

**Jammu and Kashmir Pollution Control Committee**

Parivesh Bhavan, Forest Complex || Silk Factory Road  
Transport Nagar, Jammu, 180 006 || Rajbagh, Srinagar, 190 008

Tel - 0191-2476927; mail - membersecretaryjkpcb@gmail.com

**The Consultant Judicial,  
Hon'ble National Green Tribunal,  
Principal Bench,  
New Delhi.**

No: JKPC/NGT/OA 504/682

Date:- 17-08-2024

**Sub:- Hon'ble NGT order dated 08-05-2024 in OA No. 504/2024 titled  
"Tapestry of Dal Lake's decline and Fishing Community's struggle in  
Kashmir".**

Sir,

In compliance to the directions of Hon'ble National Green Tribunal, Principal Bench, New Delhi order dated 08-05-2024 in OA 504/2024, the response of the J&K Pollution Control Committee is submitted herewith.

It is therefore, requested that the response may kindly be taken on record and placed before the Hon'ble NGT for consideration.

Your faithfully,

**Encl:- As Above**

  
(Ghansham Singh) JKAS

Member Secretary

J&K PCC

17.8.24

Copy to the:-

- 1) Sh. Parth Awasthi, Government Standing Counsel for UT of Jammu and Kashmir, New Delhi for information and necessary action.

**Before the Hon'ble National Green Tribunal  
Principal Bench, New Delhi**

Original Application No. **504 of 2024**

**IN THE MATTER OF**

**News item titled "Tapestry of Dal Lake's decline and Fishing Community's struggle in Kashmir" appearing in the wire dated 01.03.2024".**

Response of the Jammu and Kashmir Pollution Control Committee in compliance to Hon'ble National Green Tribunal directions dated 08-05-2024 passed in OA No. **504 of 2024** titled "News item titled "**Tapestry of Dal Lake's decline and Fishing Community's struggle in Kashmir**" appearing in the wire dated 01.03.2024".

**Background:**

That the Hon'ble National Green Tribunal, Principal Bench, New Delhi vide its order dated 08-05-2024 in the OA No. 504 of 2024 titled "**Tapestry of Dal Lake's decline and Fishing Community's struggle in Kashmir**" issued the following directions:-

1. *"Let Notice be issued to the above respondents for filing their response atleast one week before the next date of hearing by e-mail at [judicial-ngt@gov.in](mailto:judicial-ngt@gov.in) preferably in the form of searchable PDF/OCR Support PDF and not in the form of Image PDF".*

**Status Report:**

In compliance to directions of Hon'ble NGT dated 08-05-2024 in **OA No. 504 of 2024**, in the first instance, Regional Director Kashmir was asked to furnish a comprehensive report with following Terms of Reference (ToRs) vide this office



No. JKPCC/Sc/OA-504-2024/834-35 dated 22-05-2024 (copy enclosed as **Annexure 'A'**):

1. Status of Monitoring of Dal Lake in respect of No. of monitoring stations & water quality.
2. Status of Sewage management in Srinagar city specifically around Dal Lake.
3. Status of sewage disposal by houseboats and sewage treatment mechanism.
4. Status of monitoring of STPs with specific focus on efficiency / capacity of STPs.

The Regional Director, J&K PCC, Kashmir submitted a comprehensive report along with requisite detail especially water quality analysis report of the Dal Lake and average water quality profile of Dal Lake from January 2024 to May 2024 vide his No. PCC/RDK/W.Lab/24-25/20; dated 11/06/2024 (Copy enclosed as **Annexure 'B'**).

Some of the highlights of the report of the Regional Director, J&K PCC, Kashmir, summarised as under:

1. **Water Quality Analysis Report:**

Water samples were collected from 24 spots of the Dal and Nageen Lakes and subjected to analysis for various physico-chemical parameters. Out of the water samples collected and tested for 24 locations during the period w.e.f January to May 2024, only one spot conforms to Class "B" criteria (Report Annexed as Annexure 'B'. Results of key indicative water quality parameters are tabulated as below:

Parameters	Range Value
pH	7.26-9.7
Dissolved Oxygen (DO)	1.0 -12.5 mg/l
Biological Oxygen Demand (BOD)	2.1-23.5 mg/l
Total Coliform Bacteria	200 cfu/100ml – 36,000 cfu/100ml
Fecal Coliform Bacteria	20 cfu/100ml – 2000 cfu/100ml

Low concentration of Dissolved oxygen was recorded in the back water channels of the Dal Lake viz., Nayadyar and Jogilankar, which is

*[Handwritten signature]*

due to unabated flow of untreated domestic water into these channels. Higher concentrations of Dissolved Oxygen was recorded near the STPs and some open areas of the Dal lake.

The higher concentration of BOD was recorded near STPs and in interior areas of Dal Lake viz., Nayadyar and Jogilankar.

High concentration of Total coliform bacteria has been observed at Konkhan Intermediate Pumping Station (IPS) site, whereas, maximum concentration of Fecal Coliform Bacteria was observed near Hazratbal shrine and Konkhan Intermediate Pumping Station (IPS)

## **2. Waste Water Quality Analysis of STPs:**

Approximately, 193.34 MLD of domestic sewage is generated in Srinagar city based on 80% of 135 lpcd water supply to 1790249 of population (Projected population).

For treatment of sewage generated from the catchment areas of the Dal and Nageen Lake, there are six STPs, with capacity of 53.8 MLD of sewage water. One more Common STP with capacity of 60.0 MLD is under final stage of commissioning.

Untreated sewage gets entry into the Dal Lake from areas like Telbal, Lalbazar etc.

## **3. Waste water quality analysis:-**

Waste water quality analysis reports of the six number of operational STPs indicate that quality of the treated water for all analysed parameters does not fall within the prescribed limits and treated water is entering into the Dal lake, which should have been otherwise utilized for irrigation, construction work etc. Results of key indicative water quality parameters are tabulated as below:



STP Location	Parameters	Norms as per general standards
Nishat laam	pH: 7.3 - 7.7 BOD: 15.3- 34.0 Po <sub>4</sub> : 0.39-0.63 Ammonical Nitrogen: 3.61-8.62	5.5 to 9.0 30 5.0 50
Habak	pH: 7.49 - 7.83 BOD: 15.7- 46.8 Po <sub>4</sub> : 0.42-1.0 Ammonical Nitrogen: 6.01-9.03	5.5 to 9.0 30 5.0 50
Hazratbal	pH: 7.36 - 7.87 BOD: 15.8- 40.7 Po <sub>4</sub> : 0.25-0.67 Ammonical Nitrogen: 5.97-9.60	5.5 to 9.0 30 5.0 50
Nallah Amir Khan	pH: 7.60 - 7.8 BOD: 15.4- 19.7 Po <sub>4</sub> : 0.28-0.83 Ammonical Nitrogen: 7.8-9.09	5.5 to 9.0 30 5.0 50
Barinambal LAWDA	pH: 7.48 - 7.63 BOD: 14.3- 21.7 Po <sub>4</sub> : 0.53-0.91 Ammonical Nitrogen: 2.82-7.32	5.5 to 9.0 30 5.0 50
Barinambal UEED	pH: 7.31 - 7.61 BOD: 61.5- 87.7 Po <sub>4</sub> : 1.19-1.61 Ammonical Nitrogen: 9.22-10.01	5.5 to 9.0 30 5.0 50

4. **Status of disposal of sewage generated by the Houseboats: -**

There are about 910 houseboats present in Dal and Nigeen lake as per J&K Tourism Department whose water often gets discharged into Dal lake without any treatment. Sewage generated from houseboats stationed in Nigeen lake has been directed into sumps constructed near the fringe of the lake for its treatment.

Based upon the report of the Regional Director, J&K PCC and results of the water quality test reports, directions were issued to Vice Chairman J&K Lakes, Conservation & Management Authority, Srinagar

vide No. JKPCC/show cause notices / 2024/236-244 dated 27-06-2024 with the advise to immediately comply with the directions issued on 18-05-2024 (in OA 239 of 2024) as well as in OA No. 504/2024, failing which the officers, officials responsible for continued violation of Rules, shall be liable to be prosecuted under the relevant Acts. The response of the Vice Chairman, J&K, LCMA is awaited.

Similarly, Deputy Commissioner, Srinagar has also been asked to furnish the requisite information on the following aspects vide this office No. JKPCC/OA-504-2024/24/657 dated 10-08-2024 (Copy enclosed as **Annexure 'C'**) to share information with respect to

- i) Impact of tourism and rising population on the deteriorating condition of Dal Lake;
- ii) Scale of deterioration of Dal Lake owing to dumping of raw sewage / treated water from STPs specifically impact on fishes;
- iii) Factual status of Hanji people due to rising pollution in Dal Lake and its impact on fisheries.

In the premises, it is therefore respectfully prayed that the response may kindly be taken on record before the Hon'ble National Green Tribunal for consideration.

  
(Ghansham Singh)  
Member Secretary 17.8.24  
J&K PCC

**Jammu and Kashmir Pollution Control Committee**

Parivesh Bhavan, Forest Complex || Silk Factory Road  
Transport Nagar, Jammu, 180 006 || Rajbagh, Srinagar, 190 008

Tel - 0191-2476927; mail - membersecretaryjkspcb@gmail.com



NGT matter  
OA No.504 / 2024

Regional Director,  
J&K Pollution Control Committee,  
Kashmir.

No. : JKPC/Sc./ OA 504-2024/834-35

Date: 22 - 05-2024

Sub: Tapestry of Dal Lake's Decline and Fishing Community's Struggling in Kashmir appearing in the Wire dated 01.03.2024.

Ref: Hon'ble NGT directions dated 08.05.2024 in OA No. 504/ 2024.

Sir,

Please refer to the subject & reference cited above. In this connection, I am to convey that Hon'ble NGT in its order dt. 08.05.2024 in the matter of OA 504/2024 has reiterated regarding deteriorating condition of Dal Lake and its impact on Fishes and Fishing Community.

In this regard, you are requested to ensure submission information w.r.t following points:

1. Status of Monitoring of Dal Lake in respect of No. of monitoring stations & water quality.
2. Status of Sewage management in Srinagar city specifically around Dal Lake.
3. Status of Sewage disposal by House boats and sewage treatment mechanism.
4. Status of monitoring of STPs with specific focus on efficiency / capacity of STPs.

The Detailed Report should reach this office by or before **10-06-2024** for further necessary action at this end.

  
(GhanSham Singh) JKAS  
Member Secretary  
22.5.24

Copy to

P.A to Chairman J&K PCC, for kind information of the Chairman.



Government of Jammu & Kashmir  
**J&K Pollution Control Committee**

Office of the Regional Director Kashmir

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www.jkspcb.nic.in(email: regionaldirectorjkmr@gmail.com)(Tel 0194-2135911/telefax 2311842)

**Member Secretary**  
**Pollution Control Committee**  
**Jammu**

NO:- PCC/RDK/W.Lab/ 24-25/20

Dated:- 11/06/2024

**Subject: - Tapestry of Dal lake's decline and Fishing Community's struggling in Kashmir appearing in the Wire dated 01-03-2024**

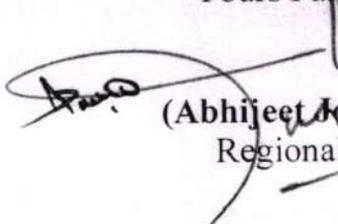
**Ref;- your letter no JKPCC/Sc/OA504-2024/834-35 Dated.22-05-2024**

Sir,

With reference to above captioned subject the brief report after carrying out the fresh inspection has been framed on Dal and Nigeen lake .The report is hereby submitted for favour of information and further necessary action please

Enl. AA

Yours Faithfully

  
(Abhijeet Joshi) SFS  
Regional Director

SL(A)

  
12-6-24



**JAMMU & KASHMIR  
POLLUTION CONTROL COMMITTEE**  
[www.jkspcb.in](http://www.jkspcb.in)

**A Breif Report  
on  
DAL-NIGEEN LAKE**

**(JANUARY 2024 to MAY 2024)**

Compliance to Hon'ble NGT Direction dated 08-05-2024 in OA No.504/2024



**Regional Directorate  
J & K PCC, Kashmir**

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Government of Jammu & Kashmir  
**J&K Pollution Control Committee**



Office of the Regional Director Kashmir

*Sheikh-ul-Kalam Complex, Rajbagh, near Government Silk Factory, Srinagar-190008*

[www.jkspcb.nic.in](http://www.jkspcb.nic.in)(email: [regionaldirectorkmr@gmail.com](mailto:regionaldirectorkmr@gmail.com))(Tel 0194-2135911/telefax 2311842)

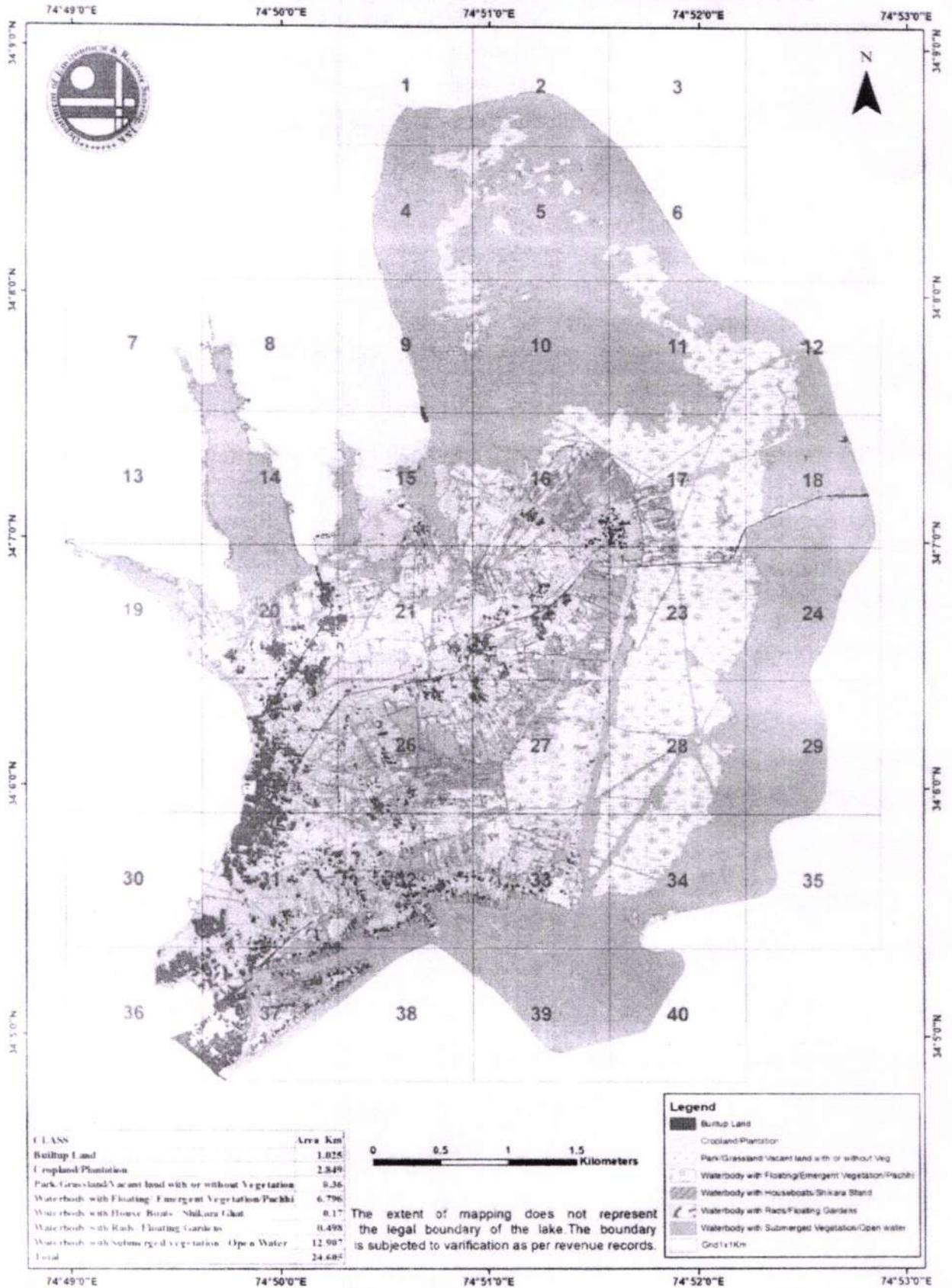
## **Introduction**

Dal lake is a Himalayan urban lake and is situated towards north east of Srinagar at an altitude of about 1586m above sea level between geographic coordinates of 34°06'N & 34°10'N latitude and 74°50'E & 74°54'E Longitude. The lake is shallow with saucer shaped basin and has open drainage i.e, regular inflow and outflow of water takes place. Catchment area of Dal lake is about 314 sq. kms which is about twenty times more than the lake area. The main source of water are Dachigam, Telbal Nallah, Mearkh Shah Nallah, Bota koul, and Pishpow Nallah. Within the lake basin itself, there are several springs which act as permanent water sources for the lake. The lake has two main outlets one at Dalgate which is linked with "Tsehunti Khul" channel for final discharge of water into river Jhelum. This outlet has a lock gate provision for flow regulation and navigation purpose. The other outlet is through Nallah Amir Khan which links Nigeen Lake with Anchar lake via Gilsar and Khushalsar respectively.

## **Environmental Concern of Dal Lake.**

The lake once famous for its pristine beauty is facing ever increasing anthropogenic pressures due to heavy pollution load from habitations, houseboats and Tourist activities etc. The main environmental issues involved are discharge of untreated sewage by Dal dwellers, some adjoining residential areas, release of treated waste from STPs, excessive weed growth, reduction in water purity, siltation and discharge of domestic waste etc.

### LANDUSE LANDCOVER MAP OF DAL-NIGEEN LAKE 2020



## Water Quality Monitoring of Dal-Nigeen Lake

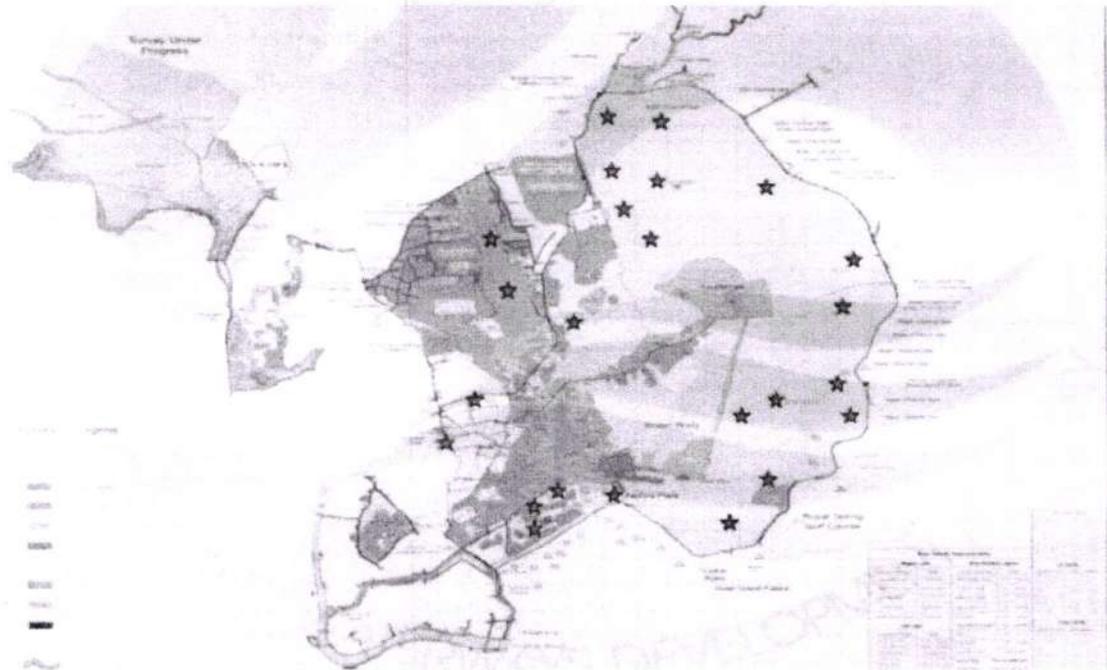
Keeping in view the importance of these water bodies, J&K State Pollution Control Committee, in pursuance to its mandate for prevention and control of pollution, has taken a step forward by monitoring the water quality of Dal and Nigeen Lake on monthly basis at 24 (Twenty four) designated sites .

### Water Quality Assessment of Dal Lake:-

This report contains assessment of water quality of Dal and Nigeen lakes from Jan 2024 to May 2024 at 24 designated locations. The site description of these monitoring stations is as as under:-

S.NO	Sample collection Site	Geo-reference	Site Description
1	Dalgate	34.0810146 °N 74.8298439°E	Water exit point of Dal lake
2	Nehru Park	34.089410 °N 74.844725°E	Tourist spot having house boats/hotels
3	Grand Palace Ghat	34.083446 °N 74.860873°E	Tourist spot
4	Charchinari	34.102740 °N 74.8667973°E	Central site of lokut Dal
5	Abikarpora	34.0901345 °N 74.8582487°E	Open area of lake
6	Near Nishatlaam STP	34.1069799 °N 74.8752291°E	Discharge point of treated effluent
7	Nishat water intake	34.1192646 °N 74.8767786°E	Water extraction point for Nishat water supply scheme
8	Telbal	34.1460713 °N 74.847831°E	Main water inlet channel
9	Near Habak STP	34.145703 °N 74.8432169°E	Discharge point of treated effluent
10	Near Hazratbal STP	34.134849 °N 74.8415009°E	Discharge point of treated effluent
11	Sonalank	34.1326911 °N 74.8524216°E	Central site of Bod Dal
12	Dobigath	34.128443 °N 74.8443509°E	Washing of Clothes on Commercial scale
13	Nayadyar	34.1003 °N 74.8306°E	Back water channel
14	Jogilankar	34.0971 °N 74.8297°E	Back water channel
15	*Golden Lake	34.09443474, °N 74.843584°E	Major tourist foot fall site
16	*SKICC Back Side	34.091955 °N 74.866816°E	Major tourist foot fall site
17	*Makai Point	34.101364 °N 74.869532°E	Major tourist foot fall site

18	*Nishat Garden	34.123698 °N 74.878118°E	Major tourist foot fall site
19	*Shalimar Channel	34.142525 °N 74.861288°E	Major tourist foot fall site
20	* HazratbalAbulation Point	34.1287831 °N 74.843598°E	Major tourist foot fall site
21	*Khonakhan IPS	34.0869447 °N 74.831389°E	Major tourist foot fall site
22	Ashaibagh	34.1148 °N 74.8367°E	Entry point of Dal Water into Nigeen lake
23	NigeenCenter	34.1194701°N 74.8297464°E	Water extraction point for Pokhribal water supply scheme
24	Saderbal	34.12915 °N 74.829159°E	Human settlement



★ = Sampling Locations

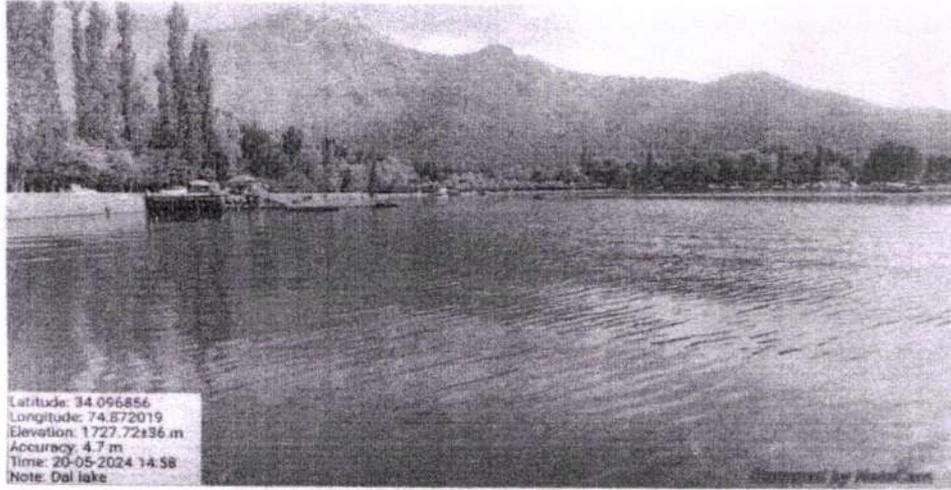
*Monitoring sites of Dal and Nigeen lakes shown as red star.*

### Water Quality Analysis of Dal and Nigeen Lake:-

The samples were analysed for various Physico-chemical and bio..... parameters. Protocols followed for sampling and analysis were mostly based on the standard methods for the examination of water and waste water (APHA, 1998). Water quality of water bodies should conform to **Class B** status of Primary water quality criteria as per designated best use which is outdoor bathing (organized).

#### Designated Best Use Water Quality Criteria

Designated-Best-Use	Class of water	Criteria
Drinking Water Source without conventional treatment but after disinfection	A	Total Coliforms Organism MPN/100ml shall be 50 or less pH between 6.5 and 8.5 Dissolved Oxygen 6mg/l or more Biochemical Oxygen Demand 5 days 20C 2mg/l or less
Outdoor bathing (Organised)	B	Total Coliforms Organism MPN/100ml shall be 500 or less pH between 6.5 and 8.5 Dissolved Oxygen 5mg/l or more Biochemical Oxygen Demand 5 days 20C 3mg/l or less
Drinking water source after conventional treatment and disinfection	C	Total Coliforms Organism MPN/100ml shall be 5000 or less pH between 6 to 9 Dissolved Oxygen 4mg/l or more Biochemical Oxygen Demand 5 days 20C 3mg/l or less
Propagation of Wild life and Fisheries	D	pH between 6.5 to 8.5 Dissolved Oxygen 4mg/l or more Free Ammonia (as N) 1.2 mg/l or less
Irrigation, Industrial Cooling, Controlled Waste disposal	E	pH between 6.0 to 8.5 Electrical Conductivity at 25°C $\mu$ mhos/cm Max. 2250 Sodium absorption Ratio Max. 26 Boron Max. 2mg/l



Latitude: 34.096856  
Longitude: 74.872019  
Elevation: 1727.72±36 m  
Accuracy: 4.7 m  
Time: 20-05-2024 14:58  
Note: Dal lake

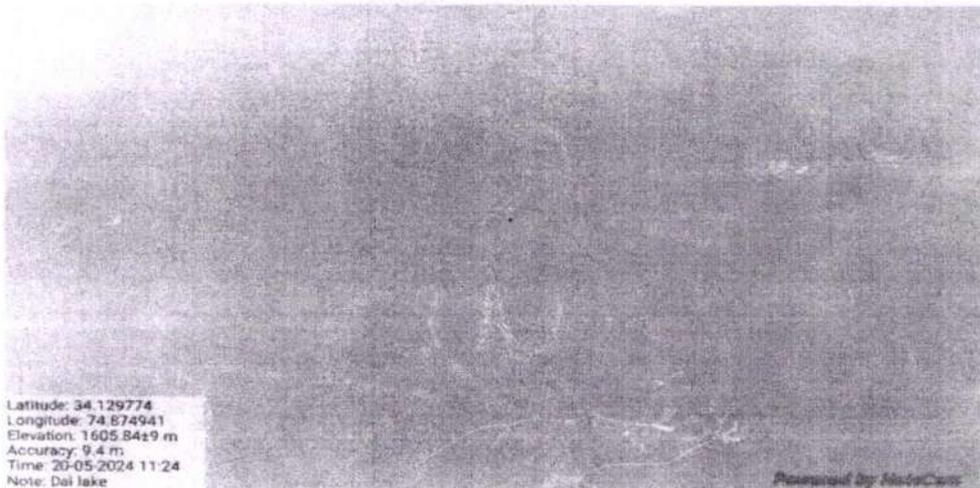
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Dal lake Open water Area



Latitude: 34.123439  
Longitude: 74.856693  
Elevation: 1578.45±12 m  
Accuracy: 9.3 m  
Time: 20-05-2024 13:56  
Note: Dal lake

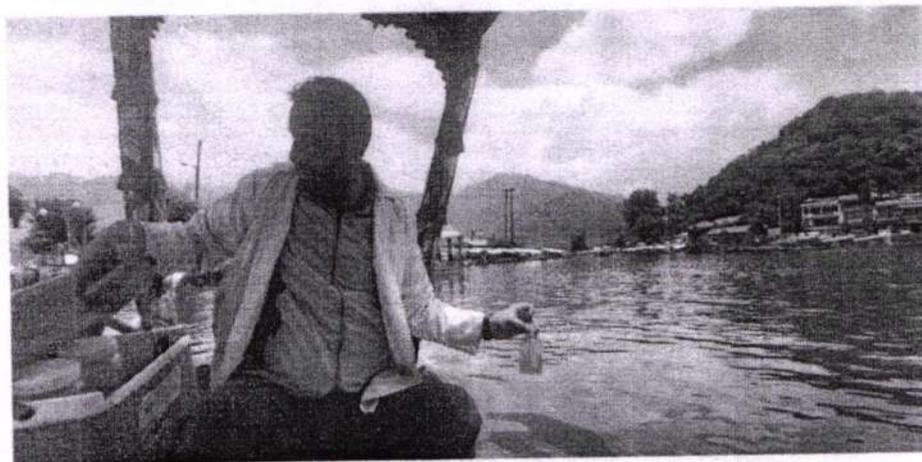
Interior Areas of Dal Lake



Latitude: 34.129774  
Longitude: 74.874941  
Elevation: 1605.84±9 m  
Accuracy: 9.4 m  
Time: 20-05-2024 11:24  
Note: Dal lake

Powered by InstaCam

Algal bloom of Dal lake



Sampling of Dal Lake



Manual Dewatering of Dal lake



Open water area of the lake

Water samples collected from these 24 spots of the Dal and Nigeen lake were analysed for various Physico chemical parameter as per the Standard methods for examination of water and wastewater published by APHA. The water quality data is enclosed as **Annexure 1 to 16**.

### **Brief summary and results of critical Physico chemical parameters**

1. **pH** :- It determines the acidity or basicity of water body .It plays a vital role in various chemical reaction that takes place within the aquatic ecosystem. During the period from **January to May 2024**, the *pH of Dal and Nigeen lake ranged from 7.26 to 9.7* which indicate alkaline nature of the water body.
2. **Dissolved Oxygen** :- It is an important parameter in assessing water quality. Its correlation with water body gives direct and indirect information regarding the bacterial activity, photosynthesis, availability of nutrients, etc . During the period from January to May 2024, *concentration of Dal and Nigeen lake ranged from 1.0 to 12.5 mg/l .The low concentration of D.O was recorded in the back water channels of the lake viz Nayadyar and Jogilankar which is due to unabated flow of untreated domestic waste into these channels. Higher concentrations of Dissolved Oxygen was recorded near the STPs and at some open areas of the lake which may probably be due to algal bloom on the lake surface in these area .*
3. **Biochemical Oxygen demand (BOD)**:-BOD is an important indicator of organic pollution and is defined as the amount of dissolved oxygen required for the biochemical decomposition of organic matter by aerobic bacteria . **Results:-** *The BOD levels in Dal Lake ranged from 2.1 mg/l to 23.5mg/l .The higher concentration of BOD was recorded near STPs and in interior areas of dal lake viz Nayadyar and Jogilankar*

**Conclusion:-** *On the basis of analysis reports it is clear that out of 24 monitoring locations only one location confirm to Class B criteria ( Outdoor Bathing water quality ) of primary water quality .*

### **Brief summary and results of Microbiological Parameters of Dal lake**

Microbiological analysis of Dal lake has been initiated recently & is being carried out routinely. The lake is being monitored for two bacteriological *parameters*, the Total coliforms and Faecal

(coliforms are regarded as good bio-indicators of pollution load, reflecting the degree of contamination or degradation of a water body). *Currently microbiological analysis at 13 sites of Dal lake, was carried out in the month of January and February 2024. The findings in brief are as follows:-*

**Total coliforms bacteria (Tc):** Are a group of bacteria commonly found & distributed in the environment, for example in soil or vegetation, as well as the intestines of mammals, including humans. Maximum Total coliforms counts in month of January were obtained at Konkhan IPS\* site (36,000 cfu/100ml) and *Min.* at Nigeen Club & Ashai-bagh sites (200 cfu/100ml) respectively. In the month of February, Total coliforms counts at Konkhan IPS\* site is recorded Maximum again (16400cfu/100ml). Lowest Total coliforms(Tc) counts have been obtained at 02 sites- Ashaibagh & Nigeen club (200/cfu/100ml) each & 250cfu/100ml at Nehru Park site in the month of February

**Fecal coliform bacteria(Fc):** Are a sub-group of total coliform bacteria. The presence of fecal coliform in a water sample often indicates recent fecal contamination, sewage influx, especially if detected in a drinking/potable water meaning that the water is contaminated & there is a greater risk that pathogens are present. In case of Faecal coliforms(Fc), *maxi.* counts have been obtained at Hazratbal shrine (ablution point) – (2000cfu/100ml) in the month of January analysis where as in the month of February maximum counts have been obtained at Konkhan IPS\* site (1100cfu/100ml). Minimum faecal coliforms counts were obtained in January at Shalimar Channel site (20cfu/100ml) with counts elevated in the month of February at this site (180cfu/100ml) followed by Ashaibag\*\* - Nigeen club sites (30cfu/100ml). However, the month of February analysis report reveals that the lowest counts have been obtained at Nehru Park (20cfu/100ml) followed by Ashaibagh \*\* site (40cfu/100ml).

Test analysis report is annexed as **Annexures-17-18**

The observed Faecal coliform values meet the prescribed permissible limits (Max. Permissible limit 2500 cfu/100ml) of Class B-Water used for organized outdoor bathing for all sites for this specific duration based on the monthly microbiology data generated for the duration of two months i.e; Jan & Feb 2024.

### Status of Sewage Management in Srinagar City:-

As per 2011 Census ,Total urban population of Srinagar District = **1219516**

Present projected urban population of Kashmir Division using below mentioned formula=**1790249**

$$P_p = P_c(1+r/100)^n$$

**n** = No. of years, in this case it is 13 years

**r** = 3

**P<sub>c</sub>** = Present population

**P<sub>p</sub>** = Projected population

#### Salient features of Sewerage Generation scheme in Kashmir

- ❖ Total urban population of Srinagar District as per 2011 census =**1219516**
- ❖ Present projected Urban population of Kashmir Division = **1790249**
- ❖ Total Domestic sewage generation from population on the Basis of 80% of 135 lpcd water supply = **193.34 MLD**
- ❖ Total sewage treatment facility available as on April 2024 = **62.01 MLD**
- ❖ Out of about **193.34** million litre per day of sewage generated from urban population of Srinagar Existing sewage treatment facility available is only for **62.01** million litre per day
- ❖ Hence percentage of Sewage treatment before its discharge into surface water bodies=**32.07%**
- ❖ One more CSTP having capacity of **60.0** MLD at Noorbagh is under final Stage of commissioning this will enhance the percentage of treatment from **32.07% to 63.10%**

#### Status of Sewage Generation around Dal –Nigeen Lake

For the treatment of sewage generated from the catchment areas of the dal and Nigeen lake Six number of STPS have been constructed around the lake which all together treat **53.8 MLD** of waste water. However, there are areas around the lake like Telbal, Lalbazar etc where waste water is still getting discharged into the lake without any treatment. Hence in such areas STPs of adequate capacity with latest technology need to be constructed so as to check the entry of untreated waste water into the water body. With regard to quantity of waste water generated in and around the Dal lake LCMA may have the precise figures so their feedback in this regard can play an important role in planning the future strategy for taking appropriate steps to have a logistic system in place to tackle the issue.

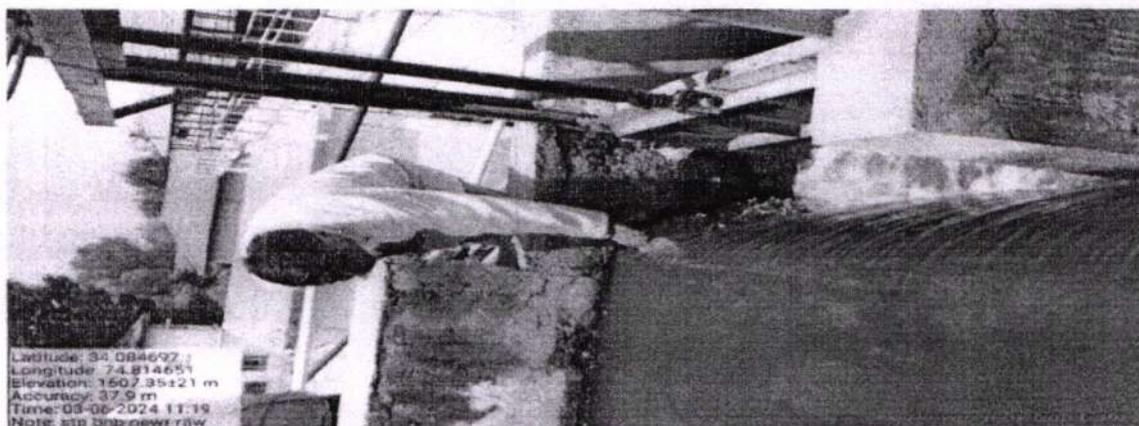
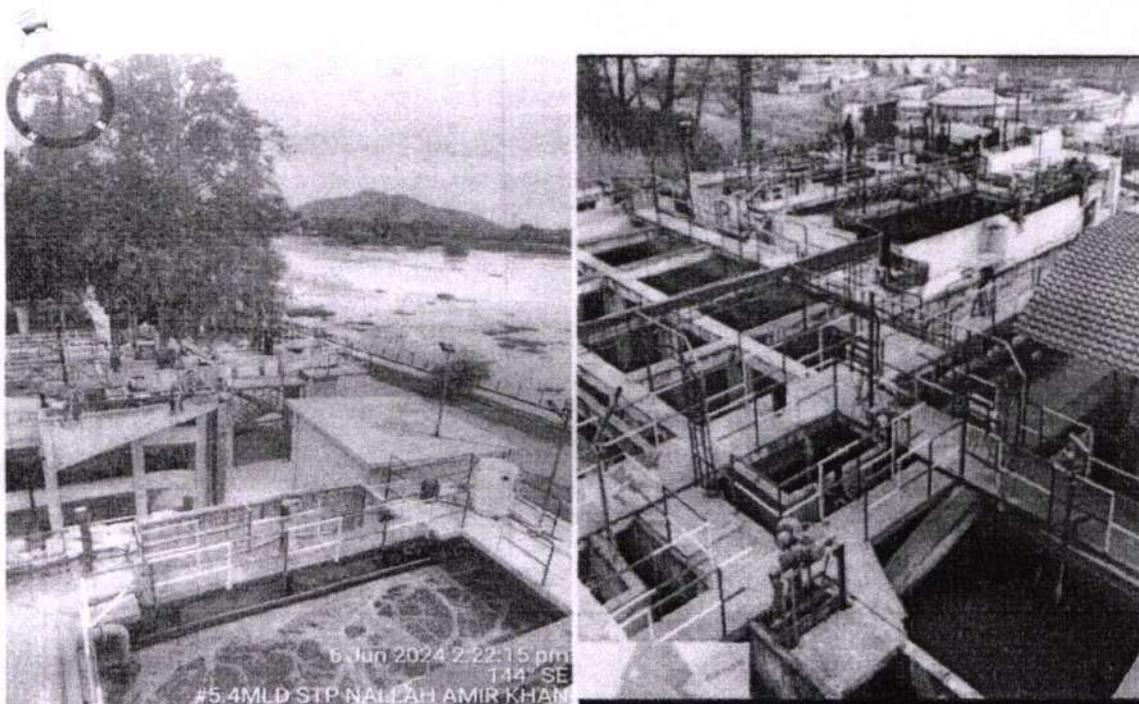
Table.1 Sewage Treatment Plants around Dal Lake

STP location	Agency	Geo-references	Year of Commissioning	Status	Installed Capacity	Actual Utilization Capacity	Technology Adopted	Disposal
1 STP Hazratbal Srinagar	LAWDA	34°83'31N 74°50'26.31 E	2006	Operational	7.5MLD	6.5 MLD	FAB	Dal lake
2 STP Habak Srinagar	LAWDA	34°84'5.31N 74°50'34.08 E	2006	Operational	3.2 MLD	3.2MLD	FAB	Dal lake
3 STP Nishat Laam Srinagar	LAWDA	34°62'1.12N 74°52'37.14 E	2006	Operational	4.5 MLD	4.5 MLD	FAB	Dal lake
4 STP Barinambal (New)Srinagar	LAWDA	34°53'.20N 74°48'54.94 E	2013	Operational	16.1 MLD	13.0 MLD	SBR	Barinambal Lagoon
5 STP Barinambal (Old)Srinagar	UEED	34°53'.20N 74°48'54.94 E	1993-94	Operational	17.1 MLD	Running in over designed capacity	ASP	River Jhelum
6 STP Nallah Amir Khan Srinagar	LAWDA	34°65'4.34N 74°49'22.63E	2013	Operational	5.4 MLD	4.0MLD	SBR	Nigeen Lake
<b>Total Capacity</b>					<b>53.8 MLD</b>	<b>48.3 MLD</b>		

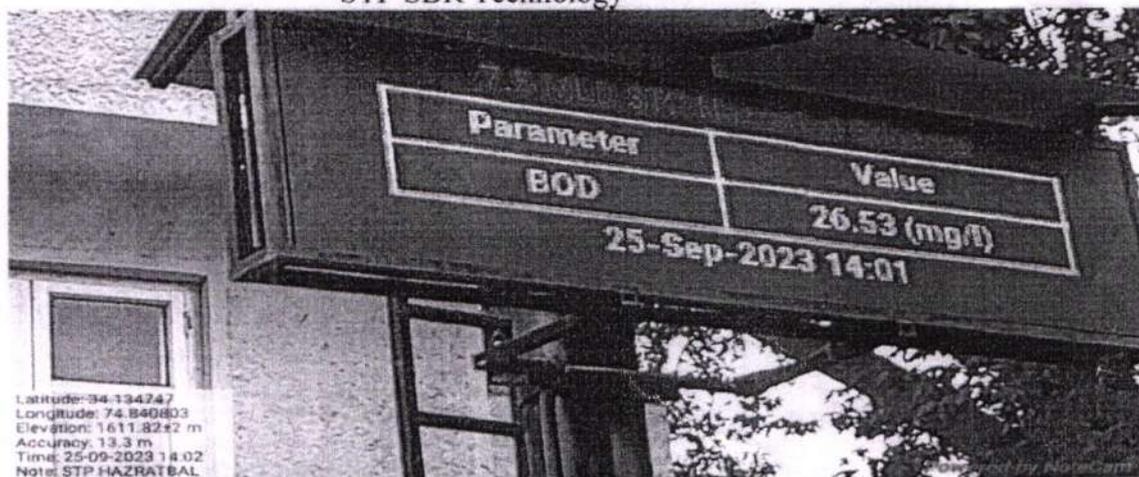
The reduction percentage of various pollutants by these STPs from the influent to effluent has not yet been achieved to 90% as already committed by the commissioning agency. However, the test analysis report reveal that the quality of treated effluent for all analyzed parameters, does not fall within the prescribed permissible limit many times when compared with the Standards for discharge of environmental pollutant as per **Schedule V1 Part A** of the Environmental (Protection) Act, 1986.

Hon'ble NGT issued directions vide its order dt. **30/04/2019** in OA No.1069/2018 for enforcing the standards notified by Ministry of Environment, Forest and Climate Change vide notification dated 13/10/2017 throughout the country. **On the basis of these standards, none of the STPs operational around Dal lake completely meet such standards** and accordingly directions regarding utilization of treated water from the STPs for activities like irrigation etc has





STP SBR Technology



Online Continuous Effluent Monitoring System(OCEMS)

### Status of Sewage Disposal by House Boats and Sewage treatment Mechanism

Sewage from houseboats is most significant source of untreated sewage discharging into the lake. There are about 910 house boats present in Dal and Nigeen lake (*Source:- J and K Tourism Department*) whose waste water often gets discharge into the lake without any treatment, although in the year 2020 Six Bio-digesters were fitted to house boats for trial run but due to some technical snag, these bio digesters were emanating foul smell besides the samples collected and analyzed from these bio-digesters were not meeting the prescribed permissible norms (*Survey carried by JKPC in 2021*). However sewage generated from house boats stationed in Nigeen Lake has now been directed into sumps constructed near the fringe of the Nigeen lake for its treatment.



House Boats in Dal lake



House boats of Nigeen lake connected to STPs through Floating pipes .

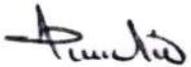
### Recommendations:-

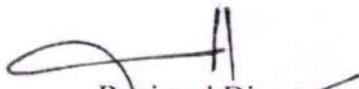
The following are some of recommendations for effective restoration of lake by enhancement of restoration and conservation measures for the lake and its catchments:-

- i) Conservation of Dal lake is directly related to preventing of direct discharge of untreated sewage from the habitation around the lake. STPs are taking care of this aspect to a large extent in case of discharge of sewage from hotels and residential areas around **Boulevard, Nishat, Habak and Hazratbal** etc but due to the direct flow of sewage in raw and untreated form interior areas into the lake, the purpose of having STPs gets defeated and therefore there is an urgent need for the corrective measures to be adopted by the concern authorities. To improve the water quality of lakes, there is an immediate need to increase sewage treatment capacity and its optimum utilization, connectivity of House Boats to sewage network for its scientific treatment and disposal.
- ii) As on date, the worst threat to health and survival of the lake is not only from outside pollution sources but from within the lake as well i.e. *from the Dal dwellers and houseboats(Except Nigeen lake) whose entire raw sewage and sewerage directly flows into the lake, unabated*. The re-location of huge population from the lake area and the re-alignment of house-boats was once thought to be long term restoration and conservation effort, which is now an urgency and SOS call for safety and protection of Dal lake. Immediate efforts for evolving methodology for treatment of sewage /sewerage, generated by house boats and Dal dwellers need to be undertaken on war footing basis by the LCMA without further delay.
- iii) The STPs at Laam, Habak and Hazartbal have been commissioned in 2006, and these are based on MBBR process with FAB technology and do not achieve 90% reduction in pollution load as already committed by the commissioning agency, for which there is a need to upgrade all the three STPs.
- iv) Collection in respect of garbage and solid waste from peripheral and areas within the lake is satisfactory to a great extent, however scientific treatment/disposal mechanism is lacking and must be dealt on priority by the concerned agencies as per Solid Waste (Management) Rule, 2016.

- v) Treatment of catchment area of the lake should be taken up on priority, which will bring substantial improvement in the lake environment by means of reduction of silt, control of chemicals, and nutrients. Soil conservation measures, bank/slope erosion control measures, afforestation, drainage improvements, diversion of silt carrying channels away from the lake, control of sewage wastes, sewage interceptions and diversions measures be adopted more effectively and vigorously for the restoration of the lake.
- vi) Organic farming involving the use of only organic manure / vermicompost be allowed in upper catchment areas of the lake and the use of chemical fertilizers, pesticides, insecticides, weedicides and all other hazardous chemicals should be restrained and ultimately replaced with organic and manual alternatives.
- vii) Algal bloom is now a regular phenomenon taking place in the lake, the algae pose serious to aquatic organisms and thus preventive measures need to be taken to address the issue.
- viii) In order to enhance water circulation, all the blocked inlet and outlet points of the Dal lake should be identified and restored.

Hence submitted.

  
I/C Water Lab  
JKPCC Srinagar

  
Regional Director  
JKPCC Kashmir.



**J&K Pollution Control committee**  
Office of The Regional Director – Kashmir

Annexure-1

Shiekh-ul-Alam Complex Rajbagh Kashmir

## Analysis Report

## Physico Chemical Characteristics of Dal Lake for the Month of January, 2024

DATE OF SAMPLING:- 16/01/2024

S/N	Sampling spots	Air Temp	Water Temp	pH	Conductivity	TDS	D O	COD	BOD	Phosphate	Amm Nit	Sulphate	Hardness	Calcium	Magnesium	T Alkalinity	Chloride	Turbidity
1	Dalgate:3251	8.0	5.6	7.38	284	150.0	4.6	73.33	8.9	0.263	2.7	21.51	190	52.10	14.58	120.0	30.0	9.0
2	Nehru park 1309	8.2	5.6	8.44	181	93.00	10.4	19.99	2.4	0.048	0.438	13.33	202	56.11	15.06	116.0	12.0	4.0
3	Grand Palace Ghat	8.2	5.4	8.34	186	95.0	10.8	31.65	3.2	0.062	0.546	12.12	136	38.47	15.06	118.0	24.0	4.0
4	Near Nishat STP: 3253	8.8	6.3	8.82	230	118	10.0	58.31	6.9	0.046	0.48	9.54	216	56.11	18.46	134.0	22.0	4.0
5	Nishat Water Intake: 3261	8.9	6.8	8.86	239	121.0	10.5	54.97	5.9	0.048	0.402	13.18	222.0	52.9	21.81	P=14 M=96 Total=110	18.0	3.0
6	Telbal entry: 3256	8.9	7.3	7.9	349	208.0	9.1	61.4	7.1	0.085	0.564	43.48	216	62.52	14.58	154.0	22.0	7.0
7	Near STP Habak: 3257	8.5	7.7	8.57	400	209	9.0	74.7	8.8	0.086	0.57	67.56	214	54.5	18.95	152.0	18	7
8	Near STP Hazratbal: 3258	8.5	7.5	8.65	386	205.0	10.0	49.8	5.8	0.046	0.384	70.44	276	72.14	23.32	144.0	16.0	6.0
9	Dobighat: 3259	9.3	6.8	8.48	384	196.0	10.5	64.7	7	0.067	0.366	52.57	236	67.33	16.52	144.0	20.0	6.0
10	Charchinari: 3252	8.4	5.1	9.06	227	114.0	11.5	29.98	2.9	0.051	0.45	16.96	196	51.30	16.52	P=30 M=60 Total=90	16.0	3.0
11	Abikarpora: 3254	8.4	5.8	8.3	214	109.0	11.6	31.63	2.7	0.073	0.528	11.66	202	46.49	20.89	124.0	22.0	3.0
12	Sonalank: 3260	8.5	6.8	8.13	386	196.0	11.8	41.5	3.7	0.037	0.486	64.69	198	38.47	24.78	186.0	14.0	4.0
Primary water quality criteria for Bathing ( class B)		-	-	6.5 - 8.5	-	-	>5mg/l	-	< 3mg/l	-	-	-	-	-	-	-	-	-

→All Values are in mg/l except pH, ,turbidity &amp; Temperature.

Samples collected by

BET

Analyzed by

I/C Water Lab



**J&K Pollution Control committee**  
Office of The Regional Director – Kashmir

Shiekh-ul-Alam Complex Rajbagh Kashmir

**Analysis Report**

**Annexure-2**

**Physico Chemical Characteristics of Dal and Nigeen Lake for the Month of January, 2024**

**DATE OF SAMPLING:- 16/01/2024**

S/N	Sampling spots	Air Temp	Water Temp	pH	Condu ctivity	TDS	D O	COD	BOD	Phosp hate	Amm Nit	Sulpha te	Hardn ess	Calciu m	Magne sium	T Alkalinit	Chlori de	Turbid ity
13	Nayadyar: 4041 Joghanakar:	8.8	7.8	7.61	594.0	302.0	1.4	149.40	18.3	1.04	6.39	61.96	380.0	102.6	30.13	280.0	46.0	17.0
14	4042	8.9	8	7.8	793.0	396.0	1.0	166.00	20.05	1.84	9.09	73.02	366.0	86.57	36.45	170.0	70.0	22.0
15	Golden Lake:0	8.0	5.6	8.38	196.0	100.0	10.5	33.32	3.2	0.053	0.552	14.69	270.0	76.15	19.44	110.0	20.0	4.0
16	SKICC Backside	8.1	5.3	8.25	217.0	110	10.6	33.32	3.9	0.047	0.39	10.45	202.0	56.11	15.06	120.0	24.0	14.0
17	WAKAT PARK Point	8.6	5.8	7.6	218.0	113.0	10.0	54.97	5.2	0.048	0.582	11.66	196.0	52.90	15.55	114.0	14.0	4.0
18	Nishat Garden Near Shanmar	9	7.3	8.15	331.0	100.0	10	58.31	6.0	0.075	0.948	18.78	318	80.16	28.67	132.0	22.0	6.0
19	Channel HAZRATDAL	9	7.2	8.04	352.0	178.0	11.0	51.64	4.1	0.048	0.36	34.08	230.0	65.73	16.03	144.0	16.0	4.0
20	Ablution point KHOONKHAN AREA	9.2	7.0	8.10	391.0	200.0	11.0	44.88	5.0	0.064	0.504	73.47	236.0	56.11	23.32	104.0	20.0	5.0
21	IPS	8.9	8.2	7.80	389.0	191.0	4.0	109.4	11.1	0.453	4.66	35.60	286.0	55.31	35.96	210.0	40.0	8.0
22	Ashaibagh Bridge: 4040	8.9	7.3	7.52	360.0	187.0	11.0	39.8	4.0	0.061	0.348	52.11	362.0	97.79	28.67	176.0	14.0	4.2
23	Nigeen: 3262	8.8	6.7	8.42	354.0	186.0	11.0	39.8	3.1	0.039	0.438	57.87	226.0	64.12	16.03	132.0	26.0	4.0
24	Saderbal	8.7	7.8	8.71	378.0	198.0	11.2	54.7	6.3	0.086	0.606	34.54	220.0	64.12	14.58	150.0	24.0	15.0
Primary water quality criteria for Bathing ( class B)		-	-	6.5 - 8.5	-	-	>5mg/l	-	< 3mg/l	-	-	-	-	-	-	-	-	-

→All Values are in mg/l except pH, turbidity & Temperature.

Samples collected by

*[Signature]*

Analyzed by

*[Signature]*

*[Signature]*  
I/C Water Lab



**J&K Pollution Control committee**  
Office of The Regional Director – Kashmir

Annexure-3

Shiekh-ul-Alam Complex Rajbagh Kashmir

## Analysis Report

## Physico Chemical Characteristics of Dal Lake for the Month of February, 2024

DATE OF SAMPLING:- 24/02/2024

S/N	Sampling spots	Air Temp	Water Temp	pH	Conductivity	TDS	DO	COD	BOD	Phosphate	Amm Nit	Sulphate	Hardness	Calcium	Magnesium	T Alkalinity	Chloride	Turbidity
1	Dalgate:3251	13.0	9.0	7.69	259.0	140.0	6.3	64.0	7.4	0.231	1.83	16.66	196	48.09	18.46	120.0	22.0	5.0
2	Nehru park 1309	13	9.0	8.07	205.0	110.0	9.50	40.0	4.1	0.043	0.546	10.3	202	45.69	21.38	114.0	24.0	5.0
3	Grand Palace Ghat	12.8	9.0	8.26	225.0	121.0	10.2	40.0	4.3	0.091	0.534	14.24	188	41.68	20.41	112.0	20.0	4.0
4	Near Nishat STP: 3253	12.8	10.4	8.18	258.0	139	10.0	40.0	3.5	0.059	0.69	21.51	260	54.5	30.13	128.0	26.0	4.0
5	Nishat Water Intake: 3261	12.0	10.3	8	276.0	148.0	10.6	64.0	5.7	0.062	0.582	24.08	234.0	57.71	21.87	134.0	16.0	5.0
6	Telbal entry: 3256	10.2	10.0	7.8	368.0	200.0	10.4	64.0	5	0.048	0.648	44.08	360	88.17	34.02	166.0	20.0	3.0
7	Near STP Habak: 3257	10.0	8.8	7.93	366.0	198	10	56.0	5.5	0.04	1.02	67.56	360	94.58	30.13	160.0	28	5
8	Near STP Hazratbal: 3258	11.3	8.9	7.98	393.0	213.0	10.3	56.0	4.5	0.078	1.29	56.35	316	68.13	35.47	174.0	29.0	4.0
9	Dobighat: 3259	11.2	9.8	7.76	380.0	205.0	9.5	64.0	5	0.101	0.486	67.41	302	70.54	30.61	164.0	26.0	5.0
10	Charchinari: 3252	12.4	9.0	8.18	256.0	138.0	10.4	24.0	2.1	0.058	0.492	13.63	260	50.50	32.56	120.0	24.0	5.0
11	Abikarpora: 3254	12.3	9.1	8.3	249.0	135.0	10.7	32.0	3	0.041	0.54	19.65	230	44.88	28.67	134.0	16.0	5.0
12	Sonalank: 3260	11.0	8.5	8.02	397.0	214.0	10.6	32.0	3	0.114	0.546	64.08	240	60.92	21.38	162.0	20.0	3.0
Primary water quality criteria for Bathing ( class B)		-	-	6.5 - 8.5	-	-	>5mg/l	-	< 3mg/l	-	-	-	-	-	-	-	-	-

→All Values are in mg/l except pH, turbidity &amp; Temperature.

Samples collected by

BET

Analyzed by

  
I/C Water lab



**J&K Pollution Control committee**  
Office of The Regional Director – Kashmir

Annexure-4

Shiekh-ul-Alam Complex Rajbagh Kashmir

## Analysis Report

## Physico Chemical Characteristics of Dal and Nigeen Lake for the Month of February, 2024

DATE OF SAMPLING:- 24/02/2024

S/N	Sampling spots	Air Temp	Water Temp	pH	Condu activity	TDS	D O	COD	BOD	Phosp hate	Amm Nit	Sulpha te	Hardn ess	Calciu m	Magne sium	T Alkalinit	Chlori de	Turbid ity
13	Nayadyar: 4041	9.0	10.1	7.67	628.0	340.0	1.0	112.0	18.6	1.11	8.58	69.69	286.0	73.74	24.78	270.0	60.0	10.0
14	Joghankar: 4042	9.0	10	7.34	716.0	383.0	1.0	120.0	16.60	1.85	10.02	87.26	220.0	56.11	19.44	280.0	50.0	12.0
15	Golden Lake:0	12.9	8.9	7.86	207.0	111.0	9.2	32.0	4.0	0.05	0.522	13.33	134.0	40.88	7.77	100.0	22.0	4.0
16	SKICC Backside	13.1	9.6	8.09	259.0	140.0	10.4	32.0	4.0	0.075	0.48	14.54	240.0	41.66	30.61	128	30.0	4.0
17	Wakal Park Point	12.5	9.2	8.34	246.0	134.0	10.3	24.0	2.8	0.069	0.534	23.63	210.0	48.09	21.87	130.0	22.0	6.0
18	Nishat Garden Near Shanmar	11.5	10.5	8.01	313.0	171.0	10.1	64.0	5.6	0.057	0.66	24.24	250	60.12	24.3	154	24	3
19	Channel Hazratbal	12.4	10.2	8.28	332.0	180.0	10.2	48.0	3.9	0.073	0.48	36.05	262.0	49.69	33.53	134	30.0	4.0
20	Ablution point	10.0	9.8	8.05	383.0	206.0	10.2	48.0	4.3	0.093	0.552	59.08	268.0	64.12	26.24	174.0	24.0	4.0
21	Khonkhan Area IPS	12.5	9.2	7.35	308.0	169.0	4.8	80.0	9.0	0.435	2.88	17.27	240.0	56.11	24.3	146.0	24.0	9.0
22	Ashaiyagh Bridge: 4040	9.2	9.5	8.49	358.0	190.0	10.2	48.0	4.3	0.086	0.408	52.41	282.0	64.12	29.64	170.0	18.0	4.0
23	Nigeen: 3262	10.7	9.2	8.05	356.0	180.0	10.8	32.0	3.5	0.119	0.552	57.11	352.0	64.12	46.65	180.0	26.0	3.0
24	Saderbal	10.4	9.3	8.08	373.0	202.0	9.3	48.0	4.0	0.13	0.63	59.84	210.0	60.12	14.58	166.0	26.0	5.0
Primary water quality criteria for Bathing ( class B)		-	-	6.5 - 8.5	-	-	>5mg/l	-	< 3mg/l	-	-	-	-	-	-	-	-	-

→All Values are in mg/l except pH, turbidity &amp; Temperature.

Samples collected by

Analyzed by

  
I/C Water Lab



**J&K Pollution Control committee**  
Office of The Regional Director – Kashmir

Annexure-5

Shiekh-ul-Alam Complex Rajbagh Kashmir

Analysis Report

**Physico Chemical Characteristics of Dal Lake for the Month of March, 2024**

DATE OF SAMPLING:- 18/03/2024

S/N	Sampling spots	Air Temp	Water Temp	pH	Conductivity	TDS	DO	COD	BOD	Phosphate	Amm Nit	Sulphates	Hardness	Calcium	Magnesium	T Alkalinity	Chloride	Turbidity	
1	Dalgate:3251	19.8	14.1	8.13	229.0	135.0	7.0	56.0	6.3	0.086	0.69	12.27	230	52.90	23.81	130	20.0	8.0	
2	Nehru park 1309	19.4	15.2	8.78	229.0	136.0	8.50	40.0	3.7	0.086	0.708	12.72	180	52.90	11.66	128	28.0	4.0	
3	Grand Palace Ghat	19.5	15.5	8.90	222.0	134.0	7.5	64.0	5.9	0.074	0.672	12.72	190	52.90	14.09	P=8 M=134 T=142	20.0	5.0	
4	Near Nishat STP: 3253	19.0	16.8	9.02	231.0	138.0	8.0	56.0	6.0	0.070	1.128	23.48	196	57.71	12.63	P=13 M=145 T=158	28.0	5.0	
5	Nishat Water Intake: 3261	19.5	17	8.43	218.0	134.0	8.7	56.0	5.8	0.062	1.206	26.96	284	56.11	34.92	138	20.0	6.0	
6	Telbal entry: 3256	19.5	21	7.71	269.0	167.0	-	112.0	18.8	1.08	1.752	64.23	260	58.51	27.70	130	16.0	34.0	
7	Near STP Habak: 3257	19.8	21.2	7.65	254.0	161.0	-	120.0	23.5	0.132	1.668	63.78	286	78.95	22.84	135	24.0	20.0	
8	Near STP Hazratbal: 3258	19.5	21	8.15	255.0	161.0	-	112.0	15.8	0.098	1.134	47.41	264	67.33	23.32	138	20.0	10.0	
9	Dobighat: 3259	20.0	19.5	8.15	263.0	161.0	-	104.0	12.1	0.073	0.81	40.90	204	64.12	10.69	130	32.0	7.0	
10	Charchinari: 3252	19.8	16.2	9.10	221.0	132.0	8.9	32.0	4.0	0.043	0.702	15.75	166	49.69	10.20	P=10 M=140 T=150	28.0	7.0	
11	Abikarpora: 3254	19	16.5	9.01	222.0	130.0	9.0	56.0	4.8	0.046	0.69	18.02	198	56.11	14.09	P=12 M=146 T=158	20.0	11.0	
12	Sonalank: 3260	20.5	19	8.52	255.0	157.0	7.9	56.0	5.0	0.085	0.888	43.93	210	60.92	14.09	140	20.0	9.0	
Primary water quality criteria for Bathing ( class B)		-	-	6.5 - 8.5	-	-	>5mg/l	-	< 3mg/l	-	-	-	-	-	-	-	-	-	-

→All Values are in mg/l except pH, turbidity & Temperature.

Samples collected by

Analyzed by

I/C Water lab



**J&K Pollution Control committee**  
Office of The Regional Director – Kashmir

Annexure-6

Shiekh-ul-Alam Complex Rajbagh Kashmir

## Analysis Report

## Physico Chemical Characteristics of Dal and Nigeen Lake for the Month of March,2024

DATE OF SAMPLING:- 18/03/2024

S/N	Sampling spots	Air Temp	Water Temp	pH	Condu ctivity	TDS	D O	COD	BOD	Phosp hate	Amm Nit	Sulpha te	Hardn ess	Calciu m	Magne sium	T Alkalinit	Chlori de	Turbid ity
13	Nayadyar: 4041	21.7	19.3	8.10	295.0	188.0	3.0	112.0	16.5	0.147	2.25	54.54	210	49.69	20.89	210	68.0	12.0
14	4042	22	19.5	8.12	306.0	195.0	2.3	120.0	18.0	0.152	2.33	55.14	220	58.51	17.98	212	64.0	14.0
15	Golden Lake:0	19.7	14.8	8.54	228.0	134.0	7.5	40.0	4.1	0.062	0.75	12.12	220	51.30	22.35	140	24.0	9.0
16	SKICC Backside	19.5	16	8.81	234.0	141.0	7.4	48.0	5.0	0.097	0.672	18.78	240	62.52	20.41	P=6 M=132 Total=138	24.0	15.0
17	Makai Park Point	17.6	16.3	9.02	226.0	133.0	8.2	48.0	5.0	0.048	0.684	21.96	240	64.12	19.44	P=8 M=142 Total=150	36.0	8.0
18	Nishat Garden Near Shanmar	18.5	17.0	8.86	246.0	148.0	8.4	56.0	6.2	0.063	0.774	48.17	260	46.49	34.99	P=4 M=140 T=144	28.0	5.0
19	Channel Hazratbal	18.8	17.5	8.32	260.0	157.0	9.0	56.0	5.8	0.076	0.702	47.87	276	54.50	34.02	158	28.0	6.0
20	Ablution point KNONKNAN AREA	21.0	19.8	8.47	259.0	159.0	-	80.0	9.1	0.073	1.07	43.02	280	65.73	28.18	130	28.0	8.0
21	IPS	20	15.0	7.55	246.0	145.0	6.2	64.0	6.6	0.200	0.798	13.02	180	48.09	14.58	140	28.0	5.0
22	Ashaibagh Bridge: 4040	21.5	18.0	8.98	257.0	162.0	-	72.0	7.6	0.047	1.16	41.96	192	52.10	15.06	P=4 M=146 Total=150	20.0	8.0
23	Nigeen: 3262	20.8	18.0	9.10	264.0	169.0	-	80.0	9.5	0.059	0.954	50.75	170	49.69	11.17	P=11 M=149 Total=160	22.0	8.0
24	Saderbal	20.0	19.0	8.42	268.0	174.0	-	96.0	12.1	0.140	1.362	55.75	250	64.12	21.87	142	28.0	11.0
Primary water quality criteria for Bathing ( class B)		-	-	6.5 - 8.5	-	-	>5mg/l	-	< 3mg/l	-	-	-	-	-	-	-	-	-

→All Values are in mg/l except pH, turbidity &amp; Temperature.

Samples collected by

Analyzed by

I/C Water lab

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Office of The Regional Director – Kashmir

Shiekh-ul-Alam Complex Rajbagh Kashmir

**Analysis Report**

**Annexure-7**

**Physico Chemical Characteristics of Dal Lake for the Month of April, 2024**

**DATE OF SAMPLING:- 22/04/2024**

S/N	Sampling spots	Air Temp	Water Temp	pH	Conductivity	TDS	D O	COD	BOD	Phosphate	Amm Nit	Sulphate	Hardness	Calcium	Magnesium	T Alkalinity	Chloride	Turbidity	
1	Dalgate:3251	24.2	22.7	8.13	266.0	143.0	8.6	41.67	4.0	0.024	0.744	23.48	200.0	52.10	17.01	160.0	22.0	7.3	
2	Nehru park 1309	24.2	22.3	9.04	255.0	137.0	6.20	33.3	3.9	0.071	0.81	16.81	188.0	56.11	11.66	P=8 M=150 T=158	18.0	3.7	
3	Grand Palace Ghat	24.5	22.5	9.01	258.0	138.0	9.2	58.3	5.3	0.068	0.726	19.99	180.0	48.89	14.09	P=6 M=128 T=134	24.0	6.1	
4	Near Nishat STP: 3253	24.8	23.5	8.35	249.0	133.0	9.4	50.0	5.0	0.108	0.852	26.51	166.0	48.09	11.17	140.0	20.0	17.8	
5	Nishat Water Intake: 3261	24.5	21.5	8.39	252.0	134.0	9.5	49.17	5.1	0.075	0.816	19.39	158.0	48.09	9.23	144.0	20.0	6.9	
6	Telbal entry: 3256	23.8	21.5	9.39	208.0	110.0	12.0	108.0	13.7	0.094	0.954	17.54	150.0	41.68	11.17	P=16 M=130 T=146	16.0	7.0	
7	Near STP Habak: 3257	24.2	21.0	9.15	198.0	104.0	11.5	100.0	12.1	0.093	0.816	15.9	124.0	36.07	8.26	P=6 M=130 T=136	16.0	5.0	
8	Near STP Hazratbal: 3258	25.2	21.1	9.1	203.0	107.0	11.0	75.0	7.3	0.103	0.732	17.24	124.0	40.08	5.83	P=8 M=138 T=146	12.0	4.0	
9	Dobighat: 3259	25.3	21.2	9.02	200.0	106.0	9.8	58.33	4.5	0.069	0.816	15.60	144.0	48.09	5.83	P=16 M=116 T=132	18.0	4.0	
10	Charchinari: 3252	24.5	23.7	8.32	245.0	132.0	10.2	33.3	3.1	0.052	0.696	20.6	214.0	45.69	24.30	146.0	18.0	3.5	
11	Abikarpora: 3254	24.7	23.4	9.03	238.0	127.0	9.6	25.0	3.0	0.065	0.648	23.63	154.0	39.27	13.6	P=12 M=116 T=128	20.0	3.2	
12	Sonalank: 3260	25.3	21.9	8.69	211.0	112.0	10.6	41.67	4.2	0.081	0.654	13.18	146.0	48.09	6.31	120.0	22.0	5.8	
Primary water quality criteria for Bathing ( class B)		-	-	6.5 - 8.5	-	-	>5mg/l	-	< 3mg/l	-	-	-	-	-	-	-	-	-	-

→All Values are in mg/l except pH, turbidity & Temperature.

Samples collected by

Analyzed by

*[Signature]*

*[Signature]*  
I/C Water lab



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Office of The Regional Director – Kashmir

Annexure-8

Shiekh-ul-Alam Complex Rajbagh Kashmir

## Analysis Report

## Physico Chemical Characteristics of Dal and Nigeen Lake for the Month of April, 2024

DATE OF SAMPLING:- 22/04/2024

N O	Sampling spots	Air Temp	Water Temp	pH	Condu ctivity	TDS	D O	COD	BOD	Phosp hate	Amm Nit	Sulpha te	Hardn ess	Calciu m	Magne sium	T Alkalinit	Chlori de	Turbid ity
13	Nayadyar: 4041 Jogmankar.	24.0	19.5	7.26	277.0	144.0	4.0	66.67	7.0	0.162	1.61	17.11	170.0	54.5	8.26	134.0	18.0	5.0
14	4042	24.0	18.2	7.5	269.0	143.0	3.9	66.67	6.0	0.111	1.44	16.96	134.0	46.49	4.37	142.0	14.0	4.0
15	Golden Lake:0 SKICC	24.3	22.5	8.87	246.0	137.0	9.9	58.3	4.8	0.31	1.01	16.36	208.0	48.09	21.38	P=6 M=172 T=178	12.0	6.6
16	Backside WAKAR PARK	24.7	23.4	8.46	249.0	132.0	10.8	50.00	5.3	0.059	0.792	30.9	164.0	44.88	12.63	146.0	20.0	6.2
17	Point	24.6	23.3	8.49	248.0	131.0	10.3	33.3	3.6	0.065	0.804	27.42	216.0	46.49	24.3	150.0	16.0	7.3
18	Nishat Garden Near Shannar	24.1	21.8	8.48	245.0	130.0	9.7	4.67	4.1	0.102	0.738	17.72	156.0	49.69	7.77	138.0	18.0	8.0
19	Channel HAZRATGAR	23.9	21.8	8.1	233.0	123.0	10.5	58.33	5.5	0.087	0.81	18.63	194.0	46.49	18.95	120.0	19.0	16.0
20	Ablution point KHOOKHAN AREA	23.8	22.5	9.25	182.0	97.0	9.5	66.67	7.7	0.082	0.78	14.08	126.0	40.88	5.83	P=18 M=104 T=122	18.0	5.0
21	IPS	24.1	18.1	7.55	269.0	140.0	4.8	41.67	4.3	0.594	1.152	14.54	164.0	52.1	8.2	150.0	22.0	3.0
22	Ashaibagh Bridge: 4040	25.4	18.5	8.93	240.0	128.0	9.0	58.33	5.8	0.197	0.786	16.05	196.0	47.29	18.95	P=22 M=146 T=168	16.0	4.0
23	Nigeen: 3262	25.5	19.5	9.12	255.0	137.0	12.0	50.0	5.8	0.076	0.918	26.36	182.0	56.11	10.2	P=12 M=134 T=146	22.0	5.0
24	Saderbal	25.5	21.6	8.45	277.0	147.0	8.5	50.0	5.7	0.078	1.068	26.2	182.0	48.09	15.06	140.0	24.0	6.0
Primary water quality criteria for Bathing ( class B)		-	-	6.5 - 8.5	-	-	>5mg/l	-	< 3mg/l	-	-	-	-	-	-	-	-	-

→All Values are in mg/l except pH, turbidity &amp; Temperature.

Samples collected by

Analyzed by

*[Signature]*  
I/C Water lab

*[Signature]*



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Office of The Regional Director – Kashmir

Shiekh-ul-Alam Complex Rajbagh Kashmir

*Analysis Report*

**Annexure-9**

**Physico Chemical Characteristics of Dal Lake for the Month of May, 2024**

**DATE OF SAMPLING:- 20/05/2024 and 27/05/2024**

S/N	Sampling spots	Air Temp	Water Temp	pH	Conductivity	TDS	DO	COD	BOD	Phosphate	Amm Nit	Sulphate	Hardness	Calcium	Magnesium	T Alkalinity	Chloride	Turbidity
1	Dalgate:3251	26.2	24.1	8.10	188.1	103.0	8.0	41.66	4.0	0.063	0.768	8.181	104.0	27.25	8.74	120.0	22.0	10.0
2	Nehru park 1309	26.3	23.9	9.10	169.4	88.0	9.50	58.33	6.2	0.101	0.468	10.908	140.0	24.04	19.44	P=10 M=190 T=100	22.0	13.0
3	Grand Palace Ghat	26.3	23.9	9.60	159.5	83.0	9.0	58.33	6.2	0.089	0.612	12.574	138.0	26.45	17.49	P=16 M=86 T=102	18.0	14.0
4	Near Nishat STP: 3253	30.0	25.0	8.83	192.5	98.0	7.6	50.0	4.6	0.126	1.098	13.02	142.0	33.66	14.09	P=12 M=122 T=134	20.0	7.0
5	Nishat Water Intake: 3261	28.5	23.0	8.7	191.4	99.0	8.0	41.66	3.9	0.119	0.960	13.63	120.0	32.06	9.72	P=12 M=118 T=120	20.0	6.0
6	Telbal entry: 3256	28.0	21.2	9.70	161.7	84.0	12.0	108.3	16.2	0.149	1.404	16.66	128.0	30.46	12.63	P=16 M=128 T=144	22.0	10.0
7	Near STP Habak: 3257	28.4	24.4	9.5	207.0	105.0	12.5	100.0	14.2	0.252	2.88	42.42	142.0	28.85	17.01	P=18 M=140 T=158	20.0	38.0
8	Near STP Hazratbal: 3258	28.8	24.8	9.23	185.9	102.0	10.0	66.6	9.8	0.145	1.01	18.93	162.0	40.88	9.72	P=10 M=90 T=100	24.0	14.0
9	Dobighat: 3259	29.0	22.5	9.08	171.6	93.0	10.0	82.23	9.2	0.112	1.08	33.48	126.0	26.45	14.88	P=14 M=140 T=154	20.0	9.0
10	Charchinari: 3252	30.0	23.0	8.40	198.0	98.0	8.4	24.99	2.2	0.098	1.404	12.27	140.0	33.66	13.60	120.0	16.0	9.0
11	Abikarpora: 3254	30.0	24.0	9.15	171.6	86.0	8.8	25.0	2.6	0.086	1.008	10.75	132.0	32.06	12.63	P=16 M=118 T=134	18.0	5.0
12	Sonalank: 3260	28.5	22.5	9.0	181.5	91.0	8.8	33.33	3.4	0.113	1.116	11.05	120.0	33.66	8.72	P=10 M=98 T=108	18.0	10.0
Primary water quality criteria for Bathing ( class B)		-	-	6.5 - 8.5	-	-	>5mg/l	-	< 3mg/l	-	-	-	-	-	-	-	-	-

→All Values are in mg/l except pH, turbidity & Temperature.

Samples collected by

Analyzed by

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*Analysis Report*

**Annexure-10**

**Physico Chemical Characteristics of Dal and Nigeen Lake for the Month of May,2024**

**DATE OF SAMPLING:- 20/05/2024 and 27/05/2024**

S/N	Sampling spots	Air Temp	Water Temp	pH	Conductivity	TDS	D O	COD	BOD	Phosphate	Amm Nit	Sulphate	Hardness	Calcium	Magnesium	T Alkalinity	Chloride	Turbidity
13	Nayadyar: 4041	26.2	25.1	7.36	214.5	120.0	3.8	58.33	6.2	0.172	1.71	18.12	140.0	40.08	9.72	140.0	26.0	14.0
14	Jogilankar: 4042	26.3	25.8	7.45	225.5	130.0	3.5	66.66	6.9	0.141	1.54	17.96	160.0	49.69	8.74	148.0	26.0	15.0
15	Golden Lake:0	26.3	24.0	9.0	176.0	90.0	9.5	58.77	5.7	0.089	0.606	9.696	114.0	24.84	12.63	P-12 M-90 T-102	20.0	11.0
16	SKICC Backside	26.3	24.2	9.55	176.0	92.0	12.1	83.33	13.8	0.111	0.66	10.453	152.0	40.08	12.15	P-20 M-80 T-100	20.0	12.0
17	Makai Park Point	30.0	24.0	8.83	195.8	99.0	8.0	41.66	3.6	0.109	1.038	10.90	176.0	38.47	19.44	P-6 M-112 T-118	18.0	6.0
18	Nishat Garden	29.2	22.1	9.0	193.6	97.0	9.5	66.66	5.8	0.113	1.134	12.57	120.0	32.06	9.72	P-14 M-120 T-134	18.0	7.0
19	Near Shalimar Channel	28.0	23.4	9.36	160.0	82.0	12.0	108.32	11.0	0.124	0.942	13.63	110.0	27.25	10.20	P-10 M-116 T-126	20.0	12.0
20	Hazratbal Ablution point	28.9	20.16	9.9	210.0	107.0	12.0	133.33	15.2	0.161	1.098	25.75	132.0	31.26	13.12	P-16 M-120 T-136	18.0	19.0
21	Khonkhan Area IPS	26.1	24.1	7.54	214.5	110.0	10.0	33.33	3.6	0.112	0.474	9.99	124.0	28.85	12.63	118.0	20.0	8.0
22	Ashaibagh Bridge: 4040	30.0	29.0	9.10	201.3	104.0	9.5	41.66	4.0	0.120	1.170	17.87	128.0	34.46	10.20	P-16 M-104 T-120	18.0	8.0
23	Nigeen: 3262	30.0	23.4	9.25	205.7	106.7	10.2	33.3	4.6	0.109	1.134	12.57	126.0	34.46	20.89	P-12 M-102 T-114	18.0	9.0
24	Saderbal	29.0	25.0	9.3	225.5	118.0	7.8	66.7	6.0	0.121	2.07	14.08	128.0	36.07	9.23	P-12 M-104 T-116	22.0	10.0
Primary water quality criteria for Bathing ( class B)		-	-	6.5 - 8.5	-	-	>5mg/l	-	< 3mg/l	-	-	-	-	-	-	-	-	-

→All Values are in mg/l except pH, turbidity & Temperature.

Samples collected by

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## J&K Pollution Control Committee

Shiekh-ul-Alam Complex Rajbagh Kashmir

Average Water quality profile of Dal Lake from January to May 2024

Annexure II

S.no	Parameter	DALGATE			NEHRUPARK			GRAND PALACE GHAT			NEAR NISHAT LAAM			Primary water quality criteria for Bathing ( class B)
		Min	Max	Average	Min	Max	Average	Min	Max	Average	Min	Max	Average	
1	Air Temp. °C	8.0	26.2	18.2	8.2	26.3	18.2	8.2	26.3	18.3	8.8	30.0	19.1	6.5 - 8.5
2	Water Temp. °C	5.6	24.1	15.1	5.6	23.9	15.2	5.4	23.9	15.3	6.3	25.0	16.4	
3	pH	7.38	8.13	7.89	8.07	9.10	8.69	8.26	9.60	8.82	8.18	9.02	8.64	
4	Conductivity µs/cm	188.1	284.0	245.2	169.4	255.0	207.9	159.5	258.0	210.1	192.5	258.0	232.1	
5	T.D.S	103.0	150.0	134.2	88.0	137.0	112.8	83.0	138.0	114.2	98.0	139.0	125.2	
6	D.O	4.6	8.6	6.9	6.2	10.4	8.8	7.5	10.8	9.3	7.6	10.0	9.0	
7	C.O.D	41.7	73.3	55.3	20.0	58.3	38.3	31.7	64.0	50.5	40.0	58.3	50.9	
8	B.O.D	4.0	8.9	6.1	2.4	6.2	4.1	3.2	6.2	5.0	3.5	6.9	5.2	
9	Phosphate	0.024	0.263	0.133	0.043	0.101	0.070	0.062	0.091	0.077	0.046	0.126	0.082	
10	Ammonical Nitrogen	0.690	2.700	1.346	0.438	0.810	0.594	0.534	0.726	0.618	0.480	1.128	0.850	
11	Sulphate	8.18	23.48	16.42	10.30	16.81	12.81	12.12	19.99	14.33	9.54	26.51	18.81	
12	Hardness	104.0	230.0	184.0	140.0	202.0	182.4	136.0	190.0	166.4	142.0	260.0	196.0	
13	Calcium	27.3	52.9	46.5	24.0	56.1	47.0	26.5	52.9	41.7	33.7	57.7	50.0	
14	Magnesium	8.7	23.8	16.5	11.7	21.4	15.8	14.1	20.4	16.2	11.2	30.1	17.3	
15	T. Alkalinity	120.0	160.0	130.0	100.0	158.0	123.2	102.0	142.0	121.6	128.0	158.0	138.8	
16	Chloride	20.0	30.0	23.2	12.0	28.0	20.8	18.0	24.0	21.2	20.0	28.0	23.2	
17	Turbidity NTU	5.0	10.0	7.9	3.7	13.0	5.9	4.0	14.0	6.6	4.0	17.8	7.6	

All parameters are in mg/l except Ph Conductivity, Temperature and turbidity

Sample Collected By

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Shiekh-ul-Alam Complex Rajbagh Kashmir

Average Water quality profile of Dal Lake from January to May 2024

Annexure 12

S.no	Parameter	NISHAT WATER INTAKE POINT			TELBAL ENTRY			NEAR STP HABAK			NEAR STP HAZRATBAL			Primary water quality criteria for Bathing (class B)
		Min	Max	Average	Min	Max	Average	Min	Max	Average	Min	Max	Average	
1	Air Temp. °C	8.9	28.5	18.7	8.9	28.0	18.1	8.5	28.4	18.2	8.5	28.8	18.7	
2	Water Temp. °C	6.8	23.0	15.7	7.3	21.5	16.2	7.7	24.4	16.6	7.5	24.8	16.7	
3	pH	8.00	8.86	8.48	7.71	9.70	8.50	7.65	9.50	8.56	7.98	9.23	8.62	—
4	Conductivity µs/cm	191.4	276.0	235.3	161.7	368.0	271.1	198.0	400.0	285.0	185.9	393.0	284.6	6.5 - 8.5
5	T.D.S	99.0	148.0	127.2	84.0	208.0	153.8	104.0	209.0	155.4	102.0	213.0	157.6	—
6	D.O	8.0	10.6	9.5	9.1	12.0	10.9	9.0	12.5	10.8	10.0	11.0	10.3	—
7	C.O.D	41.7	64.0	53.2	61.4	112.0	90.7	56.0	120.0	90.1	49.8	112.0	71.9	>5mg/l
8	B.O.D	3.9	5.9	5.3	5.0	18.8	12.2	5.5	23.5	12.8	4.5	15.8	8.6	—
9	Phosphate	0.048	0.119	0.073	0.048	1.080	0.291	0.040	0.252	0.121	0.046	0.145	0.094	< 3mg/l
10	Ammonical Nitrogen	0.402	1.206	0.793	0.564	1.752	1.064	0.570	2.880	1.391	0.384	1.290	0.910	—
11	Sulphate	13.18	26.96	19.45	16.66	64.23	37.20	15.90	67.56	51.44	17.24	70.44	42.07	—
12	Hardness	120.0	284.0	203.6	128.0	360.0	222.8	124.0	360.0	225.2	124.0	316.0	228.4	—
13	Calcium	32.1	57.7	49.4	30.5	88.2	56.3	28.9	94.6	58.6	40.1	72.1	57.7	—
14	Magnesium	9.2	34.9	19.5	11.2	34.0	20.0	8.3	30.1	19.4	5.8	35.5	19.5	—
15	T. Alkalinity	110.0	144.0	131.2	130.0	166.0	148.0	135.0	160.0	148.2	100.0	174.0	140.4	—
16	Chloride	16.0	20.0	18.8	16.0	22.0	19.2	16.0	28.0	21.2	12.0	29.0	20.2	—
17	Turbidity NTU	3.0	6.9	5.4	3.0	34.0	12.2	5.0	38.0	15.0	4.0	14.0	7.6	—

All parameters are in mg/l except Ph Conductivity, Temperature and turbidity

Sample Collected By

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Analysed BY

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## J&K Pollution Control Committee

Shiekh-ul-Alam Complex Rajbagh Kashmir

Average Water quality profile of Dal Lake from January to May 2024

Annexure 13

S.no	Parameter	DOBIGHAT			CHARCHINARI			ABIKARPORA			SONALANK			Primary water quality criteria for Bathing ( class B)
		Min	Max	Average	Min	Max	Average	Min	Max	Average	Min	Max	Average	
1	Air Temp. °C	9.3	29.0	19.0	8.4	30.0	19.0	8.4	30.0	18.9	8.5	28.5	18.8	
2	Water Temp. °C	6.8	22.5	16.0	5.1	23.7	15.4	5.8	24.0	15.8	6.8	22.5	15.7	-
3	pH	7.76	9.08	8.50	8.18	9.10	8.61	8.30	9.15	8.76	8.02	9.00	8.47	6.5 - 8.5
4	Conductivity µs/cm	171.6	384.0	279.7	198.0	256.0	229.4	171.6	249.0	218.9	181.5	397.0	286.1	-
5	T.D.S	93.0	205.0	152.2	98.0	138.0	122.8	86.0	135.0	117.4	91.0	214.0	154.0	-
6	D.O	9.5	10.5	10.0	8.4	11.5	9.9	8.8	11.6	9.9	7.9	11.8	9.9	>5mg/l
7	C.O.D	58.3	104.0	74.7	24.0	33.3	28.9	25.0	56.0	33.9	32.0	56.0	40.9	-
8	B.O.D	4.5	12.1	7.6	2.1	4.0	2.9	2.6	4.8	3.2	3.0	5.0	3.9	< 3mg/l
9	Phosphate	0.067	0.112	0.084	0.043	0.098	0.060	0.041	0.086	0.062	0.037	0.114	0.086	-
10	Ammonical Nitrogen	0.366	1.080	0.712	0.450	1.404	0.749	0.528	1.008	0.683	0.486	1.116	0.738	-
11	Sulphate	15.60	67.41	41.99	12.27	20.60	15.84	10.75	23.63	16.74	11.05	64.69	39.39	-
12	Hardness	126.0	302.0	202.4	140.0	260.0	195.2	132.0	230.0	183.2	120.0	240.0	182.8	-
13	Calcium	26.5	70.5	55.3	33.7	51.3	46.2	32.1	56.1	43.8	33.7	60.9	48.4	-
14	Magnesium	5.8	30.6	15.7	10.2	32.6	19.4	12.6	28.7	18.0	6.3	24.8	15.1	-
15	T. Alkalinity	130.0	164.0	144.8	90.0	150.0	125.2	124.0	158.0	135.6	108.0	186.0	143.2	-
16	Chloride	18.0	32.0	23.2	16.0	28.0	20.4	16.0	22.0	19.2	14.0	22.0	18.8	-
17	Turbidity NTU	4.0	9.0	6.2	3.0	9.0	5.5	3.0	11.0	5.4	3.0	10.0	6.4	-

All parameters are in mg/l except Ph Conductivity, Temperature and turbidity

Sample Collected By

*BET*

Analysed BY

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## J&K Pollution Control Committee

Shiekh-ul-Alam Complex Rajbagh Kashmir

Average Water quality profile of Dal Lake from January to May 2024

Annexure 14

S.no	Parameter	NAYADYAR			JOGILANKAR			GOLDEN LAKE			SKICC BACK SIDE			Primary water quality criteria for Bathing ( class B)
		Min	Max	Average	Min	Max	Average	Min	Max	Average	Min	Max	Average	
1	Air Temp. °C	8.8	26.2	17.9	8.9	26.3	18.0	8.0	26.3	18.2	8.1	26.3	18.3	
2	Water Temp. °C	7.8	25.1	16.4	8.0	25.8	16.3	5.6	24.0	15.2	5.3	24.2	15.7	
3	pH	7.26	8.10	7.60	7.34	8.12	7.64	7.86	9.00	8.53	8.09	9.55	8.63	6.5 - 8.5
4	Conductivity µs/cm	214.5	628.0	401.7	225.5	793.0	461.9	176.0	246.0	210.6	176.0	259.0	227.0	
5	T.D.S	120.0	340.0	218.8	130.0	396.0	249.4	90.0	137.0	114.4	92.0	141.0	123.0	
6	D.O	1.0	4.0	2.6	1.0	3.9	2.3	7.5	10.5	9.3	7.4	12.1	10.3	>5mg/l
7	C.O.D	58.3	149.4	99.7	66.7	166.0	107.9	32.0	58.8	44.5	32.0	83.3	49.3	
8	B.O.D	6.2	18.6	13.3	6.0	20.1	13.5	3.2	5.7	4.4	3.9	13.8	6.4	< 3mg/l
9	Phosphate	0.147	1.110	0.526	0.111	1.850	0.819	0.050	0.310	0.113	0.047	0.111	0.078	
10	Ammonical Nitrogen	1.610	8.580	4.108	1.440	10.020	4.884	0.522	1.010	0.688	0.390	0.792	0.599	
11	Sulphate	17.11	69.69	44.28	16.96	87.26	50.07	9.70	16.36	13.24	10.45	30.90	17.02	
12	Hardness	140.0	380.0	237.2	134.0	366.0	220.0	114.0	270.0	189.2	152.0	240.0	199.6	
13	Calcium	40.1	102.6	64.1	46.5	86.6	59.5	24.8	76.2	48.3	40.1	62.5	49.1	
14	Magnesium	8.3	30.1	18.8	4.4	36.5	17.4	7.8	22.4	16.7	12.2	30.6	18.2	
15	T. Alkalinity	134.0	280.0	206.8	142.0	280.0	190.4	100.0	178.0	126.0	100.0	146.0	126.4	
16	Chloride	18.0	68.0	43.6	14.0	70.0	44.8	12.0	24.0	19.6	20.0	30.0	23.6	
17	Turbidity NTU	5.0	17.0	11.6	4.0	22.0	13.4	4.0	11.0	6.9	4.0	15.0	10.2	

All parameters are in mg/l except Ph Conductivity, Temperature and turbidity

Sample Collected By

*[Handwritten Signature]*

Analysed BY

*[Handwritten Signatures]*

*[Handwritten Signature]*  
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## J&K Pollution Control Committee

Shiekh-ul-Alam Complex Rajbagh Kashmir

Average Water quality profile of Dal Lake from January to May 2024

Annexure 15

S.no	Parameter	MAKAI POINT			NISHAT GARDEN			SHALIMAR CHANNEL			HAZRATBAL ABLUTION POINT			Primary water quality criteria for Bathing ( class B)
		Min	Max	Average	Min	Max	Average	Min	Max	Average	Min	Max	Average	
1	Air Temp. °C	8.6	30.0	18.7	9.0	29.2	18.5	9.0	28.0	18.4	9.2	28.9	18.6	
2	Water Temp. °C	5.8	24.0	15.7	7.3	22.1	15.7	7.2	23.4	16.0	7.0	22.5	15.9	—
3	pH	7.61	9.02	8.46	8.01	9.00	8.50	8.04	9.36	8.42	8.05	9.90	8.75	6.5 - 8.5
4	Conductivity µs/cm	195.8	248.0	226.8	193.6	331.0	265.7	160.0	352.0	267.4	182.0	391.0	285.0	—
5	T.D.S	99.0	134.0	122.0	97.0	171.0	129.2	82.0	180.0	144.0	97.0	206.0	153.8	—
6	D.O	8.0	10.3	9.4	8.4	10.1	9.5	9.0	12.0	10.5	9.5	12.0	10.7	>5mg/l
7	C.O.D	24.0	55.0	40.4	4.7	66.7	49.9	48.0	108.3	64.5	44.9	133.3	74.6	—
8	B.O.D	2.8	5.2	4.0	4.1	6.2	5.5	3.9	11.0	6.1	4.3	15.2	8.3	< 3mg/l
9	Phosphate	0.048	0.109	0.068	0.057	0.113	0.082	0.048	0.124	0.082	0.064	0.161	0.095	—
10	Ammonical Nitrogen	0.534	1.038	0.728	0.660	1.134	0.851	0.360	0.942	0.659	0.504	1.098	0.801	—
11	Sulphate	10.90	27.42	19.11	12.57	48.17	24.30	13.63	47.87	30.05	14.08	73.47	43.08	—
12	Hardness	176.0	240.0	207.6	120.0	318.0	220.8	110.0	276.0	214.4	126.0	280.0	208.4	—
13	Calcium	38.5	64.1	50.0	32.1	80.2	53.7	27.3	65.7	48.7	31.3	65.7	51.6	—
14	Magnesium	15.6	24.3	20.1	7.8	35.0	21.1	10.2	34.0	22.5	5.8	28.2	19.3	—
15	T. Alkalinity	114.0	150.0	132.4	132.0	154.0	140.4	120.0	158.0	136.4	104.0	174.0	133.2	—
16	Chloride	14.0	36.0	21.2	18.0	28.0	22.0	16.0	30.0	22.6	18.0	28.0	21.6	—
17	Turbidity NTU	4.0	8.0	6.3	3.0	8.0	5.8	4.0	16.0	8.4	4.0	19.0	8.2	—

All parameters are in mg/l except Ph Conductivity, Temperature and turbidity

Sample Collected By

*[Signature]*

Analysed BY

*[Signature]*

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## J&K Pollution Control Committee

Shiekh-ul-Alam Complex Rajbagh Kashmir

Average Water quality profile of Dal and Nigeen Lake from January to May 2024

Annexure 16

S.no	Parameter	KHONAKHAN IPS			ASHAIBAGH BRIDGE			NIGEEN CENTRAL			SADERABAL			Primary water quality criteria for Bathing ( class B)
		Min	Max	Average	Min	Max	Average	Min	Max	Average	Min	Max	Average	
1	Air Temp. °C	8.9	26.1	18.3	8.9	30.0	19.0	8.8	30.0	19.2	8.7	29.0	18.7	-
2	Water Temp. °C	8.2	24.1	14.9	7.3	29.0	16.5	6.7	23.4	15.4	7.8	25.0	16.5	-
3	pH	7.35	7.80	7.56	7.52	9.10	8.60	8.05	9.25	8.79	8.08	9.30	8.59	6.5 - 8.5
4	Conductivity µs/cm	214.5	389.0	285.3	201.3	360.0	283.3	205.7	356.0	286.9	225.5	378.0	304.3	-
5	T.D.S	110.0	191.0	151.0	104.0	190.0	154.2	106.7	186.0	155.7	118.0	202.0	167.8	-
6	D.O	4.0	10.0	6.0	9.0	11.0	9.9	10.2	12.0	11.0	7.8	11.2	9.2	>5mg/l
7	C.O.D	33.3	109.4	65.7	39.8	72.0	52.0	32.0	80.0	47.0	48.0	96.0	63.1	-
8	B.O.D	3.6	11.1	6.9	4.0	7.6	5.1	3.1	9.5	5.3	4.0	12.1	6.8	< 3mg/l
9	Phosphate	0.112	0.594	0.359	0.047	0.197	0.102	0.039	0.119	0.080	0.078	0.140	0.111	-
10	Ammonical Nitrogen	0.474	4.660	1.993	0.348	1.170	0.774	0.438	1.134	0.799	0.606	2.070	1.147	-
11	Sulphate	9.99	35.60	18.08	16.05	52.41	36.08	12.57	57.87	40.93	14.08	59.84	38.08	-
12	Hardness	124.0	286.0	198.8	128.0	362.0	232.0	126.0	352.0	211.2	128.0	250.0	198.0	-
13	Calcium	28.9	56.1	48.1	34.5	97.8	59.2	34.5	64.1	53.7	36.1	64.1	54.5	-
14	Magnesium	8.2	36.0	19.1	10.2	29.6	20.5	10.2	46.7	21.0	9.2	21.9	15.1	-
15	T. Alkalinity	118.0	210.0	152.8	120.0	176.0	156.8	114.0	180.0	146.4	116.0	166.0	142.8	-
16	Chloride	20.0	40.0	26.8	14.0	20.0	17.2	18.0	26.0	22.8	22.0	28.0	24.8	-
17	Turbidity NTU	3.0	9.0	6.6	4.0	8.0	5.6	3.0	9.0	5.8	5.0	15.0	9.4	-

All parameters are in mg/l except Ph Conductivity, Temperature and turbidity

Sample Collected By

*[Handwritten Signature]*

Analysed BY

*[Handwritten Signature]*

*[Handwritten Signature]*  
I/C water LAB



Government of Jammu & Kashmir  
J&K POLLUTION CONTROL COMMITTEE  
OFFICE OF THE REGIONAL DIRECTOR - KASHMIR  
Sheikh-ul-Alam Campus, Rajbagh, near Government Silk Factory, Srinagar-190008



**Microbiological Analysis Report of Dal lake for the month of January 2024.**

Date of Sampling	30-01-2024		
S.No.	Location	Total Coliforms after 24hrs of Incubation at 37°C	Faecal coliforms after 24hrs of Incubation at 45°C
1	Nehru Park	733	120
2	Golden Lake	1800	80
3	Charchinari	1400	55
4	Oberoi Ghat	230	30
5	SKICC(BACK SIDE)	420	40
6	Makai Point	4100	142
7	Nishat Ghat	7606	1200
8	Near Shalimar Channel	350	20
9	Entry Telbal Nallah	3900	200
10	Hazratbal Shrine(near ablution point)	9000	2000
11	Konkhan IPS	36000	1000
12	Ashai-bagh	200	30
13	Nigeen Club	200	30

Observations:

Samples collected by: *[Signature]*

Samples Analysed by:

Samples Analysed by *[Signature]* 11/6/24



Government of Jammu & Kashmir  
J&K POLLUTION CONTROL COMMITTEE



Sheikh-ul-Alam Campus, Rajbagh, near Government Silk Factory, Srinagar-190008

### Microbiological Analysis Report of Dal lake for the month of Feb-2024

Date of Sampling	27-02-2024		
S.No.	Location	Total Coliforms after 24hrs of Incubation at 37°C	Faecal coliforms after 24hrs of Incubation at 45°C
1	Nehru Park	250	20
2	Golden Lake	300	40
3	Charchinari	450	60
4	Oberoi Ghat	600	100
5	SKICC(BACK SIDE)	450	70
6	Makai Point	2450	140
7	Nishat Ghat	2100	740
8	Near Shalimar Channel	420	180
9	Entry Telbal Nallah	7200	60
10	Hazratbal Shrine(near ablution point)	3100	620
11	Konkhan IPS	16400	1100
12	Ashai-bagh	2100	40
13	Nigeen Club	1440	140

Observations:

Samples collected by:

Samples Analysed by:

Samples Analysed by



### Performance report of Various STPs around DAL and Nigeen Lake

S.no		STP NISHAT LAAM			STP HABAK			STP HAZRATBAL			Permissible limits as per general standards for discharge of environmental pollutants	Norms as per Hon,ble NGT
		RAW	FINAL	% TREATMENT	RAW	FINAL	% TREATMENT	RAW	FINAL	% TREATMENT		
	Date of Sampling	11-01-2024			11-01-2024			11-01-2024				
1	Air Temperature	13.5			13.1			13.1				
2	Water Temperature	11.5	10.0	-	11	10.5	-	11.5	10.8	-	5°C above receiving water body.	
3	pH	7.62	7.7	-	7.61	7.7	-	7.45	7.52	-	5.5 to 9.0	5.5 to 9.0
4	Dissolved Oxygen	-	6.8	-	-	6.5	-	-	6.3	-	-	-
5	Chemical Oxygen Demand	290.91	136.36	53.13	390.87	227.27	41.86	254.55	112	56.00	-	50
6	*Biochemical Oxygen Demand for 3days at 27°C*	64.8	15.4	76.23	148.8	46.8	68.55	84.8	15.8	81.37	30.0	10
7	Phosphate(PO <sub>4</sub> -P)	1.234	0.639	48.22	2.500	1.02	59.20	1.50	0.256	82.93	5.0	1
8	Ammonical Nitrogen (NH <sub>3</sub> -N)	8.220	7.65	6.93	10.14	6.01	40.73	7.51	6.91	7.99	50.0	-
9	Chloride	110.0	80.0	-	85	55	-	68	60	-	1000.0	-
10	Total Suspended Solids	-	30.0	-	-	95.0	-	-	40.0	-	100.0	20
11	Total Dissolved Solids	358.0	288.0	-	483	427	-	365	240	-	2100	-

% of Treatment should be= 90%

*It is advised that treated water from the STPs should be utilized for activities like irrigation, construction, industrial use etc instead of discharging it directly into the water bodies so that water bodies can be prevented from further deterioration*

All values are in mg/l except p H. & Temperature

Note :- This analysis report is confined only to the samples analysed

Sample Collected by

5/17

Analysed by

*[Signature]*

*[Signature]*  
I/C Water Lab



### Performance report of Various STPs around DAL and Nigeen Lake

S.no		STP NALLAH AMIR KHAN			STP BARINAMBAL LAWDA			STP BARINAMBAL UEED			Permissible limits as per general standards for discharge of environmental pollutants	Norms as per Hon,ble NGT
		RAW	FINAL	% TREATMENT	RAW	FINAL	% TREATMENT	RAW	FINAL	% TREATMENT		
	Date of Sampling	11-01-2024			11-01-2024			11-01-2024				
1	Air Temperature	12.50			12			12				
2	Water Temperature	11.0	11.6	-	10.9	9.8	-	10.8	9.5	-	5°C above receiving water body.	
3	pH	7.55	7.8	-	7.38	7.48	-	7.37	7.53	-	5.5 to 9.0	5.5 to 9.0
4	Dissolved Oxygen	-	7.0	-	-	7	-	-	4	-	-	-
5	Chemical Oxygen Demand	200.00	90.91	54.55	354.4	81.82	76.91	390.91	272.7	30.24	-	50
6	*Biochemical Oxygen Demand for 3days at 27°C*	76.8	15.4	79.95	148.8	14.3	90.39	176.8	82.8	53.17	30.0	10
7	Phosphate(PO4-P)	2.020	0.337	83.32	2.11	0.758	64.08	2.24	1.19	46.88	5.0	1
8	Ammonical Nitrogen (NH3-N)	9.530	8.26	13.33	9.73	5.07	47.89	9.72	9.6	1.23	50.0	-
9	Chloride	96.0	74.0	-	70	60	-	48	54	-	1000.0	-
10	Total Suspended Solids	-	35.0	-	-	25.0	-	-	160.0	-	100.0	20
11	Total Dissolved Solids	493.0	479.0	-	447	367	-	410	405	-	2100	-

% of Treatment should be= 90%

*It is advised that treated water from the STPs should be utilized for activities like irrigation, construction, industrial use etc instead of discharging it directly into the water bodies so that water bodies can be prevented from further deterioration*

All values are in mg/l except p H, & Temperature

Note :- This analysis report is confined only to the samples analysed

Sample Collected by

*[Signature]*

Analysed by

*[Signature]*

*[Signature]*  
I/C Water Lab



J&K Pollution Control Committee  
Rajbagh, Srinagar Kashmir

Annexure-21

Performance report of Various STPs around DAL and Nigeen Lake

S.no		STP NISHAT LAAM			STP HABAK			STP HAZRATBAL			Permissible limits as per general standards for discharge of environmental pollutants	Norms as per Hon,ble NGT
		RAW	FINAL	% TREATMENT	RAW	FINAL	% TREATMENT	RAW	FINAL	% TREATMENT		
	Date of Sampling	06-02-2024			06-02-2024			06-02-2024				
1	Air Temperature	9.80			10.5			10.1				-
2	Water Temperature	8.5	8.0	9.3	9.3	9	-	10.5	10.3	-	5°C above receiving water body.	-
3	pH	7.50	7.62	-	7.58	7.65	-	7.55	7.87	-	5.5 to 9.0	5.5 to 9.0
4	Dissolved Oxygen	-	6.0	-	-	6	-	-	4.5	-	-	-
5	Chemical Oxygen Demand	250.00	166.60	33.36	441.4	208.2	52.83	333.2	124.9	62.52	-	50
6	*Biochemical Oxygen Demand for 3days at 27°C*	69.7	34.0	51.22	132.7	32.7	75.36	118.7	39.3	66.89	30.0	10
7	Phosphate(PO4-P)	0.546	0.395	27.66	2.7	0.427	84.19	1.20	0.672	44.00	5.0	1
8	Ammonical Nitrogen (NH3-N)	8.700	7.72	11.26	10.26	8.94	12.87	9.40	8.66	7.87	50.0	-
9	Chloride	80.0	84.0	-	86	74	-	52	48	-	1000.0	-
10	Total Suspended Solids	-	45.0	-	-	55.0	-	-	60.0	-	100.0	20
11	Total Dissolved Solids	313.0	310.0	-	496	449	-	354	391	-	2100	-

% of Treatment should be = 90%

*It is advised that treated water from the STPs should be utilized for activities like irrigation, construction, industrial use etc instead of discharging it directly into the water bodies so that water bodies can be prevented from further deterioration*

All values are in mg/l except p H, & Temperature

Note :- This analysis report is confined only to the samples analysed

Sample Collected by

BEET

Analysed by

*[Signature]*

*[Signature]*  
I/C Water Lab



Performance report of Various STPs around DAL and Nigeen Lake

S.no	STP NALLAH AMIR KHAN			STP BARINAMBAL LAWDA			STP BARINAMBAL UEED			Permissible limits as per general standards for discharge of environmental pollutants	Norms as per Hon,ble NGT			
	RAW	FINAL	% TREATMENT	RAW	FINAL	% TREATMENT	RAW	FINAL	% TREATMENT					
	Date of Sampling			06-02-2024			06-02-2024			06-02-2024				
1	Air Temperature			9.10			7.8			8				
2	Water Temperature			10.3	9.5	-	9.2	8.9	-	8.8	8.3	-	5°C above receiving water body.	-
3	pH			7.48	7.67	-	7.43	7.63	-	7.52	7.61	-	5.5 to 9.0	5.5 to 9.0
4	Dissolved Oxygen			-	7.9	-	-	6.5	-	-	2.5	-	-	-
5	Chemical Oxygen Demand			291.50	108.20	62.88	408.1	116.6	71.43	425	275	35.29	-	50
6	*Biochemical Oxygen Demand for 3days at 27°C*			92.7	17.9	80.69	126.7	21.7	82.87	146.7	87.7	40.22	30.0	10
7	Phosphate(PO4-P)			1.453	0.287	80.25	1.871	0.799	57.30	2.15	1.39	35.35	5.0	1
8	Ammonical Nitrogen (NH3-N)			9.860	9.09	7.81	10.17	7.32	28.02	10.32	10.01	3.00	50.0	-
9	Chloride			56.0	50.0	-	60	40	-	70	62	-	1000.0	-
10	Total Suspended Solids			-	30.0	-	-	28.0	-	-	120.0	-	100.0	20
11	Total Dissolved Solids			442.0	407.0	-	376	333	-	398	362	-	2100	-

% of Treatment should be= 90%

*It is advised that treated water from the STPs should be utilized for activities like irrigation, construction, industrial use etc instead of discharging it directly into the water bodies so that water bodies can be prevented from further deterioration*

All values are in mg/l except p H, & Temperature

Note :- This analysis report is confined only to the samples analysed

Sample Collected by

BET

Analysed by

*[Signature]*

*[Signature]*  
I/C Water Lab



J&K Pollution Control Committee  
Rajbagh, Srinagar Kashmir

Annexure-23

Performance report of Various STPs around DAL and Nigeen Lake

S.no		STP NISHAT LAAM			STP HABAK			STP HAZRATBAL			Permissible limits as per general standards for discharge of environmental pollutants	Norms as per Hon,ble NGT
		RAW	FINAL	% TREATME	RAW	FINAL	% TREATME	RAW	FINAL	% TREATM		
	Date of Sampling	20-03-2024			20-03-2024			20-03-2024				
1	Air Temperature	16.60			20			21.4				-
2	Water Temperature	12.9	12.7	-	13.5	13.2	-	13.8	13.7	-	5°C above receiving water body.	-
3	pH	7.53	7.58	-	7.52	7.8	-	7.46	7.58	-	5.5 to 9.0	5.5 to 9.0
4	Dissolved Oxygen	-	6.0	-	-	4.5	-	-	6	-	-	-
5	Chemical Oxygen Demand	264.60	117.00	55.78	323.4	98	69.70	343	127.4	62.86	-	50
6	*Biochemical Oxygen Demand for 3days at 27°C*	60.5	23.5	61.16	118.5	23.5	80.17	104.5	23.5	77.51	30.0	10
7	Phosphate(PO4-P)	0.741	0.553	25.37	2.26	0.606	73.19	1.45	0.555	61.67	5.0	1
8	Ammonical Nitrogen (NH3-N)	8.690	8.62	0.81	9.78	9.03	7.67	9.54	8.95	6.18	50.0	-
9	Chloride	80.0	42.0	-	74	46	-	68	62	-	1000.0	-
10	Total Suspended Solids	-	23.0	-	-	28.0	-	-	32.0	-	100.0	20
11	Total Dissolved Solids	244.0	230.0	-	497	465	-	346	372	-	2100	-

% of Treatment should be= 90%

*It is advised that treated water from the STPs should be utilized for activities like irrigation, construction, industrial use etc instead of discharging it directly into the water bodies so that water bodies can be prevented from further deterioration*

All values are in mg/l except p H, & Temperature

Note :- This analysis report is confined only to the samples analysed

Sample Collected by

FBI

Analysed by

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I/C Water Lab



Performance report of Various STPs around DAL and Nigeen Lake

S.no		STP NALLAH AMIR KHAN			STP BARINAMBAL LAWDA			STP BARINAMBAL UEED			Permissible limits as per genral standards for discharge of environmental pollutants	Norms as per Hon,ble NGT
		RAW	FINAL	% TREATMENT	RAW	FINAL	% TREATMENT	RAW	FINAL	% TREATMENT		
	Date of Sampling	20-03-2024			20-03-2024			20-03-2024				
1	Air Temperature	21.00			21			21.2				
2	Water Temperature	14.5	14.0	-	14	13.5	-	14	14.3	-	5°C above receiving water body.	
3	pH	7.43	7.7	-	7.42	7.61	-	7.3	7.56	-	5.5 to 9.0	5.5 to 9.0
4	Dissolved Oxygen	-	7.0	-	-	7.2	-	-	1.4	-	-	-
5	Chemical Oxygen Demand	294.00	98.00	66.67	421.4	107.8	74.42	539	225	58.26	-	50
6	*Biochemical Oxygen Demand for 3days at 27°C*	90.5	17.5	80.66	140.5	17.5	87.54	156.3	61.5	60.65		
7	Phosphate(PO <sub>4</sub> -P)	1.875	0.358	80.91	1.751	0.912	47.92	1.96	1.54	21.23	30.0	10
8	Ammonical Nitrogen (NH <sub>3</sub> -N)	9.690	8.89	8.26	9.92	3.96	60.08	9.97	9.22	7.52	5.0	1
9	Chloride	70.0	42.0	-	56	30	-	76	50	-	50.0	-
10	Total Suspended Solids	-	20.0	-	-	18.0	-	-	130.0	-	1000.0	-
11	Total Dissolved Solids	466.0	185.0	-	350	139	-	344	330	-	2100	-

% of Treatment should be= 90%

*It is advised that treated water from the STPs should be utilized for activities like irrigation, construction, industrial use etc instead of discharging it directly into the water bodies so that water bodies can be prevented from further deterioration*

All values are in mg/l except p H, & Temperature

Note :- This analysis report is confined only to the samples analysed

Sample Collected by

ABD

Analysed by

*[Signature]*

*[Signature]*  
I/C Water Lab



J&K Pollution Control Committee  
Rajbagh, Srinagar Kashmir

Annexure-25

**Performance report of Various STPs around DAL and Nigeen Lake**

S.no		STP NISHAT LAAM			STP HABAK			STP HAZRATBAL			Permissible limits as per general standards for discharge of environmental pollutants	Norms as per Hon,ble NGT
		RAW	FINAL	% TREATMENT	RAW	FINAL	% TREATMENT	RAW	FINAL	% TREATMENT		
	Date of Sampling	03-04-2024			03-04-2024			03-04-2024				
1	Air Temperature	16.60			16.3			16.3				
2	Water Temperature	14.5	14.1	-	14.7	14.2	-	14.7	14.5	-	5°C above receiving water body.	-
3	pH	7.04	7.54	-	7.71	7.83	-	7.23	7.36	-	5.5 to 9.0	5.5 to 9.0
4	Dissolved Oxygen	-	4.4	-	-	5	-	-	4	-	-	-
5	Chemical Oxygen Demand	451.30	112.90	74.98	435	112.9	74.05	419.35	153.1	63.49	-	50
6	*Biochemical Oxygen Demand for 3days at 27°C*	112.7	22.7	79.86	96.7	21.7	77.56	92.7	40.7	56.09	30.0	10
7	Phosphate(PO4-P)	1.148	0.453	60.54	1.548	0.511	66.99	1.160	0.542	53.28	5.0	1
8	Ammonical Nitrogen (NH3-N)	10.990	6.73	38.76	11.28	6.76	40.07	11.34	9.606	15.29	50.0	-
9	Chloride	64.0	46.0	-	84	56	-	60	50	-	1000.0	-
10	Total Suspended Solids	-	47	-	-	33	-	-	89	-	100.0	20
11	Total Dissolved Solids	327.0	209.0	-	572	407	-	448	374	-	2100	-

% of Treatment should be= 90%

*It is advised that treated water from the STPs should be utilized for activities like irrigation, construction, industrial use etc instead of discharging it directly into the water bodies so that water bodies can be prevented from further deterioration*

All values are in mg/l except p H, & Temperature

Note :- This analysis report is confined only to the samples analysed

Sample Collected by

*Handwritten signature*

Analysed by

*Handwritten signature*

*Handwritten signature*  
I/C Water Lab



### Performance report of Various STPs around DAL and Nigeen Lake

S.no		KHAN			LAWDA			UEED			Permissible limits as per general standards for discharge of environmental pollutants	Norms as per Hon,ble NGT
		RAW	FINAL	% TREATMENT	RAW	FINAL	% TREATMENT	RAW	FINAL	% TREATMENT		
	Date of Sampling	03-04-2024			03-04-2024			03-04-2024				
1	Air Temperature	15.00			17.4			17.3				-
2	Water Temperature	14.5	14.0	-	15.5	15.3	-	14.7	14.4	-	5°C above receiving water body.	-
3	pH	7.59	7.87	-	7.28	7.41	-	7.19	7.35	-	5.5 to 9.0	5.5 to 9.0
4	Dissolved Oxygen	-	6.0	-	-	6.2	-	-	2	-	-	-
5	Chemical Oxygen Demand	411.29	129.03	68.63	467.25	112.9	75.84	475.81	290.32	38.98	-	50
6	*Biochemical Oxygen Demand for 3days at 27°C*	84.7	19.7	76.74	120.7	15.7	86.99	108.7	78.7	27.60		
7	Phosphate(PO <sub>4</sub> -P)	1.285	0.834	35.10	1.36	0.677	50.22	1.64	1.616	1.28	30.0	10
8	Ammonical Nitrogen (NH <sub>3</sub> -N)	10.200	7.25	28.92	10.91	4.49	58.85	9.47	9.43	0.42	5.0	1
9	Chloride	68.0	76.0	-	50	62	-	54	60	-	50.0	-
10	Total Suspended Solids	-	23	-	-	21	-	-	249	-	1000.0	-
11	Total Dissolved Solids	461.0	430.0	-	343	296	-	344	340	-	100.0	20
											2100	-

% of Treatment should be= 90%

*It is advised that treated water from the STPs should be utilized for activities like irrigation, construction, industrial use etc instead of discharging it directly into the water bodies so that water bodies can be prevented from further deterioration*

*All values are in mg/l except p H. & Temperature*

*Note :- This analysis report is confined only to the samples analysed*

Sample Collected by

*ET*

Analysed by

*[Signature]*

*[Signature]*  
I/C Water Lab



J&K Pollution Control Committee  
Rajbagh, Srinagar Kashmir

Annexure-27

Performance report of Various STPs around DAL and Nigeen Lake

S.no		STP NISHAT LAAM			STP HABAK			STP HAZRATBAL			Permissible limits as per general standards for discharge of environmental pollutants	Norms as per Hon,ble NGT
		RAW	FINAL	% TREATMENT	RAW	FINAL	% TREATMENT	RAW	FINAL	% TREATMENT		
<b>Date of Sampling</b>		<b>06-05-2024</b>			<b>06-05-2024</b>			<b>06-05-2024</b>				
1	<b>Air Temperature</b>	28.10			28.1			27.5				-
2	<b>Water Temperature</b>	17.6	17.1	-	18	17	-	17.5	17.1	-	5°C above receiving water body.	-
3	<b>pH</b>	6.80	7.3	-	7.14	7.49	-	7.35	7.40	-	5.5 to 9.0	5.5 to 9.0
4	<b>Dissolved Oxygen</b>	-	6.0	-	-	6.5	-	-	7	-	-	-
5	<b>Chemical Oxygen Demand</b>	707.32	73.17	<b>89.66</b>	406.5	89.45	<b>78.00</b>	406.55	81.3	<b>80.00</b>	-	50
6	<b>*Biochemical Oxygen Demand for 3days at 27°C*</b>	160.7	15.3	<b>90.48</b>	94.7	15.7	<b>83.42</b>	118.7	16.7	<b>85.93</b>	30.0	10
7	<b>Phosphate(PO4-P)</b>	1.138	0.497	<b>56.33</b>	1.2	0.597	<b>50.25</b>	1.180	0.490	<b>58.47</b>	5.0	1
8	<b>Ammonical Nitrogen (NH3-N)</b>	8.540	3.61	<b>57.73</b>	9.82	8.2	<b>16.50</b>	9.59	5.97	<b>37.75</b>	50.0	-
9	<b>Chloride</b>	52.0	44.0	-	78	56	-	56	60	-	1000.0	-
10	<b>Total Suspended Solids</b>	-	25	-	-	15	-	-	14	-	100.0	20
11	<b>Total Dissolved Solids</b>	202.0	190.0	-	490	358	-	364	309	-	2100	-

% of Treatment should be= 90%

*It is advised that treated water from the STPs should be utilized for activities like irrigation, construction, industrial use etc instead of discharging it directly into the water bodies so that water bodies can be prevented from further deterioration*

*All values are in mg/l except pH, & Temperature*

*Note :- This analysis report is confined only to the samples analysed*

Sample Collected by

*BEJ*

Analysed by

*[Signature]*

*[Signature]*  
I/C Water Lab



Performance report of Various STPs around DAL and Nigeen Lake

Analysis Report

S.no	KHAN			LAWDA			UEED			Permissible limits as per general standards for discharge of environmental pollutants	Norms as per Hon,ble NGT	
	RAW	FINAL	% TREATMENT	RAW	FINAL	% TREATMENT	RAW	FINAL	% TREATMENT			
Date of Sampling		06-05-2024			06-05-2024			06-05-2024				
1	Air Temperature	27.10		—	26.1		—	26.1		—		—
2	Water Temperature	17.5	17.1	—	17.5	17.2	—	17.2	17	—	5°C above receiving water body.	—
3	pH	7.42	7.60	—	7.38	7.55	—	7.15	7.31	—	5.5 to 9.0	5.5 to 9.0
4	Dissolved Oxygen	—	7.2	—	—	7	—	—	2.5	—	—	—
5	Chemical Oxygen Demand	284.50	105.69	62.85	357.72	73.17	79.55	365.85	268.2	26.69	—	50
6	*Biochemical Oxygen Demand for 3days at 27°C*	60.7	18.0	70.35	122.7	14.7	88.02	104.7	64.7	38.20	30.0	10
7	Phosphate(PO <sub>4</sub> -P)	1.163	0.539	53.65	1.88	0.533	71.65	1.63	1.594	2.03	5.0	1
8	Ammonical Nitrogen (NH <sub>3</sub> -N)	9.340	7.8	16.49	9.94	2.82	71.63	9.94	9.89	0.50	50.0	—
9	Chloride	72.0	78.0	—	56	32	—	68	68	—	1000.0	—
10	Total Suspended Solids	—	50.0	—	—	18.0	—	—	202.0	—	100.0	20
11	Total Dissolved Solids	460.0	446.0	—	336	230	—	349	340	—	2100	—

% of Treatment should be= 90%

*It is advised that treated water from the STPs should be utilized for activities like irrigation, construction, industrial use etc instead of discharging it directly into the water bodies so that water bodies can be prevented from further deterioration*

*All values are in mg/l except p H, & Temperature*

*Note :- This analysis report is confined only to the samples analysed*

Sample Collected by

*BET*

Analysed by

*[Signature]*

*[Signature]*  
I/C Water Lab



**J&K Pollution Control committee**  
**Office of The Regional Director – Kashmir**  
 Shiekh-ul-Alam Complex Rajbagh Kashmir  
**Analysis Report**

**Physico Chemical Characteristics of Dal Lake for the Month of June, 2024**

**DATE OF SAMPLING:- 06/06/2024**

S/N	Sampling spots	Air Temp	Water Temp	pH	Conductivity	TDS	DO	COD	BOD	Phosphate	Ammonium Nitrate	Sulphate	Hardness	Calcium	Magnesium	Total Alkalinity	Chloride	Turbidity	Nitrate Nitrogen
1	Dalgate:3251	25.00	23.70	7.37	173.00	93.00	5.20	57.85	4.00	0.065	2.184	13.635	112.0	36.07	5.34	118.0	20.0	15.0	0.480
2	Nehru park 1309	25.00	23.10	8.37	164.00	84.00	8.60	33.65	3.80	0.064	1.728	13.029	108.0	34.46	5.34	126.0	18.0	21.0	0.200
3	Grand Palace Ghat	25.50	23.30	8.34	158.00	80.00	10.10	49.58	4.10	0.071	1.026	10.150	120.0	31.26	10.20	150.0	20.0	13.0	0.288
4	Near Nishat STP: 3253	28.00	25.10	8.09	148.00	79.00	9.60	74.37	8.20	0.097	0.936	9.241	110.0	36.07	4.86	128.0	16.0	24.0	0.244
5	Nishat Water Intake: 3261	27.20	24.70	8.28	157.00	85.00	8.90	57.84	3.80	0.058	1.074	6.060	164.0	35.27	18.46	138.0	16.0	12.0	0.244
6	Telbal entry: 3256	25.20	24.30	7.70	136.00	73.00	10.10	49.58	4.80	0.114	0.582	9.090	112.0	36.07	5.34	120.0	18.0	12.0	0.972
7	Near STP Habak: 3257	25.30	24.00	7.90	152.00	81.00	12.30	132.22	14.60	0.132	2.470	10.900	140.0	44.08	7.29	118.0	20.0	20.0	0.356
8	Near STP Hazratbal: 3258	24.80	23.00	7.36	200.00	104.00	13.50	90.90	14.20	0.195	2.580	26.050	206.0	45.69	22.35	140.0	20.0	24.0	0.652
9	Dobighat: 3259	25.00	23.00	8.70	180.00	96.00	11.40	90.90	13.70	0.119	1.080	21.210	166.0	36.87	17.98	P=10 M=104 T=114	26.0	16.0	0.872
10	Charchinari: 3252	26.10	24.70	8.25	147.00	77.00	8.80	33.05	3.10	0.053	1.044	9.544	118.0	32.06	9.23	114.0	16.0	20.0	0.496
11	Abikarpura: 3254	25.30	24.00	8.18	148.00	78.00	8.70	41.32	3.60	0.058	0.726	9.393	144.0	31.26	16.03	142.0	18.0	18.0	0.496
12	Sonalank: 3260	25.00	24.00	9.62	132.00	69.00	13.70	49.58	6.00	0.063	0.978	12.120	168.0	31.26	21.87	P=18 M=104 T=122	16.0	8.0	0.236

→All Values are in mg/l except pH, turbidity & Temperature.

Samples collected by

*[Signature]*

Analyzed by

*[Signature]*

*[Signature]*  
I/C Water lab



**J&K Pollution Control committee**  
Office of The Regional Director – Kashmir  
Shiekh-ul-Alam Complex Rajbagh Kashmir  
*Analysis Report*

Physico Chemical Characteristics of Dal and Nigeen Lake for the Month of June, 2024  
DATE OF SAMPLING:- 06/06/2024

S/N	Sampling spots	Air Temp	Water Temp	pH	Conductivity	TDS	DO	COD	BOD	Phosphate	Ammonium Nitrate	Sulphate	Hardness	Calcium	Magnesium	Total Alkalinity	Chloride	Turbidity	Nitrate Nitrogen
13	Nayaayyar: 4041	25.40	23.20	7.50	188.00	100.00	5.50	90.90	8.90	0.111	1.46	17.57	206.00	48.09	20.89	132.00	20.00	12.0	0.524
14	Jogilankar: 4042	25.10	23.00	7.30	205.00	108.00	3.60	99.16	10.10	0.13	1.62	15.75	224.00	49.69	24.30	128.00	22.00	16.0	0.544
15	Golden Lake:0 SKICC	24.40	23.70	8.10	172.00	88.00	7.00	41.32	4.10	0.069	1.152	12.877	170.00	33.66	20.89	148.00	20.00	18.0	0.328
16	Backside Makai Park	25.30	23.20	8.33	156.00	79.00	8.90	74.37	6.60	0.089	1.032	10.453	160.00	27.25	22.35	138.00	14.00	16.0	0.372
17	Point	24.70	25.00	8.35	150.00	75.00	8.70	41.32	3.80	0.075	1.062	9.990	120.00	28.05	12.15	120.00	16.00	7.0	1.064
18	Nishat Garden Near Shalimar	27.20	24.10	9.36	121.00	65.00	14.00	66.11	5.80	0.084	0.756	7.878	114.00	24.04	13.12	P=8 M=120 T=128	20.00	14.0	0.132
19	Channel	25.00	24.50	8.20	127.00	68.00	14.20	82.64	9.60	0.112	1.410	8.787	116.00	30.46	9.72	100.00	18.00	13.0	0.176
20	Hazratbal Ablution point	25.00	23.10	9.89	134.00	72.00	15.50	66.11	7.80	0.108	0.822	7.423	130.00	33.66	11.17	P=20 M=94 T=114	22.00	14.0	0.556
21	Khonkhan Area IPS	25.00	22.00	7.70	215.00	112.00	5.00	49.58	5.20	0.112	0.522	13.180	128.00	37.67	8.26	120.00	20.00	14.0	0.304
22	Ashaibagh Bridge: 4040	25.40	23.10	8.34	172.00	91.00	9.70	57.84	5.80	0.064	1.278	15.750	128.00	37.67	8.26	130.00	16.00	7.0	0.300
23	Nigeen: 3262	25.20	23.00	8.26	174.00	93.00	10.10	49.58	6.20	0.076	1.008	18.480	112.00	36.87	4.86	140.00	18.00	6.0	0.184
24	Saderbal	25.00	22.80	8.10	184.00	97.00	9.60	74.37	6.20	0.082	1.032	21.360	148.00	40.88	11.17	160.00	20.00	18.0	0.212

→All Values are in mg/l except pH, turbidity & Temperature.

Samples collected by

BET

Analyzed by

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*[Handwritten signature]*

I/C Water lab

**Jammu and Kashmir Pollution Control Committee**

Parivesh Bhavan, Forest Complex || Silk Factory Road  
Transport Nagar, Jammu, 180 006 || Rajbagh, Srinagar, 190 008  
Tel - 0191-2476927; mail - membersecretaryjkspcb@gmail.com

Deputy Commissioner,  
Srinagar,

No.: JKPCC/OA 504-2024/24/657

Date: 10 08-2024

**Sub:** Direction of Hon'ble NGT order dated 22.05.2024 in the matter of OA No. 504 / 2024, News item titled "The Drowning Jewel: Tapestry of Dal Lake's Decline and Fishing Community's Struggling in Kashmir appearing in the Wire dated 01.03.2024.

**Ref:** Hon'ble NGT order dated 08.05.2024.

Sir,

Please refer to the subject & reference referred above, wherein, Hon'ble NGT has made following observations.

*"This Original Application is registered suo-motu on the basis of the news item titled "The Drowning Jewel: Tapestry of Dal Lake's Decline and Fishing Community's Struggle in Kashmir" appearing in The Wire dated 01.03.2024."*

*"The news item relates to the deteriorating condition of the Dal Lake in Kashmir due to municipal sewage, pollution and urbanization and its impact on the lives of Hanji people (those living in houseboats). The news item discloses that the lake is choking by the surge of plastic and pollution. There is discharge of municipal sewage and the lake is drowning in sewage and pollution covered with weeds and patches of garbage. It also discloses that the sewage has destroyed the fish and at one time people used to drink the lake water but today it cannot be even used for washing the face."*

In the light of above observations, you are kindly requested to share information with respect to

- i) Impact of tourism and rising population on the deteriorating condition of Dal Lake.
- ii) Scale of deterioration of Dal Lake owing to dumping of Raw sewage / treated water from STPs specifically impact in fishes.
- iii) Factual status of Hanji People due to rising pollution in Dal Lake and its impact on fisheries.

Yours faithfully,

*26/8/24*  
A/ (Ghansham Singh) JKAS  
Member Secretary

10.8.24