DeviceLynk Success Story

Government of the Northwest Territories
Water / Wastewater

Government of Northwest Territories uses DeviceLynk to Optimize Water Monitoring Processes and Reduce Costs

About Northwest Territories:

The Northwest Territories is one of three remote northern territories in Canada's subartic taiga & Canadian Arctic Archipelago. The Government of Northwest Territories (GNWT) operates from its regional capital, Yellowknife, on the north shore of Great Slave Lake, overseeing 33 remote communities, with 30 water treatment plants distributed through the regions of Dehcho, North Slave, Sahtu, South Slave and Inuvik.

Responsible for aiding local communities in the delivery of municipal water services, the GNWT was looking for a way to modernize legacy equipment and remotely monitor water quality reports, chemical levels, reservoir amounts and fill-schedules with data gathered directly from existing control equipment. The information gathered needed to be accessible from any location through a standard web-browser, and speed/ease of deployment were paramount to meeting tight budgetary constraints.

Challenges: Location and manual process:

Operating in a remote region with many community assets spread out over a large geographical area, GNWT faced several unique challenges. While each remote site has a water treatment facility near the local water source, there is little infrastructure and no piping available to the nearby communities. As a result, water must be transported by truck to consumer water tanks at their homes, or in their communities.

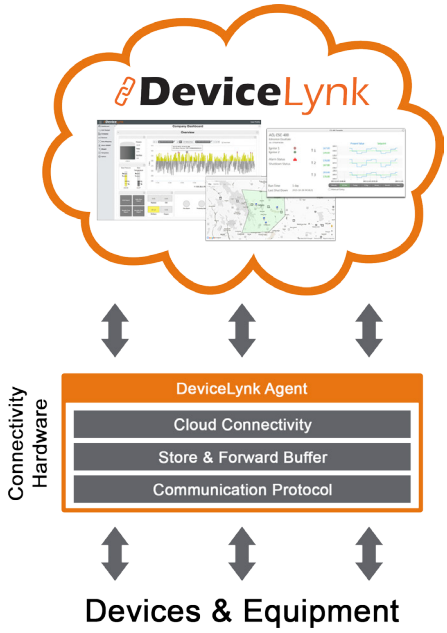
With only localized automation in place and no centralized historian, all data – tank levels, water quality, chlorine levels (for disinfection), equipment readings and more – was being recorded manually. Routine maintenance rounds were being performed several times per year to check equipment and perform repairs, but water quality reports were being provided by fax and/or e-mail, introducing human error and additional cost into data collection. With great distances between sites, this was a very time consuming and costly process, and offered no visibility into data or operations when staff were not onsite at each location.

Facing limited funding for equipment upgrades, it was crucial that a new solution could tie into legacy systems and existing equipment, keeping capital expenditures and expensive upgrades to a minimum.

Solution: DeviceLynk for Water Monitoring

DeviceLynk was selected to be placed at six remote sites to collect data from mobile water treatment plants, water tanks, and mobile trucks, providing Actionable Intelligence dashboards via cloud application to the main office, and to mobile staff.

DeviceLynk Certified Hardware was installed at each remote site, connecting to existing on-site equipment, hardware, and systems, enabling data transmission via cellular connection. Once connected, users at the provincial office were able to login to DeviceLynk's cloud-hosted application to view and access water readings, equipment data, dashboards and automated reports.



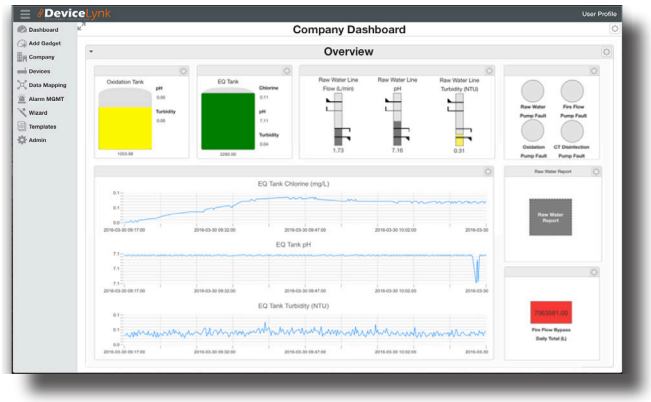
Products used:

- DeviceLynk Application – Cloud-hosted software application, provides users with Actionable Intelligence
- DeviceLynk Agent – Fully integrated connectivity connecting control equipment, and transmitting data to the Cloud
- DeviceLynk Certified Hardware - Lanner 7110 Industrial Computer

- Customer's existing systems, hardware, and water processing equipment

Turning Ordinary Data into Actionable Intelligence:

By implementing a DeviceLynk solution across their remote sites, GNWT was able to realize immediate benefits not only in terms of cost, but in process improvement, visibility and accuracy of reporting. One of the most vital benefits for operations staff is vastly improved data collection and management. Previously, operators from each site were required to submit a weekly log sheet of water quality readings to be manually compiled in Yellowknife.



With DeviceLynk, the process of data collection and reporting is now automated, providing the ability to view water and equipment data on demand, decreasing expenses and man-hours associated with travel, as well as inevitable inaccuracies and delays of a manual process. With automated custom reports, the process for complying with drinking water regulations has been simplified.

Visibility into equipment functionality and operation is also greatly improved, cutting down on discrepancies between operators of various technical skill levels. Management staff is now able to monitor operations - including tank levels, water quality and equipment function - from the main office, and receive automatic notifications if water quality is below standards, or equipment malfunctions, preventing unnecessary dispatching of staff to site. Additionally, GNWT was able to be notified when scheduled water trucks arrive, and can remotely detect if an unauthorized vehicle is attempting to access the water supply, ensuring security of their remote operations.

DeviceLynk is very easy to install and maintain, and doesn't require a specialized engineer or consultant – which is really important to us since our water treatment sites are located in remote communities.

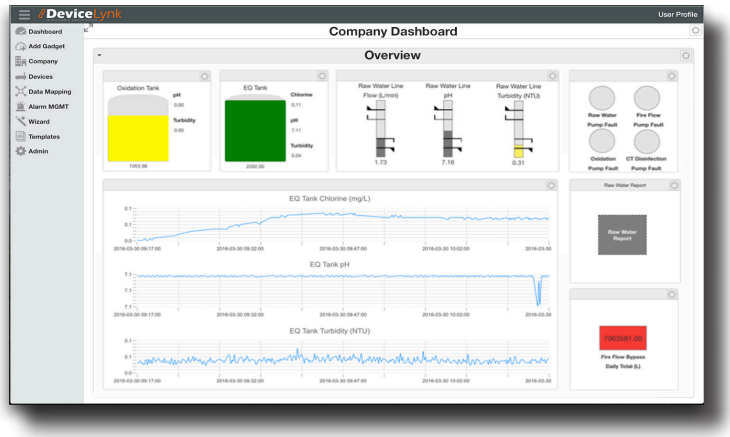
That alone dramatically reduces our project and travel costs.

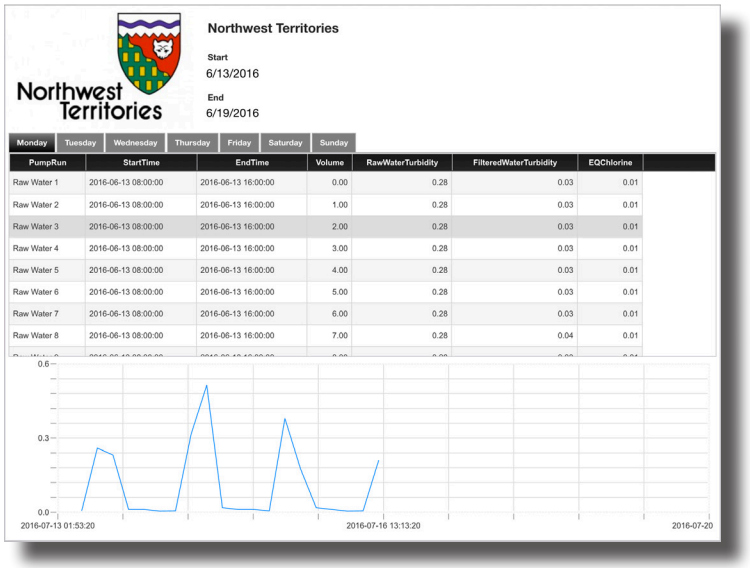
- Justin Hazenberg, Engineering Team Lead, Community Operations, Government of Northwest Territories

Using DeviceLynk the GNWT has modernized – rather than replaced – their existing control hardware and processing equipment, aligning with their limited budgetary requirements. With the improved visibility into data from remote equipment, the engineering department now has greater insight into if/when equipment needs to be upgraded or replaced.

Justin Hazenberg, the Engineering Team Lead believes GNWT has benefitted from DeviceLynk's ease of installation, enabling GNWT to install DeviceLynk quickly, and without any outside assistance, eliminating costs related to custom engineering and integration.

Actionable Intelligence Dashboards





Custom dashboard designed by GNWT:
DeviceLynk's dashboards are based on Situational Awareness principles, color indicates where values are above or below parameters, and action needs to be taken.

Custom reports:
View detailed, customized reports at desired intervals. This report features raw water levels from each source, meausuring turbity of raw and fresh water, and chlorine levels.

DeviceLynk for Water Monitoring

- Increase visibility to remote water assets and processes
- Receive real-time notifications when water quality is unsafe
- Consistent reporting across region with improved accuracy and timeliness
- Eliminate rounds or travel time associated with monitoring disparate equipment
- Guarantee communities receive clean, safe drinking water and that waste water is processed efficiently and completely minimizing environmental impact

DeviceLynk
Actionable Intelligence

Contact Information:
DeviceLynk
19909 - 120th Ave NE, Suite 106
Bothell, WA 98011

Tel: 855.724.8570
www.DeviceLynk.com