

# Semi-Annual Environmental Monitoring Report

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Project Number: 41116-033

Period: January 2018 to June 2018

Submission Date: 20 November 2018

## IND: Jammu and Kashmir Urban Sector Development Investment Program – Tranche 2

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# **Semi-Annual Environmental Monitoring Report**

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**Loan Number: 2925 IND**  
**Period: January 2018 to June 2018**

**IND: Jammu and Kashmir Urban Sector Development  
Investment Program**

Submitted By:  
Economic Reconstruction Agency, Government of Jammu and Kashmir

## Contents

1. INTRODUCTION.....	1
2. COMPLIANCE STATUS WITH NATIONAL /STATE /LOCAL STATUTORY ENVIRONMENTAL REQUIREMENTS.....	5
3. COMPLIANCE STATUS WITH THE ENVIRONMENTAL COVENANTS AS STIPULATED IN THE LOAN AGREEMENT .....	14
4. COMPLIANCE STATUS WITH ENVIRONMENTAL MANAGEMENT AND MONITORING PLANS AS STIPULATED IN THE ENVIRONMENTAL DOCUMENTATION AS AGREED WITH ADB. ....	15
5. APPROACH AND METHODOLOGY ENGAGED FOR ENVIRONMENTAL MONITORING OF THE PROJECT .....	19
6. MONITORING OF ENVIRONMENTAL RECEPTORS/ ATTRIBUTE .....	19
7 ANY OTHER ENVIRONMENTAL ASPECTS, IMPACTS OBSERVED DURING IMPLEMENTATION WHICH WERE NOT COVERED EARLIER .....	42
8 DETAILS OF COMPLAINTS RECEIVED FROM PUBLIC AND ACTIONS TAKEN THEREOF TO RESOLVE.....	42
9 FOLLOW-UP ACTIONS AND CONCLUSIONS.....	42
APPENDIX-1: PUBLIC CONSULTATION & ATTENDANCE DETAILS OF FLYOVER- JEHANAGIR CHOWK TO RAMBAGH .....	43
APPENDIX-2: PUBLIC CONSULTATION ATTENDANCE DETAILS OF SURFACE DRAINAGE SUBPROJECT AT ATHWAJAN –NH-1A, SRINAGAR .....	44
APPENDIX-3: PUBLIC CONSULTATION ATTENDANCE DETAILS OF PUMPING STATIONS SITES.....	45
APPENDIX-4: SAMPLING SITE LOCATION MAP OF FLYOVER FROM JEHANGIR CHOWK-RAMBAGH, SRINAGAR .....	46
APPENDIX-5: SAMPLING SITE LOCATION MAP OF FLYOVER- LABOUR CAMP/ BATCHING PLANT AT KRALPORA, SRINAGAR .....	47
APPENDIX-6: SAMPLING SITE LOCATION MAP OF STORM WATER DRAINAGE ALONG NH-1A, ATHWAJAN, SRINAGAR .....	48

## **1. INTRODUCTION**

### **1.1. Overall Project Description:**

1. The State of Jammu and Kashmir lies in the northernmost part of the country and shares international border with Pakistan and China. This physiographic situation attaches strategic importance to the region as well as the infrastructural development in the state. The state has three main geographical regions namely Jammu, Kashmir valley and highlands of Ladakh. As per details from Census 2011, Jammu and Kashmir has population of 1.25 Crores, an increase from figure of 1.01 Crore in 2001 census. The population forms 1.04% of India in 2011, compared to 0.99% in 2001. As per census 2011, the Sex Ratio of female is 889 per 1000 male, which is below national average of 940. While, in 2001 the sex ratio of female was 900 per 1000 males. The literacy rate has seen an upward trend at 67.16% as per 2011 census as compared to the national literacy rate of 64.80%, while in 2001 literacy rate stood at 55.52%.
2. Jammu and Srinagar are the two major cities where majority of urban population is concentrated while other smaller towns share the rest. Urban infrastructure in these places for long has been neglected and hence, is subject to severe urban infrastructure problems. Although, at least, majority of population in Jammu and Srinagar cities have been provided with piped water supplies, the other urban amenities remain neglected. This is mainly due to meager investments made in the urban infrastructure either by private or by public sector.
3. The Government of Jammu and Kashmir (GoJK), apart from the ADB financed Multi-Sector Project for Infrastructure Rehabilitation (MPIR) in Jammu and Kashmir, again approached ADB for assistance in urban sector development for more development works and studies so as to implement comprehensively the urban sector reforms. The GoJK through Jammu and Kashmir Economic Reconstruction Agency has conceived the Jammu and Kashmir Urban Sector Development Investment Program (JKUSDIP) in its effort to boost economic growth in Jammu and Kashmir State. The primary objective of JKUSDIP is to promote economic development in Jammu and Kashmir State through expansion of basic services such as water supply, sewerage, sanitation, drainage, solid waste management, urban transport and other municipal functions in Jammu, Srinagar and other important urban centers of the State. JKUSDIP will also strengthen the service delivery capacity of the responsible state urban agencies and urban local bodies through management reforms, capacity building and training.

### **1.2. Project Objectives:**

4. The proposed JKUSDIP will foster the economic growth in Jammu and Kashmir State. The long term Project objectives are to contribute to the economic development of Jammu and Kashmir through enhanced and sustainable growth in the main urban areas with emphasis on promoting commerce and on improvement of livelihood for the poor.
5. The urban sector sub-projects are aimed at expansion of basic services such as

water supply, sanitation, waste management, urban transport and other municipal functions in Jammu and Srinagar cities and other urban centers in order to cater to the demands and requirements of the increasing population. The overall program envisages the following broad benefits:

- i. Improved water supply system
- ii. Improved sewerage/drainage systems
- iii. Improved solid waste management
- iv. Improved road and traffic (urban transport) conditions
- v. Other municipal facilities

### 1.3. Environmental Category:

6. The Project 2 under JKUSDIP was categorized as Environmental Category “B”, according to ADB’s Safeguard Policy Statement-2009. All the subprojects under execution in Srinagar and Jammu have been categorized as Category “B”.

### 1.4. Environmental Performance Indicators, if any:

7. For effective monitoring, selected environmental parameters have been identified as indicators which may be qualitatively and quantitatively measured and compared over a period of time in order to assess/ensure the compliance to environmental management plans (EMPs). The environmental performance indicators selected are physical, biological and social characteristics identified as most important in affecting the environment at critical locations all along the sub-project corridors. The parameters identified as performance indicators are:
  - i. Compliance with environmental management and monitoring plan.
  - ii. Compliance to State/National environmental regulations.
  - iii. Monitoring of ambient air quality, water quality and noise levels and comparison with baseline environmental quality and State/National standards.

### 1.5. Overall project progress, agreed milestones and implementation schedules:

8. In Srinagar, construction work for the following three sub-projects are in progress (Physical progress as on 30<sup>th</sup> June 2018):
  - i. Construction of Elevated Expressway Corridor from Jehangir Chowk to Rambagh- Natipora in Srinagar City (Physical progress of 79.20%).
  - ii. Construction of Multi-storied mechanized Parking Facility at KMDA Stand in Srinagar city (Physical progress of 100%).
  - iii. Construction of Storm Water Drainage in the adjoining areas of NH-Bypass in Srinagar (Physical progress of 72.80%).
  - iv. Procurement of Works for Up gradation and Upliftment of existing drainage pumping stations in Srinagar City (Lot A & B: Pumping Stations of left/ right Bank of River Jhelum). Lot-A: 92.50% and Lot-B: 96 .00%
9. In Jammu, construction work for the five out of following six sub-projects is complete:
10. :
  - i. Construction of Bikram Chowk Flyover and Widening /Strengthening of Road from Bikram Chowk to Govt. Women’s Degree College on Bikram Chowk– Satwari Chowk Road Corridor, Jammu Under Contract Package JKUSDIP

- Jammu/UT-01 (Physical Progress of 100%).
- ii. Rehabilitation and Channelization of Storm Water Drains at Channi Himmat in Jammu City, Under Contract Package JKUSDIP Jammu/SWD-02 (Physical progress of 100%).
- iii. Construction of Tube wells, Installation Water Supply Rehabilitation Programme (19 Nos, tube well) (lot-1 =12 Nos. & lot-2=7) Under Contract Package JKUSDIP Jammu/ WS-01 (Physical progress of Lot-1: 100% and Lot-2:100%)
- iv. Replacement of Worn-out pipe lines, laying of new pipelines in distribution network and Construction of OHT at Jammu city Under Contract Package JKUSDIP Jammu/ WS-02 (Physical progress of 70%).
- v. Rehabilitation and Channelization of Storm Water drain at Gangyal and Digiana areas in Jammu City JKUSDIP Jammu / SWD-01 (Physical progress of 100%).
- vi. Replacement of Worn-out machineries and electrical equipment including essential civil works in Tube wells and Central Pumping Station (CPS) at Jammu City Water Supply Rehabilitation Programme under Contract Package JKUSDIP Jammu / WS – 03(Physical progress of 100%).

#### 1.6. Any other information useful for assessing environmental performance of the project:

##### Public consultation and grievance redressal:

- 11. Public consultation has evolved as a useful tool in addressing the issues and rectification of the same wherever possible. The public consultation is the ongoing and continuous process, which is conducted on regular basis in Srinagar and Jammu subprojects under execution, with local residents to ensure that they are fully engaged in the project and have the opportunity to participate in its implementation. Formal consultation as well as adhoc regular discussions with the local residents which forms part of the meaningful public consultation process.
- 12. Communication with the local residents is always open and views of the residents are taken into consideration during planning of the work programs under JKUSDIP, so that the people suffer least disturbance and inconvenience as the work is executed.
- 13. Various issues were discussed during formal consultation which includes:-
  - a) Public views on opening of flyover ramps (A2 and A3) at A.S College upward ramp, downward ramp towards Airport road Barzulla and Natipora downward ramp.
  - b) Restoration of roads and lanes
  - c) Inconvenience with regard to access disruption
  - d) Dust and noise problems faced during execution of work
  - e) Use of proper barricading to ensure the safety of public and workers.
- 14. Mitigation measures discussed during formal consultation includes:
  - i. Clearing passageways and roads of surplus waste material on priority
  - ii. Speedy restoration of all the utilities
  - iii. Simultaneous road restorations after execution of work
  - iv. Provision of alternate access routes till restoration is achieved

- v. Using appropriate dust suppression measures and proper noise/air monitoring. Frequent water sprinkling and removal of left over soil arising due to the excavation activities.
- vi. Barricading of the site under construction to ensure safety of pedestrians etc.,

## 2. COMPLIANCE STATUS WITH NATIONAL /STATE /LOCAL STATUTORY ENVIRONMENTAL REQUIREMENTS

15. **Table-1:** Status of statutory environmental requirements is shown in the following table:

S. N.	Name of Sub-project	Statutory Environmental Requirements	Status of Compliance	Actions Required
<b>Srinagar</b>				
1.	Construction of Flyover/Expressway Corridor from Jehangir Chowk to Rambagh–Natipora in Srinagar.	Environmental clearance under EIA Notification, 2006.	Not Required.	Contractor instructed to comply with fresh renewed consents of HMM plant. Contractor has applied for above consents and is in process at SPCB level.  In this regard, 1-2% of the bill has been kept with held on account of non-compliance on different bills and details are given in Table 4.
		Approval for tree cutting	Permission obtained from the concerned authority PIU for cutting of 13 no's Chinar trees (all trees cleared by concerned department)	
		Consent to establish/operate Batch Mix Plant	Batch Mix Plant: 2 No's installed at Kralpora, Budgam. Consent to Establish details: <ul style="list-style-type: none"> <li>• 60 RDK of 2013 Dated: 30/10/2013 (Capacity-216000 m<sup>3</sup>/A)</li> <li>• 61 RDK of 2013 Dated: 30/10/2013 (Capacity-216000 m<sup>3</sup>/A)</li> </ul> Consent to Operate details: (Old Consents) <ul style="list-style-type: none"> <li>• 108 RDK of 2014 Dated: 29/03/2014 (Capacity-216000 m<sup>3</sup>/A)</li> <li>• 112 of RDK of 2014 Dated: 29/03/2014 (Capacity-216000 m<sup>3</sup>/A)</li> </ul> Consent to Operate details: (Consents-2015/2016) <ul style="list-style-type: none"> <li>• 172 of 2015 Dated: 10/11/2015 (Capacity-216000 m<sup>3</sup>/A each) Valid upto March 2016</li> </ul> Consent to Operate details: (New Renewed Consents-2016/2017) <ul style="list-style-type: none"> <li>• 24 RDK of 2016 Dated: 05/07/2016 (Capacity-216000 m<sup>3</sup>/A) Valid upto 05/07/2017.</li> </ul>	



		<ul style="list-style-type: none"> <li>• 25 RDK of 2016 Dated: 05/07/2016 (Capacity- 216000 m<sup>3</sup>/A) Valid upto 05/07/2017</li> </ul> <p>Consent to Operate details: (Consents- 2017/2018) Contractor has Submitted Consent to operate 2 no of batching plants Vide Consent No 61/ldk of 287 dated 21/12/2017 valid till 21/12/2018</p>	
	Consent to operate for stone crusher	<p>Stone crusher Plant (Outsourced):</p> <p>Contractor has submitted consent to operate Stone Crusher which is Valid till May 2019 The stone aggregate material is being procured from approved Stone Crusher Plants.</p>	
	Consent to establish & operate Hot Mix Plant	<p>Consent No. 590 of 2015 valid upto February 2016.</p> <p>Consent to Operate (New renewed consents): Consent No: 956 of 2017, Dated: 07/01/2017 Valid till 06/02/2018</p>	
	Consent to establish and operate DG Sets	<p><b>D.G Sets:</b></p> <p>Consent of Operate (Old Consents):</p> <ul style="list-style-type: none"> <li>• 109 RDK of 2014 Dated: 29/03/2014 (1 No-125KVA)</li> <li>• 110 RD of 2014 Dated: 29/03/2014 (1 No- 82.5 KVA)</li> <li>• 111 RDK of 2014 dated: 29/03/2014 (1 No- 250 KVA)</li> <li>• 97 of 2014 Dated: 22/05/2014</li> </ul>	

			<p>(2 No's- 125 &amp; 82.5 KVA)</p> <p><b>Consent of Operate (New Renewed Consents for 7 no's submitted):</b></p> <ul style="list-style-type: none"> <li>• 173 of 2015 (250 KVA)</li> <li>• 174 of 2015 (125 KVA)</li> <li>• 175 of 2015 (200, 62.5 &amp; 40 KVA)</li> <li>• 176 of 2015 (250 KVA)</li> <li>• 177 of 2015 (125 KVA)</li> </ul> <p><b>New Renewed DG Consents to Operate (2017)</b> <b>8 No submitted</b></p> <ul style="list-style-type: none"> <li>• 26 RDK of 2016 (2 No. DG Sets- 125 KVA &amp; 125 KVA)</li> <li>• 27 RDK of 2016 (1 No. DG Set- 250 KVA)</li> <li>• 28 RDK of 2016 (2 No. DG Sets- 200 KVA &amp; 40 KVA)</li> <li>• 29 RDK of 2016 (3 No. DG Sets- 125 KVA, 75 &amp; 40 KVA)</li> </ul> <p><b>Consent to Operate (Consents submitted for 10 no DG sets:</b> Vide consent no 63 &amp; 64 RPK of 2017 dated 21/12/2017 Valid up to 21/12/2018 for following capacity DG sets</p> <ul style="list-style-type: none"> <li>• 75 KVA</li> <li>• 40 KVA</li> <li>• 250 KVA</li> <li>• 200 KVA</li> <li>• 125 KVA (6 No's)</li> </ul>	
		PUC certificates for contractor's vehicles.	Submitted by the contractor	
2.	Construction of Multi-storied mechanized	Environmental clearance under EIA	No clearance was required for the subproject	

	parking facility on M A Road near LalChowk Srinagar.	Notification (MoEF), 2006.	Subproject Completed	
		Approval for tree cutting		
		Consent to establish/operate Stone Crusher Plant from SPCB		
		Consent to establish/operate for Batching Plant		
		Consent to establish/operate DG Sets from SPCB.		
		PUC certificates for contractor's vehicles.		
3.	Construction of Surface Water Drainage System in Athwajan catchment on national Highway Bypass at Srinagar.	Environmental clearance under EIA Notification, 2006.	Not Required.	
		Approval for tree cutting.	Not required	
		Consent to operate for Stone Crusher Plant from SPCB.	<p>The aggregate material is being procured from approved crusher plant.</p> <p>Consent to Operate: (2015-16) Consent No. 119 of 2015, valid upto April 2016</p> <p>Consent to Operate: (2016-17) Consent No. 36 of 2016, valid upto March 2017</p> <p>Consent to Operate: (New Renewed- 2017-18) Consent No. 304 of 2017 and is valid up to March 2018 Contractor has initiated the renewal process</p>	

		Consent to operate for HMM Plant from SPCB.	HMM Plant Consent to Operate: (Old) Consent No: 1593 of 2015, Valid up to January 2016 Consent to Operate: (Renewed-New) Consent No: 300 of 2016, Dated: 20-05-2016 Valid up to April 2018	
		Consent to establish/operate DG Sets from SPCB.	D.G operated by the contractor during the reporting period falls in white category	
		PUC certificates for contractor's vehicles.	Submitted by the Contractor.	
4.	Procurement of Works for Up gradation and Upliftment of existing drainage pumping stations in Srinagar City (Lot A & B: Pumping Stations of left/ right Bank of River Jhelum)	Stone Crusher Plants	Stone aggregate material is being procured from approved Stone Crusher Plant. Consent to Operate: Consent No. 1147/7/C/91/3571-74 Dated: 29/9/2016 Valid till June 2017  Fresh Consents submitted Consent No.: 508 of 2016 dated 27/08/2016 valid up to October 2019	
		PUC Certificates for Contractor's Vehicle	Submitted by the contractor	
Jammu				
5.	Construction of BikramChowk Flyover and Widening/ Strengthening of Road from BikramChowk to Govt. Women's Degree	Approval for tree cutting	Approval for tree cutting obtained from the concerned department.	Subproject Completed
		Consent to establish and operate stone crusher	Stone aggregate material is being procured from approved Stone Crusher Plant. Copy of consent certificate from utility owner obtained and submitted	

	College on Bikram Chowk – Satwari Chowk Road Corridor, Jammu Under Contract Package JKUSDIP Jammu/UT-01		by contractor. Consent to operate (Renewal): Consent No. 212 of 2016 Dated: 30-04-2016 valid up to November 2016.	
		Consent to establish and operate concrete batching plant	Consents to Establish / Operate (Old Consents) Consent no: 190 of 2014 dated 05-03-2014 valid upto March 4, 2015. Consent to Operate: (Fresh Renewed Consents submitted) Consent No. 721 of 2015 Dated: 11/07/2015 valid upto February 2018	
		Consent of D.G. set	Contractor using 4 DG Sets- (Obtained and submitted by the Contractor.)  To establish / operate DG Sets: Consent No. 191 of 2014 Dated 05-03-2014 valid upto March 4, 2017. <ul style="list-style-type: none"> <li>• 35KVA (1 No.)</li> </ul> Consent No. 722 of 2015 Dated: 11-07-2015 valid upto 10-07-2016 <ul style="list-style-type: none"> <li>• 20 KVA (1 No.)</li> <li>• 25 KVA (1 No.)</li> <li>• 65 KVA (1 No.)</li> </ul>	
		PUC certificates for contractor's vehicles	Obtained and submitted by the Contractor.	
6.	Rehabilitation and Channelization of Storm Water Drains at ChanniHimmat in Jammu City, Under	Approval for tree cutting.	Approval for tree cutting obtained from the concerned department.	Subproject Completed
		Consent to establish and operate stone crusher	Stone aggregate material is being procured from approved Stone Crusher Plant. Consent to Operate (Old Consent- 2015):	

	Contract Package JKUSDIP Jammu/SWD-02		Consent No. 1563 of 2014, Dated 24-03-2014. Consent to Operate (Old Consent- 2016): Consent No. 212 of 2016 Dated: 30-04-2016 Valid upto November 2016. Consent to Operate (New Renewed Consent- 2017): Consent No. 212 of 2016 Dated: 04-04-2016 Valid up to March 2017.	
		PUC certificates for contractor's vehicles.	Obtained and submitted by the contractor	
7.	Construction of Tube wells, Installation Water Supply Rehabilitation Programme (19 Nos, tube well) (lot-1 =12 Nos. & lot-2=7) Under Contract Package JKUSDIP Jammu/ WS-01	Approval for tree cutting	Cutting of Forest tree or any other schedule tree not required	Subproject Completed.
		Consent to establish and operate stone crusher	Stone aggregate material is being procured from approved Stone Crusher Plant.  Consent to Operate (Old): Consent No: 110 of 2015 Dated: 18/04/2015 Validity upto March 2016.  Consent to Operate (Renewed): Consent No: 14 of 2016, Dated: 04-04-2016 - Validity: Mar. 2017	
		PUC certificates for contractor's vehicles	Obtained and submitted by the Contractor	
8.	Replacement of Worn-out pipe lines, laying of new pipelines in distribution network and Construction of OHT at Jammu city Under Contract Package JKUSDIP	Approval for tree cutting	Cutting of Forest tree or any other schedule tree not required	
		Consent to establish and operate stone crusher	Stone aggregate material is being procured from approved Stone Crusher Plant.  Consent to Operate (Old):	

	Jammu/ WS-02		Consent No: 110 of 2015 Dated: 18/04/2015 Validity upto March 2016  Consent to Operate (Renewed): Consent No: 229 of 2016 Dated: 30-04-2016 Validity upto March 2017	
		PUC certificates for contractor's vehicles	Obtained and submitted by the Contractor.	
9.	Rehabilitation and Channelization of Storm Water drain at Gangyal and Digiana areas in Jammu City JKUSDIP Jammu/ SWD-01	Approval for tree cutting	Cutting of Forest tree or any other Schedule tree not required.	Subproject Completed.
		Consent to establish and operate stone crusher	Stone aggregate material is being procured from approved Stone Crusher plant. Consent to Operate: (Old) Consent No. 179 of 2014 Dated: 15-12-2014 Valid upto 14-12- 2015.  Consent to Operate: (Renewed) Consent No. 170 of 2016 Dated: 30-04-2016 Valid upto March 2017.	
		Consent to establish and operate for Batch Mixplant	Consent to Establish/Operate (Old Consent): Consent No. 1317 of 2014 Dated: 18-11-2014 Valid upto 17-11-2015.  Consent to Operate (Renewed): Consent No. 1673 of 2015 Dated: 29-12-2015 Valid upto: November 2016  Consent to Operate (New Renewed- 2017-18): Consent No. 619 of 2017 Dated: 19-01-2017 Valid upto: March, 2018	

		Consent of D.G set.	Consents to establish / operate of DG Sets obtained from SPCB and submitted by the Contractor. D.G set (125 KVA) – Consent No: 1674 of 2015 Dated: 29/12/2015 Valid upto: Dec. 2016.	
		PUC certificates for contractor's vehicles	Obtained and submitted by the Contractor	
10.	Replacement of Worn-out machineries and electrical equipment including essential civil works in Tube wells and Central Pumping Station (CPS) at Jammu City Water Supply Rehabilitation Programme under Contract Package JKUSDIP Jammu / WS – 03.	Approval for tree cutting	Cutting of Forest tree or any other schedule tree not required	Subproject Completed
		Consent to establish and operate stone crusher	Stone aggregate material is being procured from approved Stone Crusher plant. Consent to Operate: Consent No. 229 of 2016 Dated: 30-04-2016 Valid upto March 2017.	
		PUC certificates for contractor's vehicles	Not required at this stage because no physical work started yet.	



### 3. Compliance Status with the Environmental Covenants as Stipulated in the Loan Agreement

16. Table-2: The status of compliance with environmental loan covenants of Tranche-2 is presented below;

Loan Covenants	Compliance status
<b>The Borrower shall ensure, or cause the EA to ensure that;</b>	
the preparation, design, construction, implementation, operation and decommissioning of the project, and all subproject facilities comply with; (i) all applicable laws and regulations of the Borrower and the State relating to environment, health, safety; (ii) the Environmental Safeguards; (iii) EARF; and (iv) all measures and requirements set forth in the respective IEE and EMP, and any corrective or preventative actions set forth in a Safeguards Monitoring Report.	Being complied with.
All bidding documents and contracts for Works contain provisions that require contractors to:- Comply with the measures and requirements relevant to the contractor set forth in the IEE and EMP; and any corrective or preventive actions set out in a Safeguards Monitoring Report.	The bidding documents and contract agreements for work are incorporated with the provisions set forth in the IEE and EMP and are being complied with.
Make available a budget for all such environmental measures.	Environmental monitoring and mitigation costs allocated/ incorporated in contract agreements.
Provide the EA with a written notice of any unanticipated environmental impacts that arise during construction, implementation or operation of the project that were not considered in the IEE and in the EMP.	Being complied with
Adequately record the condition of roads, agricultural land and other infrastructure prior to starting to transport materials and construction.	The existing condition of roads and other infrastructure has been recorded in the form of photographs and video recording as well.
Fully reinstate pathways, other local infrastructure, and agricultural land to at least their pre-project condition upon the completion of construction.	All the areas that if disturbed by construction activities will be cleared and restored to pre-project condition.
Submit semi-annual Safeguards Monitoring to ADB and disclose relevant information from such reports to affected persons promptly upon submission;	Semi-annual reports are prepared and submitted to ADB as per the guidelines.
If any unanticipated environmental risks and impacts arise during construction, implementation or operation of the Project that were not considered in the IEE and EMP as applicable, promptly inform ADB of the occurrence of such risks or impacts, with detailed description of the event and proposed corrective action plan;	In case of any unanticipated environmental risks and impacts arise during construction, implementation or operation of the Project that were not considered in the IEE and EMP as applicable that shall be immediately informed to ADB with detailed description of the event and proposed corrective action plan.
Report any breach of compliance with the measures and requirements set forth in the EMP, promptly after becoming aware of the breach.	Breach will be reported to ADB immediately after becoming aware of it.

#### 4. COMPLIANCE STATUS WITH ENVIRONMENTAL MANAGEMENT AND MONITORING PLANS AS STIPULATED IN THE ENVIRONMENTAL DOCUMENTATION AS AGREED WITH ADB.

17. **Table-3:** The compliance status with environmental management and monitoring plan is shown in the following table;

S. No	Sub-project Name	EMP Part of Contract Documents	EMP Being Implemented	Status of EMP Implementation	Actions Proposed/ Additional Corrective Measures Required
		(Yes/No)	(Yes/No)	(Excellent/ Satisfactory/ Partially Satisfactory/ Below Satisfaction)	
1.	Construction of Flyover/ Expressway Corridor from Jehangir Chowk to Rambagh - Natipora in Srinagar.	Yes	Yes	Partially Satisfactory	Contractor has been repeatedly instructed to take corrective measures for implementation of safety measures at site. Certain amount of the Bill has been kept with held on account of non-compliance. Refer Table 4
2.	Construction of Multi-storied mechanized parking facility on M A Road near Lal Chowk Srinagar.	Yes	Subproject Completed		
3.	Construction of Surface Water Drainage System in Athwajan catchment on national Highway Bypass at Srinagar.	Yes	Yes	Satisfactory	
4.	Upgradation and Upliftment of existing drainage pumping stations in Srinagar (Lot A & B)	Yes	Yes	Satisfactory	On the spot Sensitization of workers has been done at construction site and contractor has been instructed to further improve safety measures at site of

					non-compliance.
<b>Jammu.</b>					
5.	Construction of Bikram Chowk Flyover, Jammu	Subproject Completed			
6.	Rehabilitation and Channelization of Storm Water Drains at Channi-Himmat in Jammu City	Subproject Completed			
7.	Rehabilitation and Channelization of Storm Water drain at Gangyal and Digiana areas in Jammu.	Subproject Completed			
8.	Construction of Tube wells, Installation Water Supply Rehabilitation Programme (19 Nos, tube well) (lot-1 =12 Nos. & lot-2=7).	Subproject Completed			
9.	Replacement of Worn-out pipe lines, laying of new pipelines in distribution network and Construction of OHT at Jammu	Yes	Yes	Satisfactory	
10.	Replacement of Worn-out machineries and electrical equipment including essential civil works in Tube wells and Central Pumping	Subproject Completed			

	Station (CPS) at Jammu.	
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18. Details of amount withheld from the IPC's of the Contractor's for Non-compliance of various components of EMP, in accordance with ERA Circular No.: ERA/CEO/1038/ADM/9629-42, Dated: 10/01/2013, during the period January 2018 – June 2018.

**Table-4:** Updated status of amount withheld from the IPC's for Non-compliance of EMP, Srinagar

S. No.	Contract Package	Bill No.	Total Recommended Deductions
1	Construction of Flyover Jehangir Chowk to Rambagh	IPC-50 <sup>th</sup> IPC 51 <sup>st</sup>	Rs 50000 Rs 25000
2	Up-gradation and Up-liftment of existing Drainage Pumping Stations in Srinagar City. Lot-A and Lot-B	-	NIL

## **5. APPROACH AND METHODOLOGY ENGAGED FOR ENVIRONMENTAL MONITORING OF THE PROJECT**

19. In Srinagar, construction of 3 subprojects are in process which include Jehangir Chowk to Rambagh Natipora Expressway Flyover, Storm Water Drainage in Athwajan Area on NH Bypass, Pumping Stations on Left and Right Bank of River Jhelum under Lot-A and Lot-B. Multilevel parking lot stands completed and commissioned in May 2017. In Jammu City, 5 subprojects viz., Bikram Chowk Flyover, Channi Himmat Drainage System, Gangyal Digaina Drainage System, Tube Wells Package and Replacement of Worn-out machineries and electrical equipment stands completed. The subproject -Replacement of Worn-out pipe lines, laying of new pipelines in distribution network and Construction of OHT at Jammu is in progress
20. The above Contracting firms have nominated and mobilized Environmental Safeguard Officers for ensuring EMP implementation at site and reporting thereof. Site visit/ inspections are being carried out on regular basis to assess the EMP implementation of Tranche-2 subprojects under execution.
21. Regular site visits are being conducted by the Safeguard Staff/ Team to monitor the implementation of safeguard measures on sites under execution and report to concerned official about issues/problems related to environmental non-compliance. Necessary directions in the form of corrective action measures, in case of non-compliances, are being issued to the contractors on the site and through letters about the procedures to resolve problems/issues or requirements.

## **6. MONITORING OF ENVIRONMENTAL RECEPTORS/ ATTRIBUTE**

### **6.1 Monitoring basis:**

22. Air quality, water quality and noise levels are required to be monitored to check if any adverse impact is being caused by the construction activities. The monitoring of these variables is being carried out in construction areas at sensitive locations within 100m impact zone of the subproject. The monitoring of environmental variables is being carried out as per the agreed Environmental Monitoring Plan.

### **6.2 Type of environmental receptor/attribute monitored(for each type):**

23. The environmental attributes to be monitored include the air, noise and water quality parameters at the construction sites in sub-project corridors. The air quality parameters monitored include RSPM (PM<sub>10</sub>) and (PM<sub>2.5</sub>), SO<sub>2</sub> and NO<sub>2</sub>. The water quality parameters include temperature, pH, electrical conductivity (EC), dissolved oxygen (DO), biochemical oxygen demand (BOD<sub>5</sub>), chemical oxygen demand (COD), total suspended solids (TSS), total dissolved solids (TDS), Turbidity, Total Alkalinity, Total hardness, Calcium Hardness, Magnesium Hardness, residual Chlorine & Chloride. In case of noise, the day time Leq values are monitored.

### 6.3 Methodology, Regulatory Standards of monitoring and equipment's adopted for Environmental Monitoring Laboratory (EML):

24. **Table-5:** The Assessment Methodology, Acceptable Standards and Equipment's adopted for monitoring:

S.No	Parameters	Assessment Methodology	<sup>1</sup> Acceptable Standards	Cause for rejection	Equipment's in Use
<b>A.</b>	<b>Ambient Air Quality (<sup>2</sup>NAAQ Standards, 2009)- Time weighted average</b>				
1.	RSPM-particulate matter PM <sub>10</sub>	GravimetricHigh Volume Sampler method (attached with cyclone).	100 µg/m <sup>3</sup> 60 µg/m <sup>3</sup>		Respirable Dust Sampler, Envirotech - APM 460 BL Digital Balance, Schimadzu – BL-220H
2	<sup>3</sup> Fine particulate matter PM <sub>2.5</sub> ,	Gravimetric method. Beta Attenuation	60µg/m <sup>3</sup> 40µg/m <sup>3</sup>		Ambient Fine Dust Sampler, Instrumex.
3.	SO <sub>2</sub>	Modified West and Gaeke Method.	80 µg/m <sup>3</sup>		High Volume Air Sampler, Envirotech – APM 460BL. Thermo-electrically cooled gaseous sampling attachment, Envirotech –APM 411TE Digital Spectrophotometer, EI-305.
4.	NO <sub>2</sub>	Modified Jacob & Hochheiser Method.	80 µg/m <sup>3</sup>		High Volume Air Sampler, Envirotech – APM 460BL. Thermo-electrically cooled gaseous sampling attachment, Envirotech –APM 411TEDigital Spectrophotometer, EI-305.
<b>B.</b>	<b><sup>4</sup>Ambient Noise Level</b>				
1.	Residential Area	Direct Reading in Decibel Sound Level Meter.	55dB(A) L <sub>eq</sub> (Day time)		Digital Sound Level Meter, AZ-8928
2.	Commercial Area	Direct Reading in Decibel Sound Level Meter.	65 dB(A) L <sub>eq</sub> (Day time))		Digital Sound Level Meter, AZ-8928
<b>C.</b>	<b><sup>5</sup>Ambient Water Quality (For Drinking / Ground Water)</b>				
1.	Temp (in °C)	Digital/Mercury Thermometer Method.	>20 °C		Digital/Mercury Thermometer
2.	Color (Hazen units)	Hazen Method	5 Platinum cobalt	25	-

<sup>1</sup>CPHEEO Manual, MoUD, GOI, May 1999; and MoEF, Act and Rules, 1986& Amendments 2000

<sup>2</sup> National Ambient Air Quality Standards (NAAQS)

<sup>3</sup> RSPM<sub>2.5</sub> sampler procured by the JK ERA and will part of environmental monitoring from next monitoring period.

<sup>4</sup> Standards specified in the schedule of Noise Pollution (Regulation And Control) Rules, 2000 of Government of India The Principal Rules were published in the Gazette of India, vide S.O. 123(E), dated 14.2.2000 and subsequently amended vide S.O. 1046(E), dated 22.11.2000, S.O. 1088(E), dated 11.10.2002, S.O. 1569 (E), dated 19.09.2006 and S.O. 50 (E) dated 11.01.2010 under the Environment (Protection) Act, 1986.

<sup>5</sup> Drinking water Specifications, IS-10500

			scale		
3.	Taste and Odour		Unobjectionable	Objectionable	-
4.	pH value	Electrometric Method.	6.5-8.5	>8.5	Digital pH Meter, HANNA – HI98127,
5.	Electrical Conductivity (EC) $\mu\text{S}/\text{cm}$	Electrometric Method.	$\leq 500 \mu\text{S}/\text{cm}$	1000 $\mu\text{S}/\text{cm}$	Digital TDS/EC Meter, HANNA – HI-96311
6.	Dissolved Oxygen (DO) mg/l	Winkler's Method Using Azide Modification	> 6 mg/l		Winkler's Method
7.	Total Suspended Solids (TSS) mg/l	Gravimetric (Filtration and Drying at 105°C)	<100 mg/L		Hot Air Oven, Digital Balance, Shimadzu-BL-220H
8.	Total Dissolved Solids (TDS) mg/l	Digital Meter Method.	$\leq 500 \text{ mg/l}$	2000 mg/l	BOD Incubator
9.	Turbidity (NTU)	Nephelo Turbidity Method.	1mg/l	10 mg/l	Nephelo Turbidity Meter, Systronics – 132
10.	Total Hardness (as $\text{CaCO}_3$ ) mg/l	EDTA Titrimetric	300 mg/l	600 mg/l	-
11.	Total Alkalinity (as $\text{CaCO}_3$ ) mg/l	Titrimetric (Methyl Orange)	200 mg/l	600 mg/l	-
12.	Calcium Hardness (Ca) mg/l	EDTA Titrimetric	75 mg/l	200 mg/l	-
13.	Magnesium Hardness (Mg) mg/l	Calculation from total Hardness and Calcium	30 mg/l	150 mg/l	-
D.	<b><sup>6</sup>Waste Water Quality (Treated Leachate (Effluent), Storm/ drain water, dry weather flow and Inland water)</b>				
1.	Temp (in °C)	Digital/Mercury Thermometer Method.	Shall not exceed 5°C above the receiving water temperature		Digital/Mercury Thermometer
2.	Color (Hazen units) Platinum cobalt scale	-	5	25	-
3.	Odour	Objectionable/ Non-objectionable	Non-objectionable		-
4.	pH value	Electrometric Method.	5.5-9.2		Digital pH Meter, HANNA – HI98127,
5.	Electrical Conductivity (EC) $\mu\text{S}/\text{cm}$	Electrometric Method.	< 2000		Digital TDS/EC Meter, HANNA – HI-96311
6.	Dissolved Oxygen (DO) mg/l	Winkler's Method Using Azide Modification	> 6 mg/L		Winkler's Method
7.	Biochemical Oxygen Demand (BOD <sub>5</sub> ) mg/l	Five Days BOD as per APHA 2005	30 mg/l		BOD Incubator
8.	Chemical Oxygen Demand (COD) m/l	Dichromate Method (APHA 2005)	250 mg/l		
9.	Total Dissolved Solids (TDS) mg/l	Digital Meter Method.	$\leq 500 \text{ mg/L}$	2100 mg/L	Digital TDS/EC Meter, HANNA – HI-96311
10.	Total Suspended Solids (TSS) mg/l	Gravimetric (Filtration and Drying at 105°C)	<100 mg/L		Hot Air Oven, Digital Balance, Shimadzu-BL-220H
11.	Turbidity (NTU)	Nephelo Turbidity Method.	5 mg/L	10 mg/L	Nephelo Turbidity Meter, Systronics – 132
12.	Total Alkalinity (as $\text{CaCO}_3$ ) mg/l	Titrimetric (Methyl Orange)	200	600	

Annotation: BOD= biochemical oxygen demand; DO= dissolved oxygen; EC= electrical conductivity; NO<sub>2</sub>= nitrogen dioxide; PM<sub>10</sub>= particulate matter with particle size less than 10 $\mu$ ; RSPM= respirable suspended particulate matter; SO<sub>2</sub>= Sulphur dioxide; TDS= total dissolved solids; TSS= total suspended solids.

<sup>6</sup> General Standards for Discharge of Environmental Pollutants, Part-A Schedule-VI



#### 6.4 Monitoring results and comparison with statutory requirements at National levels and Baseline Data.

25. The environmental monitoring data for air quality, water quality and noise levels for the subprojects under execution of Tranche-2 at Srinagar carried out by the Environmental Monitoring Laboratory of J&K ERA for the period of January 2018 to June 2018. However, due to the discontinuation of PMC services in September 2017, regular functioning of Environmental Monitoring of Lab and thereby scheduled monitoring was hindered in Jammu. All the subprojects in Jammu region except one stands completed and hence defect liability monitoring is required. For this purpose the previous staff of the Lab is being mobilized for some time to conduct the monitoring. The data so generated will be send ADB.

#### A. Air Quality

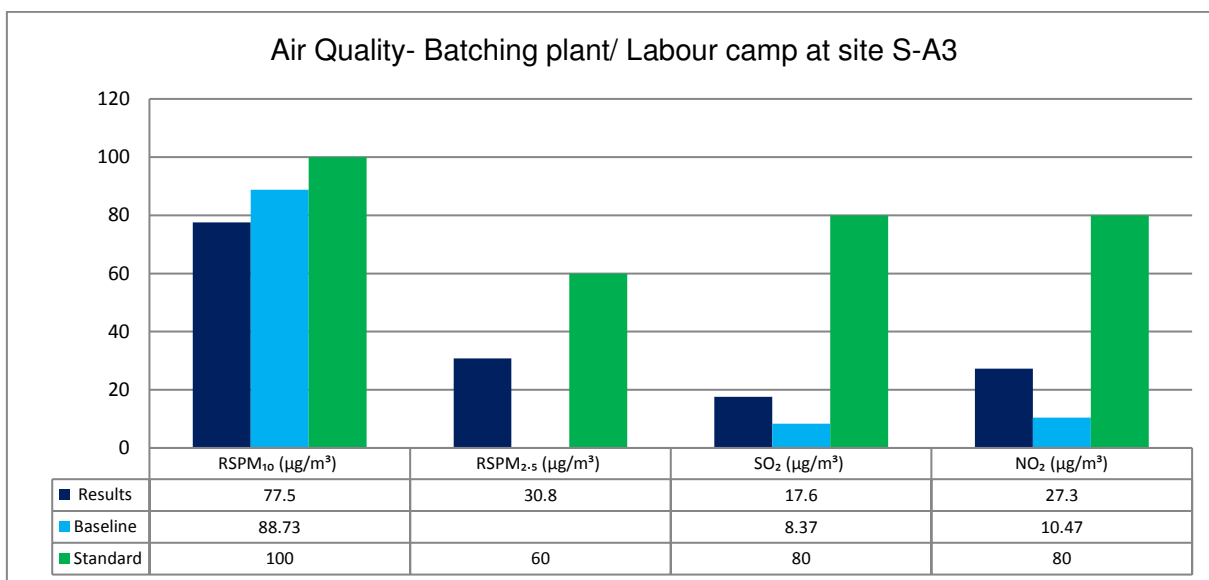
**Table 6:** Construction of Flyover from Jehangir Chowk to Rambagh in Srinagar

Srinagar Subprojects- Flyover JehangirChowk to Rambagh								
Ambient Air Quality								
Site Code	Quarter	Month of Sampling with date	Sampling Site/ Location	Site Type	RSPM <sub>10</sub> (µg/m <sup>3</sup> )	RSPM <sub>2.5</sub> (µg/m <sup>3</sup> )	SO <sub>2</sub> (µg/m <sup>3</sup> )	NO <sub>2</sub> (µg/m <sup>3</sup> )
					100	60	80	80
					Permissible Limits/ Standards			
S-A3	Baseline Monitoring	August 11-08-2014	Batching Plant/ Labour Camp Site at Kralpora	Residential	88.73	-	8.37	10.47
	Q 2	29-03-2018	Batching Plant/ Labour Camp Site at Kralpora		137.7	64.2	17.6	27.3
S-A4	Baseline Monitoring	28-05-2011	Rambagh-Natipora Chowk	Commercial	376.94	-	6.93	39.78
	Q2 -	23-04-2018	Near Rambagh Chowk (Section-D)	Commercial	152.4	40.3	12.4	28.2
S-A9	Baseline Monitoring	May-June 2011	Jehangir Chowk	Commercial	141.73	-	8.01	47.41
	Q2 -	31-05-2018	Jehangir Chowk (Section-A)	Commercial	156.4	54.4	15.7	29.9

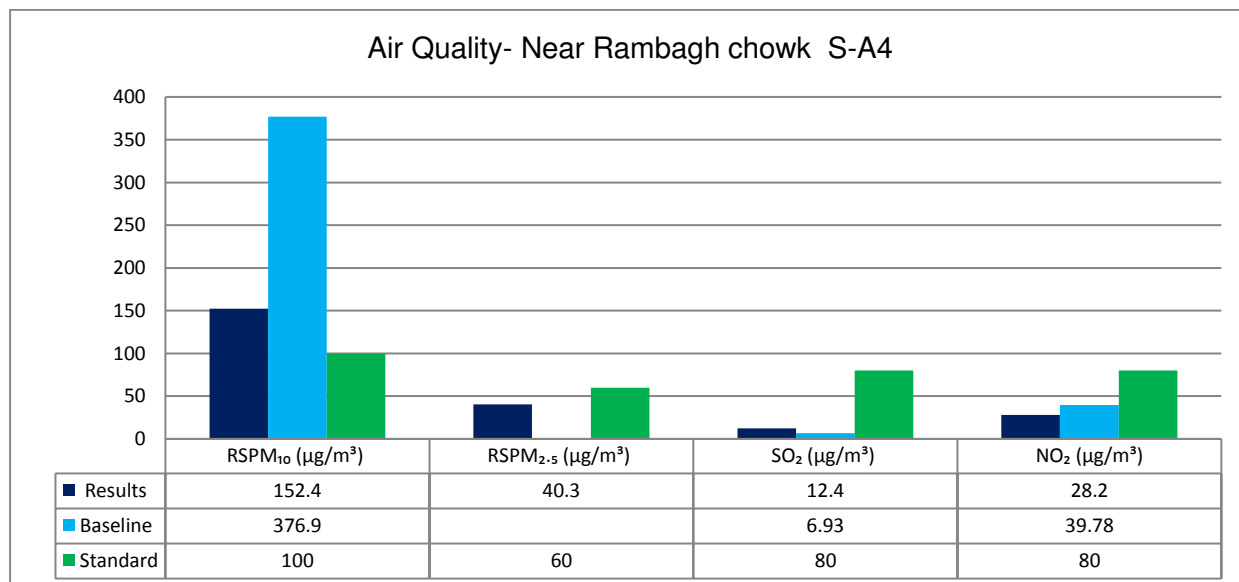
26. The monitoring results of primary pollutants of SO<sub>2</sub> & NO<sub>2</sub> were well within the NAAQ standards and baseline data throughout the monitoring period. Same trend being observed in previous monitoring as captured in previous reports. At the same time, particulate matter (RSPM<sub>10</sub>) was found to be on the higher side at the S-A3, S-A4, S-A9 than NAAQ standards, this is mainly attributed to heavy traffic influx and construction activity throughout the flyover corridor.
27. RSPM<sub>2.5</sub> observed at different sites shows values within the permissible level except for S-A3 where it shows slightly higher value than the permissible limit. This is mainly resulting from dust generated due to the ongoing construction related activities at the site and heavy vehicular movement closer to the site.
28. Corrective action measures issued to the contracting firm for implementation of effective control of dust generation & frequent removal (by way of scrapping, mopping etc) of

excavated muck/ soil or loose soil at dust sensitive zones and where traffic movement is frequent and moreover followed by regular water sprinkling at dust prone zones in order to control the dust emanating from plying of vehicles. Dust generation is directly correlated to construction activities and hence non-continuous and limited to construction period only.

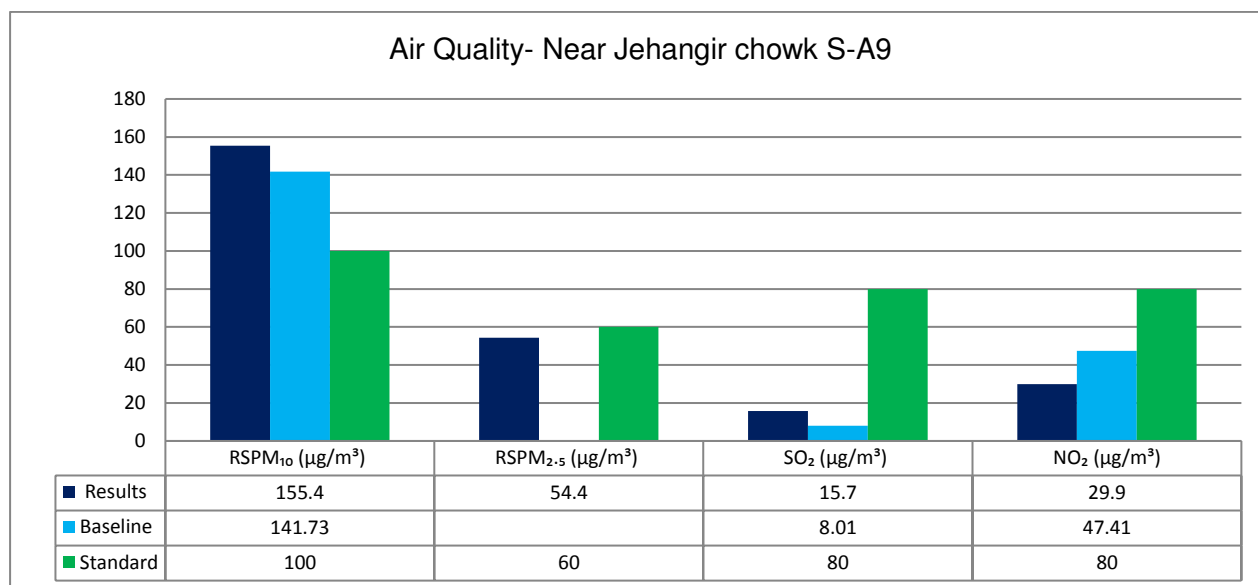
29. The trend of air quality parameters at above sites of Flyover subproject is illustrated in **Figure-1 to 3** below;



**Figure 1:** Concentration of RSPM<sub>10</sub>, RSPM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>2</sub> at site S-A3 in comparison with NAAQ standards & baseline monitoring of Flyover- Jehangir Chowk to Rambagh subproject, Srinagar.



**Figure 2:** Concentration of RSPM<sub>10</sub>, RSPM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>2</sub> at site S-A4 in comparison with NAAQ standards & baseline monitoring of Flyover- Jehangir Chowk to Rambagh subproject, Srinagar.



**Figure 3:** Concentration of RSPM<sub>10</sub>, RSPM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>2</sub> at site S-A9 in comparison with NAAQ standards & baseline monitoring of Flyover- Jehangir Chowk to Rambagh subproject, Srinagar.

**Table-7:** <sup>7</sup>Construction of Storm Water Drainage along National Highway, Athwajan in Srinagar

Air Quality Monitoring- Srinagar Subprojects								
Site Code	Quarter	Month of Sampling with date	Sampling Site/ Location	Site Type	RSPM <sub>10</sub> (µg/m <sup>3</sup> )	RSPM <sub>2.5</sub> (µg/m <sup>3</sup> )	SO <sub>2</sub> (µg/m <sup>3</sup> )	NO <sub>2</sub> (µg/m <sup>3</sup> )
					Permissible Limits/ Standards			
					100	60	80	80
	Baseline Monitoring	March 21-03-2013	Panthachowk	Commercial	220	-	10.46	17.34
S-A7	Q2	29-06-2018	Near Construction Site (Within 100 mtr. impact corridor from School at Panthachowk)	Commercial	194.8	79.3	14.9	35.2

30. During Q2 monitoring, the particulate matter RSPM<sub>10</sub> shows higher values at 194.8 µg/m<sup>3</sup> which exceed the prescribed limits. Similarly, the value of RSPM<sub>2.5</sub> was also on higher. The oxide pollutants of SO<sub>2</sub> & NO<sub>2</sub> were within the permissible limits.

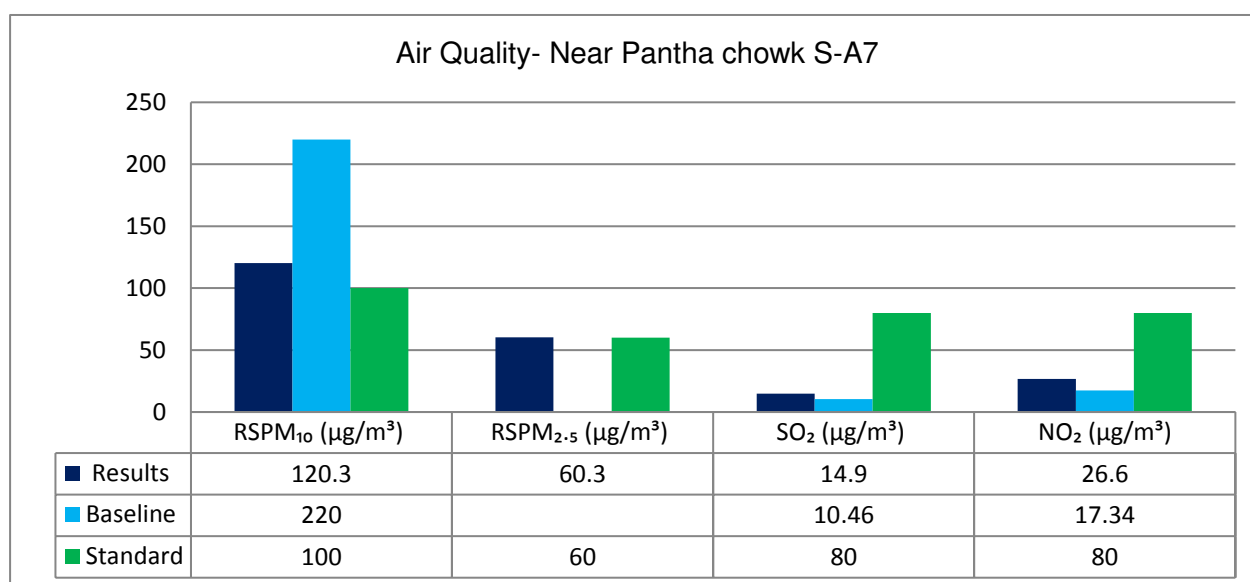
31. The Panthachowk/ Athwajan highway is prone to dust generation due to the lack of drainage system/ side drains accompanied by the construction works of NHAI on national highway corridor. Generation of dust is mainly attributed due to the plying of heavy National Highway traffic at Pantha Chowk Junction (National Highway- 1A road) and partly due to the construction related activity of the subproject and wind driven dust. However,

22. Corrective action measures were issued to the contracting firm for effective EMP management especially at these sensitive stretches. Immediate measures were frequent removal (by way of scrapping, mopping etc) of excavated muck/ soil or loose soil at dust

<sup>7</sup> The subproject of SWD in Athwajan area is on the NH Bypass which involves huge influx of heavy traffic and number of other construction activities is involved along this NH road. Hence generation of dust is anticipated which is mainly attributed to plying of NH bye-pass traffic and other construction works associated with NHAI.

sensitive zones as traffic movement is frequent and moreover followed by regular water sprinkling at dust prone zones. Since these impacts are temporary and site specific (till completion of construction period) and are mitigated through proper implementation of EMP.

32. The trend of air quality parameters at above sites of Storm Water Drainage along National Highway, Athwajan in Srinagar is provided in **Fig 4** below:



**Figure 4 :** Concentration of RSPM<sub>10</sub>, RSPM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>2</sub> at site S-A7 in comparison with NAAQ standards & baseline monitoring of Storm Water Drainage along National Highway, Athwajan in Srinagar.

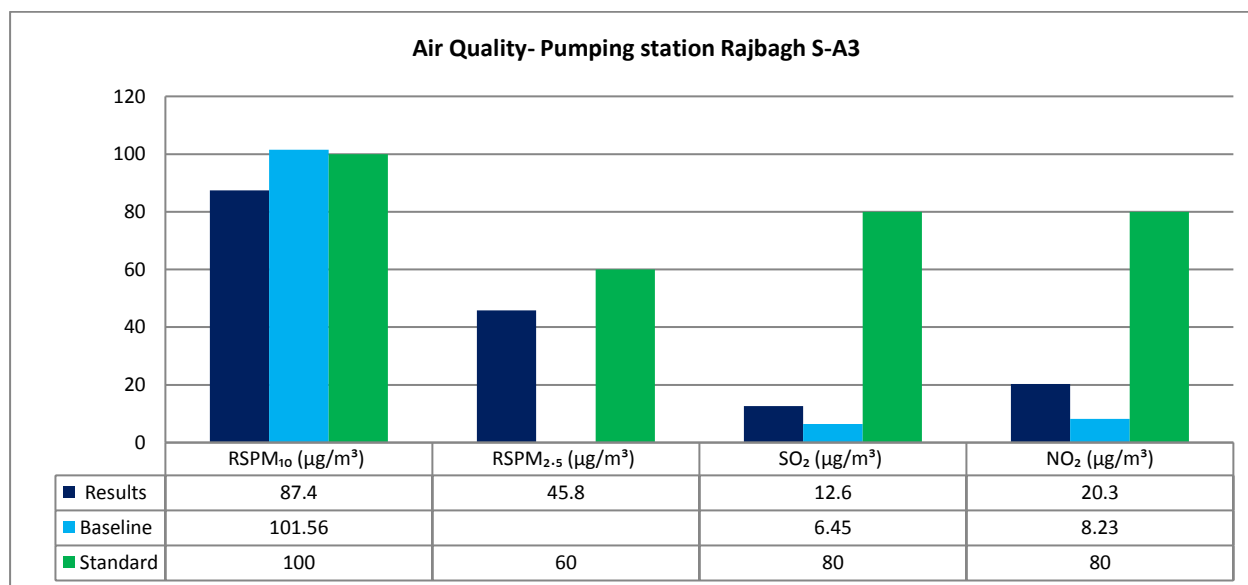
### 33. Table-8: Upgradation & Upliftment of existing pumping stations in Srinagar

#### Air Quality Monitoring- Srinagar Subprojects (Tranche-2)

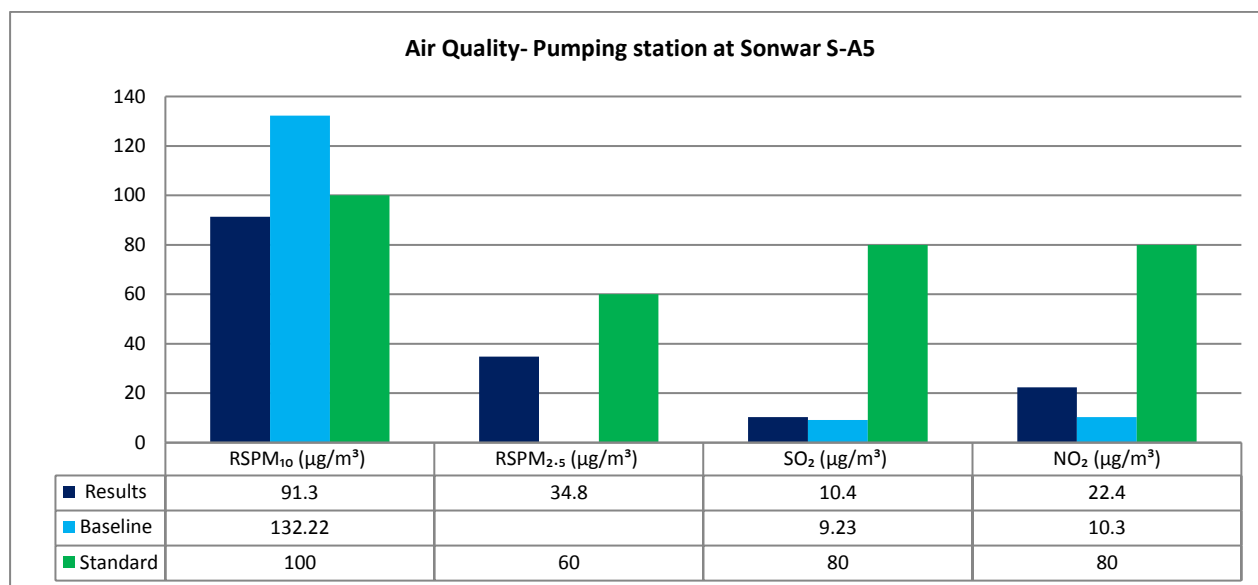
Site Code	Quarter	Month of Sampling with date	Sampling Site/ Location	Site Type	RSPM <sub>10</sub> (µg/m <sup>3</sup> )	RSPM <sub>2.5</sub> (µg/m <sup>3</sup> )	SO <sub>2</sub> (µg/m <sup>3</sup> )	NO <sub>2</sub> (µg/m <sup>3</sup> )
					Permissible Limits/ Standards			
					100	60	80	80
S-A3	Baseline Monitoring	Feb-April 2015	Pumping station, Gadhanzpora/ Rajbagh	Residential	101.56	-	6.45	8.23
	Q2	28-06-2018	Pumping station, Gadhanzpora/ Rajbagh	Residential	87.4	45.8	12.6	20.3
S-A5	Baseline Monitoring	Feb-April 2015	Pumping Station, Sonwar	Commercial	132.22	-	9.23	10.30
	Q2	30-05-2018	Pumping Station, Sonwar	Commercial	91.3	34.8	10.4	22.4

34. The above subproject “Upgradation & Upliftment of existing pumping stations in Srinagar” was inducted under Tranche-2 for environmental monitoring. These pumping stations were damaged during the September 2014 floods in Kashmir. The monitoring results of particulate matter RSPM<sub>10</sub> and RSPM<sub>2.5</sub> conducted during Q2 shows well within the permissible NAAQ standards and baseline. The primary pollutants of SO<sub>2</sub> & NO<sub>2</sub> were within the permissible limits throughout the monitoring phase.

35. The trend of air quality parameters at above sites of Upgradation & Upliftment of existing pumping stations in Srinagar is provided in **Fig 5 to 6** below:



**Figure 5:** Concentration of RSPM<sub>10</sub>, RSPM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>2</sub> at site S-A3 in comparison with NAAQ standards & baseline monitoring of Upgradation & Upliftment of existing pumping stations in Srinagar.



**Figure 6:** Concentration of RSPM<sub>10</sub>, RSPM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>2</sub> at site S-A5 in comparison with NAAQ standards & baseline monitoring of Upgradation & Upliftment of existing pumping station in Srinagar.

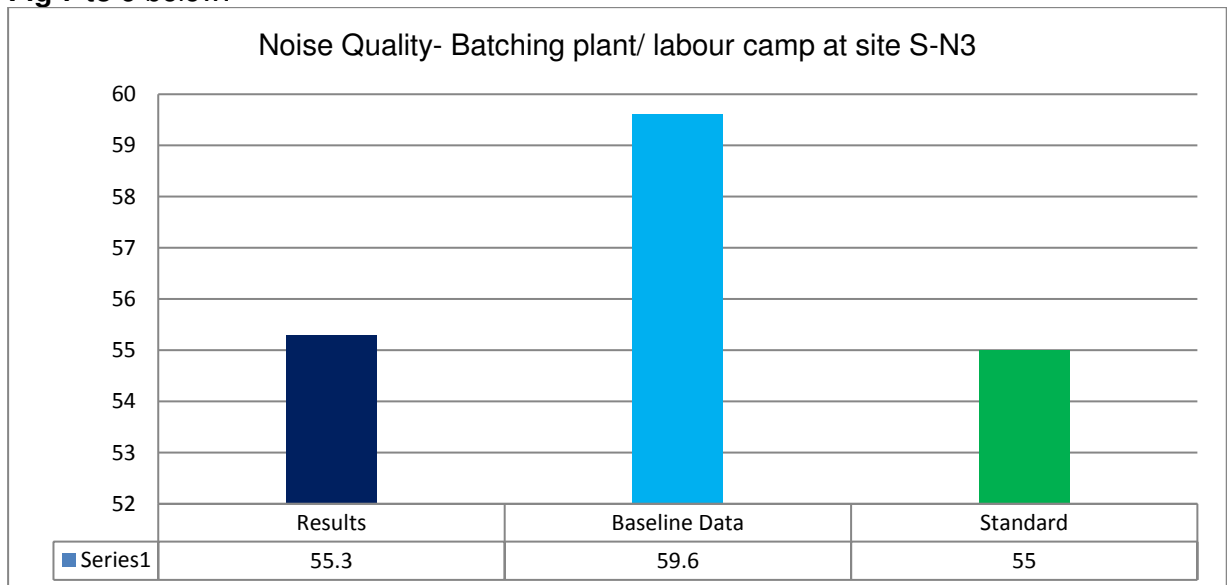
## B. Noise Quality

36. **Table 9: Construction of Flyover/ Express Corridor from Jehangir Chowk to Rambagh**

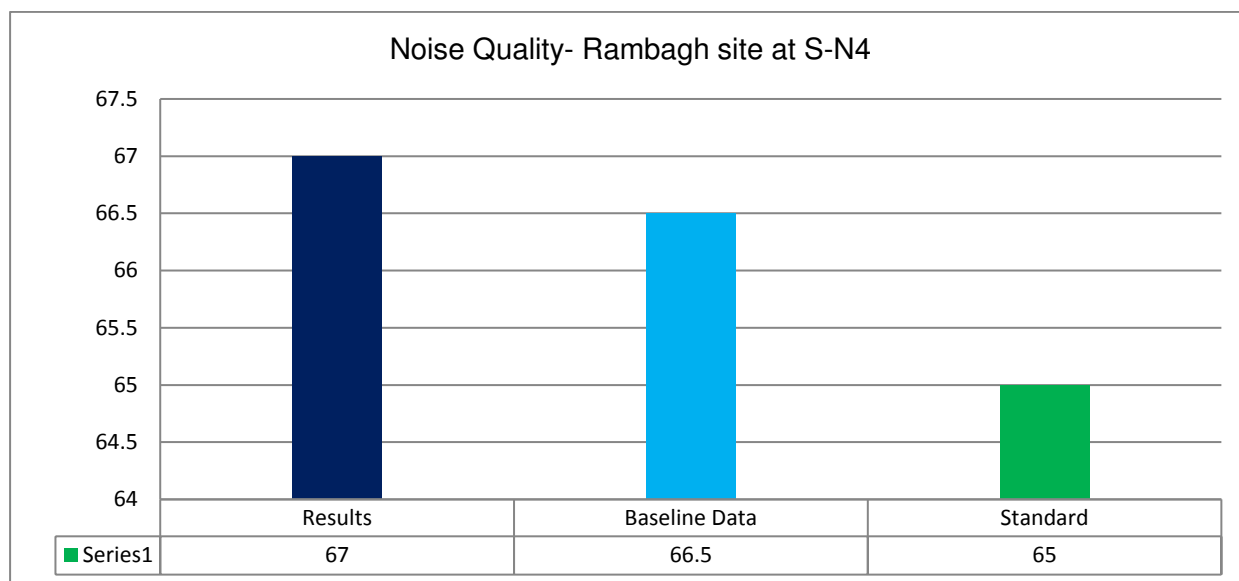
Site Code	Quarter	Month of Sampling with date	Sampling Site/ Location	Site Type	Day Time Noise Levels dB (A) Leq	Day Time Noise Quality Standards dB (A) Leq
<b>Construction of Flyover/ Express Corridor from Jehangir Chowk to Rambagh</b>						
S-N3	Baseline (Pre-Construction)	August 11-08-2014	Labour Camp/ Batching Plant at Kralpora Site	Residential	59.6	55
	Q2	29-03-2018	Labour Camp/ Batching Plant at Kralpora Site	Residential	55.3	55
S-N4	Baseline Monitoring	April 28-05-2011	Near Rambagh Chowk	Commercial Area	66.5	65
	Q2	29 -03-2018	Near Rambagh Chowk	Commercial Area	66.4	65
S-N9	Baseline Monitoring	May-June 2016	Near Jehangir Chowk	Commercial	81.85	65
	Q2	31 -05-2018	Near Jehangir Chowk	Commercial	68.0	65

37. During monitoring of Noise level of the flyover sites, increase in noise level is normally anticipated as heavy influx of traffic movement is very high throughout the busy corridor of flyover and heavy machinery engaged in the construction activity. However, the contractor has been instructed to ensure the proper mitigation measures as per EMP as instructed from time to time in order achieve compliance.

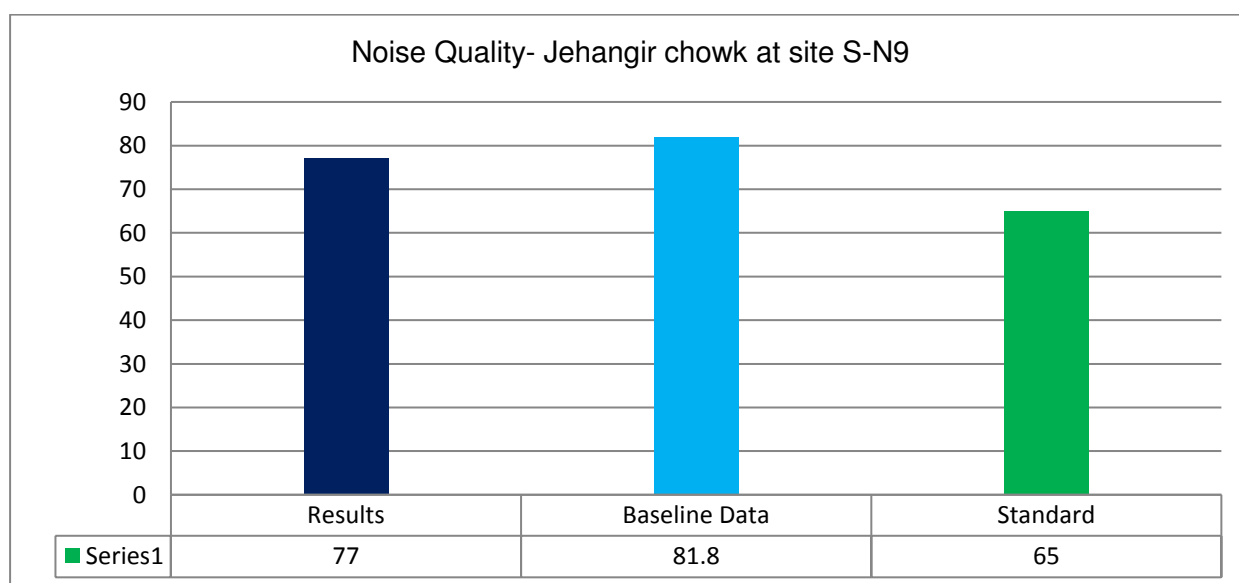
38. The trend of noise quality parameters at above sites of Flyover subproject is illustrated in **Fig 7 to 9** below:



**Figure 7:** Comparison of day time noise levels observed at Flyover subproject (ancillary site of batching Plan/ labour camp at S-N3) with National noise standards and baseline monitoring.



**Figure 8:** Comparison of day time noise levels observed at Flyover subproject (at Rambagh site of S-N4) with National noise standards and baseline monitoring.



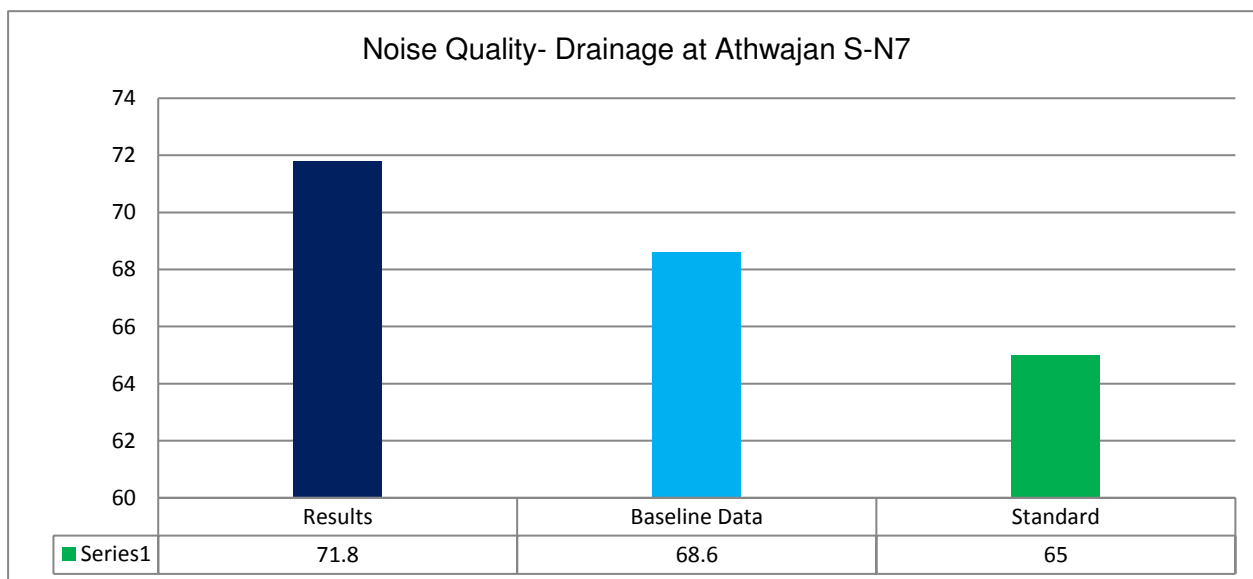
**Figure 9:** Comparison of day time noise levels observed at Flyover subproject (at Jehangir Chowk of S-N9) with National noise standards and baseline monitoring.



39. **Table-10:** Noise Quality Monitoring of Storm Water Drainage at Athwajan, Srinagar

Srinagar Subprojects						
Site Code	Quarter	Month of Sampling with date	Sampling Site/ Location	Site Type	Day Time Noise Levels dB (A) Leq	Day Time Noise Quality Standards dB (A) Leq
<i>Construction of Storm Water Drainage at Athwajan, Srinagar</i>						
	Baseline Monitoring	March 22-03-2013	Panthachowk near School	Commercial	78.9	65
S-N7	Q2	29-06-2018	Near Construction Site (Within 100 mtr. impact corridor from School at Panthachowk)	Commercial	68.6	65

40. At site S-N7 of Panthachowk/ Athwajan area, noise quality/ level shows higher values than the NAAQ standards for commercial area. However, a baseline characteristic of the site was much higher as compared to present monitoring. Moderate levels recorded are mainly attributed to higher influx of heavy traffic movement at Pantha Chowk/ Athwajan junction (National Highway 1A road) and partly due the heavy machinery engaged in construction activity.
41. The trend of noise quality parameter at above site of Storm Water Drainage at Athwajan, Srinagar is provided in **Fig 10** below:



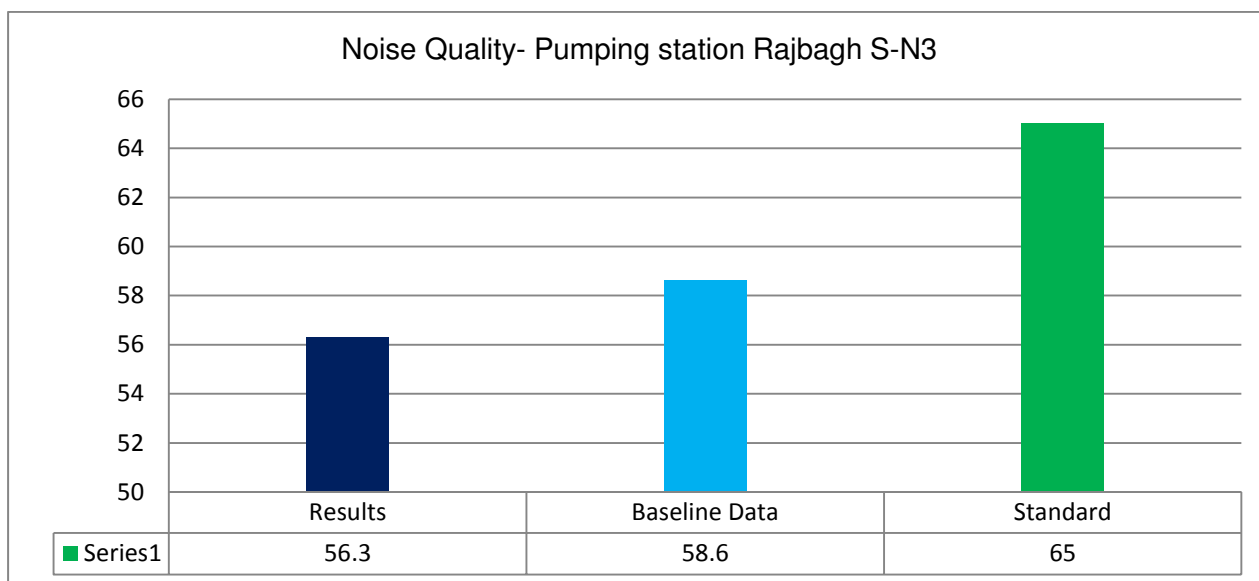
**Figure 10:** Comparison of day time noise levels observed at Storm Water Drainage at Athwajan, Srinagar with National noise standards and baseline monitoring.

#### 42. **Table-11:** Upgradation & Upliftment of Pumping Stations in Srinagar

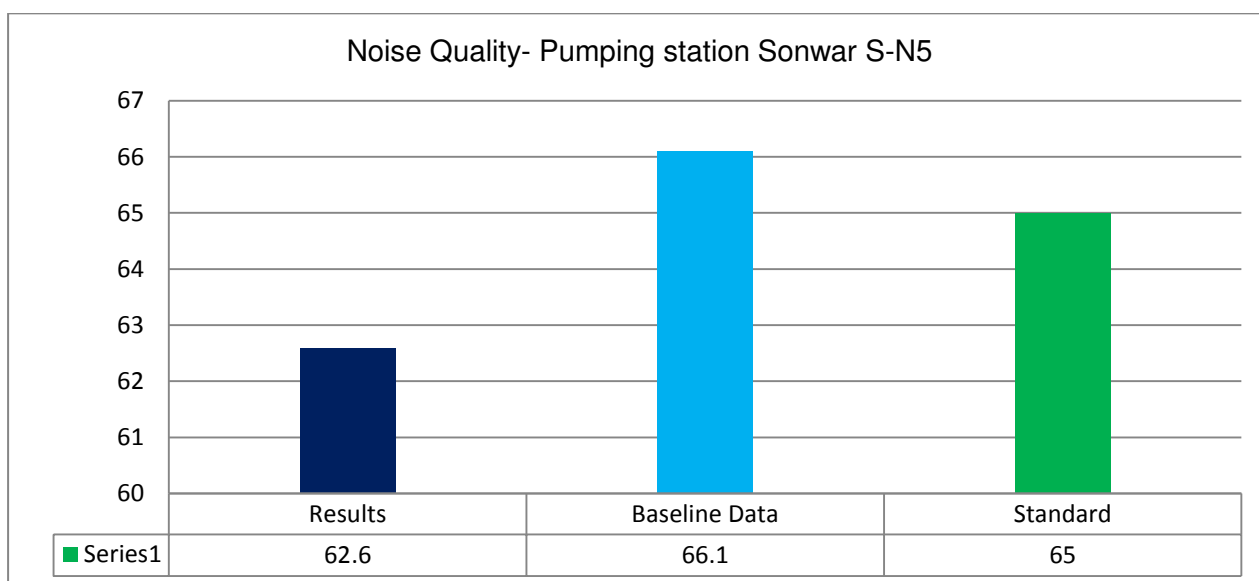
Noise Quality Data						
Up-liftment& Up-gradation of Pumping Stations in Srinagar City.						
Site Code	Quarter	Month of Sampling with date	Sampling Site/ Location	Site Type	Noise Levels (dB Leq)	Standards
S-N8	Baseline Monitoring	Feb-April 2015	Pumping Station, Golf Course	Commercial	67.2	65
	Q1	*	Pumping Station, Golf Course	Commercial	-	65
S-N10	Baseline Monitoring	Feb-April 2015	Pumping Station KGP Polytechnic College, Gogjibagh/ Ikhrajpora	Residential	57.5	55
	Q2	*	Pumping station, KGP Polytechnic College, Gogjibagh	Residential	-	55
S-N3	Baseline Monitoring	Feb-April 2015	Pumping station, Gadhanzpora/Rajb agh	Residential	58.6	65
	Q2	28 -06-2018	Pumping station, Gadhanzpora/Rajb agh	Residential	56.3	65
S-N5	Baseline Monitoring	Feb-April 2015	Pumping Station, Sonwar	Commercial	66.1	65
	Q2	30-05-2018	Pumping Station, Sonwar	Commercial	58.8	65

43. During this period, new subproject entitled “Upgradation & Upliftment of Existing Pumping Stations in Srinagar” was inducted for the monitoring. These pumping stations were severely damaged in September 2014 floods. From the noise quality monitoring it is revealed that the noise Leq observed is within the permissible limit.

44. Comparative illustration of noise quality at site S-N3 & S-N5 of Upgradation of existing pumping stations in Srinagar is provided in **Fig 11 to 12** below:



**Figure 11:** Comparison of day time noise levels observed at Rajbagh pumping station of site S-N3 in Srinagar with National noise standards and baseline monitoring.



**Figure 12:** Comparison of day time noise levels observed at Sonwar pumping station of site S-N5 in Srinagar with National noise standards and baseline monitoring.

### C. Water Quality

45. The results of water quality analysis conducted at various subproject sites in Srinagar are presented below:

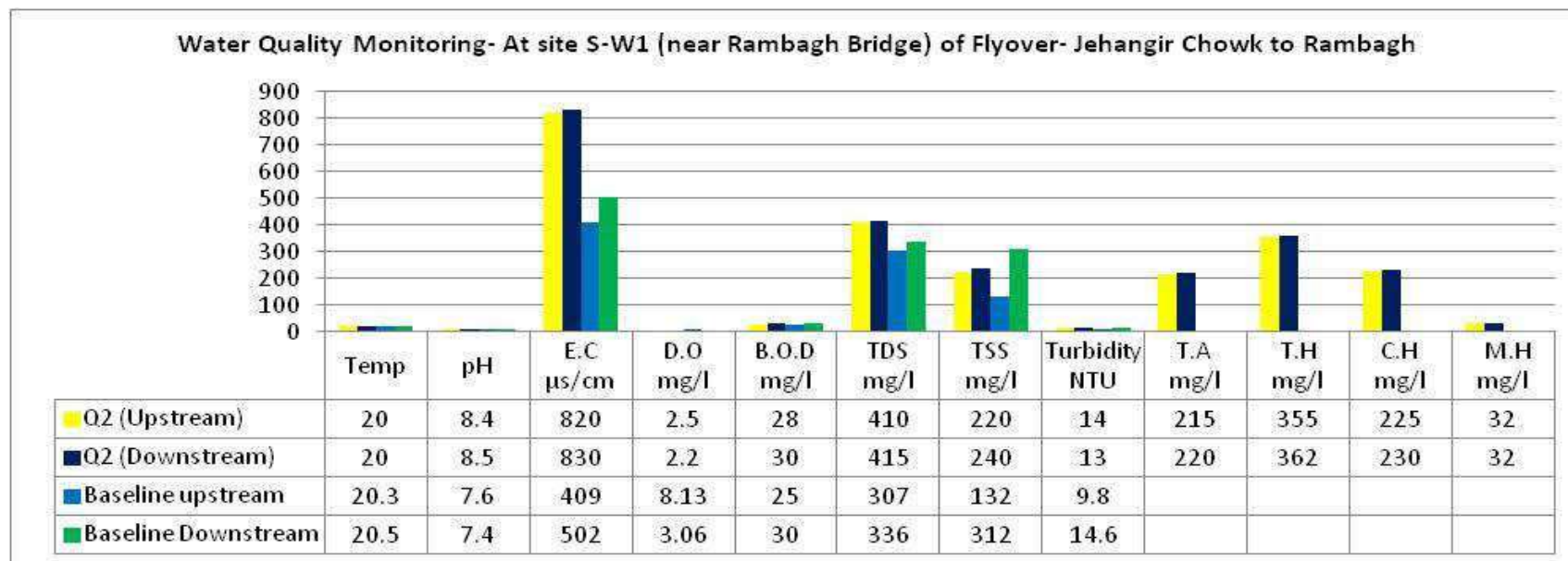
**Table-12: Construction Of Flyover- From Jehangir Chowk to Rambagh**

Site Code	Quarter	Month of Sampling with date	Sampling Site	Location	Temp °C	pH	E.C µs/cm	D.O mg/l	B.O.D mg/l	TDS mg/l	TSS mg/l	Turb. NTU	T.A	T.H	C. H	M.H
					Permissible Limits											
					-	6.5-8.5	≤500	>6	2-5	≤500	≤120	10	200 - 600	300 - 600	75- 200	30-75
S-W1	Baseline Monitoring	April 24-05-2011	Flood spill Channel at Rambagh	Upstream	20.3	7.6	409	8.13	25	307	132	9.8				
				Downstream	20.5	7.4	502	3.06	30	336	312	14.6				
	Q2 (Apr-June)	April 23-04-2018	Flood spill Channel at Rambagh	Upstream	20	8.4	820	2.5	28	410	220	14	215	355	225	32
				Downstream	20	8.5	830	2.2	30	415	240	13	220	362	230	32
S-W3	Baseline Monitoring	March 13-03-2015	Doodhganga Stream near Kralpora site	Upstream (Near Batching Plant)	6	8.9	476	5.5	3	251	230	28	160	324	205.8	28.72
				Downstream (Casting Yard)	6	8.9	437	5	3.5	217	235	29	164	340	214.2	30.56
	Q1 (Jan-Mar)	March 29-03-2018	Doodhganga Stream near Kralpora site	Upstream (Near Batching Plant)	8	7.4	388	6.4	2.0	232	150	4.0	155	236	189	11.5
				Downstream (Casting Yard)	9	7.3	385	6.0	2.0	231	159	4.2	149	246	192	13.2
S-W5	Baseline Monitoring	March	River Jhelum near Jehangir Chowk	Upstream	13	7.3	167	10.4	2.0	84	201	6.0	76	94	92	0.4
				Downstream	13	7.2	170	10.0	2.2	85	211	6.2	70	96	89	1.7
	Q2 (Apr-June)	May 31-05-2018	River Jhelum near Jehangir Chowk	Upstream	19	7.4	194	7.6	1.5	100	120	2.4	80	110	102	1.9
				Downstream	19	7.5	195	7.4	1.5	98	125	2.5	90	107	101	1.4

46. Water samples were taken from the S-W1 site of Flood Spill channel of Jhelum River near Rambagh bridge (near Section-A & D of Flyover subproject, Srinagar). During the monitoring period, spill channel has recorded average minimum discharge of water volume.

<sup>8</sup> Baseline monitoring conducted in 2011 for all subprojects were having 8 parameters of water quality, however 4 parameters (Alkalinity, Total Hardness, Ca. Hardness and Magnesium Hardness) were added in 2013 for enhanced water quality characteristics of the water body.

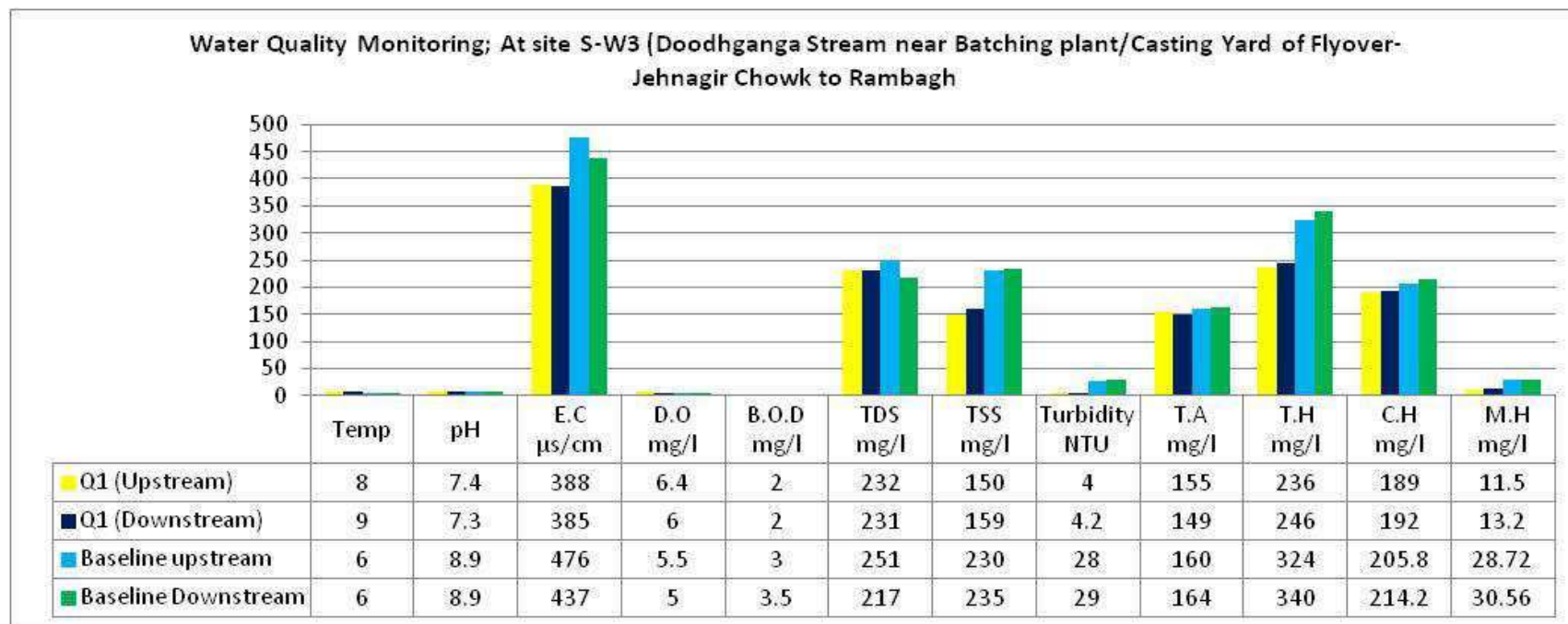
47. Since number of dewatering stations are located along the floodspill channel. The water from the storm water drainages at Ikhrajpora, Gogjibagh, Mehjoor Nagar, Rajbagh, Jawahar Nagar, Solina, old Barzulla etc are directly disposed into spill channel. This leads to change in physio-chemical characteristics of the water like BOD, conductivity, TSS, turbidity factor and decline in DO etc. Turbidity was higher during the reporting period due to high silted discharge from number of point sources of dewatering stations into spill channel. BOD, Conductivity and TSS values were marginally on higher side that is the usual feature of such water body in correlation with above factors. No impact is seen due to the ongoing Flyover works. The physio-chemical characteristics of flood spill channel is provided in **Fig 13** below;



**Figure 13:** Water quality characteristics during Q2 sampling of Flyover site- Flood spill channel near Rambagh Bridge

48. At site **S-W3**, water samples were taken from the surface water body of **Doodhganga Stream (near Batching Plant/ Labour Camp/ Casting Yard- Kralpora)**. The water was found to be clear (visible transparency) and odourless. The water quality characteristics show most of the parameters within the permissible standards and all parameters well under baseline data. The Dissolved Oxygen of the stream was normal due to the flow dynamics and organic characteristics of surface water body. BOD and Turbidity results were exceptionally within the standards and in comparison to baseline monitoring (pre-operation). This also shows a good indicator of the water quality as well.

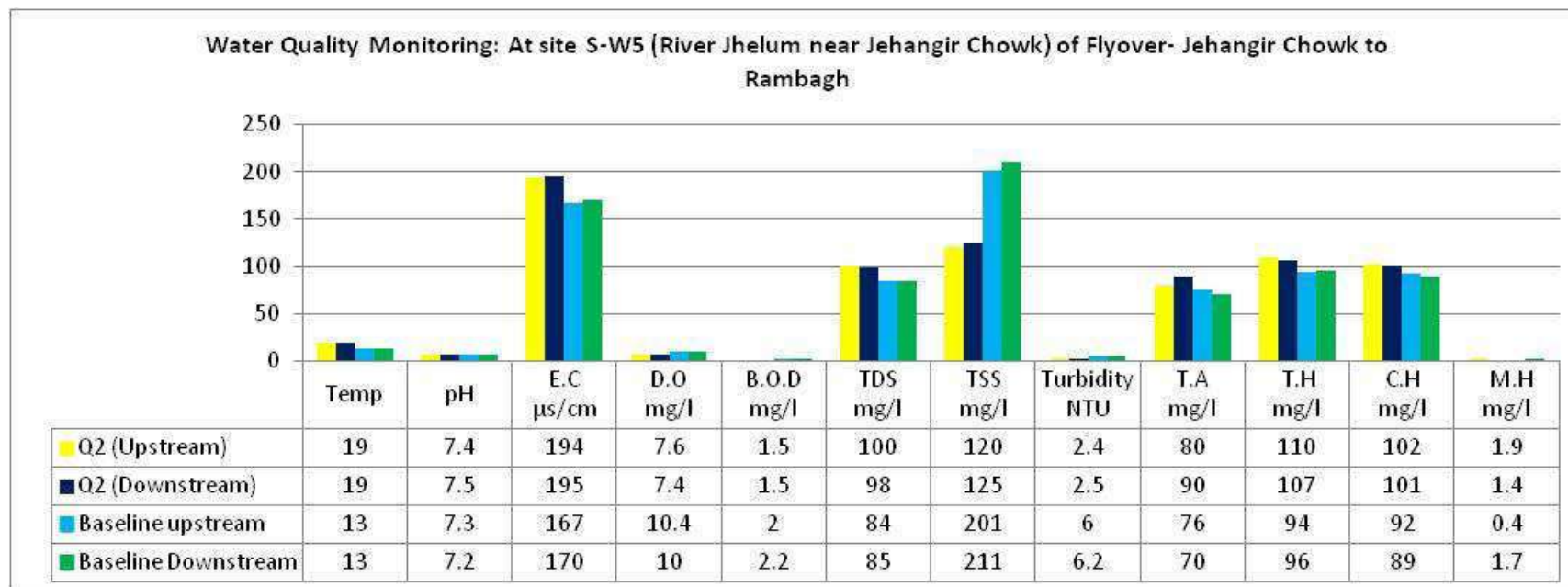
49. However, TSS result was higher side than the permissible levels which are mainly attributed to the siltation process of a stream in correlation with flow dynamics. However, the concentration of Total Alkalinity and Total Hardness were observed on lower sides. Comparative analysis is provided in **Fig 14** below;



**Figure 14:** Water quality characteristics during Q-1 sampling of Flyover site – Batching Plant/Casting Yard at Kralpora

50. Water samples were taken during Q2 period from the upstream and downstream of the River Jhelum site (S-W4) near Jehangir Chowk (Section-A of Flyover, Srinagar). The characteristics of water body shows moderate flow regime with streamline flow. The water clear (visible transparency) and odourless. Dissolved Oxygen (DO) was found in healthy state as recorded due to the flow regime dynamics of the water body.
51. The monitoring results of BOD, Conductivity and TDS values were normal. However, TSS was moderately on higher note due to siltation process which the river brings from the higher to lower gradient. Alkalinity and Hardness was observed low to optimum

range level in the water body. The physio-chemical characteristics reveal no impact on water body due to the ongoing construction activity. Comparative analysis is provided in **Fig 15** below;



**Figure 15:** Water quality characteristics during Q-2 sampling of Flyover site- River Jhelum near Jehangir Chowk

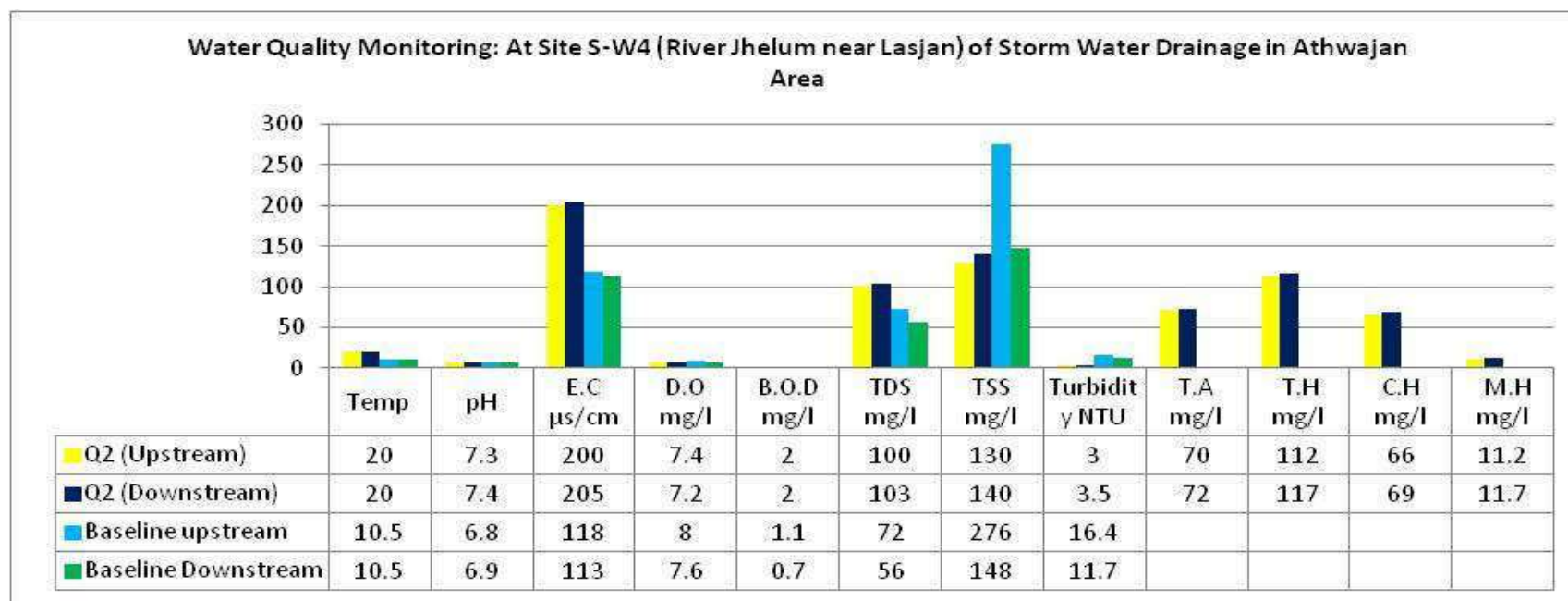
52. Table-13: Construction of Storm Water Drainage along National Highway at Athwajan

Site Code	Quarter	Month of Sampling with date	Sampling Site/ Location	Temp °C	pH	E.C µs/cm	D.O mg/l	B.O.D mg/l	TDS mg/l	TSS mg/l	Turbidity NTU	T.A	T.H	C.H	M.H
			<i>River Jhelum near Lasjan bridge</i>	Permissible Limits											
				-	6.5-8.5	≤500	>6	2-5	≤500	≤120	10	200 - 600	300 - 600	75-200	30-75
S-W4	Baseline Monitoring	April 30-05-2011	Upstream	10.5	6.8	118	8	1.1	72	276	16.4	Above 4 parameters were not part of baseline data, however included since December 2013			
			Downstream	10.5	6.9	113	7.6	0.7	56	148	11.7				
	Q2 (Apr-Jun)	June 29-06-2018	Upstream	20	7.3	200	7.4	2.0	100	130	3.0	70	112	66	11.2
			Downstream	20	7.4	205	7.2	2.0	103	140	3.5	72	117	69	11.7

53. Water samples were taken during the Q2 monitoring period from the upstream and downstream of the River Jhelum site at S-W4 near Lasjan Bridge, Panthachowk/ Athwajan. The water was flowing with moderate speed. The water was found clear (visible transparency) and odourless. Dissolved Oxygen (DO) was found in healthy state as recorded in previous report due to the flow regime dynamics of Jhelum river system.

54. The monitoring results of BOD, Conductivity and TDS values were normal. However, TSS was moderately on higher side and mainly attributed to siltation process which the river brings from the higher to lower gradient and flow dynamics. Alkalinity and Hardness was observed low to optimum range level in the water body. The physio-chemical characteristics reveal no impact on water body due to the ongoing construction activity. Comparative analysis is provided in **Fig 16** below;





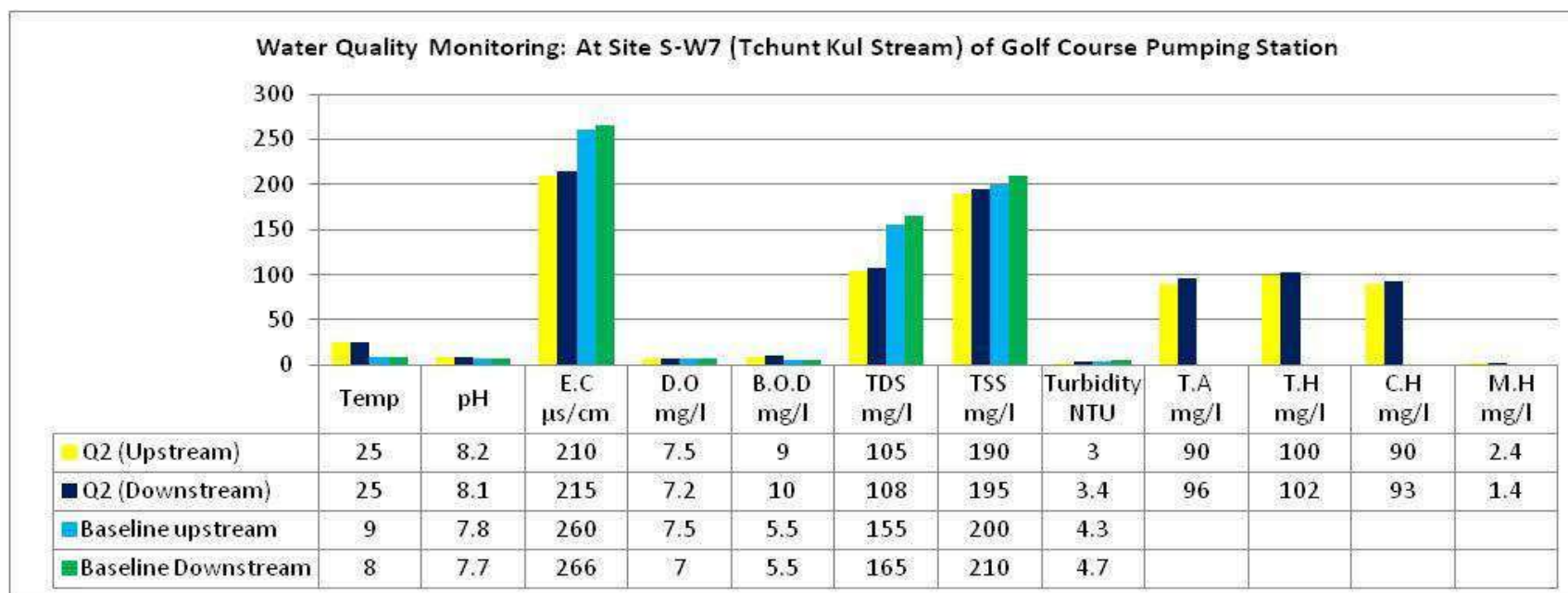
**Figure 16:** Water quality characteristics of Storm Water Drainage site- Jhelum River near Lasjan during Q2 monitoring.

55. Table-14: Upgradation and Upliftment of Existing Pumping Stations in Srinagar

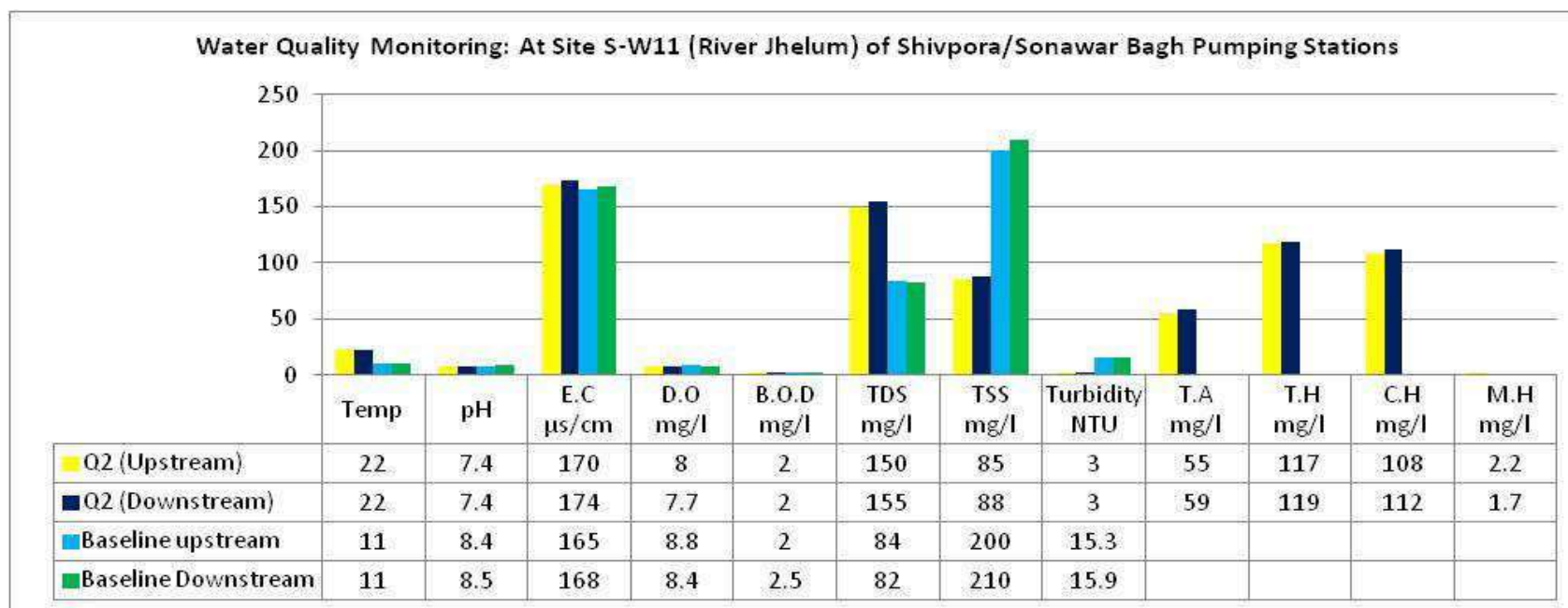
Site Code	Quarter	Month of Sampling with date	Sampling Site	Location	Temp °C	pH	E.C µs/cm	D.O mg/l	B.O.D mg/l	TDS mg/l	TSS mg/l	Turbidity NTU	T.A	T.H	C.H	M.H
				River Jhelum near Lasjan bridge	Permissible Limits											
					-	6.5-8.5	≤500	>6	2-5	≤500	≤120	5-10	200 - 600	300 - 600	75-200	30-75
S-W7	Baseline Monitoring	Feb-April 2015	Golf course (Tchunt Kul)	Upstream	9	7.8	260	7.5	5.5	155	200	4.3				
				Downstream	8	7.7	266	7.0	5.5	165	210	4.7				
	Q2 (Apr-June 2017)	June 28-06-2018	Golf course (Tchunt Kul)	Upstream	25	8.2	210	7.5	9.0	105	190	3.0	90	100	90	2.4
				Downstream	25	8.1	215	7.2	10.0	108	195	3.4	96	102	93	1.4
S-W11	Baseline Monitoring	Feb-Apr 2015	Shivpora/ Sonwar Bagh/ Sonwar Devas (River Jhelum)	Upstream	11	8.4	165	8.8	2.0	84	200	15.3				
				Downstream	11	8.5	168	8.4	2.5	82	210	15.9				
	Q2 (Apr-Jun)	May 30-05-2018	Shivpora/ Sonwar Bagh/ Sonwar Devas (River Jhelum)	Upstream	22	7.4	170	8.0	2.0	150	85	3	55	117	108	2.2
				Downstream	22	7.4	174	7.7	2.0	155	88	3	59	119	112	1.7

56. During the Q2 monitoring period, water quality sampling was inducted for pumping stations to ascertain the present quality and in comparison with baseline monitoring as per IEE. These pumping stations are mainly located on River Jhelum & its spill channel or interconnecting channels and spill channel of Doodhganga (Tengpora Channel). Throughout the monitoring period, River Jhelum sites shows parameters within the applicable standards and in line baseline monitoring except TSS on slight higher side whereas Total Alkalinity and Calcium/ Magnesium Hardness on lower side. Same has been observed at Jhelum river sampling location (pumping Station- Shivpora location). Sampling locations on Tchunt kul near Golf Course shows most of the parameters in range however, TSS and BOD were on higher sides along with Alkalinity and Hardness on lower sides. High BOD may be attributed to the static nature of the stream with high organic load owing to the anthropogenic activities.

57. Above analysis shows that at all sampling sites of pumping stations no such impact is seen due to the ongoing works on the pumping stations hence the results are within baseline features and in line with permissible levels. Comparative analysis is provided in **Fig 17 and 18** below;



**Figure 17:** Water quality characteristics of Pumping Station Sites- At S-W7 Golf course (Tchunt Kul Stream) during Q2 monitoring.



**Figure 18:** Water quality characteristics of Pumping Station Sites- At S-W11 Shivpora Station (River Jhelum) during Q2 monitoring

**7 ANY OTHER ENVIRONMENTAL ASPECTS, IMPACTS OBSERVED DURING IMPLEMENTATION WHICH WERE NOT COVERED EARLIER**

58. No such aspect/impacts observed during this period.

**8 DETAILS OF COMPLAINTS RECEIVED FROM PUBLIC AND ACTIONS TAKEN THEREOF TO RESOLVE**


59. No such complaints received during this period.

**9 FOLLOW-UP ACTIONS AND CONCLUSIONS**

60. Monitoring of the sub-projects are being carried out regularly to ensure that environmental impacts are adequately mitigated and to ensure continuation of compliance with statutory regulations as required by laws, safeguard measures at site agreed upon EMP. The contractors are being regularly guided and instructed to adhere to the provisions of EMP and contractual conditions. As part of capacity building programme for JKUSDIP subprojects training programs for the engineers, the contractors and project staff are being conducted and regular informal onsite orientation for the contractor's supervisory staff and site engineers for effective implementation of Environmental Management Plan.

**Signed by:**

Authorized signatory from implementing agency/ executing agency

  
(Abdul Mujib Shapnum)  
Director Safeguards  
J&K ERA  
16/11/2018



# Appendix-1: Public Consultation & Attendance Details of Flyover-Jehanagir Chowk to Rambagh

## Jammu and Kashmir Urban Development Investment Program (JKUSDIP)

### List of Participants in Consultation with Signatures

Sub Project Name: JCRB Flyover Project

Location of Meeting /Consultation: Around Construction Zone.

Date and Time: 7/5/2018 11am – 3pm.

S.N	Name	Age/ Sex	Occupation	Address	Signature
1	Farooq Ahmad	45/M	Shop Keeper	Rambagh	[Signature]
2	Aijaz Ahmad	40/M	Shop Keeper	Solima	[Signature]
3	Zahid Ahmad	45/M	Business	Sanat Nagar	[Signature]
4	M. A. Bhat	52/M	Business	Fateh Kadal	[Signature]
5	Arshid Shah	49/M	Engineer	Srinagar	[Signature]
6	Atta Ullah	40/M	Teacher	Srinagar Badam Bagh	[Signature]
7	Ab. Rashid	40/M	Commuter	Solima	[Signature]
8	Bashir Ah.	32/M	Commuter	Solima	[Signature]
9	Sherech Imran	49/M	Engineer	Raj Bagh	[Signature]
10	Abid Ah.	25/M	Student	Rambagh	[Signature]
11	Asif Mushtaq	29/M	Student	Raj Bagh	[Signature]
12	Farooq Bhat	32/M	Shop Keeper	Nati para	[Signature]
13	Jashad Ah.	31/M	Prvt Job	Jawher Nagar	[Signature]
14	M. Ashraf	42/M	Prvt Job	Ram Bagh	[Signature]
15	M. Rafiq	36/M	Shop Keeper	Ram Bagh	[Signature]

Closed for Consultation  
[Signature]

## Appendix-2: Public Consultation Attendance Details of Surface Drainage Subproject at Athwajan –NH-1A, Srinagar

### Jammu and Kashmir Urban Development Investment Program (JKUSDIP)

#### List of Participants in Consultation with Signatures

Sub Project Name: Storm Water Drainage Project Along National Highway Athwajan Bypass.

Location of Meeting /Consultation: Along construction zone

Date and Time: 28/04/2018 10 am - 3 pm.

S.N	Name	Age/ Sex	Occupation	Address	Signature
1	Shabeer Ah.	37/M	Business	Athwajan	Shabeer
2	M. Yousuf	60/M	Shop Keeper	Pandachowk	My
3	Khalid Bashir	49/M	Business	Srinagar Bypass	Khalid
4	Ummer Rafiq	42/M	Doctor	Nowgam	Ummer
5	Bilal Ahmad	49/M	Business	Pampore	Bilal
6	Ah. Nabi	56/M	Business/Commuter	Athwajan	Nabi
7	Bashir Ah.	38/M	Business/Commuter	Pandachowk	Bashir
8	Ah. Hassan	52/M	Resident	Athwajan Khrew,	Hassan
9	Ashfaq Ah.	41/M	Engineer	Sonawar	Ashfaq
10	Seerat	30/F	Student	Pampore	Seerat
11	Rayees	29/M	Student	Athwajan	Rayees
12	Bilal Mir	50/M	Business	Athwajan	Bilal
13	Sultan	60/M	Business	Pandachowk	Sultan
14	Zaffarullah	58/M	Govt Employee	Nowgam	Zaffar
15	Agher Phool	45/M	Pvt Employee	Bypass	Agher



### Appendix-3: Public Consultation Attendance Details of Pumping Stations Sites

#### Jammu and Kashmir Urban Development Investment Program (JKUSDIP)

##### List of Participants in Consultation with Signatures

Sub Project Name: *Up Gradation of Existing Pumping Station in  
Srinagar - Lot A - Lot B*

Location of Meeting / Consultation: *Around Construction Zones*

Date and Time: *30/5/2018 11 a.m - 4 Pm*  
*02/5/2018 11 a.m - 2 Pm*

S.N	Name	Age/ Sex	Occupation	Address	Signature
1	Burhan	25/M	Student	Govt Kadal Sgr.	<i>Burhan</i>
2	Salmaan	23/M	Student	Bar Bar Shah Sgr.	<i>Salmaan</i>
3	Masrur	35/F	House Wife	Ralgatle	<i>Masrur</i>
4	Amir Jit	36/F	Business Women	Endhang Pora, Raj Bashi	<i>Amir Jit</i>
5	Saqib	30/M	Shopkeeper	Aloch Bashi	<i>Saqib</i>
6	Firdous Ah.	45/M	Commuter	Sonawar Sgr.	<i>Firdous</i>
7	Touseef Ah.	35/M	Engineer	Raj Bashi.	<i>Touseef</i>
8	M. Amin	60/M	Business	Down Town Srinagar	<i>Amin</i>
9	Ah. Hummed.	45/M	Business	Domani Wari	<i>Hummed</i>
10	Bashir Khan	62/M	Govt Employee	Polytechnic College Sgr.	<i>Bashir</i>
11	Fazal Ahmad	68/M	Rtd Engineer	Jawahar Nagar	<i>Fazal</i>
12	Jasran Ahmad	50/M	Priv Employer	Jawahar Nagar	<i>Jasran</i>
13	Omair	37/M	Student	Srinagar	<i>Omair</i>
14	Altay Ahmad	49/M	Business	Raj Bashi	<i>Altay</i>
15	Ch. Mohd.	60/M	Business	Bar Bar Shah	<i>Ch. Mohd.</i>

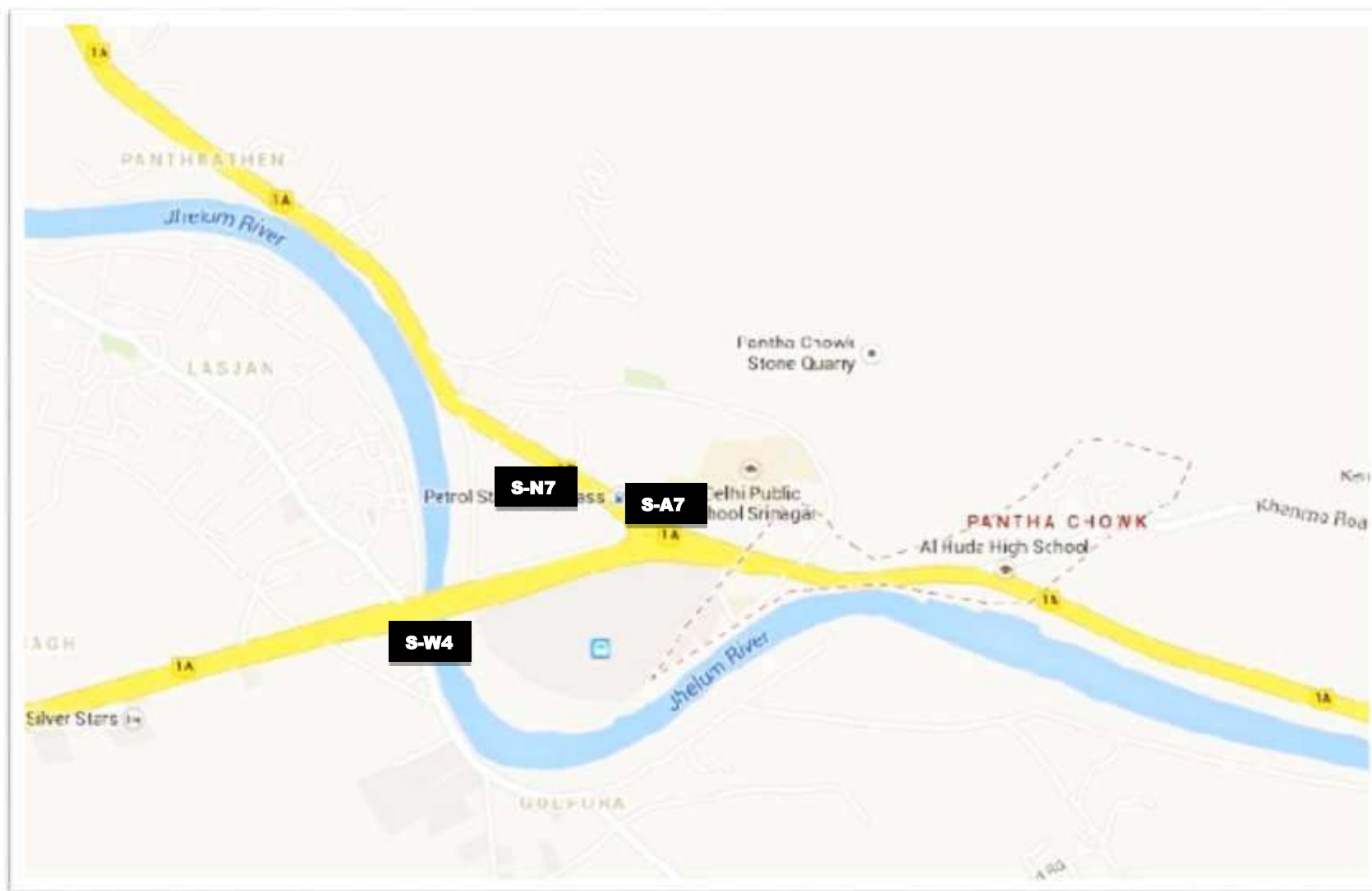


#### Appendix-4: Sampling site location map of Flyover from Jehangir Chowk-Rambagh, Srinagar



**Appendix-5: Sampling site location map of Flyover- Labour Camp/ Batching Plant at Kralpora, Srinagar**

# Appendix-6: Sampling Site Location Map of Storm Water Drainage along NH-1A, Athwajan, Srinagar



**SOUTH ASIA REGIONAL DEPARTMENT**  
**SAUW Semi-Environmental Monitoring Report Log Sheet**

<b>Project title:</b>	<b>IND: Jammu and Kashmir Urban Sector Development Investment Program – Tranche 2</b>			
<b>Loan Number:</b>	2925	<b>Project Number:</b>	41116-033	
<b>Overall Project and Objectives</b>	<p>The proposed JKUSDIP will foster the economic growth in Jammu and Kashmir State. The long term project objectives are to contribute to the economic development of Jammu and Kashmir through enhanced and sustainable growth in the main urban areas with emphasis on promoting commerce and on improvement of livelihood for the poor.</p> <p>In Srinagar, there are 3 subprojects (with civil works):</p> <ul style="list-style-type: none"> <li>(i) Construction of Elevated Expressway Corridor from Jehangir Chowk to Rambagh- Natipora in Srinagar City;</li> <li>(ii) Construction of Multi-storied mechanized Parking Facility at KMDA Stand in Srinagar city; and</li> <li>(iii) Construction of Storm Water Drainage in the adjoining areas of NH-Bypass in Srinagar.</li> </ul> <p>In Jammu, there are 6 subprojects:</p> <ul style="list-style-type: none"> <li>(i) Construction of Bikram Chowk Flyover and Widening /Strengthening of Road from Bikram Chowk to Govt. Women's Degree College on Bikram Chowk–Satwari Chowk Road Corridor, Jammu Under Contract Package JKUSDIP Jammu/UT-01;</li> <li>(ii) Rehabilitation and Channelization of Storm Water Drains at Channi Himmat in Jammu City, Under Contract Package JKUSDIP Jammu/SWD-02;</li> <li>(iii) Construction of Tube wells, Installation Water Supply Rehabilitation Programme (19 Nos, tube well) (lot-1 =12 Nos. &amp; lot-2=7) Under Contract Package JKUSDIP Jammu/ WS-01;</li> <li>(iv) Replacement of Worn-out pipe lines, laying of new pipelines in distribution network and Construction of OHT at Jammu city Under Contract Package JKUSDIP Jammu/ WS-02;</li> <li>(v) Rehabilitation and Channelization of Storm Water drain at Gangyal and Digiana areas in Jammu City JKUSDIP Jammu / SWD-01; and</li> <li>(vi) Replacement of Worn-out machineries and electrical equipment including essential civil works in Tube wells and Central Pumping Station (CPS) at Jammu City Water Supply Rehabilitation Programme under Contract Package JKUSDIP Jammu / WS – 03.</li> </ul> <p><b>Note:</b> Loan closing was on 30 May 2017 and financial closing on 8 February 2018. However it was noted in the SEMR that the construction for 3 packages (2 in Srinagar and 1 in Jammu) are still on-going. Therefore EMP implementation should still be reported to ADB until the Project Completion Report (PCR<sup>1</sup>) is issued.</p>			
<b>Approved Categorization</b>		Category A		Category C
	X	Category B		FI
<b>Loan Effectivity Date:</b>	19 August 2013		<b>Frequency of Reporting</b>	Semi-Annual
<b>Project Officer</b>	Momoko Tada		<b>Project Analyst</b>	Susan Francisco
<b>Reporting Year</b>	2018	<b>Coverage Period</b>	January – June 2018	
<b>Dates</b>	<b>PMU submission to ADB</b>	20 November 2018	<b>ADB comment submission to PMU</b>	18 January 2019

Item	Findings in the SEMR	Comments	Action/s Required	Response by PMU <sup>2</sup>
<b>A. Project Safeguards Team</b> (check loan agreement and PAM requirements)				
PMU <sup>3</sup>	No available information	PAM requires 4 safeguards experts hired in the PMU (2 for environment	In the next SEMR, ensure to include information on PMU safeguard experts	Noted. Currently two environmental experts- one

<sup>1</sup> PCR – Project Completion Report

<sup>2</sup> PMU to provide detailed response. This log sheet will be attached to the SEMR and disclosed on ADB website.

<sup>3</sup> PMU – project management unit

Item	Findings in the SEMR	Comments	Action/s Required	Response by PMU <sup>2</sup>
		<p>(Srinagar and Jammu), 2 for social (Srinagar and Jammu).</p> <p>Although the project is now financially closed, civil works are still ongoing. Therefore, safeguards experts in the PMU and the PMC safeguard consultants are still required to oversee the ongoing implementation.</p>	and PMC safeguard consultants.	each at Jammu and Srinagar-are working in PMU. However one Social expert is looking after both the regions. The contractual tenure of Project Management Consultancy (PMC) was over in Sept 2017, since then no PMC service is available for the projects.
PIU <sup>4</sup>	No available information	PAM does not mention any safeguards officer or expert at the PIU level. The Project Management Consultant (PMC) is the one tasked to assist the PMU and PIUs (see below).	None.	
Consultants	No available information	The PMC requires to have Environmental Expert (20 person-months) and Social, Gender and Resettlement Expert (25 person-months).	In the next SEMR, ensure to include information on PMC safeguard consultants.	The contractual tenure of Project Management Consultancy (PMC) was over in Sept 2017, since then no PMC service is available for the projects.
Safeguards implementation arrangement ( <i>check PAM, EARF if applicable and IEEs</i> )	No available information.	<p>The PMU safeguard experts will lead safeguards implementation, with the assistance from the PMC and DSC. The contractors are required to have full time environmental safeguards officers who will implement the EMPs.</p> <p>Although the project is now financially closed, civil works are still ongoing. Therefore, contractors are still required to engage</p>	In the next SEMR, ensure to include summary on the safeguard's implementation arrangement, including information on the environmental safeguards' officers of contractors.	Noted Same will be included in the next report

<sup>4</sup> PIU – project implementation unit,



Item	Findings in the SEMR	Comments	Action/s Required	Response by PMU <sup>2</sup>
		full time environmental safeguards officers.		
<b>B. Overall Project and Subproject Description</b> (summarize number and type of packages) <sup>5</sup>				
Number of Packages with civil works (check if consistent with latest procurement plan)	9 (3 in Srinagar and 6 in Jammu).	Loan closing was on 30 May 2017 and financial closing on 8 February 2018.	Continue submission of SEMR until PCR is issued.	Noted
Number of DB/DBO packages and status	None		None.	
Number of civil works packages and status	Srinagar: 2 packages – still ongoing 1 package – 100% completed  Jammu: 1 package – still ongoing 5 packages – 100% completed.		In the next SEMR, continue to report on the progress of implementation of these packages.	Noted
IEEs cleared for awarded packages?		Yes. The IEEs corresponding to the awarded packages are disclosed on ADB website.	None.	
Safeguard documents disclosed on project website?	No information available.		In the next SEMR, ensure to include information on disclosure of safeguard documents on project website.	Noted. Same will be included in the next report.
SEMR information on implementation phase (bidding, on-going, construction, completed, under operation, others)	SEMR includes information. All packages except the following have been completed:  (i) Srinagar area, construction works as of end June 2018: - Construction of elevated expressway corridor from Jehangir Chowk to Rambagh – Natipora in Srinagar City (Physical progress - <b>79.20% completed</b> ) - Construction of Storm Water Drainage in the adjoining areas of	The SEMR is clear on the physical progress of subproject implementation.	In the next SEMR, continue to report on the progress of implementation.	Noted

<sup>5</sup> DB/DBO – design-build or design, build, and operate or where contractor will finalize the detailed engineering design; civil works contract – sufficient details of the package is known and used as basis for bid/contract's Technical Specification

Item	Findings in the SEMR	Comments	Action/s Required	Response by PMU <sup>2</sup>
	<p>NH-Bypass in Srinagar City (Physical progress - <b>72.80% completed</b>).</p> <p>(ii) <u>Jammu area</u> construction works as of end June 2018:  - Replacement of worn-out pipe lines, laying of new pipelines in distribution network and Construction of OHT at Jammu City under Contract Package JKUSDIP Jammu/ WS-02 (Physical progress - <b>70% completed</b>).</p>			
SEMR information on construction activities progress	Same as above.	The SEMR is clear on the physical progress of subproject implementation.	Continue to report progress of construction activities in the next SEMR.	Noted
<b>C. Status of compliance with statutory clearances</b> (check IEE for the complete list, summarize the findings for each package – obtained/under application and if obtained, specify validity period)				
Environmental Clearance (EC)	EC not required under the project	It is clear in the EARF and IEEs that EC is not required under the project per 1994 EIA Notification.	None.	
Forest Clearance	None			
No Objection Certificate/Letter	None			
Site location clearance	None			
Permit/Consent to Construct (or equivalent)	None			
Permit/Consent to Operate (or equivalent)	All CTOs exist as of the reporting period.	<p>However, some have expired with the period, as follows:</p> <p>(i) Three Consents to Operate (CTOs) equipment (i.e. stone crusher plant, hot mix plants) in Srinagar site; and</p> <p>(ii) One CTO equipment (i.e. stone crusher plant) in Jammu site.</p>	Ensure to include in the next SEMR copies of renewal of these CTOs that expired.	Noted Same will appended in the next report.
Road-cutting permit	None is required.		In the next SEMRs, continue to report on the validity of permits secured under all packages.	Noted
Utilities shifting permit	None is required.			
Tree-cutting permit	Permits required have been obtained.			Noted
Others (specify)				

Item	Findings in the SEMR	Comments	Action/s Required	Response by PMU <sup>2</sup>
<b>D. Status of Compliance with loan covenants</b> <i>(verify items in SEMR with project loan agreement)</i>				
EA to ensure the preparation, design, construction, implementation, operation and decommissioning of the project, and all subproject facilities comply with; (i) all applicable laws and regulations of the Borrower and the State relating to environment, health, safety; (ii) the Environmental Safeguards; (iii) EARF; and (iv) all measures and requirements set forth in the respective IEE and EMP, and any corrective or preventative actions set forth in a Safeguards Monitoring Report.	Being complied with	The EA needs to comply with this for all subprojects, whether partially or fully completed. Monitoring of compliance should continue until ADB issues a PCR.	Continue monitoring of compliance with this loan covenant and report status in the next SEMR.	Noted
EA to ensure all bidding documents and contracts for Works contain provisions that require contractors to:- Comply with the measures and requirements relevant to the contractor set forth in the IEE and EMP; and any corrective or preventive actions set out in a Safeguards Monitoring Report.	The bidding documents and contract agreements for work are incorporated with the provisions set forth in the IEE and EMP and are being complied with.	All contracts have already been issued.	None.	
EA to ensure all bidding documents and contracts for Works contain provisions that require contractors to:-  make available a budget for all such environmental measures.	Environmental monitoring and mitigation costs allocated/ incorporated in contract agreements.	All contracts have already been issued.	None.	
EA to ensure all bidding documents and contracts for Works contain provisions that require contractors to:-  provide the EA with a written notice of any unanticipated environmental impacts that arise during construction, implementation or operation of the project that were not considered in the IEE and in the EMP.	Being complied with.	The EA needs to comply with this for all subprojects, whether partially or fully completed. Monitoring of compliance should continue until ADB issues a PCR.	Continue monitoring of compliance with this loan covenant and report status in the next SEMR.	Noted
EA to ensure all bidding documents and contracts for	The existing condition of roads and other	The EA needs to comply with this for all subprojects,	Continue monitoring of compliance with this loan covenant	Noted



Item	Findings in the SEMR	Comments	Action/s Required	Response by PMU <sup>2</sup>
Works contain provisions that require contractors to:-  adequately record the condition of roads, agricultural land and other infrastructure prior to starting to transport materials and construction	infrastructure has been recorded in the form of photographs and video recording as well.	whether partially or fully completed. Monitoring of compliance should continue until ADB issues a PCR.	and report status in the next SEMR.	
EA to ensure all bidding documents and contracts for Works contain provisions that require contractors to:-  fully reinstate pathways, other local infrastructure, and agricultural land to at least their pre-project condition upon the completion of construction.	All the areas that if disturbed by construction activities will be cleared and restored to pre-project condition.	The EA needs to comply with this for all subprojects, whether partially or fully completed. Monitoring of compliance should continue until ADB issues a PCR.	Continue monitoring of compliance with this loan covenant and report status in the next SEMR.	Noted
The Borrower shall ensure or cause the EA to submit semi-annual Safeguards Monitoring Reports to ADB and disclose relevant information from such reports to affected persons promptly upon submission.	Semi-annual reports are prepared and submitted to ADB as per the guidelines.	The EA needs to comply with this for all subprojects, whether partially or fully completed. Monitoring of compliance should continue until ADB issues a PCR..	Continue monitoring of compliance with this loan covenant and report status in the next SEMR.	Noted
The Borrower shall ensure or cause the EA to ensure that if any unanticipated environmental and/or social risks and impacts arise during construction, implementation or operation of the Project that were not considered in the IEE, the EMP, the RP or the IPP as applicable, promptly inform ADB of the occurrence of such risks or impacts, with detailed description of the event and proposed corrective action plan	In case of any unanticipated environmental risks and impacts arise during construction, implementation or operation of the Project that were not considered in the IEE and EMP as applicable that shall be immediately informed to ADB with detailed description of the event and proposed corrective action plan.	The EA needs to comply with this for all subprojects, whether partially or fully completed. Monitoring of compliance should continue until ADB issues a PCR.	Continue monitoring of compliance with this loan covenant and report status in the next SEMR.	Noted
The Borrower shall ensure or cause the EA to report any breach of compliance with the measures and requirements set forth in the EMP, the RP or the IPP promptly after becoming aware of the breach.	Breach will be reported to ADB immediately after becoming aware of it.	The EA needs to comply with this for all subprojects, whether partially or fully completed. Monitoring of compliance should continue until ADB issues a PCR.	Continue monitoring of compliance with this loan covenant and report status in the next SEMR.	Noted
<b>E. Contractors Compliance with Environmental Safeguards Requirements</b>				
Appointment of Environment, Health and	No available information in the SEMR.	The loan agreement and PAM states that contractors will have	Provide information on the appointment of full-time	Noted.

Item	Findings in the SEMR	Comments	Action/s Required	Response by PMU <sup>2</sup>
Safety (HSE) and/or nodal person		the responsibility to implement the IEEs and EMPs. And that the IEEs explicitly states the responsibility of a contractor to appoint its own full time environmental safeguards officer.	environmental safeguards officers (or equivalent) of contractors.	Same will be provided in the next report.
Submission of site-specific EMPs	No information provided in the SEMR	This has not been required in the loan agreement, PAM or IEEs.	None	
Submission of SEMP implementation report ( <i>specify in comments frequency – daily, weekly, monthly or quarterly basis</i> )	No information provided in the SEMR	This has not been required in the loan agreement, PAM or IEEs.	None	
Site verification by PMU, PIU, or consultants ( <i>verification report should be attached to the SEMR</i> )	No separate site verification report attached to the SEMR	The SEMR discusses all the environmental monitoring activities such as environmental sampling done.	In the next SEMRs, <b><u>always</u></b> attach the following: (i) separate reports duly signed by the field inspectors (PMU, PIU or consultants) on the monitoring activities done; (ii) photos taken during the inspections; and (iii) copies of certificates of laboratory analysis of environmental samples taken (ambient air, noise, and water).	Noted Same will be appended in the next report
SEMR compliance matrix on mitigation measures implementation (matrixes are based on approved SEMP)	No detailed discussions provided in the SEMR.	The SEMR does not have compliance analysis on the mitigation measures presented in the EMPs.	Confirm if contractors is satisfactorily complying with EMP and implementing mitigation measures.  In the next SEMR, provide a section in the report to discuss compliance on each mitigation measures indicated in the EMP.  For convenience, use the EMP tables in the IEEs and add another column to discuss the	All the contractors are complying and implementing EMP satisfactorily except contractor of JCRB Flyover in Srinagar, where the status of implementation of EMP is “partial satisfactory”

Item	Findings in the SEMR	Comments	Action/s Required	Response by PMU <sup>2</sup>
			compliance of each mitigation measure.	
Other information	Statutory clearances such as Consents to Operate (CTOs), tree cutting permit requirements, etc. are discussed and summarized in the SEMR.	As commented above, some CTOs have expired during the reporting period. Update on the renewal of these CTOs should be reported in the next SEMR.	In the next SEMR, continue to report on the status of all statutory clearances, including the renewal of expired CTOs or any permits that are still needed by the subprojects with ongoing civil works.	Noted
<b>F. Environmental Monitoring</b>				
Rationale	No information.			
Parameters to be monitored are commensurate to the impacts, mitigation measures, and project/subproject/package	This is discussed in the SEMR. Environmental sampling activities were conducted for ambient air, noise level and surface water quality.	This complies with the parameters discussed in the IEEs and EMPs.		
Sampling locations identified and appropriate	Sampling locations are discussed, and the maps showing these locations are attached.	On the ambient air quality and noise level sampling – no discussion as to how the locations were selected.  On the surface water quality sampling – it is satisfactory since the sampling activities were conducted at both the upstream and downstream portions relative to the locations of construction activities.	In the next SEMR, please include discussions on the basis of selecting sampling locations for the following:  (i) ambient air quality; and (ii) noise level.  Continue to conduct surface water quality sampling at the upstream and downstream portions relative to the locations of construction activities.	Noted Same will be included in the next report
Sampling frequency identified and appropriate	One sampling for each location was conducted during the reporting period.	At least one sampling is enough, provided that sampling activities are conducted when there are construction activities under the project.	In the next SEMR, indicate the activities being undertaken when environmental sampling is conducted.	Noted
Sampling collection and analysis are in accordance with internationally-accepted practices	The method of analysis of samples collected are based on national standards.	The method of analysis is based on national standards. This is consistent with the provision in the IEEs and EMPs wherein national	Continue monitoring of compliance with the methods of analysis of samples collected, and report status in the next SEMR.	Noted

Item	Findings in the SEMR	Comments	Action/s Required	Response by PMU <sup>2</sup>
		standards will be followed.		
Standards and performance indicators are compliant with ADB SPS requirements <sup>6</sup> (provide justification if less stringent standards are used)	The standards are presented in the SEMR.	The presentation in the SEMR is similar to the presentation in the IEE. It is explicit in the IEEs that the project will comply with the national standards for ambient air, noise and water.	Continue monitoring of compliance with the standards and report status in the next SEMR.	Noted
<b>G. Environmental monitoring results (narrative based on presented results)</b>				
Air quality results	Ambient air quality sampling in two locations in Srinagar site revealed RSPM <sub>10</sub> results higher than the standard. Field verification showed that this is attributed to both the heavy traffic and construction activities in the area. It was also noted that the baseline data from these sampling sites already revealed higher value of RSPM <sub>10</sub> compared to the standards. Even so, the contractors were advised to implement its corrective action plan to effectively control dust generation in the area.	The results of the sampling are well presented in the main body of the SEMR. However: (i) copies of the certificates of laboratory analysis are not attached to the SEMR; and (ii) no discussions on the basis of selecting the sampling locations.	In the next SEMR, include the following:  (i) attach as appendix copies of the certificates of laboratory analysis on samples collected; and (ii) discussions on the basis of selecting the sampling locations.	Noted Same will be attached in next report
Water quality results	Surface water quality monitoring was also done at various sampling points in streams/rivers near the subproject sites. Analysis showed mixed results wherein some sampling sites gave	The results of analysis and sampling locations are well presented in the SEMR.	In the next SEMR, include information on whether the sampling activities were conducted when civil works under the project are ongoing.	Noted Same will be included

<sup>6</sup> ADB SPS (Appendix 1 para 33) requires projects to apply pollution prevention and control technologies and practices consistent with international good practices as reflected in internationally recognized standards such as the World Bank Group's Environmental, Health and Safety Guidelines (<https://www.ifc.org/ehsguidelines>). These standards contain performance levels and measures that are normally acceptable and applicable to projects. When host country regulations differ from these levels and measures, the borrower/client will achieve whichever is more stringent. If less stringent levels or measures are appropriate in view of specific project circumstances, the borrower/client will provide full and detailed justification for any proposed alternatives that are consistent with the requirements presented ADB SPS.

Item	Findings in the SEMR	Comments	Action/s Required	Response by PMU <sup>2</sup>
	marginally higher values than the standards. However, field verification revealed that these higher values are attributed to anthropogenic activities in the city and not because of the ongoing subproject activities.			
Noise quality results	Noise level measurements have been conducted at construction sites. Most results reveal higher values than the standards. However, it is noted that baseline noise level at these sites were already higher than the standards. Even so, the contractors were advised to strictly implement the EMPs to mitigate high noise levels at the sites.	The results of the sampling are well presented in the main body of the SEMR. However: (i) no copies of certificates or logs/printouts of actual noise measurements are attached to the SEMR; and (ii) no discussions on the basis of selecting the sampling locations.	In the next SEMR, include the following:  (i) attach as appendix copies of the certificates or logs/printouts of actual noise level measurements; and (ii) discussions on the basis of selecting the sampling locations.	Noted
Others	n/a			
<b>H. Consultations and/or FGDs during the reporting period</b>				
Number	3			
Reason/s for consultations/FGDs	Continuing consultations in compliance with IEEs and EMPs.	This is in compliance with the responsibility of EA to conduct continuous consultations throughout the project implementation phases.	Continue monitoring of compliance with this responsibility and report status in the next SEMR.	Noted
Number of participants	45			
Number of female participants	3	Only 3 out of 45 are female. There is a need to improve/increase the participation of women.	Ensure to involve more women in the consultation activities, and report results in the next SEMR	Noted
<b>I. Trainings, Workshops, Seminars during the reporting period</b>				
Number	No information in the SEMR.		In the next SEMRs, include summary of training, workshops or seminar conducted during the reporting period. If there is none, ensure to state as well.	Noted
Topics	No information in the SEMR.			
Number of participants	No information in the SEMR.			
Number of female participants	No information in the SEMR.			

Item	Findings in the SEMR	Comments	Action/s Required	Response by PMU <sup>2</sup>
<b>J. Grievance Redress Mechanism</b>				
GRM per PAM or IEE/EARF established	No discussion in the SEMR.	It is suggested to include a summary or brief discussion of the GRM and GRC membership	In the next SEMR, provide a summary discussion on the GRM in place based on the IEE, including current membership of the GRC.  Also include any other additional information pertaining to the implementation of the GRM, such as capacity development training of GRM members, meetings, etc	Noted
GRM notified via publication or notice boards	No discussion in the SEMR.			
GRM members identified	No discussion in the SEMR.			
GRM members have capacity to address project-related complaints ( <i>detailed information on capacity development of GRM members such as trainings, workshops, briefings, etc should be attached in the SEMR</i> )	No discussion in the SEMR.			
Number of meetings conducted ( <i>attach minutes of the meeting</i> )	No discussion in the SEMR. However, it is clear in the SEMR that there were no complaints or grievances received during the reporting period.		None. In the next SEMR, continue to report whether or not there are complaints received during the period and discuss the status of resolution of the complaints, if any.	Noted
<b>K. Complaints Received</b> ( <i>detailed information on nature of complaints, summary and status of resolution</i> )				
Number of complaints	Per SEMR no complaints received during the reporting period.	None.	None. In the next SEMR, continue to report whether or not there are complaints received during the period, and discuss the status of resolution of the complaints, if any.	Noted
Nature ( <i>provide summary of issues/concerns</i> )	n/a	None.		
Status of resolution	n/a	None.		
<b>L. Summary of Issues and Corrective Actions</b>				
Major issues/concerns (specify)	No discussion in the SEMR.	SEMR is not clear on construction-related issues/concerns compliance analysis on the mitigation measures are is not reported.	Confirm if contractors is satisfactorily complying with EMP and implementing mitigation measures.	All the contractors are complying and implementing EMP satisfactorily except contractor of JCRB Flyover in Srinagar, where the status of implementation of EMP is “partial satisfactory”
Corrective Action to be implemented, timeline, responsible person/s, and budget are clearly specified	No discussion in the SEMR.			

Item	Findings in the SEMR	Comments	Action/s Required	Response by PMU <sup>2</sup>
<b>M. Status of Corrective Action Plan from Previous Reporting Period (list all and provide status)</b>				
N/A				
<b>N. Appendixes</b>				
Photos	None	There is a need to provide photos of field inspection, sampling activities and consultation meetings.	In the next SEMR, ensure to include as appendix photos of actual conduct of field inspections, sampling and consultation activities (see below related comment).	Noted Same will be appended
Summary of consultations	The summary of consultations is included in the main body of the report.	Although the summary of consultation meetings is discussed in the main body of the report, a separate standalone highlights or minutes of meeting, including signed attendance sheets, should be prepared and attached as appendix. Only signed attendance sheets are provided in the appendix.	In the next SEMR, ensure to include as appendix the following:  (i) minutes or highlights of consultation meetings; (ii) attendance sheet signed by participants, including information on the gender of each participant; and (iii) photos of the actual conduct of consultation meetings.	Noted Same will be appended.
Copies of environmental clearances and permits	None is included in the SEMR.	Copies of environmental clearances or permits secured during the reporting period should be provided and attached as appendix.	In the next SEMR, ensure to attach as appendix all clearances or permits secured or renewed during the reporting period.	Noted Same will be attached
Site EMPs	N/A			
Checklists	N/A			
Others				
<b>O. Review and clearance for disclosure</b>				
<b>Reference</b>	SEMR submitted on 20 November 2018			
	Name	Date		
<b>Reviewed by</b>	Miguel Diangan	18 January 2019		
<b>Noted by</b>	Ninette Pajarillaga	18 January 2019		
<b>Response to ADB comments by (PMU)</b>	Director Safeguards J&K ERA	6 February 2019		
<b>Status/Remarks</b>	Recorded as submitted	20 November 2018		
	Send comments to PMU for responses to comments and guidance for the next SEMR.			