

Southwest Water Authority

Water Topics Overview Committee

Southwest Pipeline Update

August 25, 2016



Southwest Water Authority

Our Vision:

People and Business Succeeding
with Quality Water

Our Mission:

Quality Water for Southwest
North Dakota



Capital Repayment

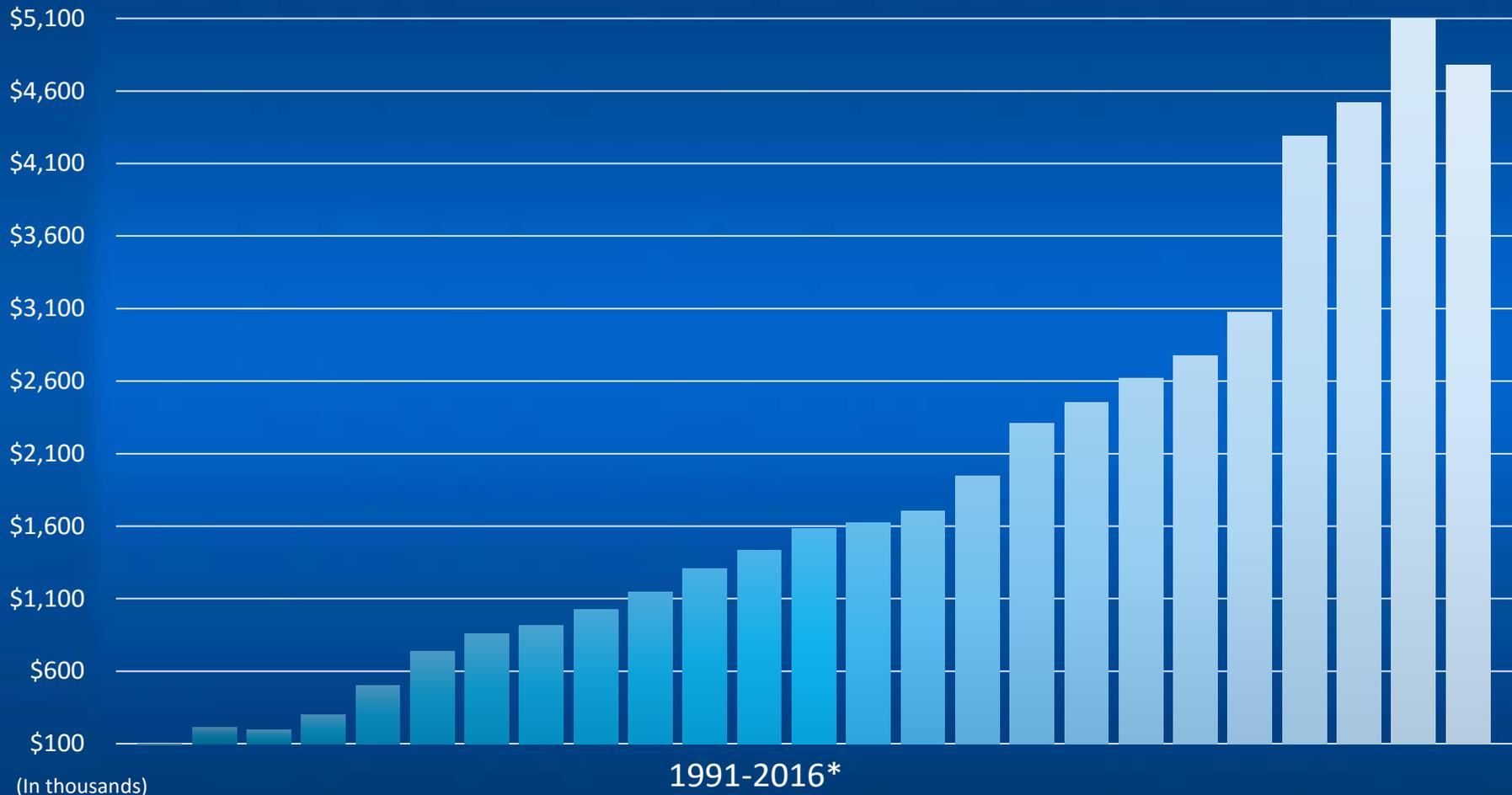
- The Southwest Pipeline Project (SWPP) pays a portion of rural, domestic, municipal and industrial water sales to the Resources Trust Fund (RTF)
- More than **\$50 million** has been paid back to North Dakota through August 2016
- Over 30 percent of SWPP's RTF money has been paid back to North Dakota
- Eventually every dollar of the funding used to construct the Southwest Pipeline Project will be paid to the Resources Trust Fund



Capital Repayment

SWA Customers pay back at a
rate of
\$5 million per year
and growing !

Annual Project Repayment



1991-2016*
(As of June 30, 2016*)



Amount Paid Back in the Form of Capital Repayment

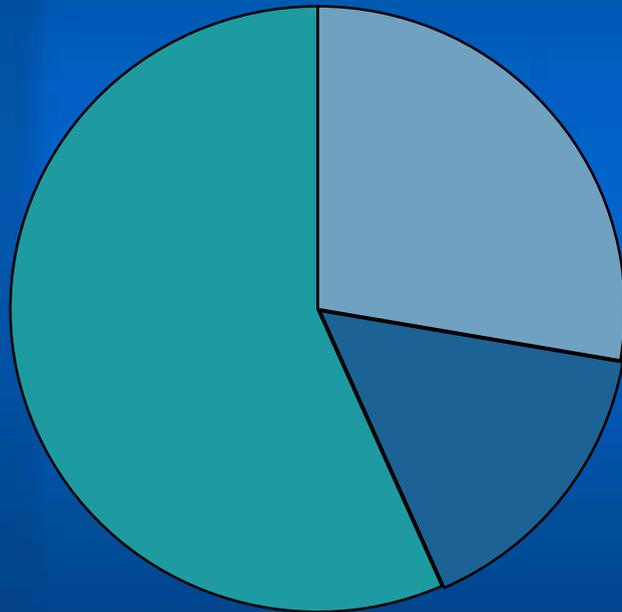
YEAR	TOTAL	YEAR	TOTAL
1991	\$11,166.00	2004	\$1,621,239.25
1992	\$212,899.00	2005	\$1,706,958.33
1993	\$195,973.00	2006	\$1,948,480.26
1994	\$300,472.00	2007	\$2,308,065.86
1995	\$504,179.00	2008	\$2,455,506.88
1996	\$734,994.15	2009	\$2,618,988.11
1997	\$857,913.00	2010	\$2,776,546.59
1998	\$915,791.37	2011	\$3,076,416.44
1999	\$1,025,997.24	2012	\$4,287,275.86
2000	\$1,146,779.77	2013	\$4,521,640.84
2001	\$1,308,267.93	2014	\$5,094,325.48
2002	\$1,432,224.68	2015	\$4,776,377.79
2003	\$1,581,284.21	2016*	\$2,139,936.75
		Total	\$49,559,699.17

(As of June 30, 2016*)

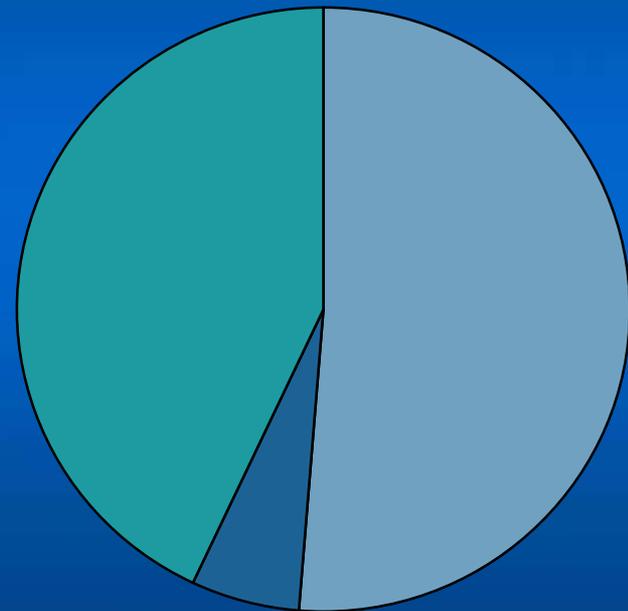


Capital Repayment & Water Rates

CONTRACT WATER RATE



RURAL MINIMUM WITH 6,000 GALLONS



■ Capital Repayment ■ REM ■ O&M

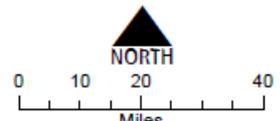
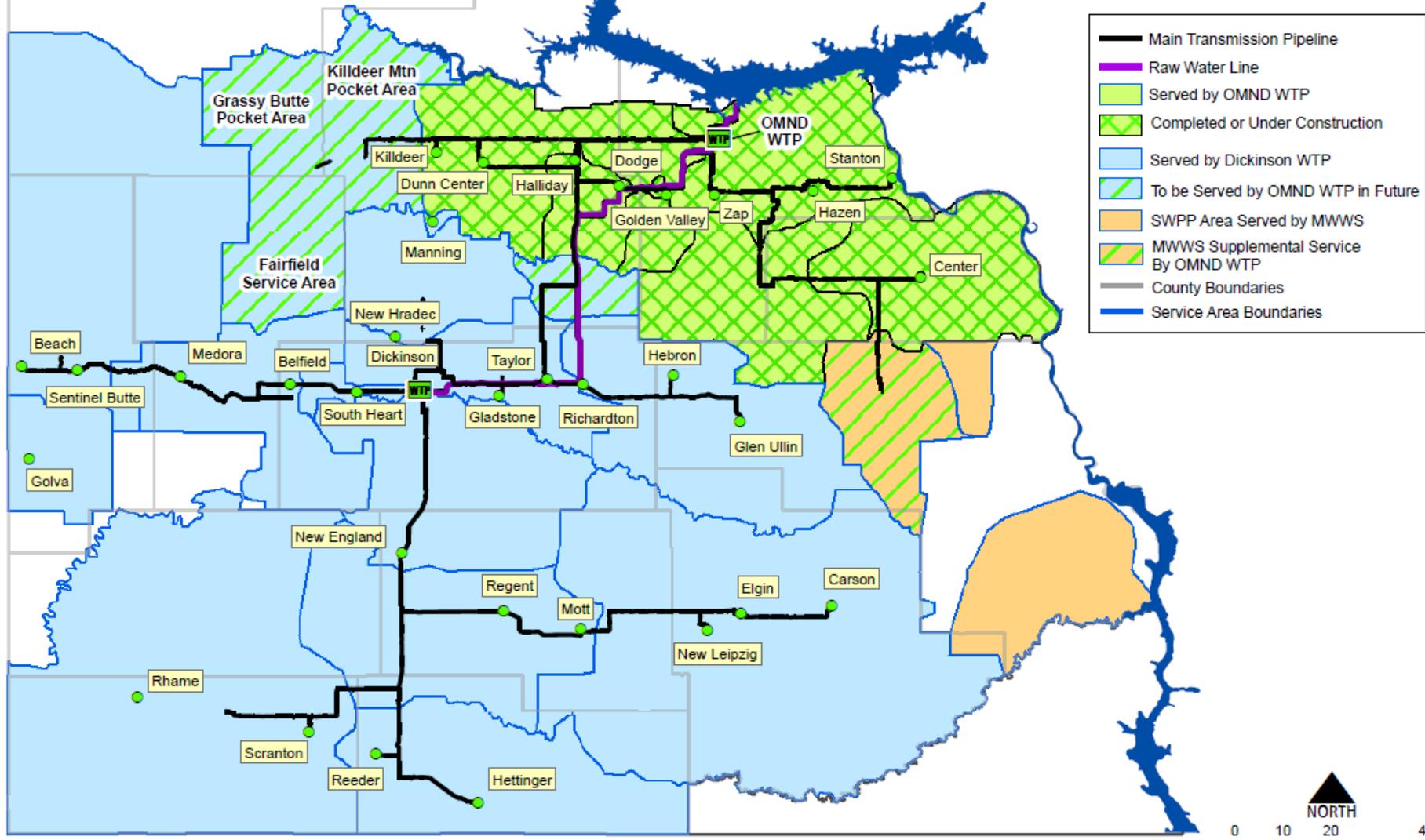
Service Area & Customers Served



Current Status

- Population served is ~56,000
- Over 6,300 rural customers
- 33 communities
- 23 contract customers
- 2 additional rural water systems
- 21 raw water customers
- 3 crew camps
- 2 raw water depots
- Water sales for 2016 projected at 2.3 billion gallons
- Water revenue for 2016 projected at \$13.7 million
- 2 water treatment plants
- 1 water treatment plant under construction
- 52 employees

Southwest Pipeline Project



Waiting Lists

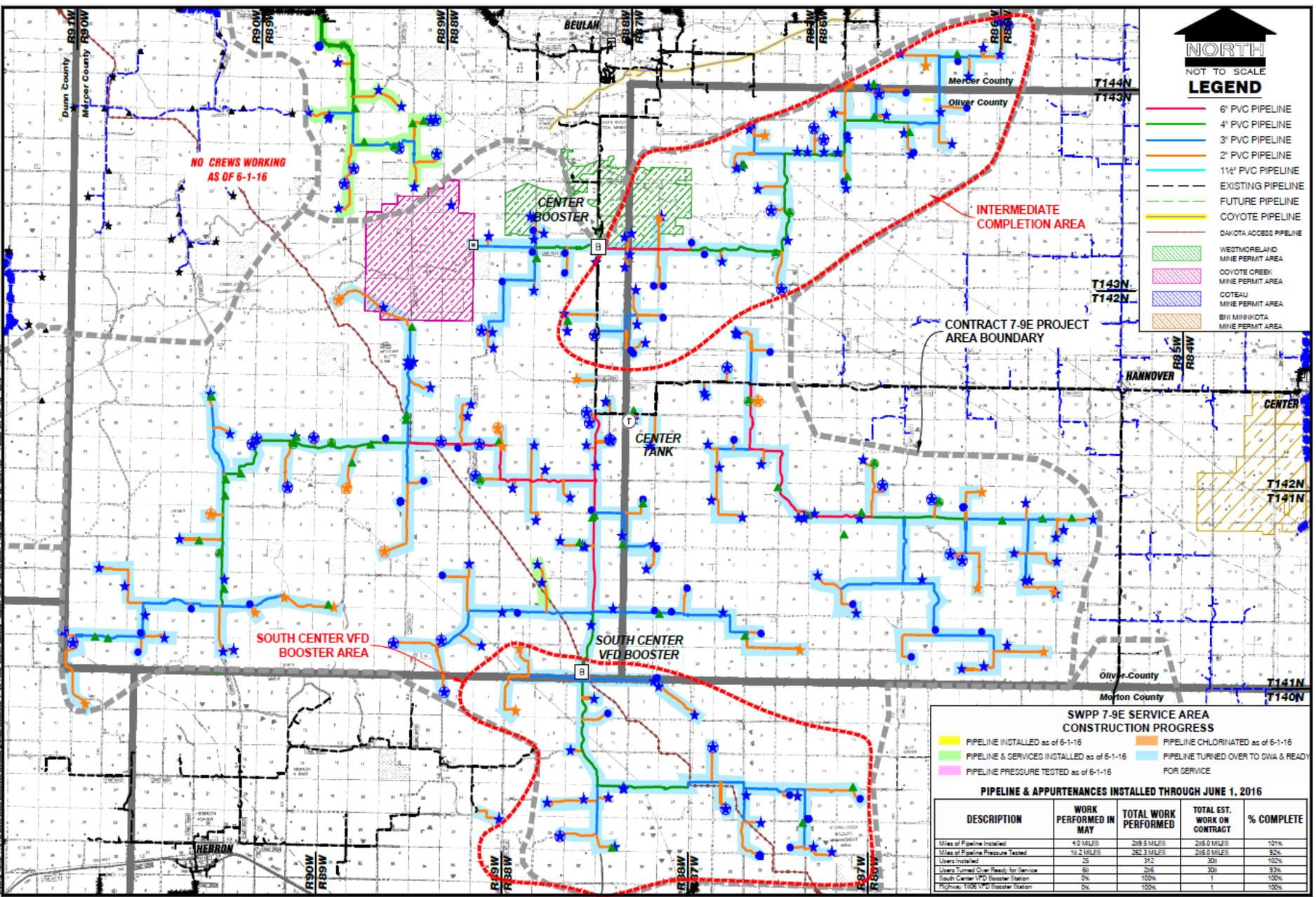
Southwest Water Authority
has **434** requests for water
in our service area

Construction Contracts

- 17 Open Contracts
- 12 Contracts Under Construction



- 6" PVC PIPELINE
- 4" PVC PIPELINE
- 3" PVC PIPELINE
- 2" PVC PIPELINE
- 1 1/2" PVC PIPELINE
- EXISTING PIPELINE
- FUTURE PIPELINE
- COYOTE PIPELINE
- DAKOTA ACCESS PIPELINE
- WESTMORELAND MINE PERMIT AREA
- COYOTE CREEK MINE PERMIT AREA
- COTEAU MINE PERMIT AREA
- BNI MINNOKOTA MINE PERMIT AREA



NO CREWS WORKING AS OF 6-1-16

SOUTH CENTER VFD BOOSTER AREA

INTERMEDIATE COMPLETION AREA

CONTRACT 7-9E PROJECT AREA BOUNDARY

SWPP 7-9E SERVICE AREA CONSTRUCTION PROGRESS

- PIPELINE INSTALLED as of 6-1-16
- PIPELINE CHLORINATED as of 6-1-16
- PIPELINE & SERVICES INSTALLED as of 6-1-16
- PIPELINE TURNED OVER TO SWIA & R&D FOR SERVICE
- PIPELINE PRESSURE TESTED as of 6-1-16

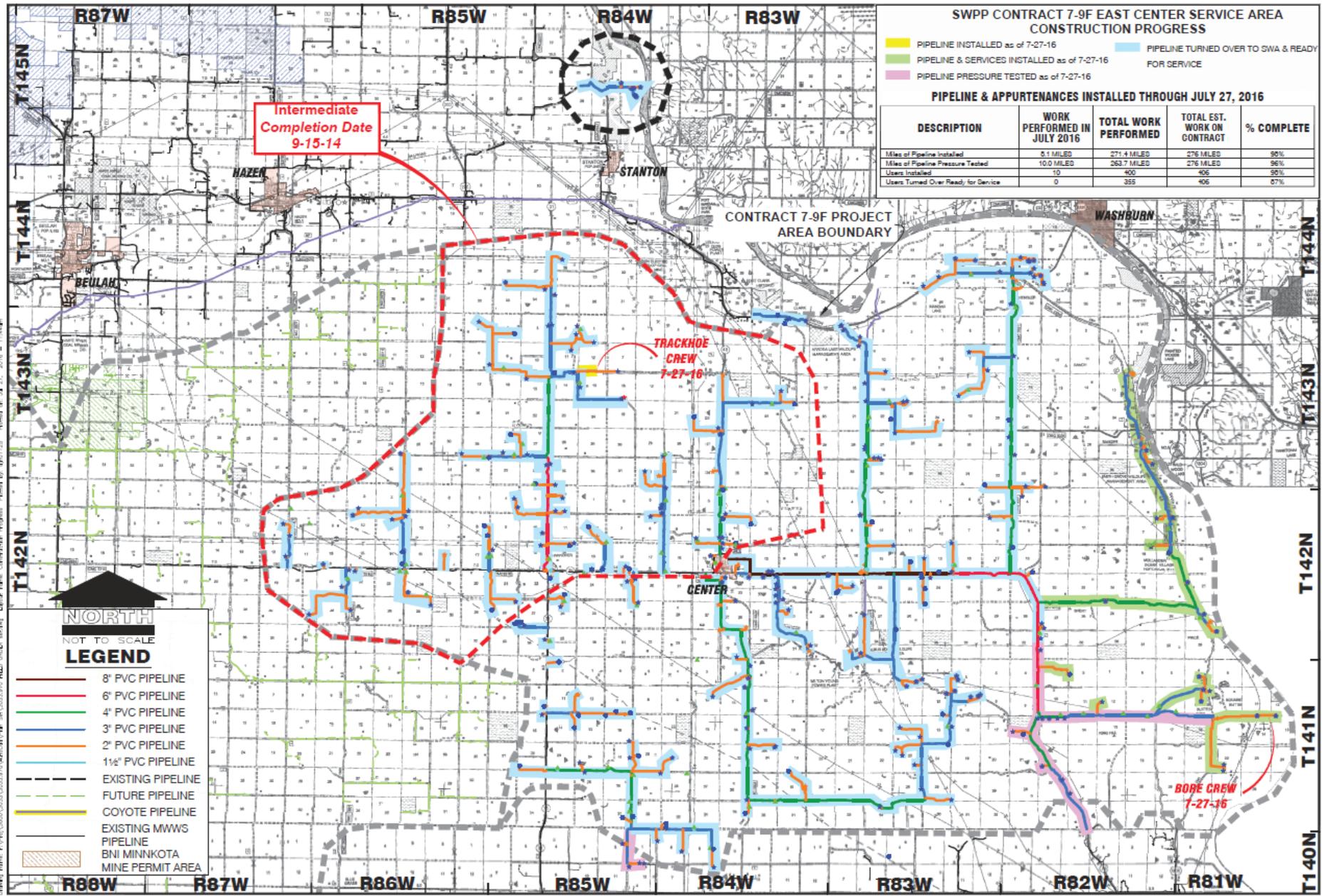
PIPELINE & APPURTENANCES INSTALLED THROUGH JUNE 1, 2016

DESCRIPTION	WORK PERFORMED IN MAY	TOTAL WORK PERFORMED	TOTAL EST. WORK ON CONTRACT	% COMPLETE
Miles of Pipeline Installed	4.0 MILES	208.5 MILES	208.0 MILES	101%
Miles of Pipeline Pressure Tested	18.2 MILES	282.3 MILES	208.0 MILES	92%
Users Installed	25	312	300	102%
Users Turned Over Ready for Service	80	205	300	93%
South Center VFD Booster Station	0%	100%	1	100%
Highway 1100 VFD Booster Station	0%	100%	1	100%

SWPP 7-9E Service Area Construction Progress - 7-15-16 (REV. 06/15/16) - 10/15/16
 Prepared by: E:\Projects\2016\SWPP 7-9E Service Area Construction Progress - 7-15-16 (REV. 06/15/16) - 10/15/16.dwg
 Date: 10/15/16 10:15:00 AM
 User: jkennedy







**SWPP CONTRACT 7-9F EAST CENTER SERVICE AREA
CONSTRUCTION PROGRESS**

- PIPELINE INSTALLED as of 7-27-16
- PIPELINE & SERVICES INSTALLED as of 7-27-16
- PIPELINE TURNED OVER TO SWA & READY FOR SERVICE
- PIPELINE PRESSURE TESTED as of 7-27-16

PIPELINE & APPURTENANCES INSTALLED THROUGH JULY 27, 2016

DESCRIPTION	WORK PERFORMED IN JULY 2016	TOTAL WORK PERFORMED	TOTAL EST. WORK ON CONTRACT	% COMPLETE
Miles of Pipeline Installed	5.1 MILES	271.4 MILES	276 MILES	98%
Miles of Pipeline Pressure Tested	10.0 MILES	263.7 MILES	276 MILES	96%
Users Installed	10	400	406	98%
Users Turned Over Ready for Service	0	355	406	87%



NOT TO SCALE

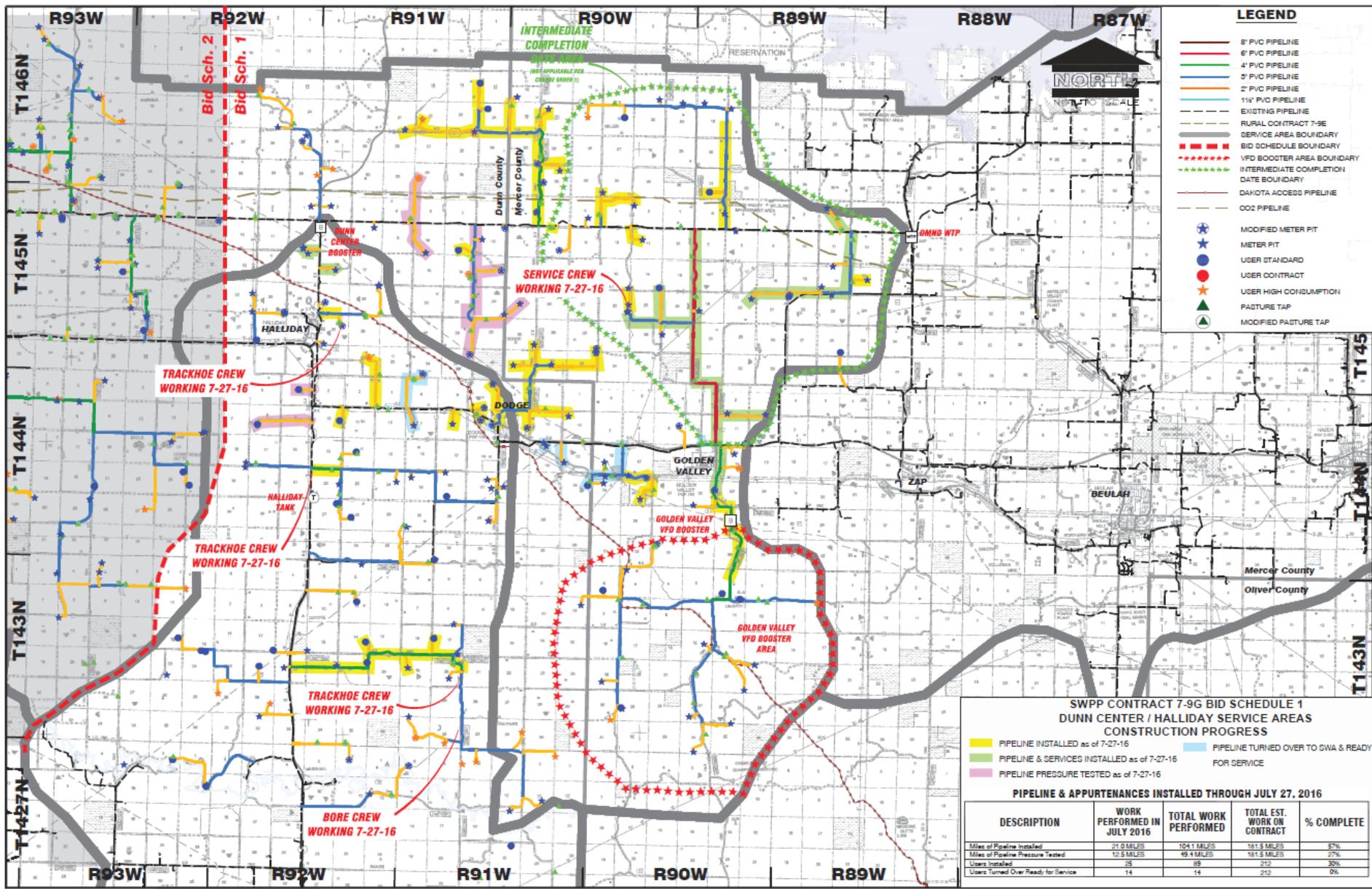
LEGEND

- 8" PVC PIPELINE
- 6" PVC PIPELINE
- 4" PVC PIPELINE
- 3" PVC PIPELINE
- 2" PVC PIPELINE
- 1 1/2" PVC PIPELINE
- EXISTING PIPELINE
- FUTURE PIPELINE
- COYOTE PIPELINE
- EXISTING MWW'S PIPELINE
- BNI MINNKOTA MINE PERMIT AREA

SOURCE: DEPT. OF PUBLIC WORKS, 2015. DATA: SWPP CONTRACT 7-9F, 2016. DATE: 7/27/2016. SCALE: 1" = 1000'. DRAWN BY: J. HARRIS. CHECKED BY: J. HARRIS. APPROVED BY: J. HARRIS.







LEGEND

- 8" PVC PIPELINE
- 6" PVC PIPELINE
- 4" PVC PIPELINE
- 3" PVC PIPELINE
- 2" PVC PIPELINE
- 1 1/2" PVC PIPELINE
- EXISTING PIPELINE
- RURAL CONTRACT 7-9E
- SERVICE AREA BOUNDARY
- BID SCHEDULE BOUNDARY
- VFD BOOSTER AREA BOUNDARY
- INTERMEDIATE COMPLETION
- DAKOTA ACCESS PIPELINE
- O02 PIPELINE
- ★ MODIFIED METER PIT
- ★ METER PIT
- USER STANDARD
- USER CONTRACT
- ★ USER HIGH CONSUMPTION
- ★ PASTURE TAP
- ▲ MODIFIED PASTURE TAP



**SWPP CONTRACT 7-9G BID SCHEDULE 1
DUNN CENTER / HALLIDAY SERVICE AREAS
CONSTRUCTION PROGRESS**

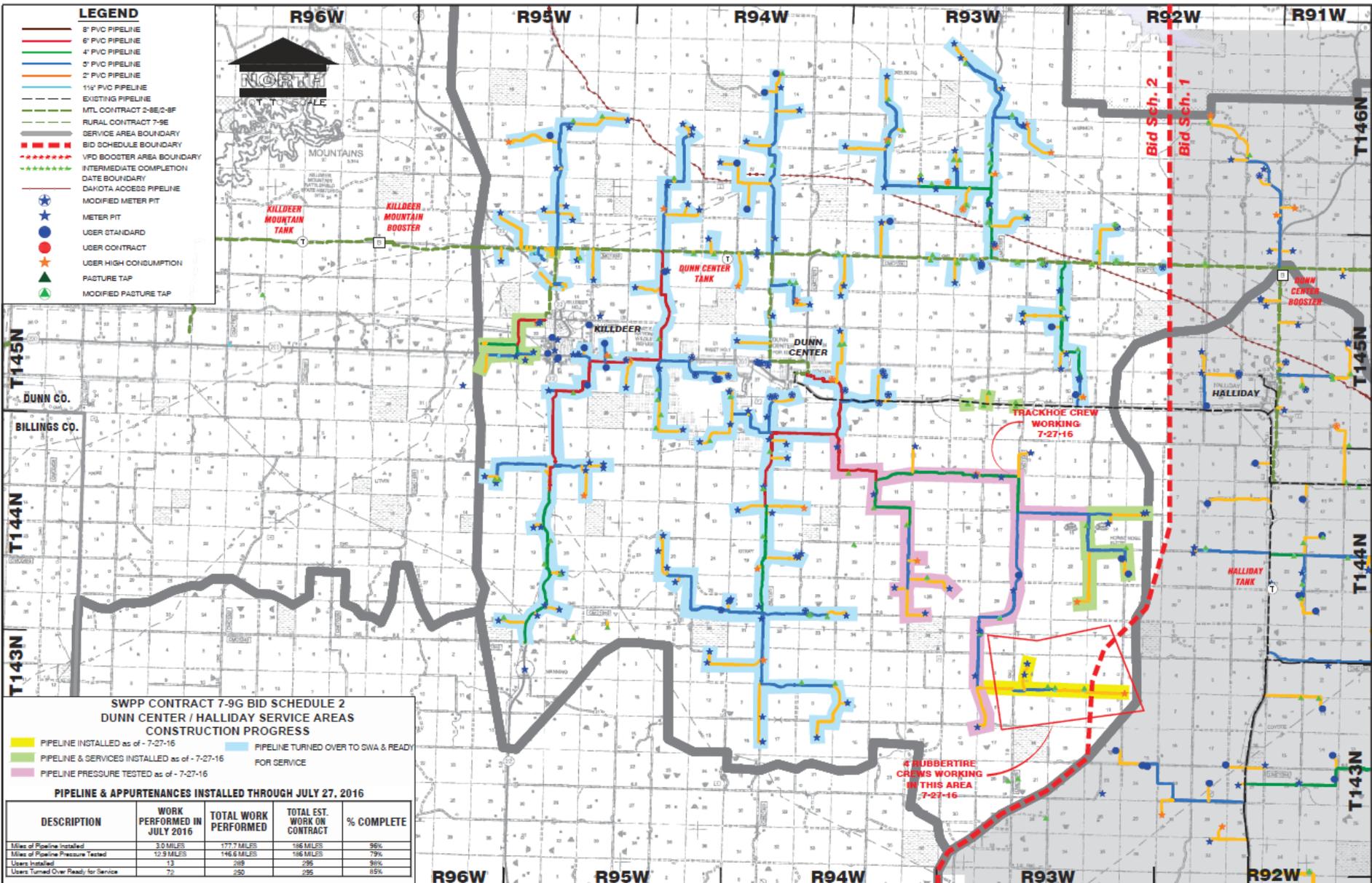
- PIPELINE INSTALLED as of 7-27-16
- PIPELINE & SERVICES INSTALLED as of 7-27-16
- PIPELINE PRESSURE TESTED as of 7-27-16
- PIPELINE TURNED OVER TO SWA & READY FOR SERVICE

PIPELINE & APPURTENANCES INSTALLED THROUGH JULY 27, 2016

DESCRIPTION	WORK PERFORMED IN JULY 2016	TOTAL WORK PERFORMED	TOTAL EST. WORK ON CONTRACT	% COMPLETE
Miles of Pipeline Installed	21.0 MILES	104.1 MILES	181.5 MILES	5%
Miles of Pipeline Pressure Tested	12.5 MILES	49.4 MILES	181.5 MILES	27%
Users Installed	25	89	212	30%
Users Turned Over Ready for Service	14	14	212	6%







LEGEND

- 8" PVC PIPELINE
- 6" PVC PIPELINE
- 4" PVC PIPELINE
- 3" PVC PIPELINE
- 2" PVC PIPELINE
- 1 1/2" PVC PIPELINE
- EXISTING PIPELINE
- MTL CONTRACT 2-8E2-8F
- RURAL CONTRACT 7-9E
- SERVICE AREA BOUNDARY
- BID SCHEDULE BOUNDARY
- VFD BOOSTER AREA BOUNDARY
- INTERMEDIATE COMPLETION DATE BOUNDARY
- DAKOTA ACCESS PIPELINE
- MODIFIED METER PIT
- METER PIT
- USER STANDARD
- USER CONTRACT
- USER HIGH CONSUMPTION
- PASTURE TAP
- MODIFIED PASTURE TAP

T145N
DUNN CO.
BILLINGS CO.
T144N
T143N

R96W R95W R94W R93W R92W R91W

T146N
T145N
T144N
T143N

**SWPP CONTRACT 7-9G BID SCHEDULE 2
DUNN CENTER / HALLIDAY SERVICE AREAS
CONSTRUCTION PROGRESS**

- PIPELINE INSTALLED as of - 7-27-16
- PIPELINE & SERVICES INSTALLED as of - 7-27-16
- PIPELINE PRESSURE TESTED as of - 7-27-16
- PIPELINE TURNED OVER TO OWA & READY FOR SERVICE

PIPELINE & APPURTENANCES INSTALLED THROUGH JULY 27, 2016

DESCRIPTION	WORK PERFORMED IN JULY 2016	TOTAL WORK PERFORMED	TOTAL EST. WORK ON CONTRACT	% COMPLETE
Miles of Pipeline Installed	3.0 MILES	177.7 MILES	186 MILES	96%
Miles of Pipeline Pressure Tested	12.9 MILES	146.6 MILES	186 MILES	79%
Users Installed	13	289	295	98%
Users Turned Over Ready for Service	72	290	295	85%

R96W R95W R94W R93W R92W

For Immediate Release:
August 5, 2016



For Immediate Release:
July 22, 2016

BISMARCK, N.D. – The North Dakota Department of Health (NDDoH) and Agriculture (NDDA), Animal Health Division, Heart Butte Dam, local residents and animals should avoid contact with water from the dam. NDDoH, Custer Health Department, and local health officials advise swimmers, fishermen, and boaters to avoid contact with water from the dam.

The production of blue-green algae in bodies of water that are used by people, pets and livestock can cause illness in people and animals. When present in water, cyanotoxins are dangerous for both people and animals. The Patterson dam is a recreational area that is used for boating and swimming. Swimming or consuming water from the dam should be curtailed until further notice. Boating should be done with caution so water is not accidentally ingested.

Exposure from ingesting affected water can cause illness in people and animals, and can result in death. There are no known antidotes for the toxins. Children are at higher risk than adults for illness because their smaller size can allow them to get a relatively larger dose of toxin.

Lake Tschida is a popular recreational area that is used for boating and swimming. Swimming or consuming water from the dam should be curtailed until further notice. Boating should be done with caution so water is not accidentally ingested.

After receiving reports of a blue-green algae bloom at a concentration of 15 times the recommended safe level (15 billion). Microcystin is a cyanotoxin caused by blue-green algae. When present in water, cyanotoxins are dangerous for both people and animals. The Patterson dam is a recreational area that is used for boating and swimming. Swimming or consuming water from the dam should be curtailed until further notice. Boating should be done with caution so water is not accidentally ingested.

Blue-green Health Off

BISMARCK, ND - The North Dakota Department of Health (NDDoH) and Agriculture (NDDA), Animal Health Division, near Bowman, due to high levels of blue-green algae. When present in water, cyanotoxins are dangerous for both people and animals. The Patterson dam is a recreational area that is used for boating and swimming. Swimming or consuming water from the dam should be curtailed until further notice. Boating should be done with caution so water is not accidentally ingested.

The NDDoH was notified of a blue-green algae bloom and collected water samples. Microcystin levels 15 times the recommended safe level (15 billion).

The production of blue-green algae in bodies of water that are used by people, pets and livestock can cause illness in people and animals. When present in water, cyanotoxins are dangerous for both people and animals. The Patterson dam is a recreational area that is used for boating and swimming. Swimming or consuming water from the dam should be curtailed until further notice. Boating should be done with caution so water is not accidentally ingested.

Blue-green algae discolor the water they live in, and can cause foam, scum or mats to appear on the surface. People and animals that swallow water containing cyanotoxins can become sick with severe diarrhea and vomiting; numb lips, tingling fingers and toes; dizziness; or rashes, hives or skin blisters. Children are at higher risk than adults for illness because their smaller size can allow them to get a relatively larger dose of toxin.

NEWS RELEASE



For Immediate Release:
July 11, 2016

For More Information, Contact:

Mike Ell
Environmental Health Section
Phone: 701.220.5025
E-mail: mell@nd.gov
OR
Dr. Susan Keller
State Veterinarian
North Dakota Department of Agriculture
Phone: 701.328.2655
Email: skeller@nd.gov

NEWS RELEASE

Blue-green Algae Identified in Patterson Lake; Health Officials Warn Public to Avoid Contact with Water

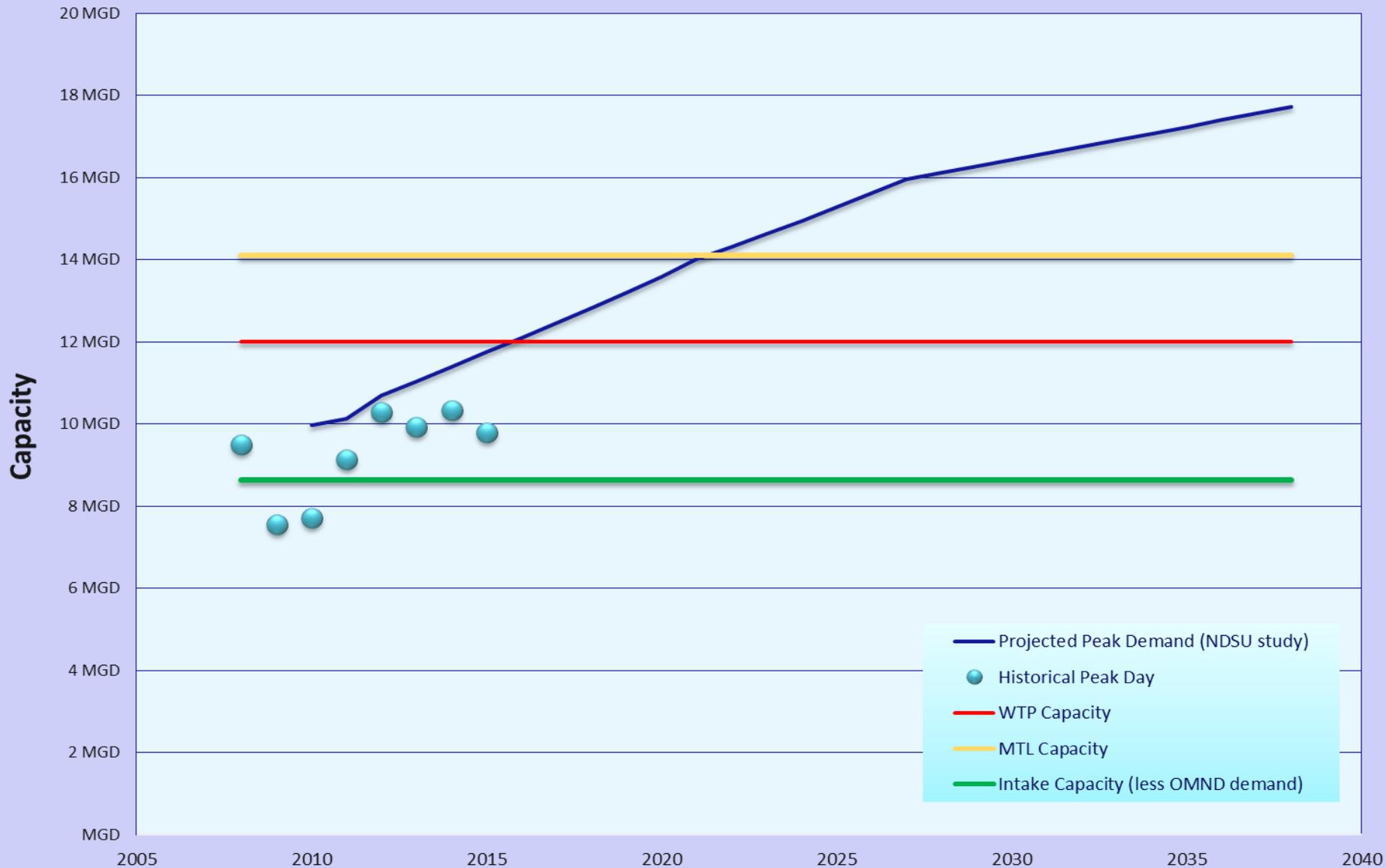
BISMARCK, N.D. – The North Dakota Department of Health (NDDoH) and Agriculture (NDDA), Animal Health Division, have issued a blue-green algae warning for Patterson Lake near Dickinson due to high levels of microcystin in the water. Microcystin is a cyanotoxin caused by blue-green algae. When present in water, cyanotoxins are dangerous for both people and animals. The Patterson dam is a recreational area that is used for boating and swimming. Swimming or consuming water from the dam should be curtailed until further notice. Boating should be done with caution so water is not accidentally ingested.

Local officials noticed the algae bloom last week and issued an advisory regarding the water quality. This week, water tests by the NDDoH revealed microcystin levels at 2-9 times recommended safe levels.

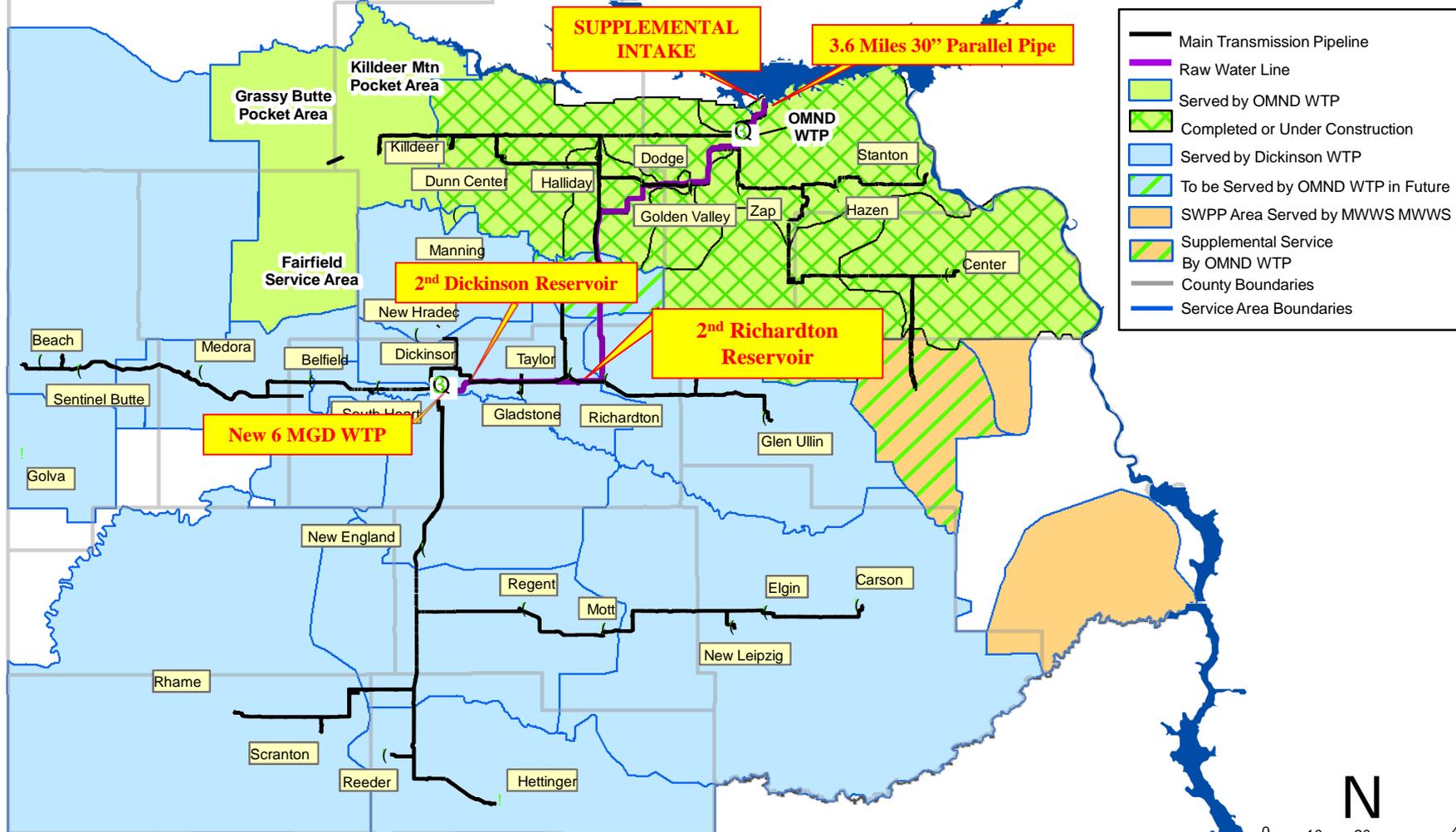
The production of blue-green algae, also known as cyanobacteria, often happens in hot weather in bodies of water that are used by people, pets and livestock. Exposure from ingesting affected water can cause illness in people and animals, and can result in death. There are no known antidotes for the toxins.

Blue-green algae discolor the water they live in, and can cause foam, scum or mats to appear on the surface. People and animals that swallow water containing cyanotoxins can become sick with severe diarrhea and vomiting; numb lips, tingling fingers and toes; dizziness; or rashes, hives or skin blisters. Children are at higher risk than adults for illness because their smaller size can allow them to get a relatively larger dose of toxin.

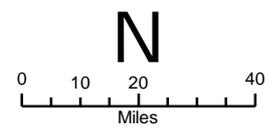
SWPP Projected Peak Demand at Dickinson Without Capital Improvements



Southwest Pipeline Project



- Main Transmission Pipeline
- Raw Water Line
- Served by OMND WTP
- Completed or Under Construction
- Served by Dickinson WTP
- To be Served by OMND WTP in Future
- SWPP Area Served by MWWS MWWS
- Supplemental Service By OMND WTP
- County Boundaries
- Service Area Boundaries













Operations and Maintenance

- The Southwest Pipeline Project (SWPP) is owned by North Dakota and administered by the State Water Commission
- Southwest Water Authority (SWA) was established in 1991
- Operations and management of the SWPP were transferred to SWA on January 1, 1996
- SWA manages, operates, and maintains all SWPP features



REM Fund

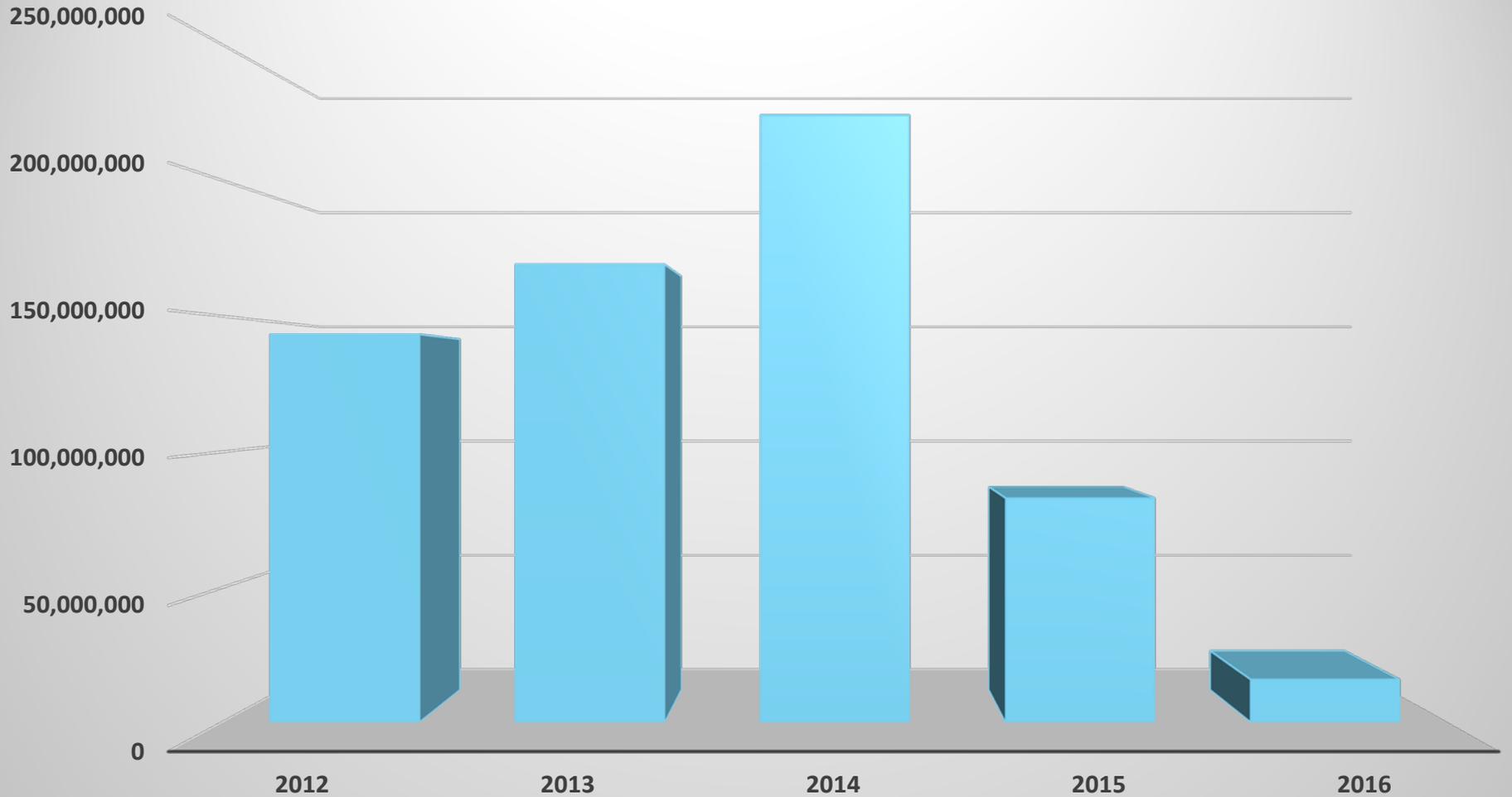
- The Replacement & Extraordinary Maintenance (REM) Fund covers costs of an extraordinary nature or to replace parts of the SWPP system that reach their life expectancy
- Originally, the rate was set at 30 cents per thousand gallons of water sold
- 2016 rate is 65 cents for every 1,000 gallons of water sold

Contact Contributions	\$	12,780,366.00
Rural Contributions	\$	1,861,357.00
Interest	\$	4,608,354.00
Dividends	\$	203,992.00
Fiduciary Fees	\$	(469,225.00)
Disbursements	\$	(3,026,493.00)
Ending Balance	\$	15,958,354.00

(As of June 30, 2016)



Oil Industry Usage History



	2012	2013	2014	2015	2016
ACTUAL	143,245,180	169,015,990	224,000,500	82,907,284	15,986,780

Oil Industry Usage

SWA Water Depot		2016	Dodge Water Depot	
January	8,684,470		January	17,000
February	6,364,370		February	17,000
March	197,220		March	10,000
April	268,540		April	7,000
May	249,270		May	42,000
June	127,430		June	112,000
July	136,090		July	49,300
8/12/2016	36,380			
Total	16,063,770		Total	254,300

Southwest Pipeline Project

North Dakota Legislature

Southwest Pipeline Project

**Management, Operations
& Maintenance**

**Southwest Water Authority
15 Elected Directors NDCC
61-24.5**

Construction & Project Owner

North Dakota State Water Commission
Governor/Chairman
Agriculture Commissioner
7 Appointed Members

Chief Engineer and Secretary
to the Water Commission
Garland Erbele, State Engineer



Southwest Water Authority

- Governed by a 15-member board representing 12 counties in the service area and the cities of Dickinson and Mandan
- Board members serve 4-year terms with half the Board up for election every two years in the June primary



Board of Directors



Jonathon Eaton
Adams County



James Odermann*
Billings County



Rick Seifert
Bowman County



Glenn Eckelberg
Dunn County



Gene Allen
Golden Valley County



Brian Roth
Grant County



Ray Bieber
Hettinger County



Marie Johnson
Mercer County



George Saxowsky
Morton County



Duane Bueligen
Oliver County



Dave Juntunen
Slope County



Steve Schneider*
Stark County



Larry Bares*
City of Dickinson



Larry Stang
City of Dickinson



Bob Leingang
City of Mandan

Funding

State Funding (in millions of dollars)

Resources Trust Fund	\$171.10
Water Development Trust Fund	\$8.47
Subtotal	\$179.57

Grants

Garrison Diversion Conservatory District	
Municipal Rural & Interest (MR&I) Fund (AARA Funding \$11.90)	\$104.92
United States Department of Agriculture – Rural Development (RUS)	\$15.32
Natural Resources Conservation Service PL566	\$0.93
Subtotal	\$121.17

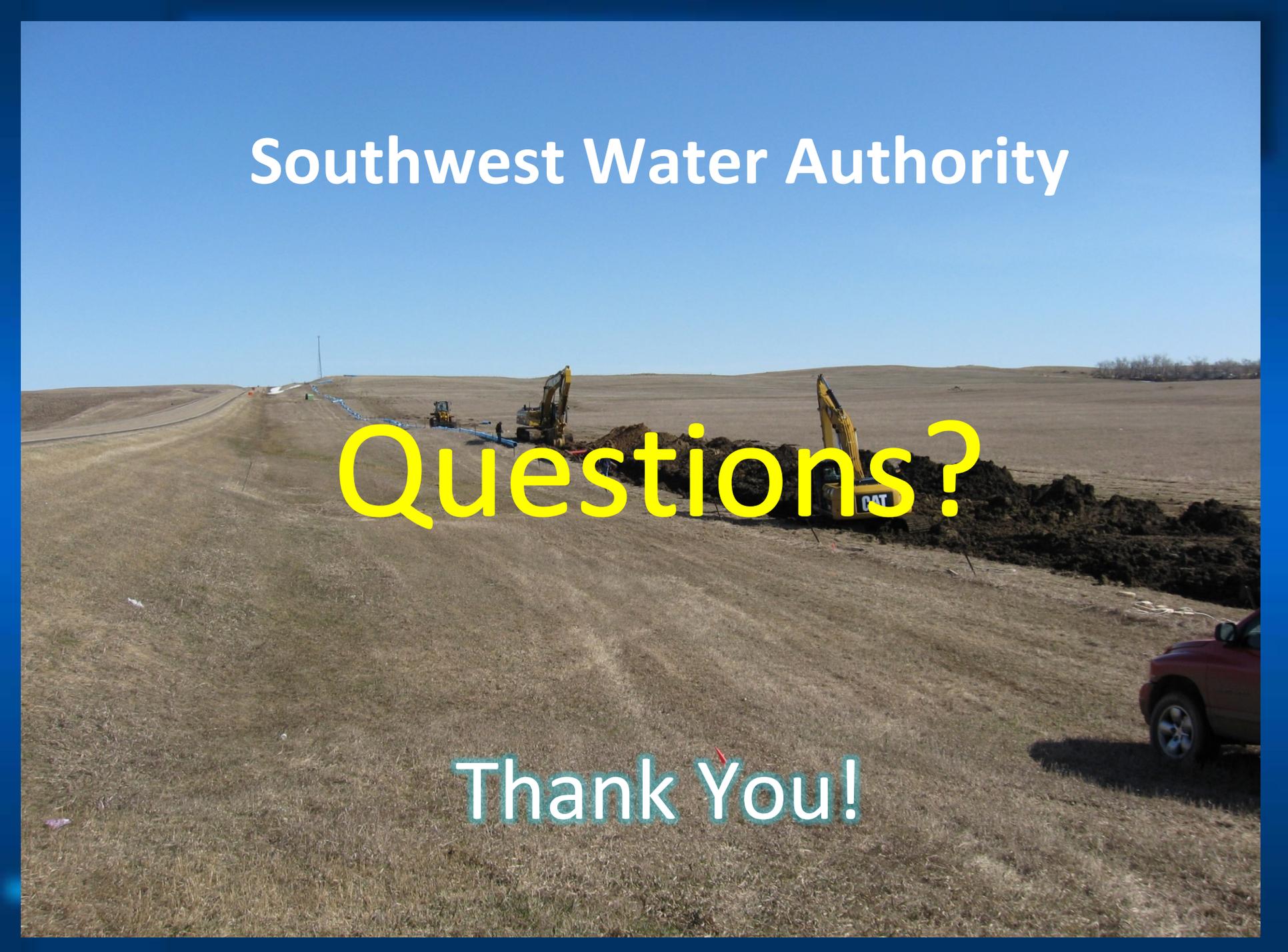
State Bonds Repaid by Users

Public Revenue Bonds	\$7.04
United States Department of Agriculture – Rural Development	\$15.70
ND Drinking Water Revolving Loan Fund	\$1.50
Subtotal	\$24.24

Total Funding **\$324.98**

(Paid through June 30, 2016)



A wide-angle photograph of a construction site in a dry, hilly landscape. The ground is brown and dusty, with sparse, dry grass. In the middle ground, two yellow excavators are working on a large pile of dark earth. A red SUV is parked on the right side of the frame. The sky is clear and blue. The text "Southwest Water Authority" is overlaid in white at the top, "Questions?" is overlaid in yellow in the center, and "Thank You!" is overlaid in white with a blue outline at the bottom.

Southwest Water Authority

Questions?

Thank You!