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KATHMANDU PAANI

QUARTERLY BULLETIN

GOVERNMENT OF NEPAL, MELAMCHI WATER SUPPLY PROJECT SUB-PROJECT 2, PROJECT IMPLEMENTATION DIRECTORATE/KATHMANDU UPATYAKA KHANEPANI LIMITED

Message from KUKL-PID

The arrival of Melamchi water to the Sundarjal water treatment plant (WTP) will be a turning event when it comes to providing clean and safe water to Kathmandu Valley denizens in an inequitable and efficient manner. Before this happens, the onus is on the Kathmandu Upatyaka Khanepani Limited-Project Implementation Directorate (KUKL-PID) to ensure that the entire water distribution system comprising Bulk Distribution System (BDS), Distribution Network Improvement (DNI), Service Reservoir Tanks (SRTs) and District Metering Areas (DMAs) and sub-DMAs is capable of supplying water to valley households.



For this, a system commissioning exercise is already underway. As part of this exercise, PID is flushing the distribution main from Sundarjal to Dhobikhola near the Gopikrishna Hall (11.05 km) using regulated flow of water from the Bagmati river. PID will conduct flushing of remaining sections of BDS pipeline, clean and disinfect the pipeline before moving on to primary, secondary and tertiary pipelines. Once water from the Melamchi arrives at the Sundarjal WTP, it may take up to six months to supply water to the farthest point of the distribution system. PID has deployed dedicated teams consisting of engineers and support staff to deal with contingencies that may arise during the system commissioning. PID is installing appurtenances like sewer pipes along the banks of Hanumante, Manohara and Khasyangkhusung apart from constructing wastewater treatment plants (WWTPs) at Guheshwari, Kodku, Sallaghari and Dhobighat. Conceptual design works of Gokarna and Hanumanghat Decentralised Wastewater Systems (DEWATS) are also going on.

At this point, some agencies are replacing old sewer lines with new ones. In this process, PID's pipelines have suffered damage in a number of locations. PID asks agencies concerned to carry out their works by protecting pipelines meant to supply water in the valley. We request all concerned to inform us through our toll-free number 1139 if they see anyone damaging or seeking to cause damage to project infrastructure so that it will be possible to supply more water to valley denizens after Melamchi water is received.


Tiresh Prasad Khatri
(Project Director)

Improvements in water, sanitation and sewerage management Set to transform whole of Kathmandu Valley



■ A view of the wastewater treatment plant under construction at Guheshwari.

Kathmandu Valley Wastewater Management Project (KVWWMP)

KVWWMP was launched in 2013 with financing from the Asian Development Bank (ADB), OPEC Fund and the Government of Nepal. The project was envisaged with the thought that improved supply of water upon completion of the Melamchi Project will lead to increase in volume of wastewater, which, if left unmanaged, could further pollute rivers. The idea behind the project is to systematically collect wastewater, revive water bodies and make a positive impact on public health and the environment by releasing wastewater treated at WWTPs.

Under this project, installation of interceptors is underway on the banks of Manohara, Hanumante and Khasyangkhusung. This project is also installing about 45 km

of interceptors along the banks of these streams. In parallel, High Powered Committee for Integrated Development of the Bagmati Civilisation has installed interceptor sections along Bagmati and Bishnumati rivers and is installing some wastewater collection laterals.

Wastewater collected from households will be transferred through interceptors to WWTPs and treated there. Under the scope of this project, WWTPs are being constructed at Sallaghari, Kodku (Balkumari) and Dhobighat and Guheshwori.

Wastewater collected and treated at these WWTPs will be released into rivers and streams. PID expects this initiative to contribute positively to environmental well-being and public health.

Progress status of water supply components

Under Distribution Network Improvement packages, PID, the implementing agency for the Melamchi Water Supply Project Subproject-02, has so far laid around 729 km of pipeline out of 1009 km, achieving a progress of around 72 per cent. Out of 109,000 household taps, it has installed around 56,000 taps thus far.

Under Bulk Distribution System packages, a crucial component of the Melamchi Project, the implementing agency has so far laid around 71 km of pipeline out of 79 km, achieving a progress of around 90 per cent.

As for the construction of service reservoir tanks, it has achieved an overall progress of 92 per cent.

With regard to road reinstatement, the directorate has reinstated around 88 km of roads out of 285 km.

Community Awareness and Safeguards Support

Community Awareness and Safeguards Support Consultant (CASSC) has been working to raise awareness on the Melamchi Project and the positive impact it will have on different fields such as health, hygiene, sanitation and environment through improved water and wastewater services by conducting community outreach activities such as community meetings, stakeholder meetings, women's group meetings and school awareness programmes.

In coordination with PID, it has conducted site visits to monitor the status of health and safety of

workers as well as the larger public. It has also been coordinating with the media for dissemination of information and PID's messages through press conferences and site visits. From mid-July, 2017 (that was when CASSC was mobilised) till June, 2018, CASSC has organised 141 community meetings with the participation of 2,683 people, including Dalits, Janajatis and Others.

During the same period, CASSC has organised 52 school awareness programmes with the participation of 2,764 people, including Dalits, Janajatis and Others.

Date	Place	Discussion topics	Participants
April 6	Balkhu	Coordination with Kathmandu Metropolitan City (KMC) ward 14 office while laying Melamchi Project's pipe to ensure that the pipe laying does not affect the ward office-initiated construction works	Elected representatives, PID officials, locals
April 11	Handigaun	Resumption of DI pipe laying works in coordination with KMC ward 5 Chair and locals	Elected representatives, PID officials, locals
May 21	Maitidevi	Drinking water supply improvement Road reinstatement after installation of pipes	Officials from KUKL, PID, elected representatives (Lalitpur Metropolitan City), local people
May 23	Tapakhe Tole, Bhaktapur	Payment of compensation for crops damaged during installation of pipes Measures to ensure minimal loss of private land while installing pipes	Local women, PID/CASSC representatives
June 11	Tokha	Maintenance of a pipe that caused flooding at Tokha municipality ward number 9 Payment of compensation to affected households	Elected representatives, contractor's and consultant's representatives

PROJECT MANAGEMENT UPDATE

PID, Lalitpur metropolis sign sewer network construction deal

Project Implementation Directorate and Lalitpur Metropolitan City (LMC) signed a memorandum of agreement (MoA) for Combined Sewer Network Rehabilitation in Lalitpur core area, on May 24, 2018. Upon the request of LMC, PID had conducted a feasibility study and prepared a detailed design of the Combined Sewer Network and Rehabilitation for the Lalitpur core area focusing on flooding of Patan Durbar Square during the rainy season.

As per the MoA, a Combined Sewer Network of approximate length of 4.6 km will be constructed/rehabilitated in core area of LMC spreading over wards 5, 9, 11, 12, 15, 16, 18, 19, 20 and 21. The LMC will lead the whole implementation process and PID will provide support in technical, procurement and contractual matters. The LMC will bear 20 per cent, whereas PID will bear 80 per cent of the project cost.

IN FOCUS

Interaction on Dhobighat WWTP

PID organised a public interaction on the Wastewater Treatment Plant (WWTP) to be built at Dhobighat, at Lalitpur, on May 27. The objectives of the programme were to highlight community and environment-friendly aspects of the WWTP project and address concerns of people living close to the project construction site.

At the interaction, Project Manager Surat Kumar Bam said landscaping will be done for the benefit of children, senior citizens

and pedestrians, apart from construction of a cycling zone. Bam pointed that secondary clarifier of the WWTP will give out water rich in oxygen, so it won't stink. "Apart from that, the deodourisation system fitted with the plant will remove bad odour."

Further, he said the WWTP to be constructed at Dhobighat will be equipped with best technology, adding that the WWTP can be developed as a regional learning centre for South Asia. Mahesh Bhattarai, Chief Executive Officer, KUKL, said: Within the middle of settlements, we should not leave anything open. The entire WWTP will be air-tight. How will it stink if the air does not come out?

LMC Mayor Chiri Babu Maharjan said the Dhobighat WWTP will be equipped with 21st century technology and stressed the need to work as per the modality agreed upon earlier. PID Project Director Tires Prasad Khatri said civil works of WWTP should go side by side with construction of children's park, senior citizens' park, etc, in view of compulsion to complete the project within the deadline.

13-member committee formed

The meeting formed a 13-member concern committee under LMC ward 4 Chairman Narayan KC to address locals' concerns. The committee has four ward members, LMC engineer, representatives of women's groups and social workers/intellectuals as members.

EVENTS



■ Minister for Water Supply, Bina Magar, presiding over a meeting held at the Ministry of Water Supply on June 19 to discuss issues related to commissioning of Melamchi Project components.

Minister Magar: Speed up project

Minister for Water Supply, Bina Magar, on June 19 directed agencies associated with the Melamchi Water Supply Project to expedite project construction works. Speaking at a meeting on project commissioning at the Ministry of Water Supply, she highlighted the need to move ahead with renewed energy to complete the project on time.

At the programme, entities tasked with the implementation and operation of the Melamchi Project briefed Minister Magar on the status of progress of project components, including the water distribution system and the Melamchi Tunnel.

Stress on beating plastic pollution

On the occasion of the World Environment Day (WED)-2018, PID/CASSC organised speech contests at three schools lying close to the banks of Hanumante, Manohara and Khasyangkhusung — Medha Higher Secondary School, Gaurishankar English Boarding School and Azzad Secondary School.

In their presentations, students focused on plastic pollution and how it's been choking the blue planet, measures that can be taken to protect the world from this form of pollution. As per the slogan of the Day, the speakers called all to reduce, recycle and reuse plastics instead of going for single-use plastic products that have been heavily

polluting the environment. They also shed light on harmful effects of burning plastic, pointing that plastic can cause diseases like cancer and asthma.

The speakers also pointed that plastic products end up in rivers, streams and oceans, posing a great threat to aquatic beings. In line with the slogan of the WED-2018, they appealed humanity with one voice to Beat Plastic Pollution: If you can't reuse it, refuse it.

Focus on right to information

A meeting on the Right to Information (RTI) Auditing was held at the Ministry of Water Supply, on June 12. Officials from the ministry and its subordinate bodies took part in the meeting held in the presence of RTI Auditor for the ministry and former secretary of the Government of Nepal, Suresh Man Shrestha, and Information Commissioner at the National Information Commission Kiran Kumar Pokharel.

Information Commissioner Pokharel said the RTI audit was meant to help curb corruption, boost the morale of performers and encourage under-performers to perform better. Pokharel said this exercise was meant to empower citizens and make officials more accountable. He said government bodies should display the process of getting information in visible places. Shrestha, RTI Auditor for the ministry, said the idea behind the audit was to make governance transparent and protect the constitutionally-guaranteed right to information.



Operation of centrifuge equipment at Guheshwori WWTP

Solid bowl type centrifuge equipment installed at Guheshwori WWTP has started operation after its successful testing.

The sludge (both solid and water) incoming from the secondary clarifier of the existing treatment plant is being fed to a de-watering centrifuge connected by a pipeline. In the dewatering centrifuge, solids and water are separated. Solids are collected in containers/trolleys and disposed off to sludge drying bed/designated places.

Water is sent back to the Inlet. Poly-dosing system comprising poly electrolyte powder is mixed with water in a tank and fed by pipeline to the inlet of decanter centrifuge by dosing pump for separation of water and solids.

Equipment list

1. Dewatering centrifuge - 11 cu.m/hr
2. Poly-dosing tank and dosing pump -

- 1000 litres and 400 LPS
3. Dewatering sludge feed pump - 11 cu.m/ hr

Characteristics/Parameters

Inflow to centrifuge equipment (sludge parameters)

Sludge feed (inlet) total solids - 3 to 5 %

Dewatering poly in kg/MT - 2 to 4 kg/ton

Outflow to centrifuge equipment (sludge parameters)

Cake total solids - 20 to 25 per cent

Centrate water TSS - 300 mg/l to 500 mg/l

Solid recovery - 97%

Equipment operation typical detail

- Start the centrifuge motor drive.
- Flushing water opening for initial flushing for 5 minutes after closing of valve (manual ball valve 25 NB).
- Starting of poly dosing pump. (Poly
- Start the centrifuge feed pump for sludge feeding.
- Continue operation of the centrifuge till the sludge is emptied out.



Centrifuge installed at Guheshwori WWTP

preparation in HDPE day head tank 1000 lh.) Dosage amount and concentration of poly dosing as per existing sludge production rate will be done by O&M team during operation.

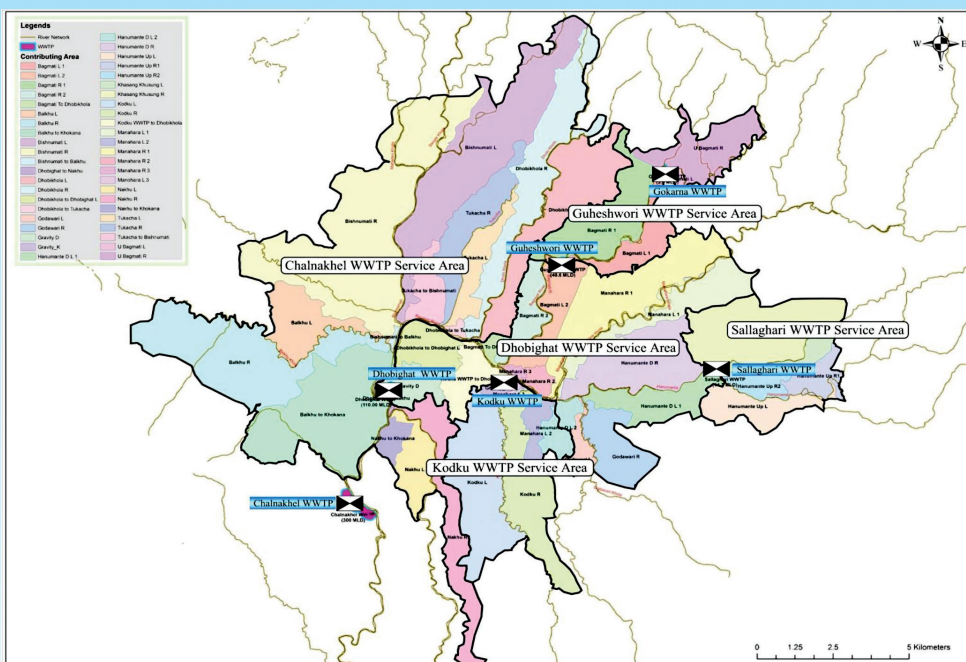
Identified WWTP Service Area

- The WWTP Service Area and its sewerage system were defined and planned considering the sewage flow and water bodies in order to treat sewage generated in the Project area.

14 Catchment Areas

45 Contribution Areas

WWTP Service Areas



Notice

Ministry of Water Supply and Sanitation and Project Implementation Directorate apologise for inconveniences faced by the public during the implementation of the mega-project and appeal for everyone's support in this transformative endeavour.

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