



The Oxbow

FROM THE NORTH DAKOTA STATE WATER COMMISSION

Water Commission AERIAL PHOTOGRAPHY MAPSERVICE GOES LIVE

For many years now, the State Water Commission has provided access to its extensive data stores through their online MapService.

The MapService is an online geographic information systems (GIS) tool that provides public access to the agency's vast data resources. The MapService is similar to other online map tools that you would see through websites such as Google Earth. Initially, it was focused on providing all of the data that the agency uses in its day-to-day operations, including, but not limited to, water levels, water chemistry, water structures and well drilling records. But since its creation, the MapService has been expanded to also support the needs of the surveying community along with providing a clearinghouse for high-resolution, precise elevation data (LiDAR); all free for public dissemination and use.

The State Water Commission has now added yet another MapService focused on historical aerial photography. Aerial photography has always been an integral part of the MapService, however, it has typically only

included the latest years, collected for the whole state. This product is different, in that its aim is to allow the delivery, viewing, and comparison of the agency's vast historical collection of aerial photography.

"Tens of thousands of dollars were spent in the initial acquisition of these aerial photographs for a wide variety of projects across the state since the late 1930s. Until the advent of computer systems capable of serving up these data through an easy to use internet portal, they sat unused in their original boxes after their initial project use, because they were difficult to repurpose for other projects in their paper form", said Rod Bassler, Cartographer and GIS Coordinator at the State Water Commission. "Now that they've been scanned and geo-registered for use in computer mapping applications, they've found new life for countless projects that require a snapshot of North Dakota geography in times past. Many of these photos may never be looked at, but for that one time and place for which a snapshot in time is required, they are priceless."



An example of the types of aerial photography available through the Water Commission's MapService. Pictured, the Capitol Grounds in Bismarck in 1957.

Aerial photography at the State Water Commission has been used in a wide variety of areas for over 50 years, from floodplain management, to identifying old abandoned dams, and even in law enforcement activities. Having a window into the past, gives people a chance to see what things looked like long ago.

In all, the State Water Commission has almost 500,000 aerial photos in its inventory. The conversion of these paper photos to a scanned digital file that can be used in modern mapping applications requires hundreds of hours of tedious work, and meticulous attention to detail by talented and patient specialists. To date, over 35,000 photos have been georegistered for the aerial photography MapService, and it currently includes 75 different projects, such as Missouri River flooding, irrigation studies, and other typical statewide aerial imaging. That represents an immense amount of data,

totaling more than 15 terabytes of information. In the future, another 25 terabytes of photography will be brought online with the inclusion of an additional 150 project areas.

Although the agency has made significant progress in adding aerial photography, it is not a core function of the agency, and photos are added as staff time, project demands, and resources permit.

The Aerial Photography MapService can be found by going to the State Water Commission website, Information & Education, and then Maps/GIS and Data, or by directly accessing it through <http://aerial.swc.nd.gov/>. For more information, contact the State Water Commission's GIS Coordinator at rgbassler@nd.gov, or (701) 328-4998.

New

Missouri River Publication Available



Today's Missouri River

A North Dakota Perspective

The Missouri River has been an important resource for people living along or near it for thousands of years. As time went on and the corridor of the Missouri River was developed and populations increased, efforts have been made to control flows, create storage, and prevent flooding. As a result, six mainstem dams have been in place for over 50 years with the goal of bringing substantial economic, environmental, and social benefits to the people of North Dakota and nine other states.

Since the building of the mainstem dams, it has been realized that for all of the benefits that were provided, the dams have also brought controversy. They have created competition between water users, loss of riparian habitat, impacts to endangered species, stream bank erosion, and delta formation - which are only a few of the complex issues related to today's Missouri River management.

This educational booklet will outline the many benefits that the Missouri River provides, and also summarize some of the biggest issues that are facing river managers and residents within the basin today. Topics discussed throughout this publication include: the development of the reservoir system, water use, federal policies and regulations, sovereign lands, threatened and endangered species, the 2011 flood, riparian development, water supply challenges, recreation, water quality, sediment deposition, and delta formation.



Recently, the State Water Commission completed an update of its "Today's Missouri River: A North Dakota Perspective" publication. Because of the ever-changing nature of water management issues facing the Missouri River, it was deemed necessary to update the publication.

The new publication was printed in full color and expanded to ten pages. It includes information regarding the following topics:

- The River System
- Sovereign Land Management
- Riparian Development
- Water Supply
- Recreation
- Water Quality
- Sediment Deposition & Delta Formation
- 2011 Missouri River Flood
- Federal Water Use Challenges

The State Water Commission has printed copies available upon request. Please call (701) 328-4989 or email [damartin@nd.gov](mailto:d martin@nd.gov). It can also be found on the agency's website at swc.nd.gov.

TOPICS

- The River System
- Sovereign Land Management
- Threatened & Endangered Species
- Riparian Development
- Water Supply
- Recreation
- Water Quality
- Sediment Deposition & Delta Formation
- 2011 Missouri River Flood
- Federal Water Use Challenges
- Additional Information



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