

Agency IT Operations Plan

2017-2019

State Water Commission

Line of Business: Natural Resources/Transportation
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Agency Number: 7700

2015-2017 Accomplishments

- Development and Deployment of Remote Telemetry Data Collection Services
- Acquisition and Deployment of Virtual Server Infrastructure
- Development and deployment of Aerial Image Dissemination Service
- Completion of Document Conversion

2017-2019 Technology Strategy Information

Goal

Maintain, Grow, and Evolve the Current IT infrastructure to address the on-going operational requirement and scientific needs for the agency.

Provide a comprehensive data management infrastructure capable of evolving with agency management requirements

Leverage GIS technology services throughout the Data Management infrastructure

Develop, Leverage, and maintain existing IT infrastructure to provide the basic computational resources required for scientific and engineering modeling

Provide storage solutions that leverage existing technology to provide the necessary resources for the SWC

Provide Mobile Computing services

Strategy

Evaluate and assess scientific and engineering requirements to assess existing and evolving technology capable of addressing these requirements.

Evaluate and assess data collection and storage requirements to evolve management capabilities to address changing requirements.

2017-2019 Planned Activity Information

- Development, Growth, and Completion of Aerial Image Services
- Development and Deployment of Private Network through Verizon for Remote Field Equipment Telemetry

2017-2019 Technology Being Investigated or Considered

Remote Telemetry

In an effort to continue to evaluate and develop more cost effective ways to collect water resource data, the Water Commission will continue to evaluate and explore a variety of options to provide solutions for remote data collection. This includes remote sensors for measuring Water Level, Soil Moisture, Temperature, Humidity, Barometric Pressure, and Precipitation, as well as, the necessary technology to establish the remote communications with this equipment to minimize the need to dispatch field personnel to collect or monitor the respective equipment and sensors.

New Projects

- None identified

Technical Infrastructure Information

Number of Computers/Workstations	120
Number of Portable Devices	60
Number of Network Printers	8
Number of Servers	14
Number of public-facing web sites	5
Number of internally facing web sites	1

Application Information

Well Inventory

Provides data management functions for the collection and analysis of the data supporting the management of North Dakota's ground and surface water systems.

<i>Water Permits</i>	Provides management functions for North Dakota's water appropriations. It includes all of the necessary legal information related to requested and approved water appropriations as well as related historic water use reporting.
<i>Retention Structures</i>	Provides management and reporting capabilities for all of the major water retention structures in North Dakota. This includes Dams, Dikes, Diversion Structures, Dugouts, and other types of retentions structures.
<i>Precipitation Stations</i>	Provides management for the network of private observers that report precipitation information throughout North Dakota.
<i>Flight Operations</i>	Provides support for the cloud seeding operations performed by the Atmospheric Resources Division.
<i>Survey System</i>	Provides internal management for North Dakota's survey benchmarks.
<i>Lidar Dissemination System</i>	Provides internal management for all of the various Lidar data collection efforts in North Dakota.
<i>Records Management</i>	Records Management / Project Management and Cost Share Tracking / Easement Management and Administration
<i>Administrative Services</i>	Administrative Library Inventory / Asset Tracking / IT Purchasing and Tracking
<i>Aerial Image Dissemination Services</i>	Storage, Management, and Dissemination of North Dakota Aerial Image resources and related data
<i>Casper Management Suite</i>	End-user device management