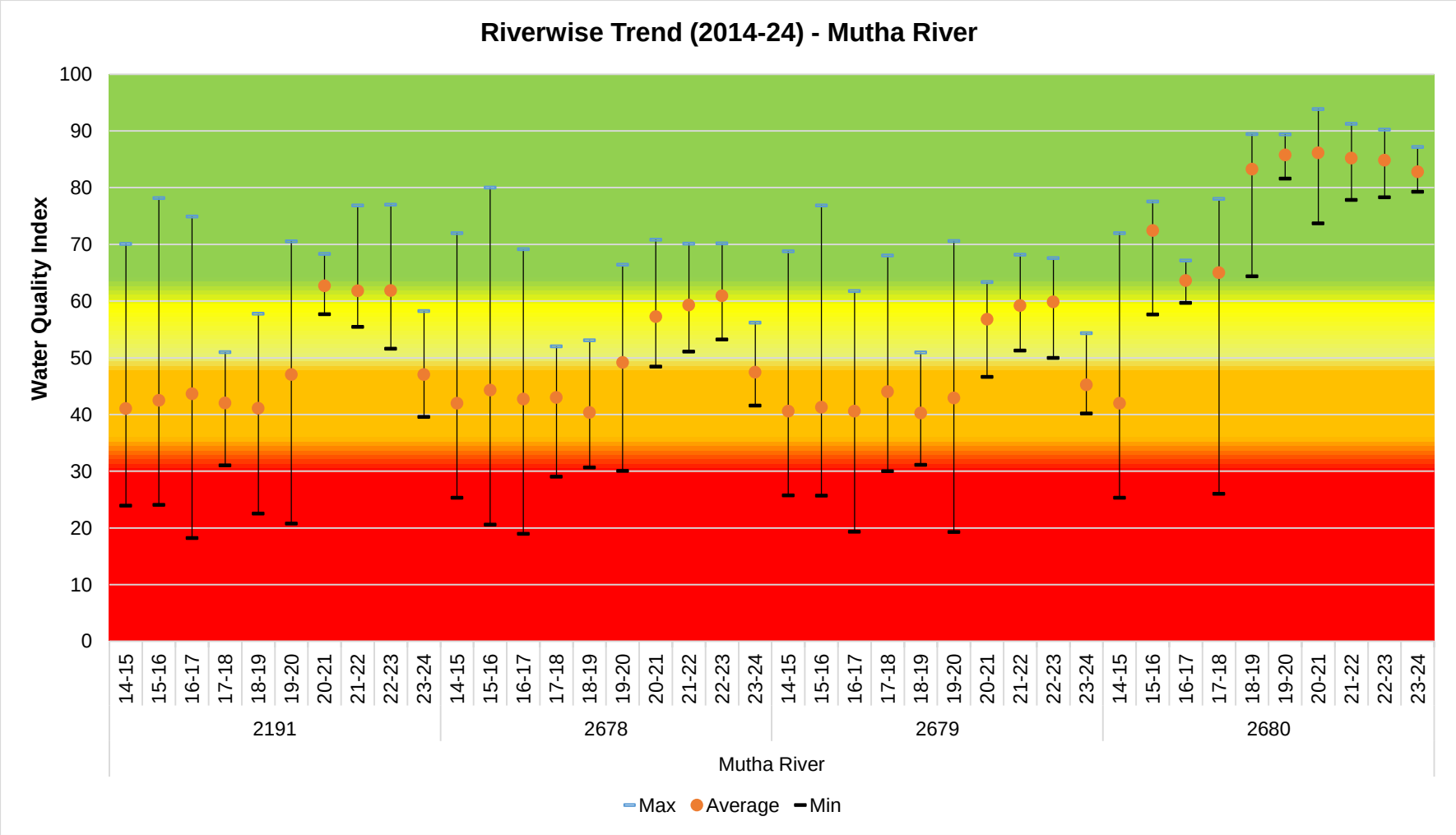

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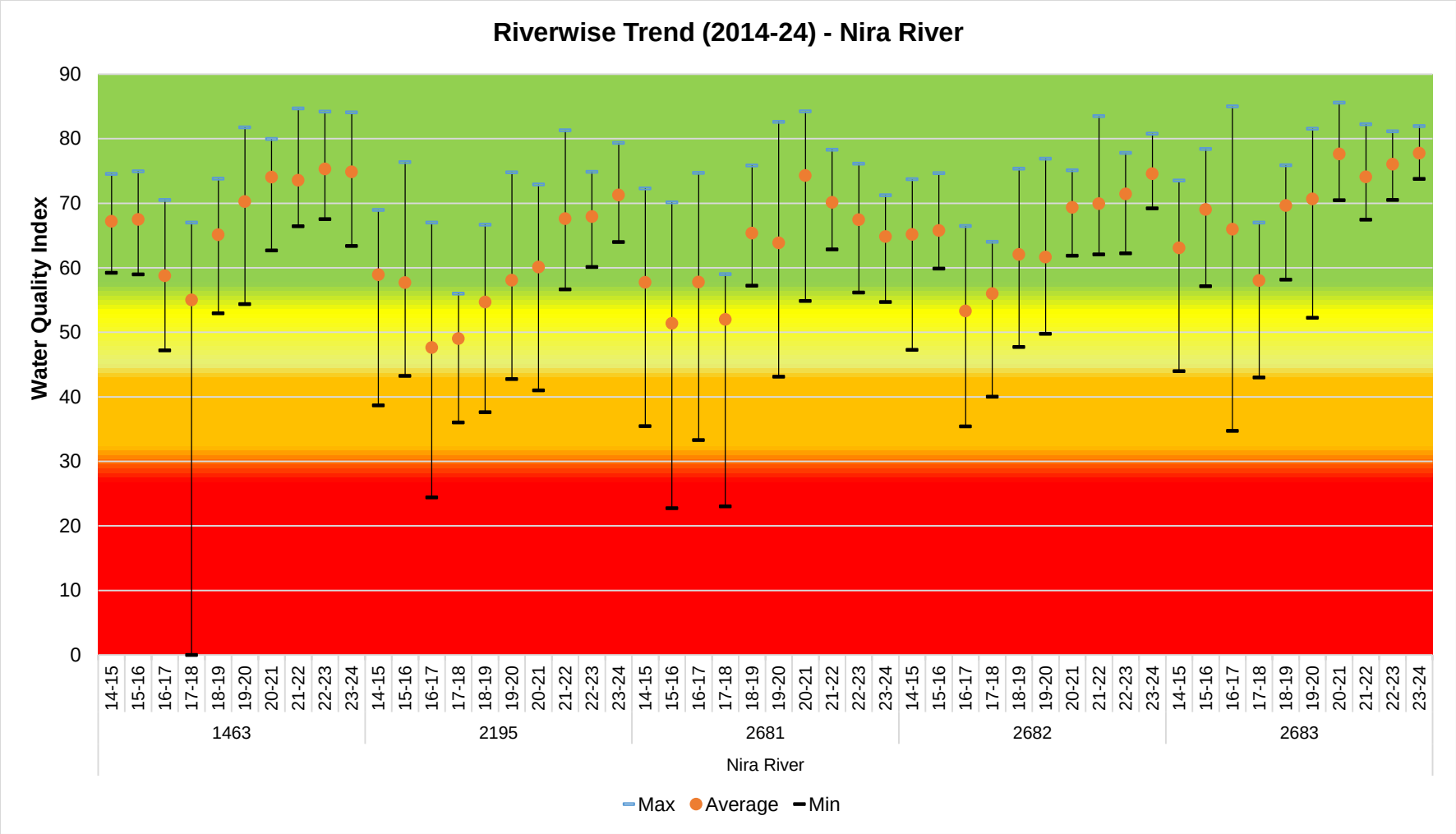

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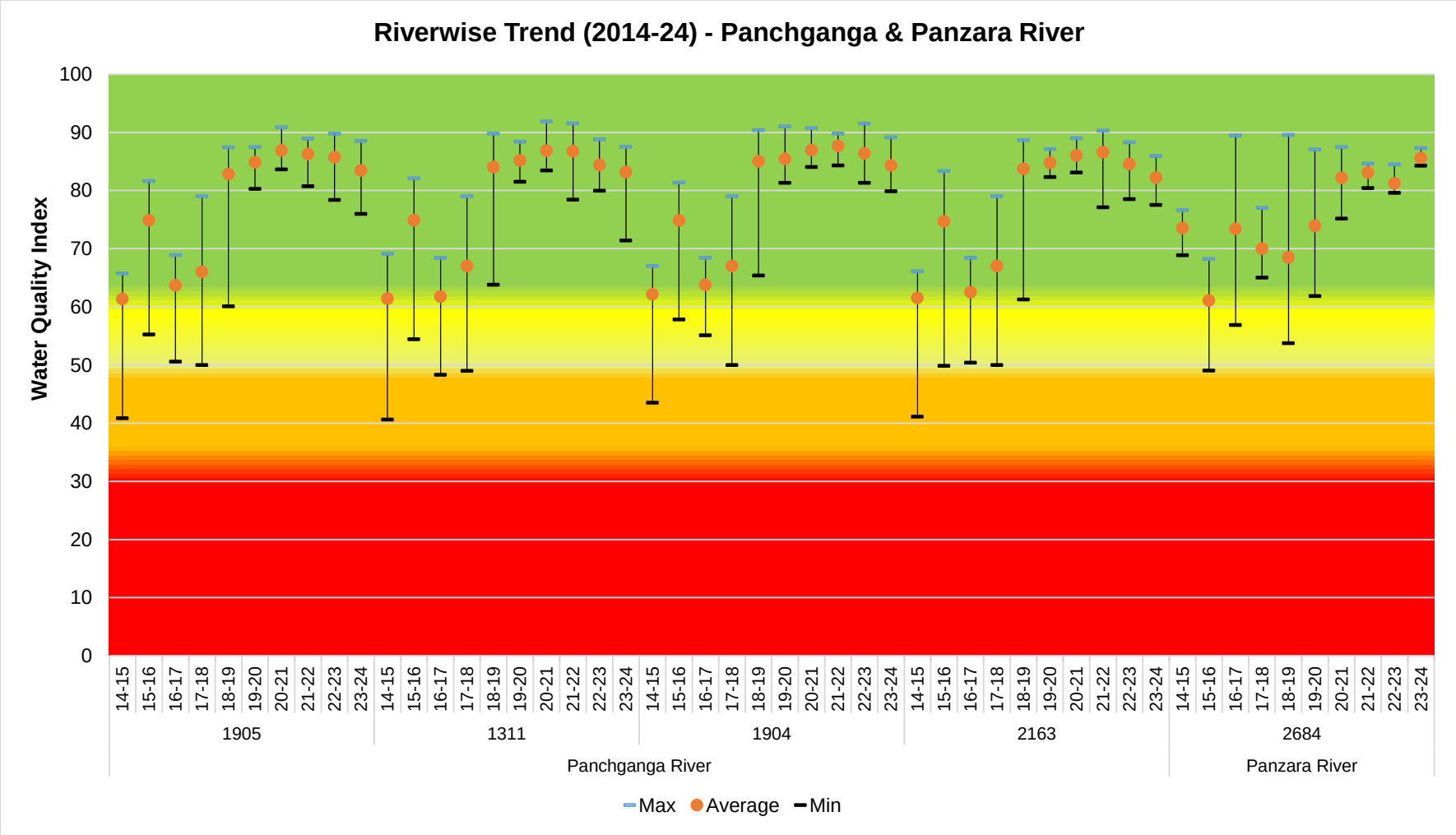

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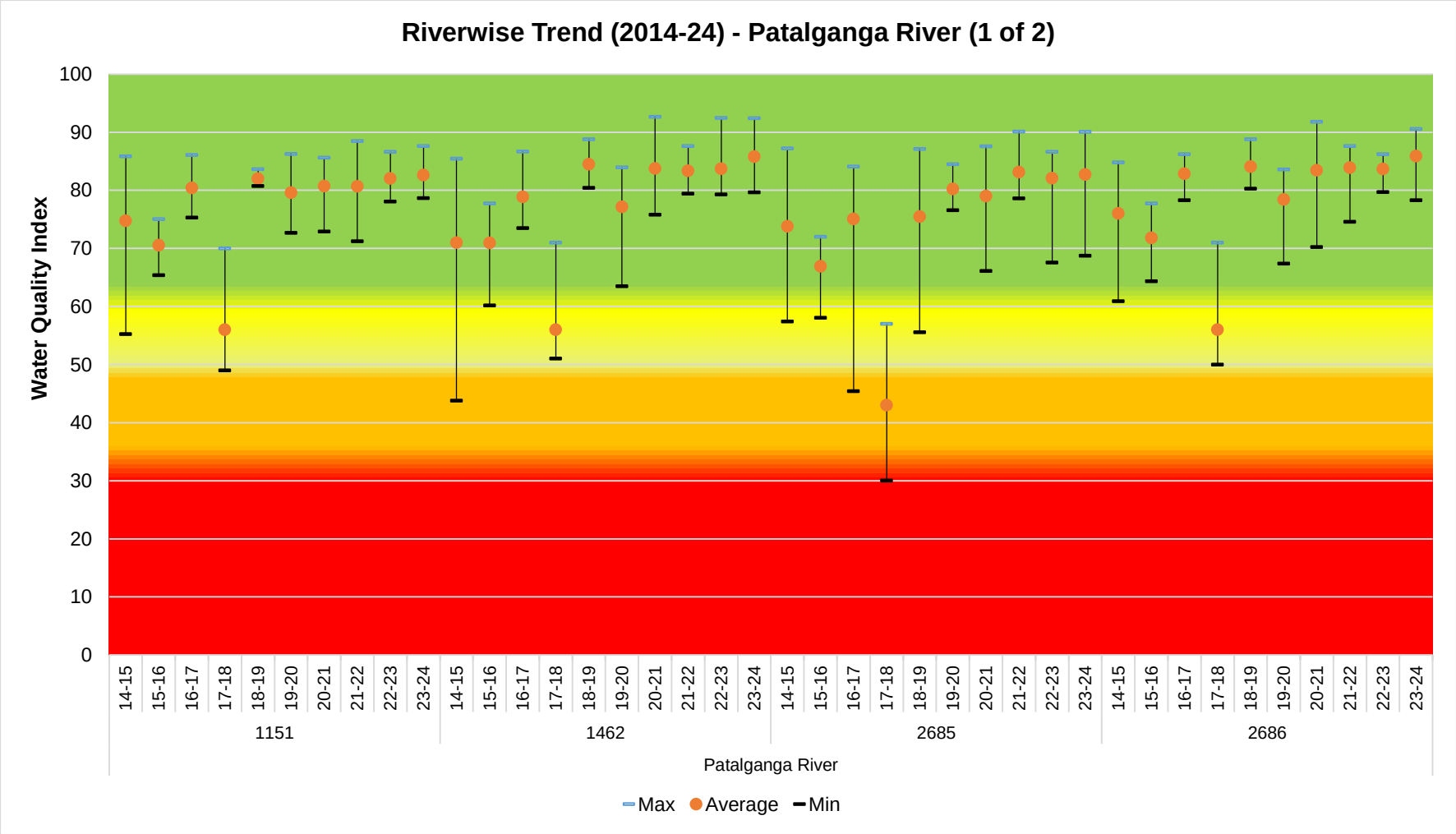

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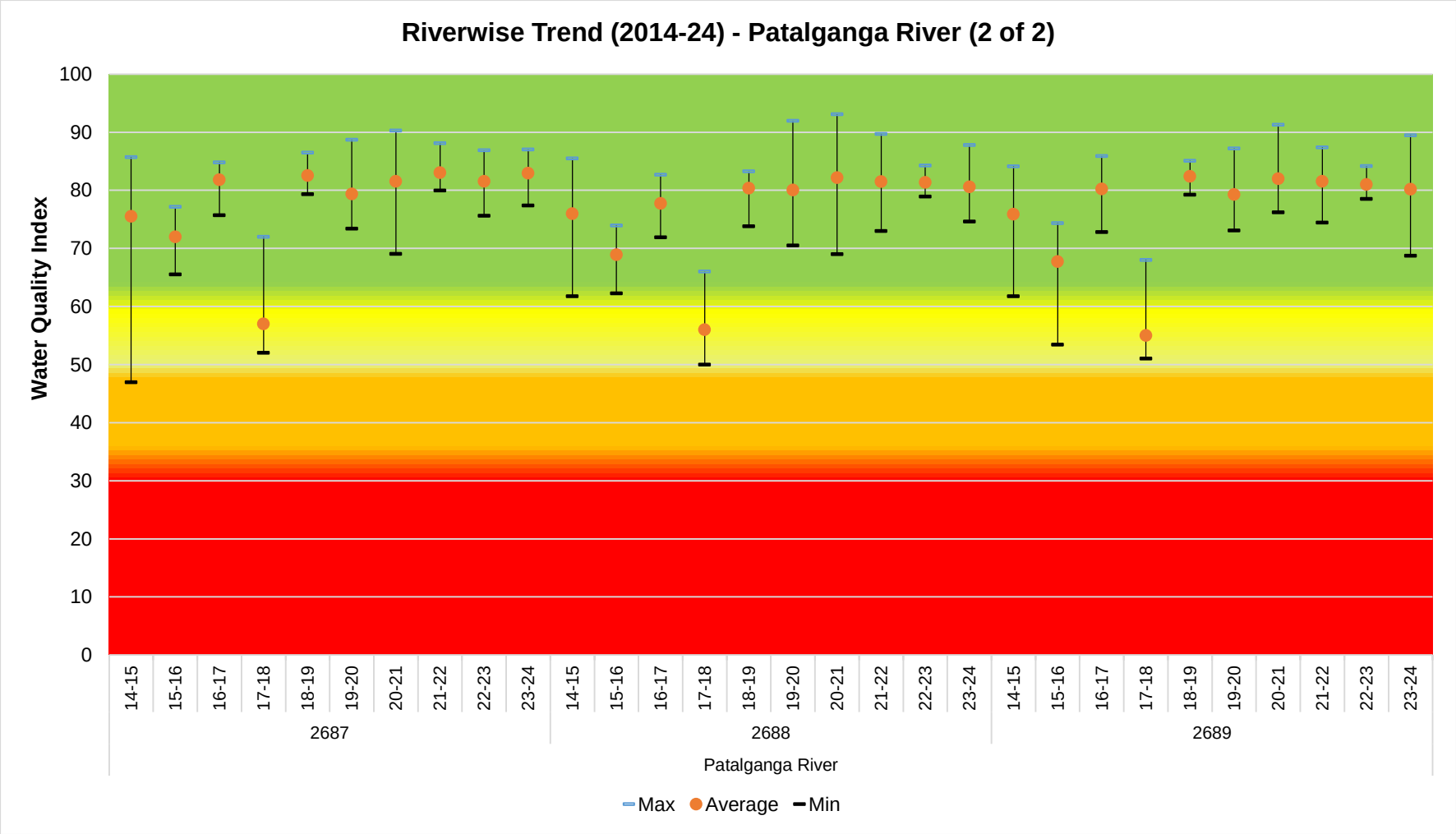

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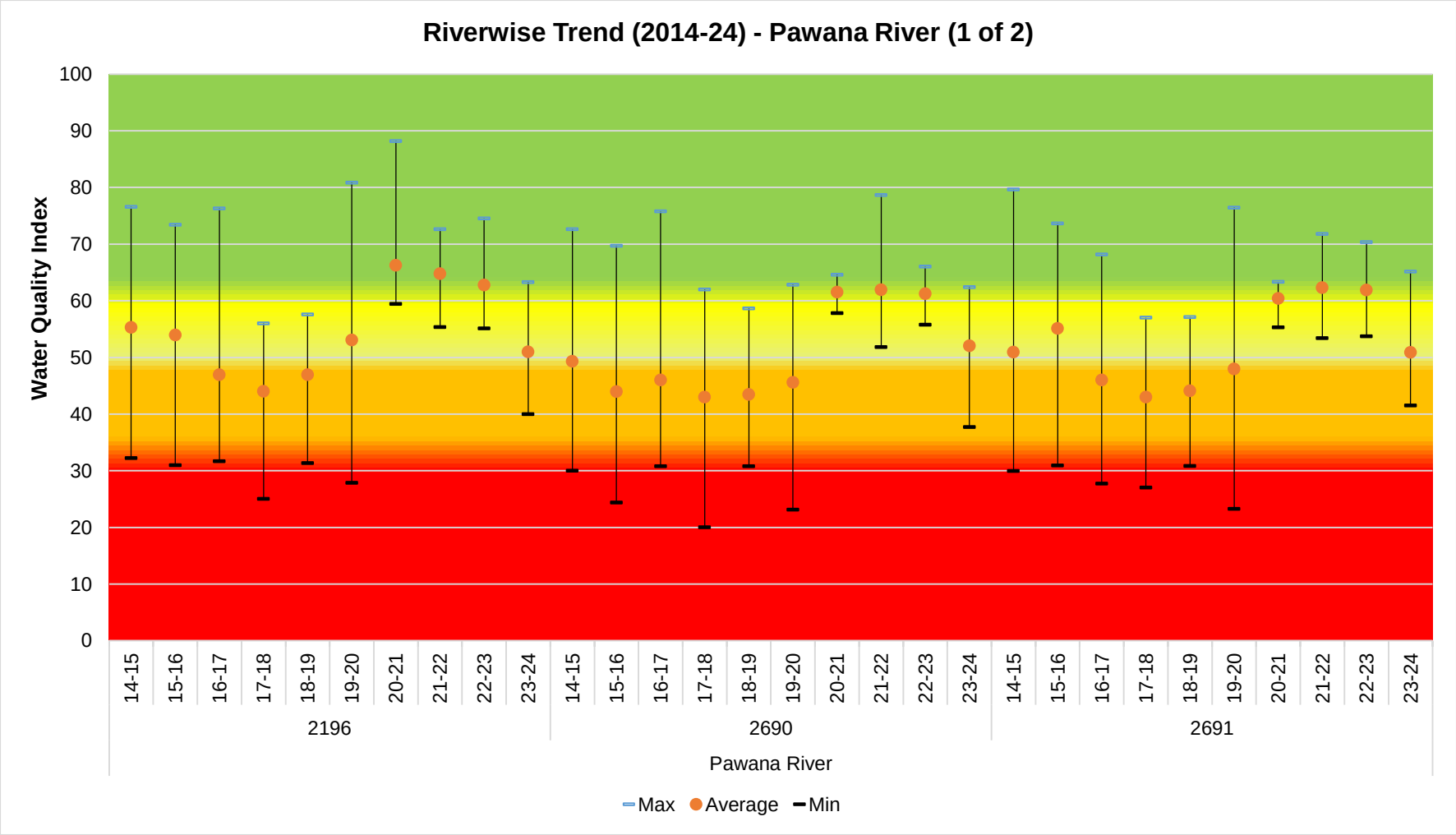

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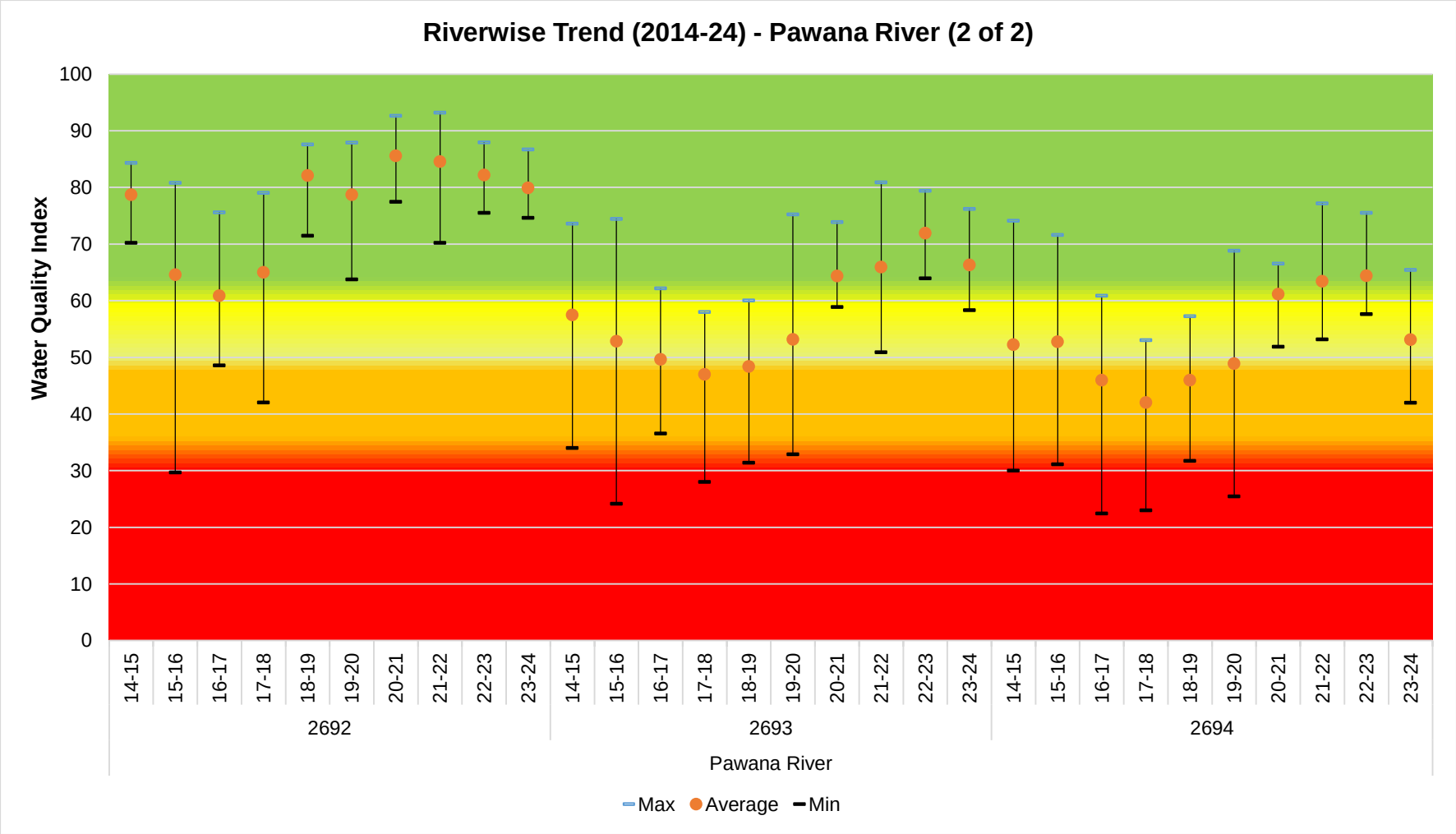

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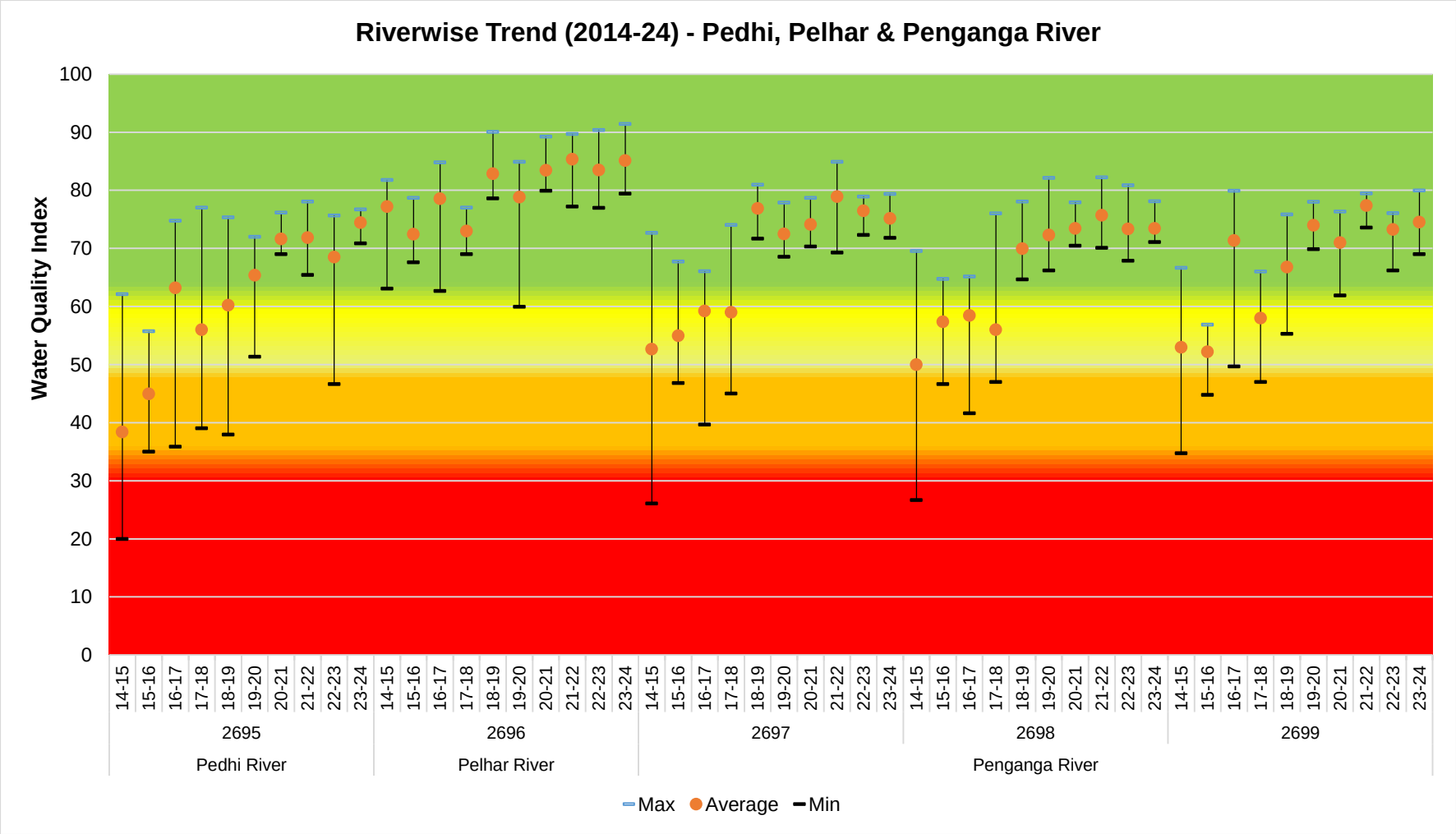

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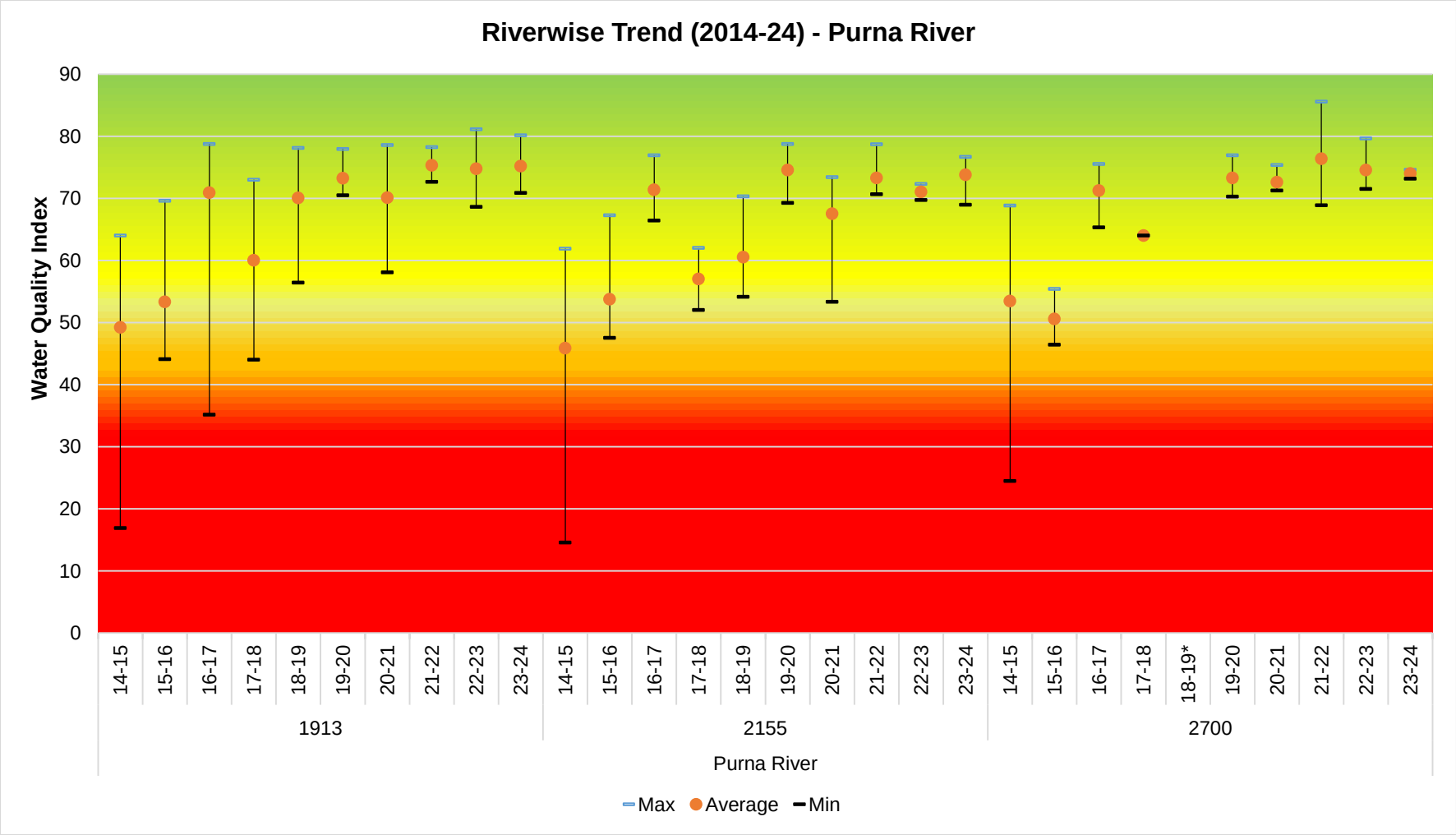

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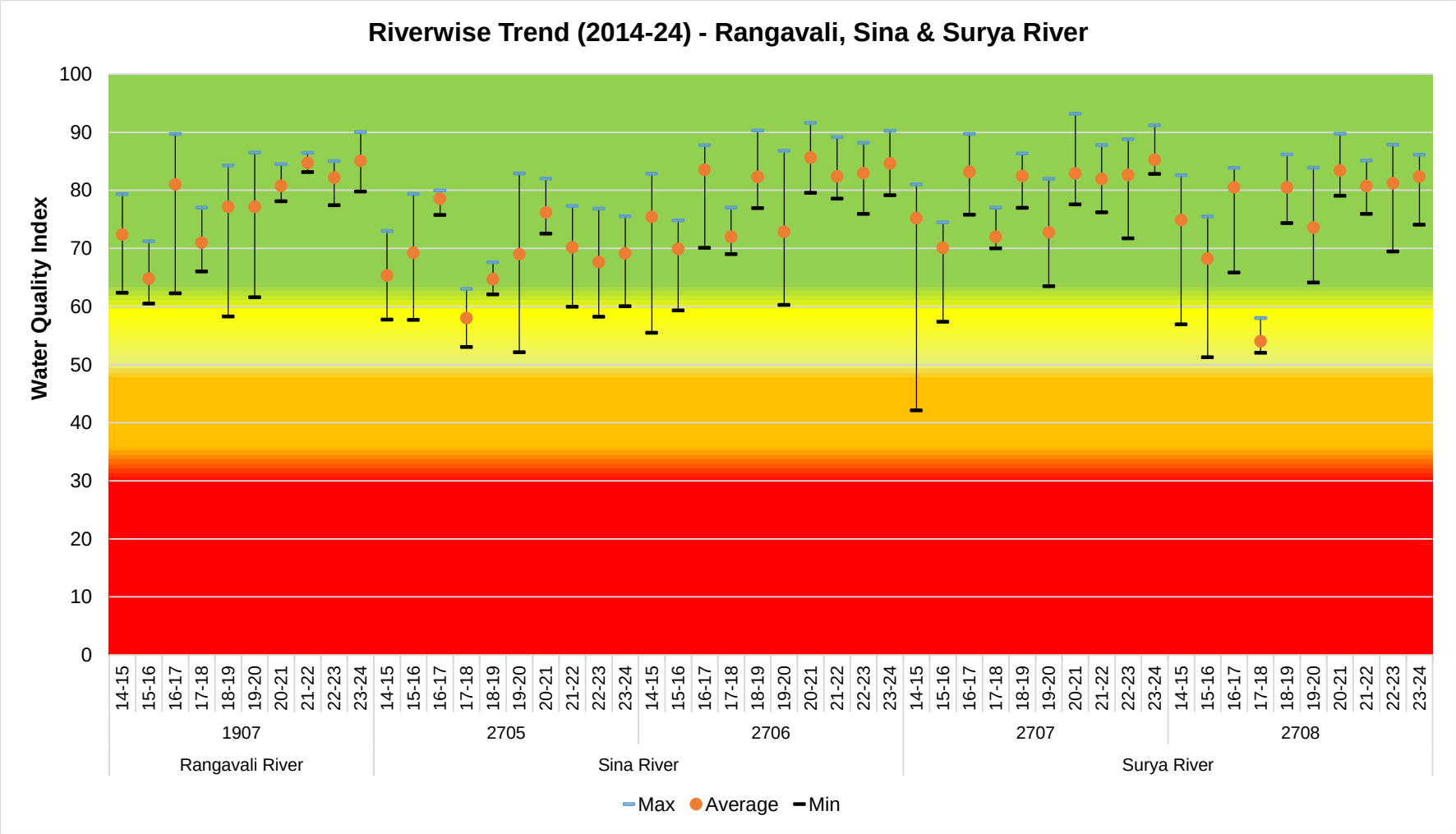

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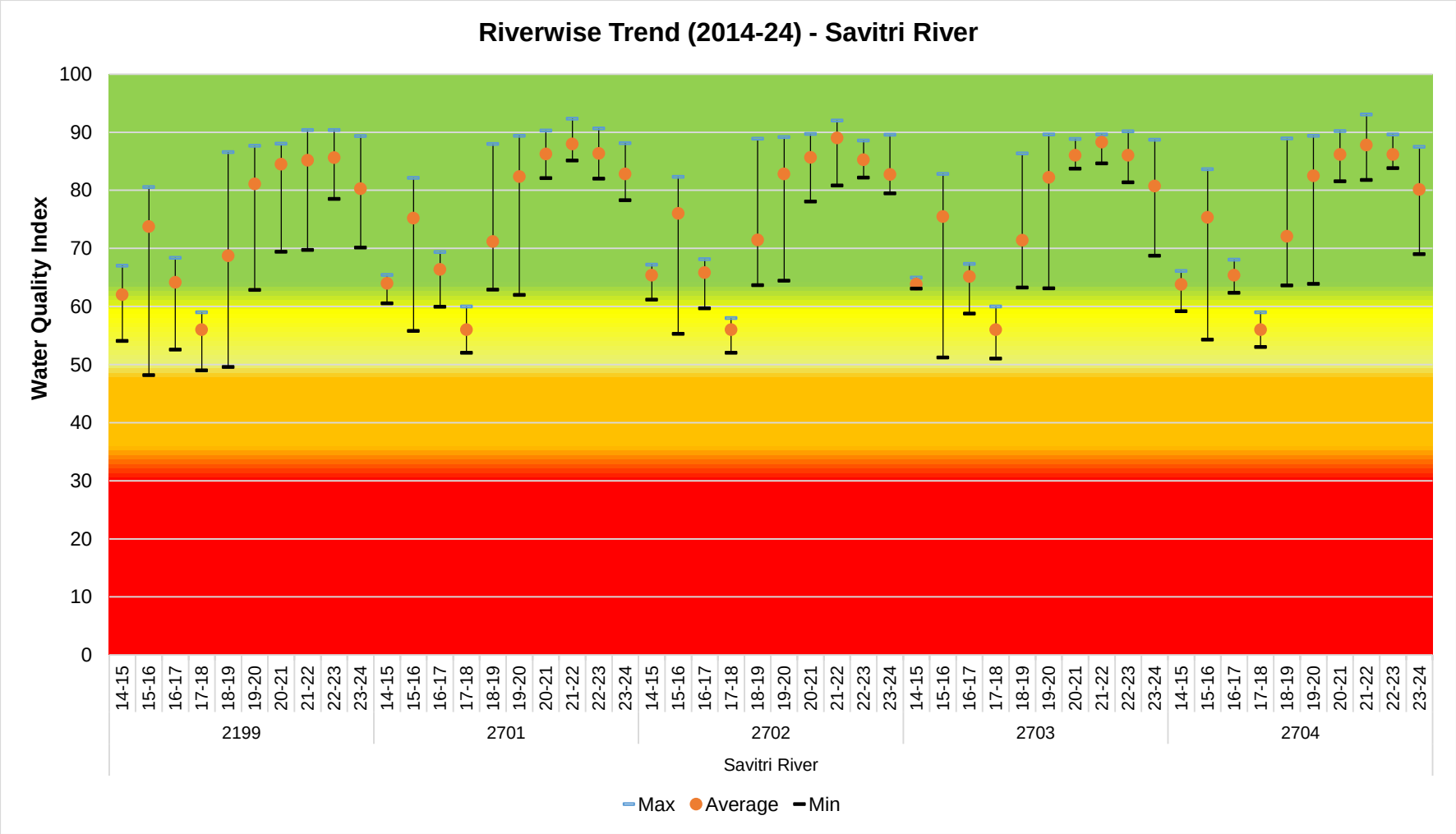

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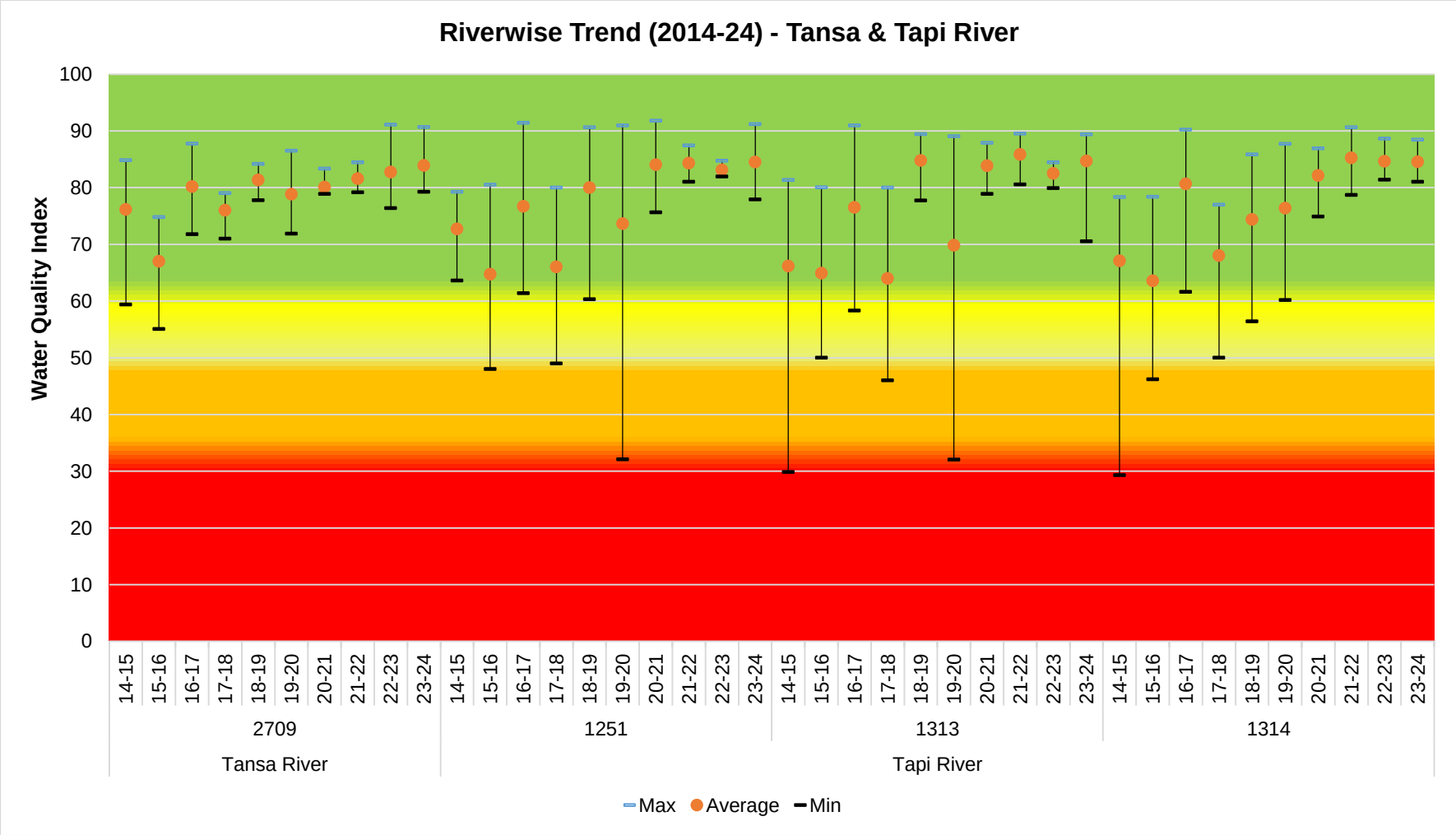
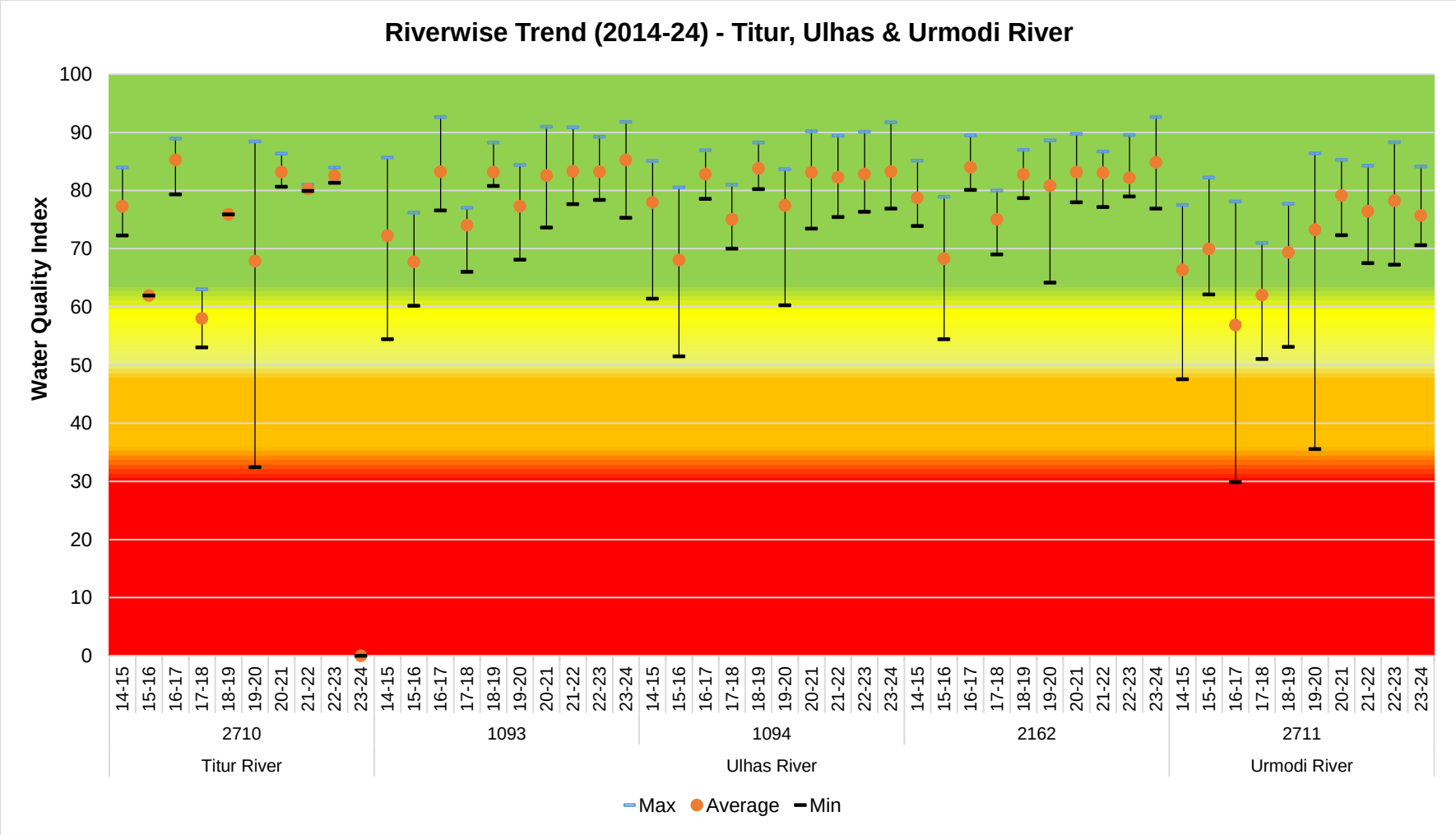


Note:* Stations are Dry/ No data available for respective year



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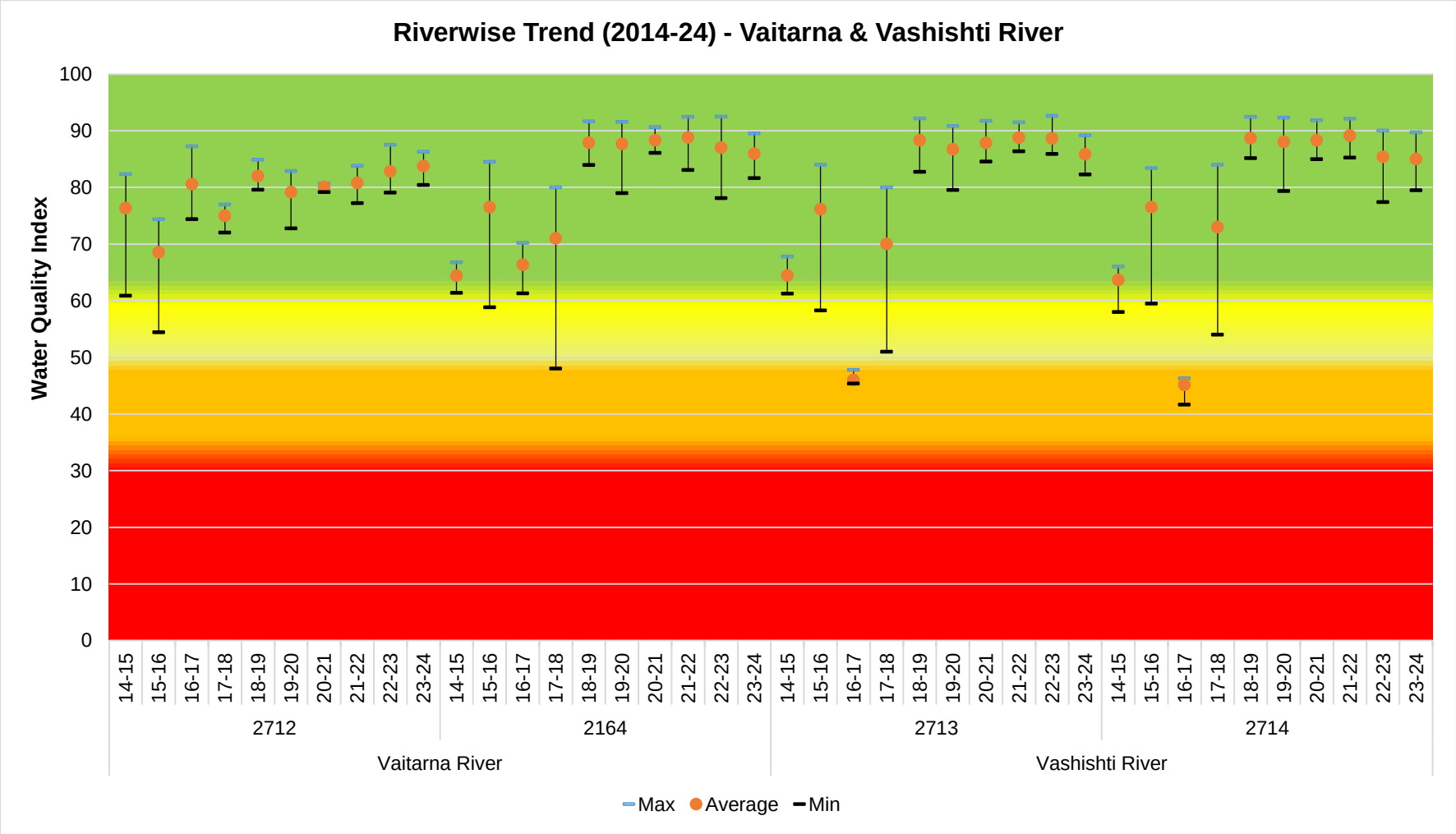

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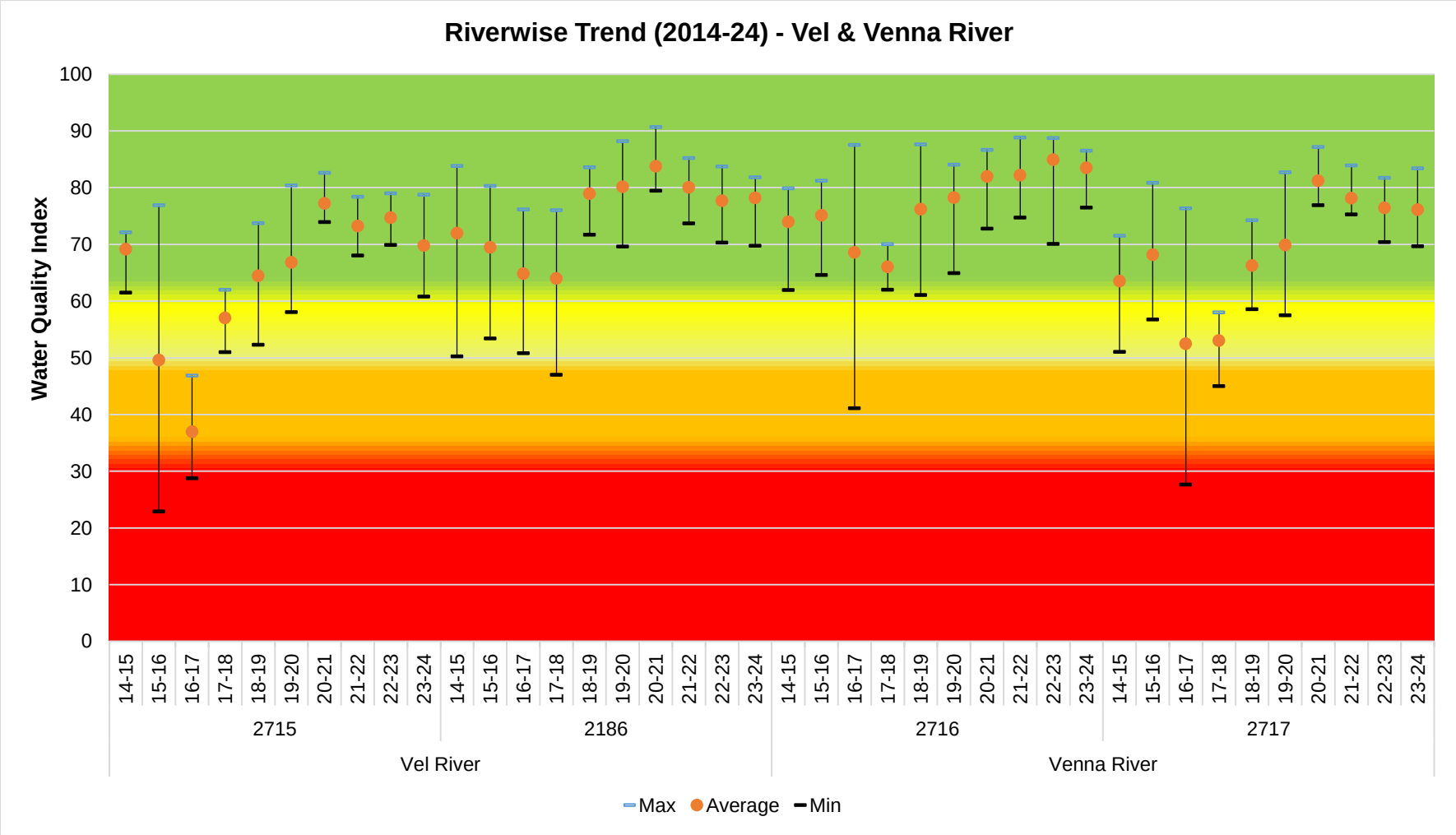

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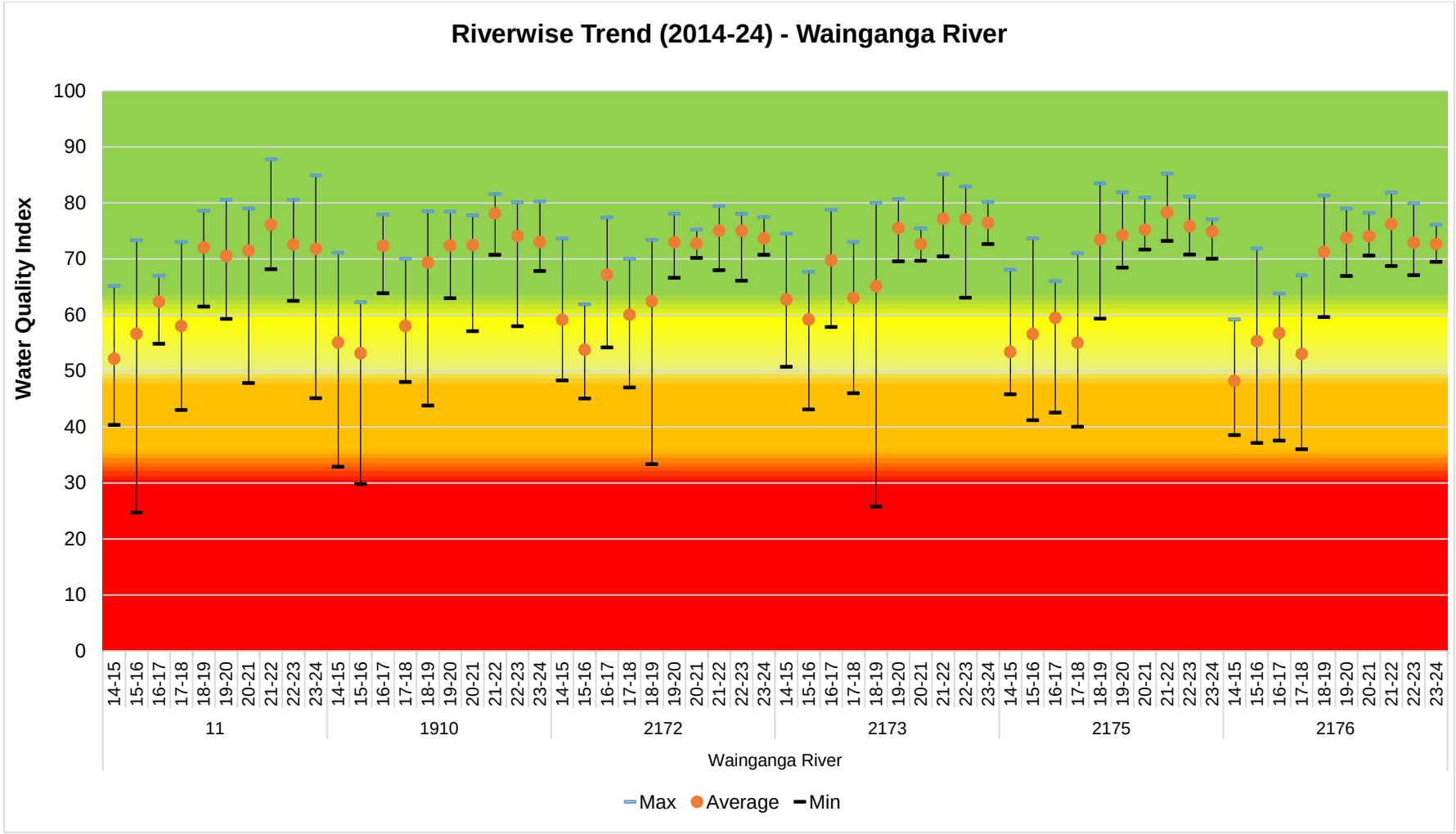

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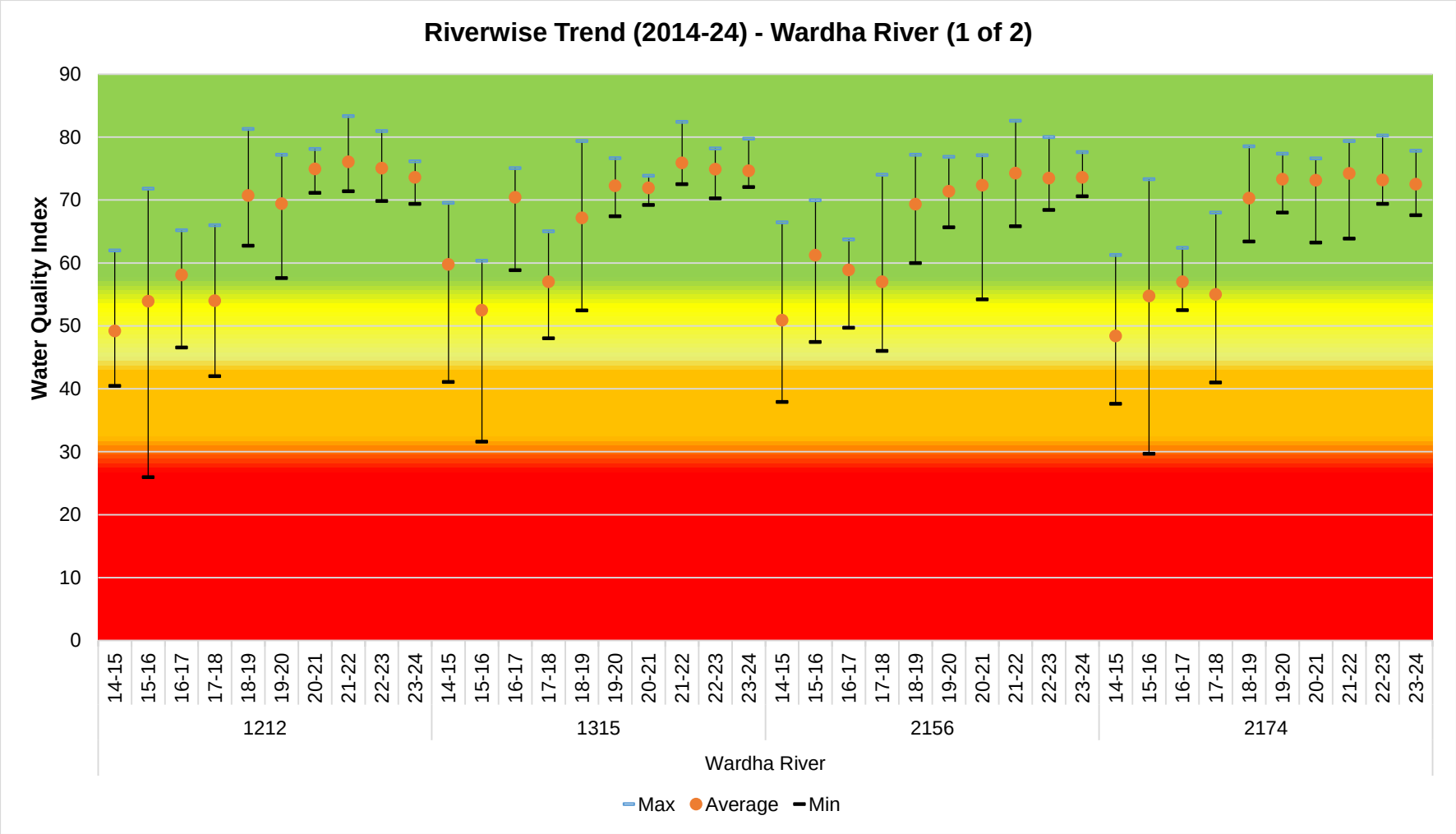

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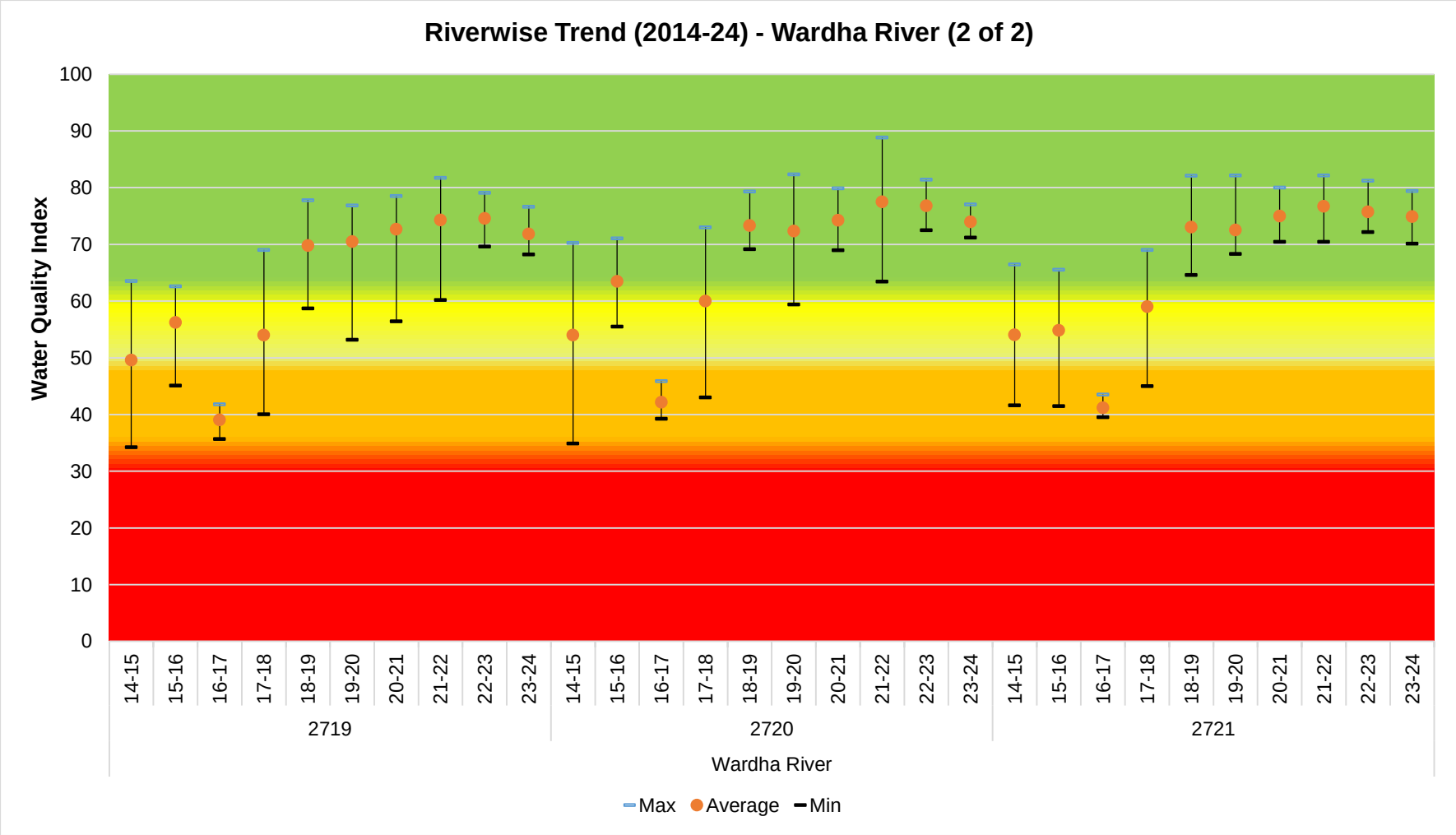
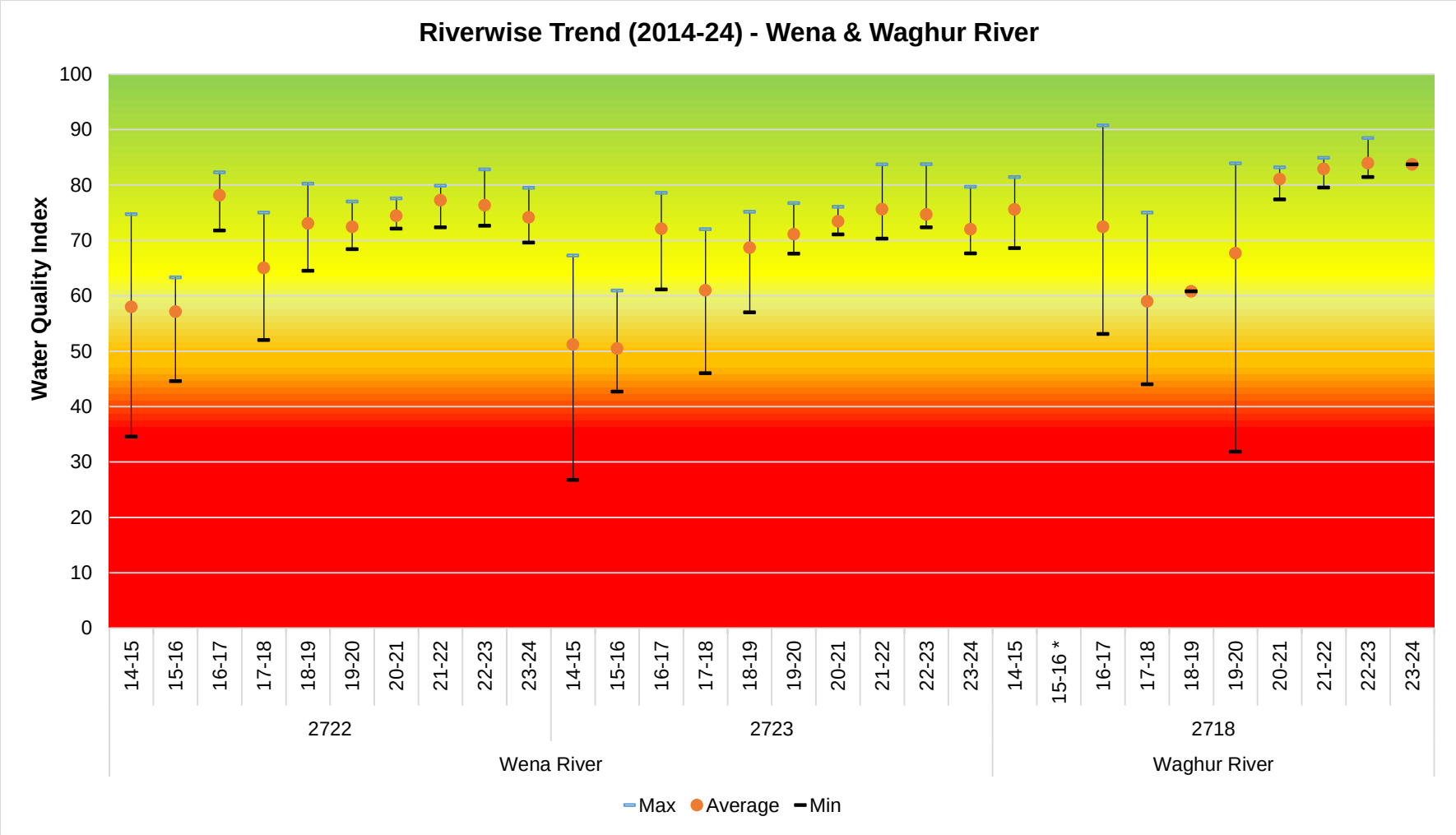


Note:* Stations are Dry/ No data available for respective year

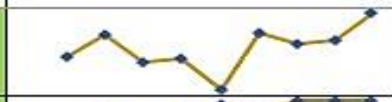
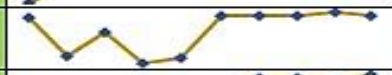
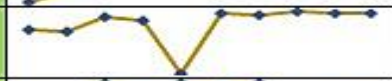


Note:* Stations are Dry/ No data available for respective year

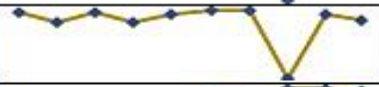
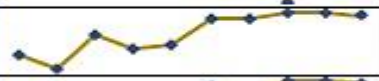
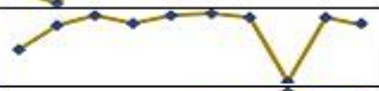
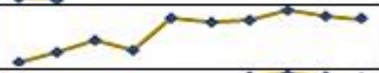
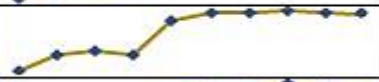
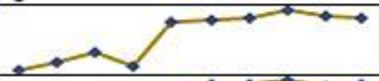
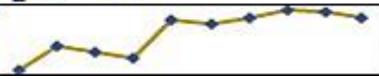
Annex - VII : Stationwise Trend In WQI (2014-24)

Surface water

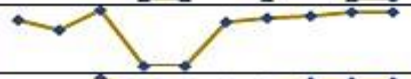
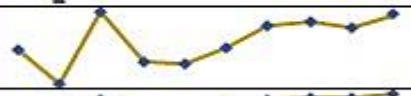
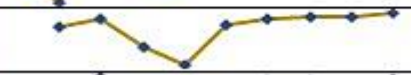
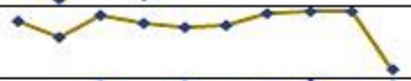
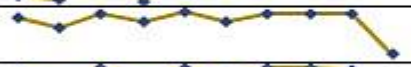
Ahmednagar, Akola, Amravati & Aurangabad Districts

District	Station Code	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Trend	Quality	CAGR %
Ahmednagar	195		48	60	44	46	29	62	55	58	74		Quality Improved	4.92
Akola	1913	49	53	70	59	70	73	70	75	75	75		Quality Improved	4.33
Akola	2155	46	54	70	57	61	75	68	73	71	74		Quality Improved	4.87
Akola	2675	71	50	63	46	48	72	72	72	74	72		No Significant Change	0.14
Amravati	2695	38	45	62	54	60	65	72	72	69	74		Quality Improved	6.85
Amravati	2700	53	51	70	64	Dry	73	73	76	75	74		Quality Improved	3.30
Aurangabad	178		68	82	66	82	75	82	NA	61	67		No Significant Change	-0.08
Aurangabad	179			81	38	Dry	82	80	NA	66	48		Quality Deteriorated	-6.42
Aurangabad	180		60	67	42	60	55	73	NA	44	46		Quality Deteriorated	-2.96
Aurangabad	181		62	65	53	67	56	69	NA	46	49		Quality Deteriorated	-2.53
Aurangabad	182		63	68	40	65	62	62	NA	47	Dry		NA	NA
Aurangabad	183		58	76	58	73	68	81	NA	53	58		No Significant Change	0.19
Aurangabad	184		66	81	64	66	80	81	NA	57	68		No Significant Change	0.36
Aurangabad	1312	85	73	85	75	85	87	87	NA	84	81		No Significant Change	-0.51

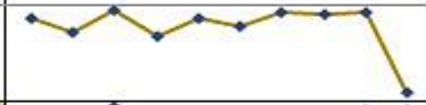
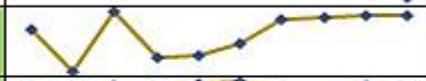
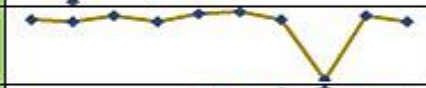
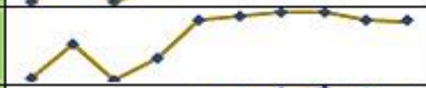
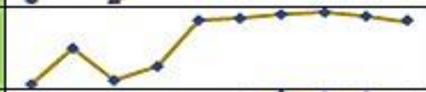
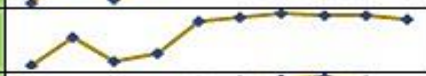
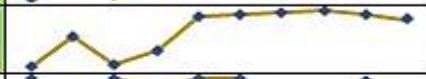
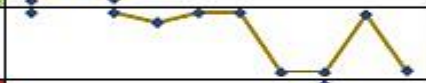
Aurangabad, Bhandara, Beed, Buldana & Chandrapur Districts

District	Station Code	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Trend	Quality	CAGR %
Aurangabad	2158	83	73	85	70	84	87	87	NA	80	78		No Significant Change	-0.69
Aurangabad	2159	83	74	84	73	85	87	87	NA	82	77		No Significant Change	-0.67
Aurangabad	2160	84	72	85	72	81	87	87	NA	82	74		Quality Deteriorated	-1.27
Bhandara	2172	59	54	66	61	62	73	73	75	75	74		Quality Improved	2.22
Bhandara	2173	63	59	69	64	65	75	73	77	77	76		Quality Improved	2.00
Beed	2657	41	71	83	73	84	86	82	NA	80	72		Quality Improved	5.88
Buldana	2699	53	52	70	58	67	74	71	77	73	75		Quality Improved	3.47
Chandrapur	11	52	57	62	57	72	70	71	76	73	72		Quality Improved	3.24
Chandrapur	1212	49	54	57	55	71	69	75	76	75	74		Quality Improved	4.11
Chandrapur	2174	48	55	57	55	70	73	73	74	73	72		Quality Improved	4.12
Chandrapur	2175	53	57	61	55	73	74	75	78	76	75		Quality Improved	3.44
Chandrapur	2176	48	55	58	54	71	74	74	76	73	73		Quality Improved	4.17
Chandrapur	2719	50	56	58	53	70	70	73	74	75	72		Quality Improved	3.78
Chandrapur	2720	54	63	61	59	73	72	74	77	77	74		Quality Improved	3.20

Chandrapur, Dhule & Jalgaon Districts

District	Station Code	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Trend	Quality	CAGR %
Chandrapur	2721	55	55	60	59	73	73	75	77	76	75		Quality Improved	3.21
Dhule	197		50	54	54	63	61	61	61	64	67		Quality Improved	3.40
Dhule	2652	64	64	87	No data	Dry	63	Dry	86	Dry	Dry		NA	NA
Dhule	2659	76	59	90	No data	Dry	71	77	82	86	87		Quality Improved	1.38
Dhule	2666	67	55	90	65	Dry	77	79	84	84	84		Quality Improved	2.34
Dhule	2670	73	65	89	70	74	84	82	83	84	87		Quality Improved	1.81
Dhule	2684	74	62	87	70	69	74	82	83	81	86		Quality Improved	1.53
Jalgaon	196		59	65	45	32	61	65	66	66	69		Quality Improved	1.84
Jalgaon	1251	73	65	86	66	80	74	84	84	83	84		Quality Improved	1.51
Jalgaon	1252	73	50	81	67	63	67	83	85	86	NA		NA	NA
Jalgaon	1313	66	65	85	64	85	70	84	86	83	85		Quality Improved	2.50
Jalgaon	2658	75	53	83	68	85	67	80	82	80	NA		NA	NA
Jalgaon	2667	72	46	83	60	82	66	82	83	80	NA		NA	NA
Jalgaon	2674	74	56	86	60	77	75	82	85	83	83		Quality Improved	1.14

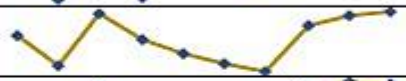
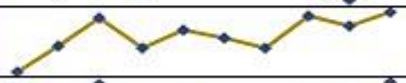
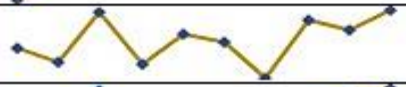
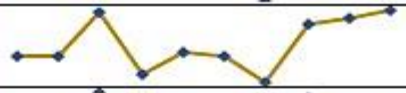
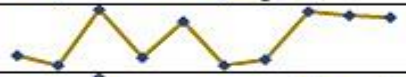
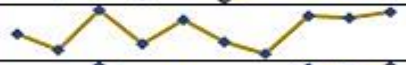
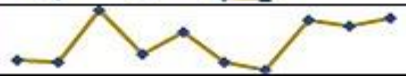
Jalgaon, Jalna, Kolhapur, Latur, Mumbai & Nagpur Districts

District	Station Code	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Trend	Quality	CAGR %
Jalgaon	2710	77	62	84	58	76	68	83	80	83	NA		NA	NA
Jalgaon	2718	76	51	86	59	61	68	81	83	84	84		Quality Improved	1.03
Jalna	2161	77	75	82	74	84	87	76	NA	82	73		No Significant Change	-0.46
Kolhapur	1153	63	75	63	69	84	83	86	88	85	81		Quality Improved	2.61
Kolhapur	1310	63	73	63	69	84	84	86	87	85	83		Quality Improved	2.79
Kolhapur	1311	61	75	61	69	84	85	87	87	84	83		Quality Improved	3.08
Kolhapur	1904	62	75	63	68	85	85	87	88	86	84		Quality Improved	3.09
Kolhapur	1905	61	75	63	67	83	85	87	86	86	83		Quality Improved	3.13
Kolhapur	2163	62	75	62	68	84	85	86	87	85	82		Quality Improved	2.94
Latur	2673	85		85	69	84	84	Dry	NA	82	NA		NA	NA
Mumbai	2168	44	39	32	34	30	42	44	53	35	36		Quality Deteriorated	-2.11
Nagpur	185		51	71	60	66	71	72	76	76	75		Quality Improved	4.42
Nagpur	186		32	38	28	35	37	46	37	48	36		Quality Improved	1.33
Nagpur	187		33	40	30	34	38	46	33	55	36		No Significant Change	0.96

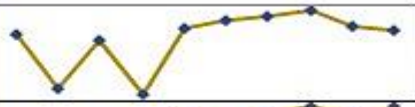
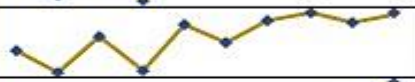
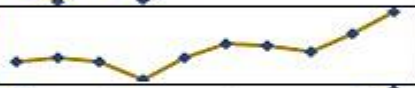
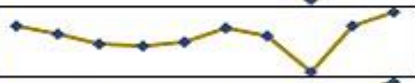
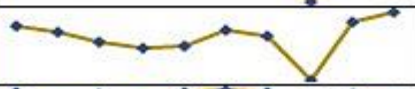
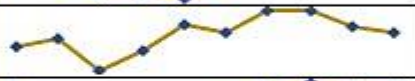
Nagpur, Nanded, Nandurbar & Nashik Districts

District	Station Code	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Trend	Quality	CAGR %
Nagpur	188		38	41	29	44	43	48	51	46	45		Quality Improved	2.02
Nagpur	189		47	45	31	42	47	48	51	50	NA		NA	NA
Nagpur	1908	56	55	72	60	70	70	72	76	75	74		Quality Improved	2.78
Nagpur	1909	54	53	69	60	69	69	71	71	65	74		Quality Improved	3.09
Nagpur	1910	55	53	72	59	69	72	72	78	74	73		Quality Improved	2.79
Nagpur	2170	57	57	77	66	71	71	73	77	76	75		Quality Improved	2.79
Nagpur	2171	56	54	72	61	66	71	73	75	72	74		Quality Improved	2.81
Nanded	1209	83	75	83	72	84	84	85	NA	80	78		No Significant Change	-0.66
Nanded	1210	83	76	84	72	86	86	81	NA	82	78		No Significant Change	-0.65
Nandurbar	1314	68	64	86	68	74	76	82	85	85	85		Quality Improved	2.24
Nandurbar	1907	72	65	88	71	77	77	81	85	82	85		Quality Improved	1.63
Nashik	194		62	88	55	79	Dry	73	81	83	82		Quality Improved	3.15
Nashik	1095	76	69	88	64	75	69	85	87	87	86		Quality Improved	1.22
Nashik	1096	69	63	80	68	82	71	66	82	81	80		Quality Improved	1.47

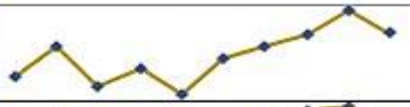
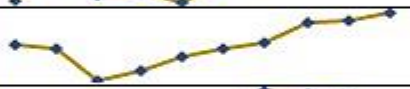
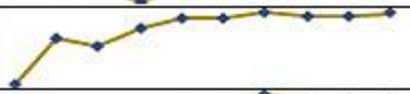
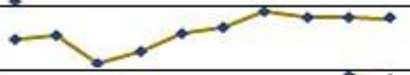
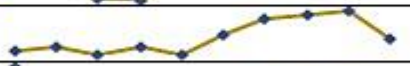
Nashik District

District	Station Code	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Trend	Quality	CAGR %
Nashik	1211	80	63	79	63	77	72	65	80	81	81		No Significant Change	0.06
Nashik	1253	74	63	84	73	67	63	60	79	83	84		Quality Improved	1.30
Nashik	2177	73	67	83	69	73	74	79	83	85	84		Quality Improved	1.38
Nashik	2178	68	59	72	59	67	76	62	62	54	66		No Significant Change	-0.24
Nashik	2179	51	65	80	63	74	69	64	81	76	83		Quality Improved	5.02
Nashik	2180	67	63	80	62	72	70	57	77	74	81		Quality Improved	1.83
Nashik	2181	65	65	82	58	67	65	56	78	80	83		Quality Improved	2.42
Nashik	2182	69	67	87	70	71	67	66	84	84	83		Quality Improved	1.81
Nashik	2183	70	67	87	69	83	67	69	87	85	84		Quality Improved	1.89
Nashik	2660	71	68	89	72	67	69	68	86	77	85		Quality Improved	1.75
Nashik	2661	72	68	89	67	83	65	69	86	85	86		Quality Improved	1.73
Nashik	2662	75	67	88	69	82	71	64	85	84	87		Quality Improved	1.49
Nashik	2663	73	68	87	70	81	67	66	86	84	86		Quality Improved	1.71
Nashik	2664	70	69	88	72	80	69	66	84	82	85		Quality Improved	1.94

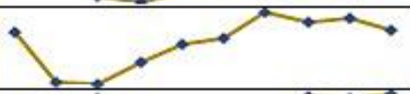
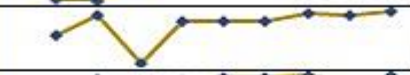
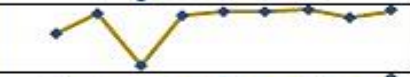
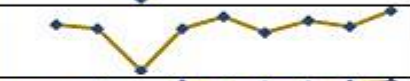
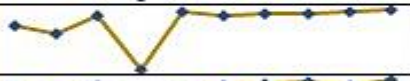
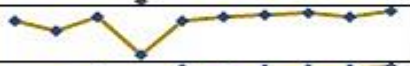
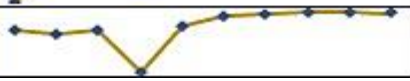
Osmanabad, Palghar, Parbhani & Pune Districts

District	Station Code	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Trend	Quality	CAGR %
Osmanabad	2157	83	73	82	72	85	86	87	88	85	84		No Significant Change	0.06
Palghar	2696	77	72	80	73	83	79	83	85	83	85		No Significant Change	0.98
Palghar	2785	26	28	26	20	28	33	32	30	36	44		Quality Improved	5.13
Palghar	2786	46	31	37	21	27	37	25	Dry	35	51		Quality Improved	1.20
Palghar	2787	39	31	24	22	25	37	30	Dry	38	51		Quality Improved	2.68
Palghar	2788	36	32	26	21	23	34	29	Dry	39	45		Quality Improved	2.27
Parbhani	12	84	71	81	73	84	86	83	NA	82	78		No Significant Change	-0.77
Pune	1189	54	47	45	47	48	52	61	66	65	49		Quality Deteriorated	-1.03
Pune	1190	70	52	43	45	39	49	58	61	63	52		Quality Deteriorated	-3.02
Pune	1191	61	64	52	59	70	67	76	76	69	67		No Significant Change	0.90
Pune	1192	70	62	49	55	63	63	70	73	71	70		No Significant Change	-0.01
Pune	1463	67	67	58	60	65	70	74	74	75	75		Quality Improved	1.08
Pune	2191	41	42	41	43	41	47	63	62	62	47		Quality Improved	1.29
Pune	2192	47	56	46	46	43	50	57	62	65	56		Quality Improved	1.66

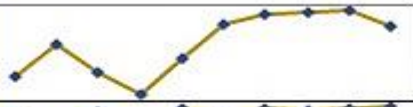
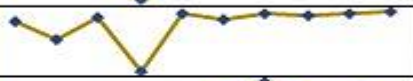
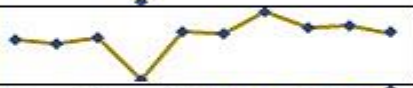
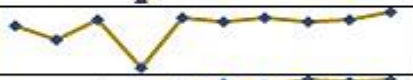
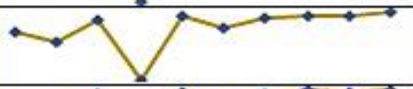
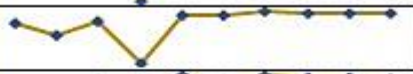
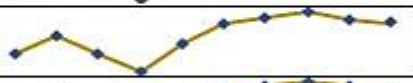
Pune District

District	Station Code	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Trend	Quality	CAGR %
Pune	2193	50	58	47	52	45	55	58	62	69	62		Quality Improved	2.24
Pune	2194	42	58	44	46	41	49	57	61	63	53		Quality Improved	2.32
Pune	2195	59	58	46	49	55	58	60	68	68	71		Quality Improved	1.92
Pune	2196	55	54	45	45	47	53	66	65	63	51		No Significant Change	-0.81
Pune	2197	56	64	57	51	53	58	66	67	71	71		Quality Improved	2.45
Pune	2655	63	68	58	53	58	61	73	74	72	74		Quality Improved	1.53
Pune	2656	41	62	58	67	72	73	75	74	73	75		Quality Improved	6.27
Pune	2665	60	62	48	54	64	67	76	72	73	72		Quality Improved	1.78
Pune	2668	55	64	55	51	53	64	65	66	72	70		Quality Improved	2.40
Pune	2669	62	65	59	57	62	67	68	73	76	74		Quality Improved	1.82
Pune	2677	59	58	49	48	60	61	77	74	70	63		No Significant Change	0.72
Pune	2678	42	44	40	44	40	49	57	59	61	47		Quality Improved	1.23
Pune	2679	71	41	39	42	40	43	57	59	60	45		Quality Deteriorated	-4.41
Pune	2680	42	72	63	69	83	86	86	85	85	83		Quality Improved	7.03

Pune & Raigad Districts

District	Station Code	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Trend	Quality	CAGR %
Pune	2682	65	66	52	56	62	62	69	70	71	75		Quality Improved	1.36
Pune	2690	49	44	44	44	43	46	62	62	61	52		No Significant Change	0.54
Pune	2691	60	55	44	45	44	48	60	62	62	51		Quality Deteriorated	-1.71
Pune	2692	79	65	60	67	82	79	86	85	82	80		No Significant Change	0.15
Pune	2693	57	53	49	48	48	53	64	66	72	66		Quality Improved	1.44
Pune	2694	52	53	45	43	46	49	61	63	64	53		No Significant Change	0.16
Pune	2715	69	50	49	57	64	67	77	73	75	70		No Significant Change	0.09
Raigad	192		72	83	55	80	80	80	84	83	86		Quality Improved	2.00
Raigad	193		71	81	56	80	82	82	83	79	82		Quality Improved	1.49
Raigad	216		65	62	34	62	72	59	69	64	75		Quality Improved	1.62
Raigad	1151	75	71	80	55	82	80	81	81	82	83		Quality Improved	1.01
Raigad	1152	77	70	79	53	77	80	82	82	80	84		No Significant Change	0.84
Raigad	1462	31	71	78	55	84	77	84	83	84	86		Quality Improved	10.76
Raigad	2198	70	68	70	48	72	77	79	79	79	79		Quality Improved	1.20

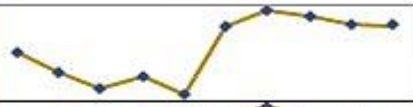
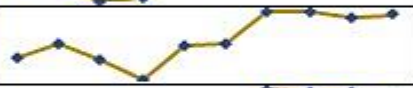
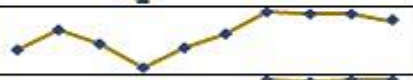
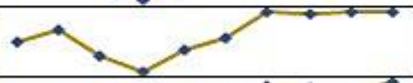
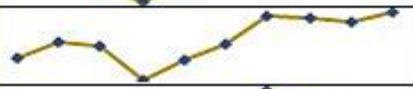
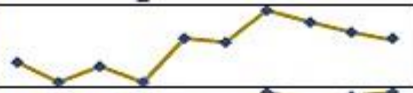
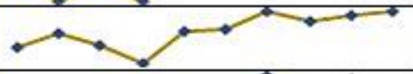
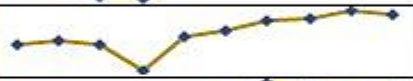
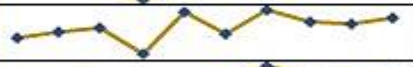
Raigad & Ratnagiri Districts

District	Station Code	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Trend	Quality	CAGR %
Raigad	2199	63	74	64	56	69	81	84	85	86	80		Quality Improved	2.52
Raigad	2651	77	69	78	54	80	78	80	79	81	82		No Significant Change	0.53
Raigad	2671	61	58	61	38	64	64	76	67	68	64		No Significant Change	0.48
Raigad	2672	77	69	80	55	81	80	82	80	80	85		No Significant Change	0.94
Raigad	2685	74	67	74	42	75	80	79	83	82	83		Quality Improved	1.14
Raigad	2686	76	72	83	54	84	78	83	84	84	86		Quality Improved	1.19
Raigad	2687	76	72	82	55	83	79	82	83	82	83		No Significant Change	0.94
Raigad	2688	76	69	77	55	80	80	82	81	81	81		No Significant Change	0.59
Raigad	2689	76	68	80	54	82	79	82	82	81	80		No Significant Change	0.56
Raigad	2701	64	75	66	56	71	82	86	88	86	83		Quality Improved	2.62
Raigad	2702	65	76	66	56	71	83	86	89	85	83		Quality Improved	2.38
Raigad	2703	64	75	65	56	71	82	86	88	86	81		Quality Improved	2.37
Raigad	2704	64	75	65	57	72	82	86	88	86	80		Quality Improved	2.31
Ratnagiri	201		79	65	69	84	82	83	82	84	81		No Significant Change	0.21

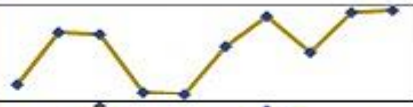
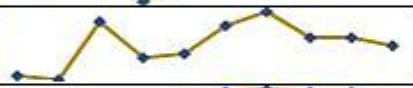
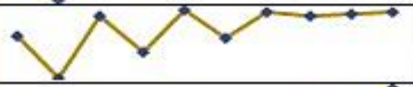
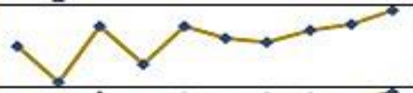
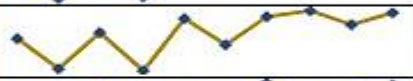
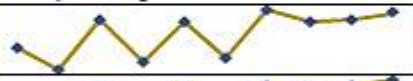
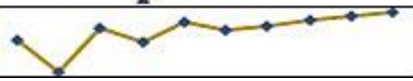
Ratnagiri, Sangli & Satara Districts

District	Station Code	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Trend	Quality	CAGR %
Ratnagiri	202		79	65	71	87	88	87	88	87	85		No Significant Change	0.79
Ratnagiri	203		79	66	71	86	87	88	88	87	85		No Significant Change	0.78
Ratnagiri	204		78	65	70	88	87	87	89	86	83		No Significant Change	0.66
Ratnagiri	2164	64	77	66	72	88	88	88	89	87	86		Quality Improved	2.93
Ratnagiri	2676	63	75	64	70	82	86	88	89	86	85		Quality Improved	3.18
Ratnagiri	2713	64	76	66	72	88	87	88	89	89	86		Quality Improved	2.91
Ratnagiri	2714	64	77	65	74	89	88	88	89	85	85		Quality Improved	2.94
Ratnagiri	2790	56	69	59	49	81	83	84	83	82	81		Quality Improved	3.75
Sangli	37	62	78	66	72	87	84	85	86	83	81		Quality Improved	2.74
Sangli	198		78	64	69	87	84	85	85	83	81		No Significant Change	0.51
Sangli	199		78	64	69	87	85	85	85	82	81		No Significant Change	0.46
Sangli	200		77	64	69	87	84	85	85	82	82		No Significant Change	0.65
Sangli	1906	64	77	65	72	86	84	85	85	83	81		Quality Improved	2.34
Satara	36	65	73	66	60	64	69	75	75	75	78		Quality Improved	1.91

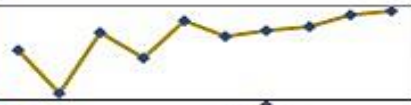
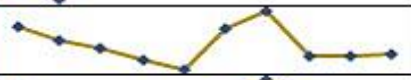
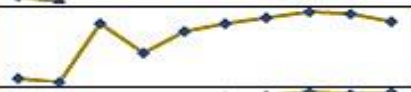
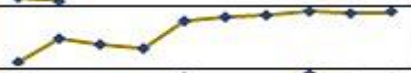
Satara & Solapur Districts

District	Station Code	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Trend	Quality	CAGR %
Satara	1194	78	74	70	73	69	83	87	86	84	84		No Significant Change	0.69
Satara	2186	72	69	64	65	79	80	84	80	78	78		No Significant Change	0.83
Satara	2187	61	66	60	54	65	66	76	76	74	75		Quality Improved	1.98
Satara	2188	62	70	64	54	62	68	77	76	76	73		Quality Improved	1.76
Satara	2189	68	72	64	59	66	69	77	76	77	77		Quality Improved	1.21
Satara	2190	64	68	68	57	63	68	77	76	75	78		Quality Improved	2.03
Satara	2681	58	51	56	51	65	64	74	70	67	65		Quality Improved	1.16
Satara	2683	64	69	64	58	70	71	78	74	76	78		Quality Improved	2.02
Satara	2711	66	70	63	62	69	73	79	76	78	76		Quality Improved	1.33
Satara	2716	74	75	74	65	76	78	82	82	85	83		Quality Improved	1.22
Satara	2717	64	68	59	53	66	70	81	78	76	76		Quality Improved	1.81
Solapur	28	63	65	67	56	75	65	76	70	69	72		Quality Improved	1.27
Solapur	1188	67	65	67	57	60	68	74	71	69	71		No Significant Change	0.58
Solapur	1911	62	65	72	56	59	60	66	67	69	72		Quality Improved	1.53

Solapur & Thane Districts

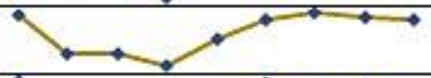
District	Station Code	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Trend	Quality	CAGR %
Solapur	1912	52	62	62	51	50	59	65	58	66	66		Quality Improved	2.44
Solapur	2705	65	69	78	58	65	69	76	70	68	69		No Significant Change	0.57
Solapur	2789	47	46	70	55	56	68	74	63	63	60		Quality Improved	2.32
Thane	1092	67	63	54	60	75	79	80	80	79	74		No Significant Change	0.98
Thane	1093	72	68	82	74	83	77	83	83	83	85		Quality Improved	1.67
Thane	1094	78	68	82	74	84	77	83	82	83	83		No Significant Change	0.66
Thane	1461	78	69	82	73	82	80	79	82	83	86		Quality Improved	1.08
Thane	2162	79	68	84	75	83	81	83	83	82	85		No Significant Change	0.75
Thane	2653	78	72	78	72	82	78	82	83	81	81		No Significant Change	0.46
Thane	2654	77	72	79	72	81	76	82	83	80	82		No Significant Change	0.62
Thane	2706	75	70	83	72	82	73	86	82	83	85		Quality Improved	1.16
Thane	2707	75	70	83	72	82	73	83	82	83	85		Quality Improved	1.26
Thane	2708	75	68	82	54	81	74	83	81	81	82		No Significant Change	0.95
Thane	2709	76	67	79	76	81	79	80	82	83	84		No Significant Change	0.98

Thane, Wardha & Yavatmal Districts

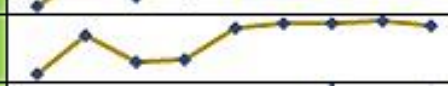
District	Station Code	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Trend	Quality	CAGR %
Thane	2712	76	69	80	75	82	79	80	81	83	84		No Significant Change	0.93
Thane	2782	42	38	35	32	29	41	47	33	33	33		Quality Deteriorated	-2.26
Thane	2783	43	36	36	41	32	42	46	42	36	35		Quality Deteriorated	-2.24
Thane	2784	42	33	30	32	28	44	43	35	34	33		Quality Deteriorated	-2.30
Wardha	1315	60	52	70	57	67	72	72	76	75	75		Quality Improved	2.25
Wardha	2722	59	57	78	66	73	72	74	77	76	74		Quality Improved	2.37
Wardha	2723	51	50	71	61	69	71	73	76	75	72		Quality Improved	3.45
Yavatmal	2156	51	61	58	57	69	71	72	74	73	74		Quality Improved	3.75
Yavatmal	2697	53	55	60	58	77	72	74	79	76	75		Quality Improved	3.63
Yavatmal	2698	50	57	59	55	70	72	73	76	73	73		Quality Improved	3.92

Saline water

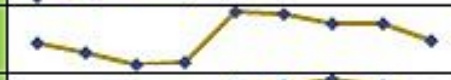
Mumbai District

District	Station Code	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Trend	Quality	CAGR %
Mumbai	1318	49	50	50	46	54	53	57	55	54	54		Quality Improved	1.07
Mumbai	2165	54	47	47	44	49	53	54	54	53	52		No Significant Change	-0.42
Mumbai	2166	55	45	47	45	50	54	54	54	52	52		No Significant Change	-0.43
Mumbai	2167	55	48	47	43	52	55	53	53	55	52		No Significant Change	-0.41
Mumbai	2169	50	45	47	41	52	54	53	52	53	53		No Significant Change	0.63
Mumbai	2808	55	46	47	44	51	54	55	53	54	52		No Significant Change	-0.66
Mumbai	2809	55	45	48	43	51	55	54	53	52	52		No Significant Change	-0.46
Mumbai	2810	51	47	48	43	50	53	53	53	51	50		No Significant Change	-0.23
Mumbai	2811	52	48	48	45	52	54	57	53	53	52		No Significant Change	-0.04
Mumbai	2812	53	46	47	45	50	55	53	52	50	50		No Significant Change	-0.46

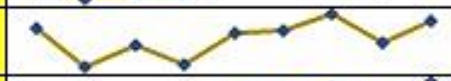
Raigad & Ratnagiri Districts

District	Station Code	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Trend	Quality	CAGR %
Raigad	191		48	48	46	54	56	54	54	61	52		Quality Improved	1.03
Raigad	1317	57	48	52	45	56	57	58	54	63	56		No Significant Change	-0.16
Raigad	2803	69	58	58	52	71	76	73	72	75	72		No Significant Change	0.42
Ratnagiri	2804	63	77	64	69	85	87	86	87	87	80		Quality Improved	2.36
Ratnagiri	2813	62	74	60	62	75	80	80	79	78	70		Quality Improved	1.22
Ratnagiri	2814	54	71	59	61	75	80	77	78	76	69		Quality Improved	2.41
Ratnagiri	2815	53	72	58	60	75	78	78	79	77	70		Quality Improved	2.83

THANE DISTRICT (1 OF 2)

District	Station Code	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Trend	Quality	CAGR %
Thane	190		52	53	51	57	62	66	61	66	64		Quality Improved	2.48
Thane	1316	56	52	55	52	60	65	64	55	60	60		No Significant Change	0.71
Thane	2184	61	54	53	52	57	61	62	60	65	64		No Significant Change	0.44
Thane	2185	53	54	56	54	62	63	64	62	65	64		Quality Improved	1.88
Thane	2791	60	57	53	53	69	68	65	65	60	67		Quality Improved	1.10
Thane	2792	57	54	55	54	64	65	66	65	63	64		Quality Improved	1.10
Thane	2793	55	54	56	53	64	64	62	65	60	60		No Significant Change	0.86
Thane	2794	56	54	58	53	63	65	66	63	62	65		Quality Improved	1.52
Thane	2795	59	55	56	54	63	66	63	63	65	63		No Significant Change	0.72
Thane	2796	60	54	55	53	62	66	65	61	65	64		No Significant Change	0.58

THANE DISTRICT (2 OF 2)

District	Station Code	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Trend	Quality	CAGR %
Thane	2797	58	52	54	54	61	66	65	57	60	61		No Significant Change	0.64
Thane	2798	58	49	54	49	57	57	61	54	59	60		No Significant Change	0.44
Thane	2799	55	49	52	48	55	58	58	53	60	54		No Significant Change	-0.19
Thane	2800	61	57	60	54	62	60	61	70	64	62		No Significant Change	0.26
Thane	2801	58	52	59	52	60	63	63	59	62	65		Quality Improved	1.06
Thane	2802	55	52	56	52	60	63	60	57	61	55		No Significant Change	-0.04
Thane	2805	60	48	50	47	55	54	56	54	58	58		No Significant Change	-0.46
Thane	2806	61	47	49	48	53	55	55	52	56	55		Quality Deteriorated	-1.00
Thane	2807	56	46	45	48	50	57	54	52	58	51		No Significant Change	-0.81

Maharashtra Pollution Control Board
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