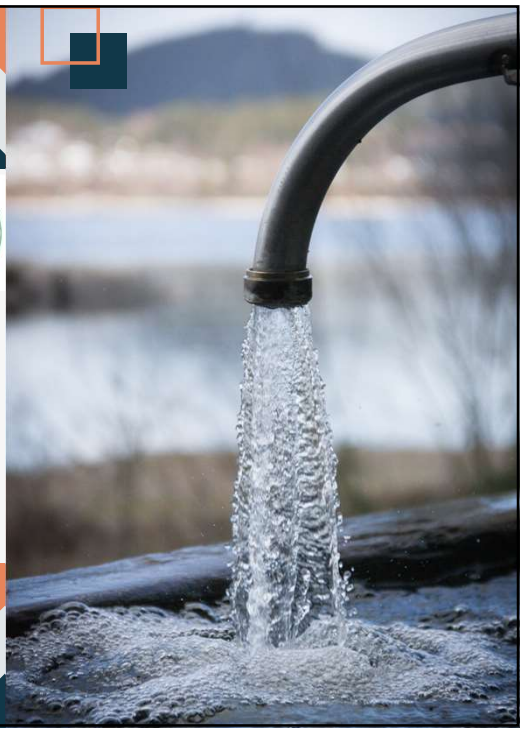
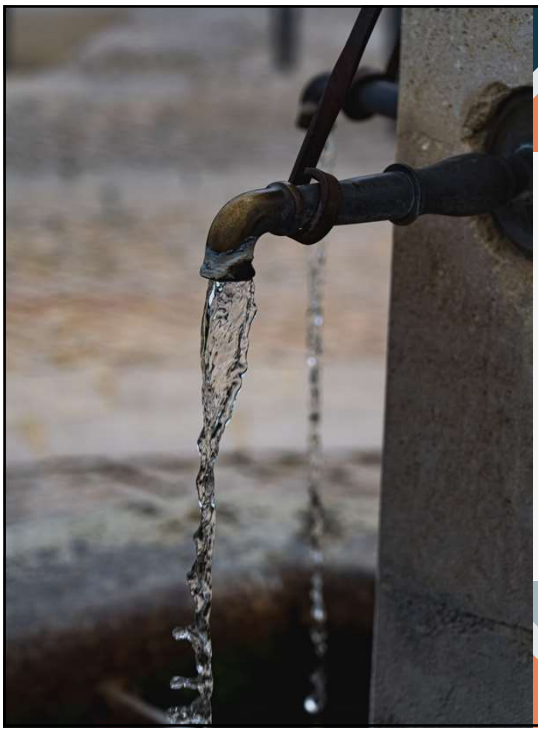
Best Practices by Government of Punjab

National Workshop on Jal Jeevan Mission
Bhubaneshwar, Odisha



Success Stories:

1. For the people, By the People: Community participation, Ownership and Management
2. Empowering through IT: mGram Seva App
3. Ensuring Quality in Quality Management
4. Every Call is heard: SNK
5. Getting Future Ready: Automation



Success Story

of village Bishniwal, Gurdaspur, Punjab.

Village: Bishniwal, Distt. Gurdaspur (Punjab).

- Bishniwal is a small village on Balata-Fatehgarh-Churian road in Gurdaspur district of Punjab with a community of 543 people across 106 households.
- The village was facing issues due to irregular water supply and inadequate pressure as it was earlier covered with Hand Pump.
- The social and technical teams from the State Jal Jeevan Mission explained the Gram Panchayat the ways to resolve their issues through construction of Overhead Service Reservoir (OHSR) for the village, laying of distribution pipelines, individual household connections etc.
- Now this water supply scheme has been augmented with tubewell at a cost of Rs. 25.37 lac. with Financial Assistance from W.B./ NRDWP in FY 2019-20
- The Gram Panchayat formed a Gram Panchayat Water and Sanitation Committee (GPWSC) and collected the community share of Rs. 41,000, i.e. 10% of the in-village infrastructure.
- The work was executed under the supervision of GPWSC.

Village: Bishniwal, Distt. Gurdaspur (Punjab).

Monthly meeting of GPWSC members.

Village: Bishniwal, Distt. Gurdaspur (Punjab)

- During trial run period, community members were trained and educated about book keeping and account maintenance for O&M of the water supply scheme.
- The Bishniwal GPWSC has a systematic record of :-
  - water bills raised,
  - user charges collected,
  - work wise detail of expenditure/ payment,
  - complaint register,
  - daily pump operation log book and
  - hours of uninterrupted water supply etc.
- All records are maintained by the Secretary of the GPWSC.
- At the time of reporting, the village scheme Operation & Maintenance (O&M) had a balance corpus of Rs. 38,000.
- The village portrays engaged community participation and active women involvement, which furthers smooth working of GPWSC.

Success Story

Success Story of village Gunnowal, Amritsar, Punjab.

Village: Gunnowal, Distt. Amritsar (Punjab)

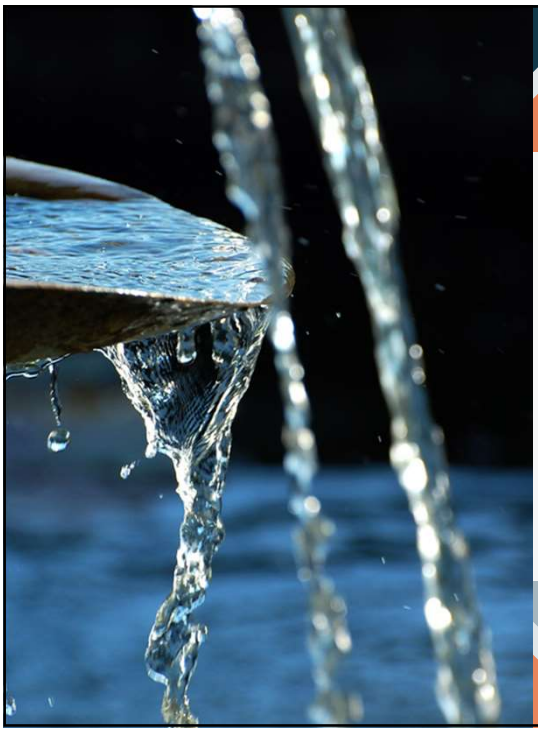
- Gunnowal is a village in Jandiala Block of Amritsar District with a total of 270 households. Earlier this scheme was constructed in 2011 under NRDWP
- These households drew their water supply from tubewell-based OHSR with the capacity of 75,000 ltr.
- During the testing, the ground water was found to be contaminated with arsenic and iron as high as 0.017mg/ ltr.
- DWSS in collaboration with IIT-Madras set up an IoT based 150 kLD Arsenic-cum-Iron removal plant under JJM as long term mitigation measure to supply treated water at 70 lpcd at a cost of Rs. 30.97 lac in June, 2021.
- Additionally, work for retrofitting of existing water supply scheme for 100% FHTC coverage was completed in July, 2021 at a cost of Rs. 6.58 lac.

Village: Gunnowal, Distt. Amritsar (Punjab).

Monthly meeting of GPWSC members.

Village: Gunnowal, Distt. Amritsar (Punjab)

- Communication campaigns were launched yet again to raise the demand for treated and contamination-free piped water supply sourced from treated groundwater and timely submission of monthly water user charges to ensure sustainability of the village scheme.
- The IEC activities, access to safe drinking water and emphasis on the village-scheme sustainability has ensured no one in the village wastes water and timely submission of monthly water user charges of Rs 100 per household to GPWSC.
- Regular household contribution of the user charges has built the village corpus of Rs 1,00,000/- to manage O&M of the village drinking water scheme and payment of its electricity bills.



IEC/ BCC Activities

IEC Initiatives

Campaign activities

Exposure Visits

Community Radio

Social Media Engagements

IEC Initiatives

Outreach through Television

Sensitising school children

Water quality (WQ) testing

Mobile WQ testing Lab

Campaign: Taps on All Connections Campaign

Outreach through Television

- Jal Hai Tan Kal Hai is an ongoing weekly programme to sensitise communities about various initiatives of DWSS.
- Each episode focuses on a specific topic and has a guest who details about the work of DWSS and benefits for communities.
- The discussions with experts are backed by the success stories from the various villages. It is telecasted in DD Punjabi on Sunday.
- Major themes focussed on the Programme Include
  - 24 X 7 Supply
  - Solid Liquid Management
  - Effective Management by GPWSCs
  - Environment
  - Water Quality
- The programme is also available on YouTube under the channel "Har Ghar Nal, Har Ghar Jal". 10 hours of audio-visual content can be accessed at:
- https://www.youtube.com/channel/UCLVLC9HRpzME38yN3EDWYdg

#Har_Ghar_Nal_Har_Ghar_Jal #Episode_52 #Balmukandsharma
Success Story of 24 Hour Water Supply of Village Mahaddipur(Jal.) | Shyam Lal Sidhu

#Har_Ghar_Nal_Har_Ghar_Jal #Episode_50 #Balmukandsharma
24 hours water supply scheme in Village Ghodawahi (Jalandhar) | Sarpanch Satish Kumar

Exposure Visits:

Photos of Exposure Visits conducted for community members at Moga, Faridkot

01 Celebration of Local Festivals

Celebration of Teej Festival organised by the Social and IEC Unit in the Villages

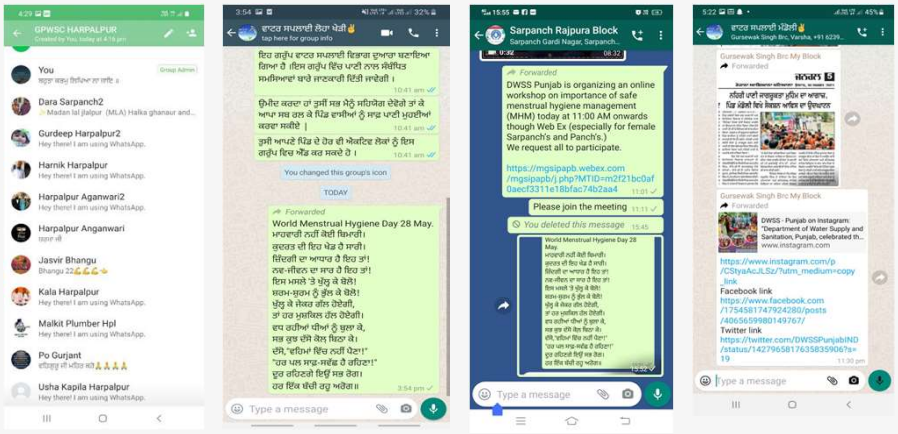
Celebration of Poshan Maah

02 Celebrating Days of National Importance

A Glimpse of the independence Day Celebrations

Gram Sabhas organised for Gandhi Jayanti Celebrations under Jal Jeevan Samvad

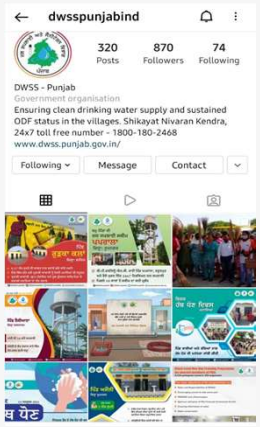
Village Level WhatsApp Groups



The GPWSC members/ GP Members/Stakeholders/Key Influencers and local community in the villages are connected through WhatsApp groups Information on Surface Water Supply Project including significance of judicious use of water, water conservation, and WASH are shared with the communities through village level WhatsApp groups on a regular basis

Presence on Various Social Media Platforms

01



02

03

mGram Seva":- A digital Initiative by Government of Punjab for Rural Water Supply Schemes

"mGram Seva":- A digital Initiative by Government of Punjab for Rural Water Supply Schemes.

Introduction/Status

"mGram Seva" mobile application has been developed by eGov Foundation under the MoU singed between eGov Foundation & Govt. of Punjab in Jan 2021.

The work was started in Jan 2021.

The piloting was done in the Division Name: "Sri Anandpur Shaib" in month of Dec 2021. Total 83 GPWSCs were made live in the Division.

The implementation includes the community participation as the application users are GPWSC (Gram Panchayat Water and Sanitation Committee) members.

The state-wide rollout has been started and targeted to be completed by Aug 2022.

"mGram Seva":- A digital Initiative by Government of Punjab for Rural Water Supply Schemes.

Benefits of Using mGramSeva

- Digital book-keeping
  - Maintain all receipt and expense records in digital format for all GPWSC as well as DWSS schemes
  - Easy consumer and vendor account generation and updation
- Easy to use and environmentally friendly
  - Simple mobile app, saves time
  - All accounts maintained digitally, saves paper
- Accountability and Transparency
  - Handover of records from one to another Sarpanch will be easy and transparent
  - Dashboards to give easy and effective visualization of all data of schemes to all stakeholders
  - Helps in better planning and efficient fund management, leading to better services
  - Information sharing about GPWSCs' performance with citizens helps build trust and confidence
- Online and cash payment
  - Online payment through multiple options - Netbanking, Credit/Debit Card, Mobile Wallets**
  - Cash payment also available
- Alerts and Notifications
  - Digital bill and receipt on registered mobile numbers on WhatsApp and SMS.
  - Active SMS alerts
- Consumer rating water quality
  - Citizens rate water quality, supply and overall service satisfaction in villages / wards
  - Easy to identify problems and improve water services
- Full or partial payment
  - Option to make partial payment of bill

***In progress*

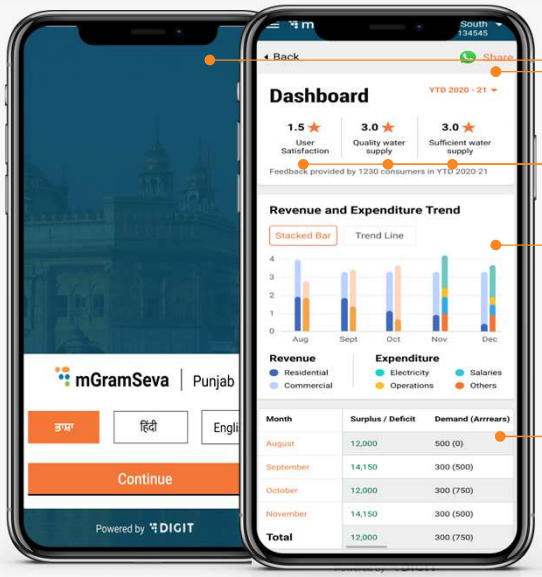
"mGram Seva":- A digital Initiative by Government of Punjab for Rural Water Supply Schemes.

- 65% of the users adopted the App within 2 weeks of launch in the first village Lodhipur
- Approx. 35% of collections in the first week of demand generation
- Over Rs. 35 Lakh+ revenue collected since launch
- ~12000 households has been covered till date

Strong commitment to scale across 4500+ GPWSCs in Punjab by April 2022

- Target to complete the Roll- out of the application in the state by Aug 2022.
- DWSS has set up a Nodal Team with 15+ resources for rollout across state
- 400+ DWSS's Field resources have been aligned across MIS, IEC and Admin to support the rollout across state

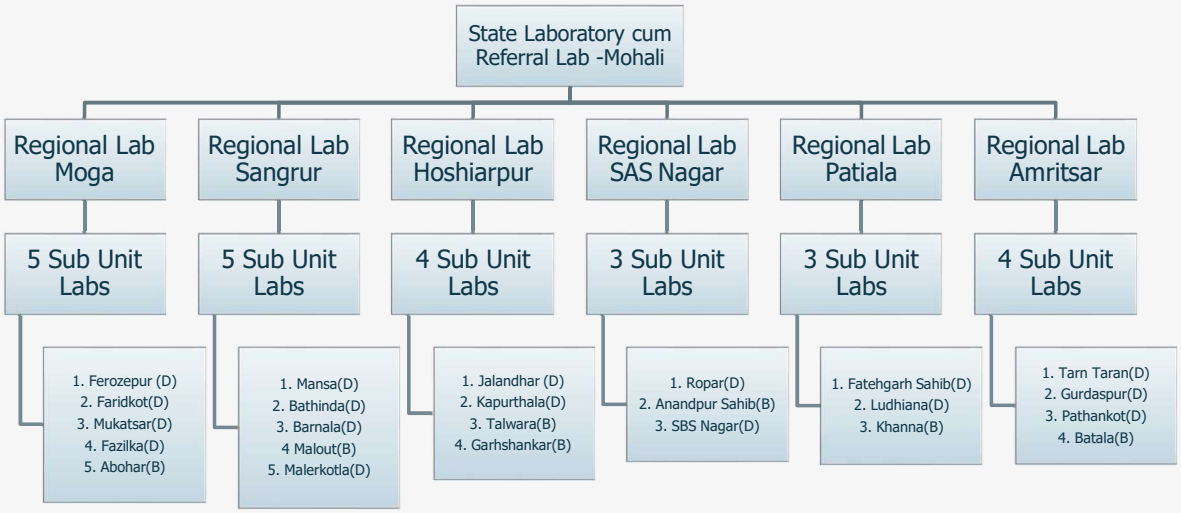
"mGram Seva":- A digital Initiative by Government of Punjab for Rural Water Supply Schemes.



1. App is Multilingual and a Digital way to maintain the revenue and expenditure records
2. Easy to share reports over WhatsApp
3. Consumer satisfaction and assessment quality of services
4. Dashboards for snapshot of collections and expenditures to the Sarpanch / other GP officials
5. Details of collection available monthly for easy management

Water Quality Monitoring and Surveillance

THREE TIER WATER QUALITY MONITORING INFRASTRUCTURE



25 No. Labs are NABL accredited out of total 31 No. labs in the state

LABORATORIES INFRASTRUCTURE AT A GLANCE

State-cum- Referal lab - Mohali

Modern Infrastructure in Labs (Regional Lab Mohali)

Regional Lab Sangrur

Inductively coupled Plasma Mass Spectrophotometer (ICP-MS)

Ion Chromatograph

Regional Lab Hoshiarpur

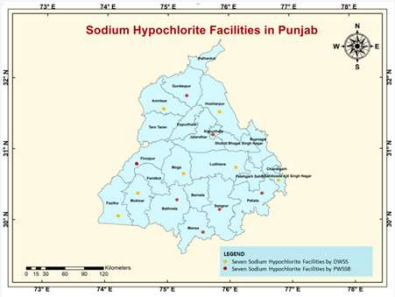
LABORATORY INFORMATION MANAGEMENT SYSTEM (LIMS)

- In order to streamline the processes starting from sample collection and scheduling, route optimization, invoice generation, sample testing and finalization of test reports and to re engineer the current processes to minimize human involvement, DWSS has inducted customized Laboratory Information Management System.
- Awarded to M/s Think Smart IT Solutions Pvt. Ltd on 29.09.2021 for Rs. 89 Lakh including 5 years O&M.
- CoTS LIMS phase for internal operation of labs (sample receiving to issuance of report and email of report to customers) is already functional in DWSS Labs.
- 2nd and 3rd phase (integration with MIS/WQMIS, sample scheduling, route optimization, FTK module, legacy data etc.) shall be rolled out by 30.06.22.

ENSURING DISINFECTION THROUGH STORAGE AND DISPENSING OF SODIUM HYPOCHLORITE

In order to create adequate storage facility of Sodium Hypochlorite for ensuring disinfection of drinking water:

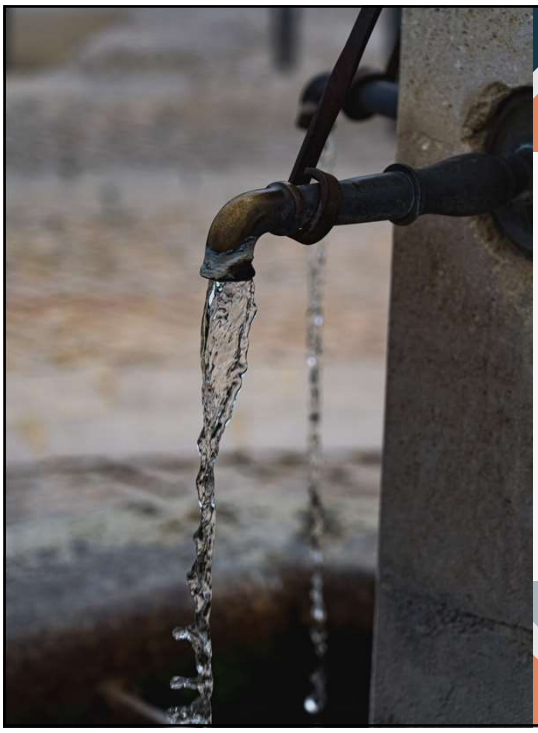
- 7 No. Storage facilities by DWSS are functional at Amritsar, Hoshiarpur, Moga, Ludhiana, Mohali, Muktsar sahib & Abohar.
- Another 7 such facilities by PWSSB at Phagwara, Patiala, Gurdaspur, Bhudlada, Ferozpur, Bathinda, Sangrur are functional



Sodium Hypochlorite Centre, Moga

Sodium Hypochlorite Centre, Patiala

Sodium Hypochlorite Centre, Amritsar



Digitalized Complaint Redressal System-

Shikayat Nivaran Kendra (SNK)

EVERY CALL IS IMPORTANT

Grievance Redressal System

- Digital well equipped 24x7 call centre with IVRS (Interactive Voice Response System) along with PRI Line is active with Toll free No. 1800-180-2468 for grievance redressal.
- The analog grievance redressal system is operational since December 2009 and digitally upgraded in December 2020.
- 10 operators work in 3 shifts (7 am – 2pm, 9am – 5 pm and 2 pm – 9 pm) and their live call handling and recording is also monitored.

DWSS Grievance Redressal -24*7 active Shikayat Nivaran Kendra

Every Call is important

Alert system for redressal of complaints

- For the pending complaints
  - Daily monitoring by sending reminders to the concerned Junior Engineers, Sub Divisional Engineers, Executive Engineers via SMS, Whatsapp, e-mail and telephonically.
  - Concerned Superintending Engineers cum District Nodal officers (DSNOs) and Chief Engineers are reminded when complaints are not redressed within stipulated time.
- The complaint is closed only after the complainant informs that the complaint has been redressed and is satisfied.

MONITORING STATUS TILL 08-06-2022

Total number of complaints Registered - 98454 Nos .
Total number of complaints Resolved - 97530 Nos.
Total number of complaints Pending - 924 Nos.

% age Redressal of complaints - 99.0%

Arsenic and Iron Removal Plants (AIRP) at Punjab with IoT based Online Monitoring Infrastructure

View of physical assets of IoT Platform

The installed IoT platform is not merely limited to the above mentioned sensor and meter. The infrastructure is expandable. Various water quality sensors and Server side semi-automation can be implemented as and when needed.

Web Services for monitoring the operation of AIRPs

Dashboard

1. Saturn is the only planet with ringsLive Status of Installed AIRP
2. Usage pattern of the day
3. Chronological AIRP active status
4. Daily District-wise Activity tracker
5. District wise Grouping with Alert messages
6. Live status marked Geo-tagging with link
7. Reports Navigation page

Dynamic Live Widgets

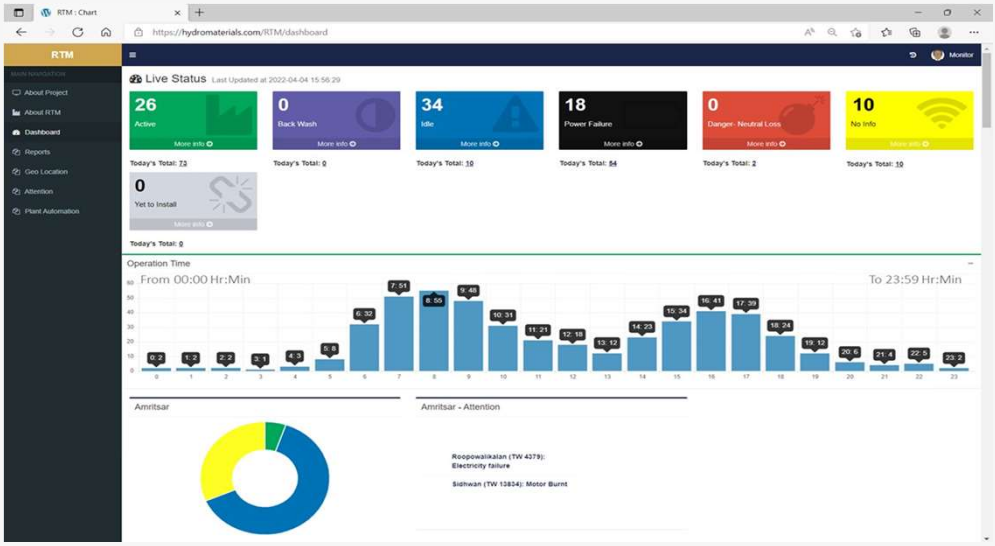
1. Dynamic three phase volt chart
2. Dynamic three phase ammeter
3. Dynamic flow meter
4. Dynamic pressure gauge

Analytics and static data

1. Day wise Treated water quantity data
2. Day wise operation time data
3. Day wise flow-rate data
4. Day wise pump current data
5. Day wise head-loss data
6. Pump running time log

The Web services are custom designed. Designed as a common platform to keep everyone notified and hence transparency and accountability in public service is ensured.

Dashboard



Way Forward

Retrofitting of 1092 nos. Water Supply Scheme (23 nos. Blocks), 1 no. Assembly Constituency Sensor Based Measurement & Monitoring System using IoT Applications to substantially improve the services of Water Supply
(Under Jal Jeevan Mission Programme/ Govt. of Punjab Share)

Proposal for Improvement of various W/S Schemes of a Block to substantially improve the services of Water Supply to make it a Model Block

Sr. No.	Circle	District	Division	Block	No. of W/S Schemes	No. of Villages	IoT based Real Time Operation & Monitoring System	Grand Total (Rs in Lacs)
1	2	3	4	5	6	7	10	
			Central Zone Total	7	273	421	2524.86	2524.86
			South Zone Total	8	378	485	3376.89	3376.89
			North Zone Total	8	441	732	3929.31	3929.31
			Grand Total	23	1092	1638	9831.06	9831.06

Thank You