IDAHO WATER RESOURCE BOARD

MEETING NO. 6-16
September 15-16, 2016
Pocatello

LAST CHANCE
DIVERSION DAM
REHABILITATION
PROJECT

Master

AGENDA

IDAHO WATER RESOURCE BOARD

Work Session for Meeting No. 6-16
September 15, 2016
8:00 a.m.
Clarion Inn
1399 Bench Rd
Pocatello, ID

1. Roll Call
2. Annual Update of ESPA Monitoring and Aquifer Storage
3. ESPA Recharge
4. Loan Requests
   a. North Side Canal Company
   b. Three-D Water
5. Water Storage Studies Update
6. Statewide Cooperative Cloud Seeding Program Update
7. Teton Water Users Association
8. Lunch
9. Depart for Tour of Last Chance Diversion Dam Rehabilitation Project

At 1:00 p.m. the Board will depart for a Field Trip to Grace, Idaho. Transportation will be provided for Board members, IDWR staff, and invited guests.

Americans with Disabilities

The meeting will be held in facilities that meet the accessibility requirements of the Americans with Disabilities Act. If you require special accommodations to attend, participate in, or understand the meeting, please make advance arrangements by contacting Department staff by email jennifer.strange@idwr.idaho.gov or by phone at (208) 287-4800.

Eastern Snake River Plain Monitoring Program Update

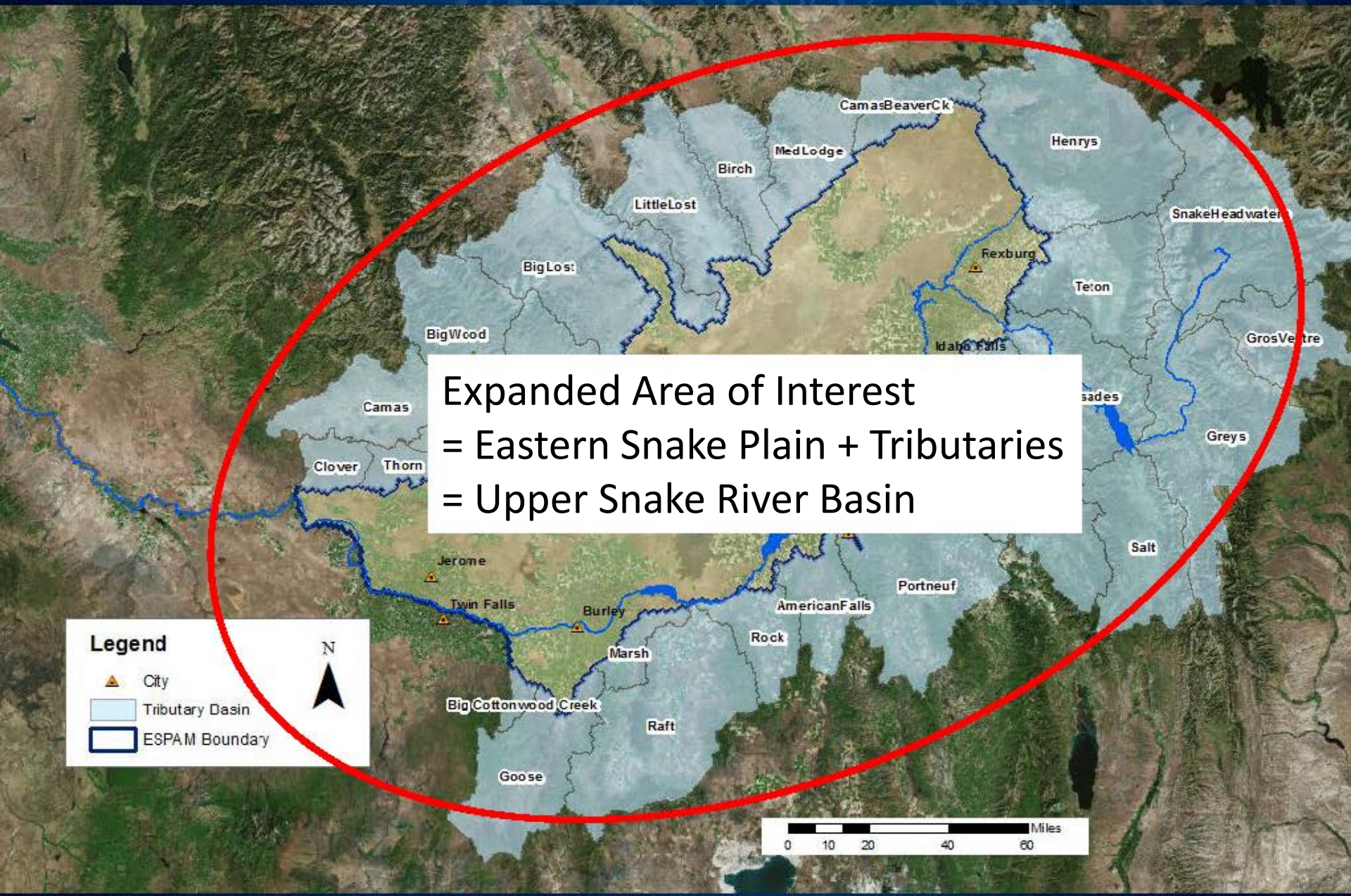
Presented by Sean Vincent

September 15, 2016

Talking Points

- FY2016 accomplishments
  - New contract personnel
  - Implementation of water level monitoring initiatives
  - CGWA & GWMA webpage updates
  - Automation of data collection systems
  - Well rehabilitation
  - Managed Recharge Program support

- FY2017 initiatives



Expanded Area of Interest
= Eastern Snake Plain + Tributaries
= Upper Snake River Basin

New Contract Personnel

Andrea Duran

Will Parham

FY2016 Initiatives – Synoptic Water Level Measurements

- Water levels in all Upper Snake River Basin wells measured w/in a compressed timeframe
  - Pre-irrigation season (03/01 - 04/15)
  - Post-irrigation season (10/15 - 11/30)
- Provide snapshots of aquifer health
- Facilitate trend analysis and computation of aquifer storage change

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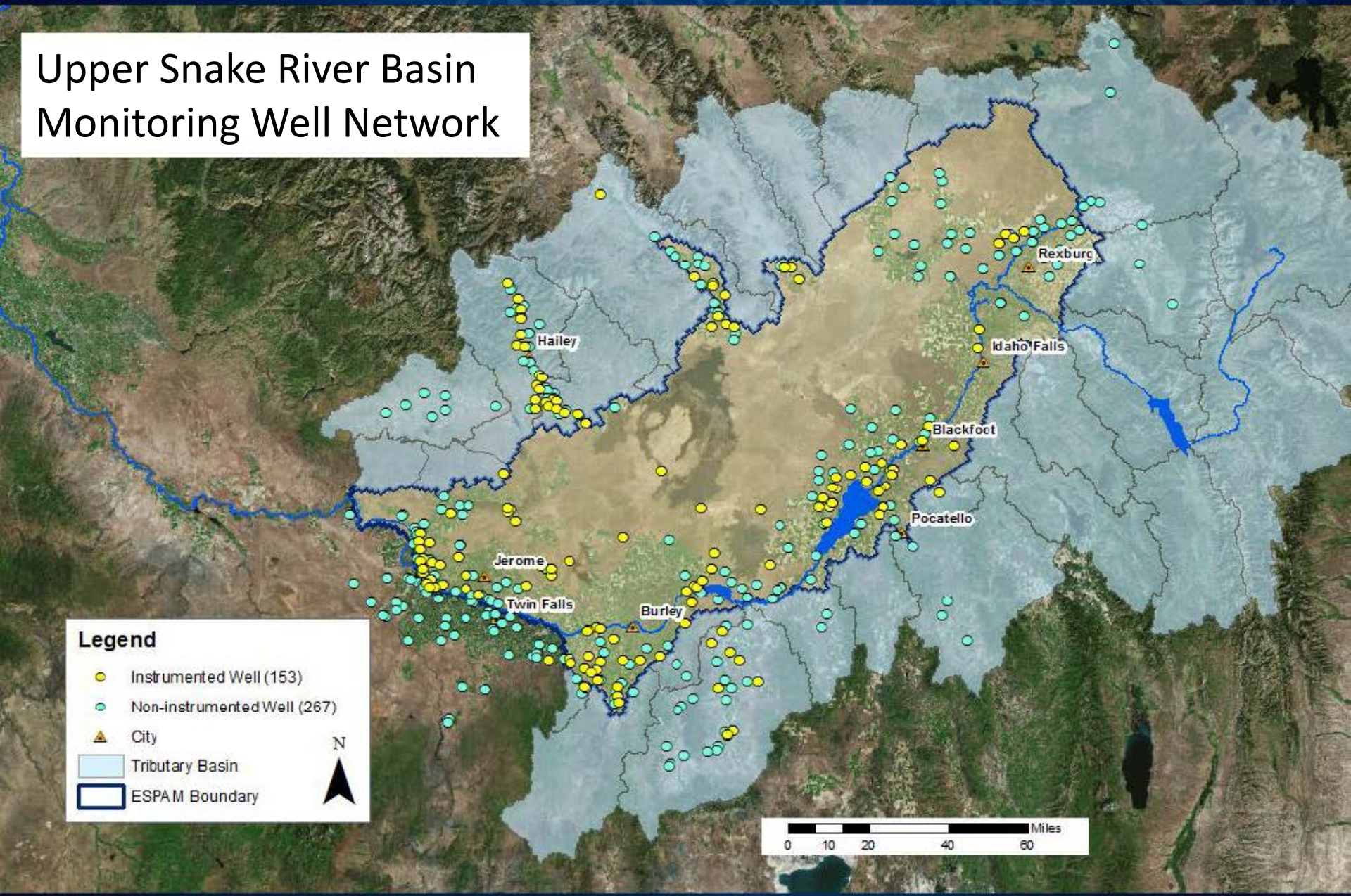
Upper Snake River Basin Monitoring Well Network



FY2016 Initiatives – Sentinel Well Monitoring Program

- IDWR began monitoring sentinel wells in support of the IGWA/SWC settlement agreement
- 18 wells currently monitored by IDWR, 2 by USGS
- Direct-read pressure transducers installed by IDWR in 17 wells
- Monitoring port installed in Milner Dam sentinel well

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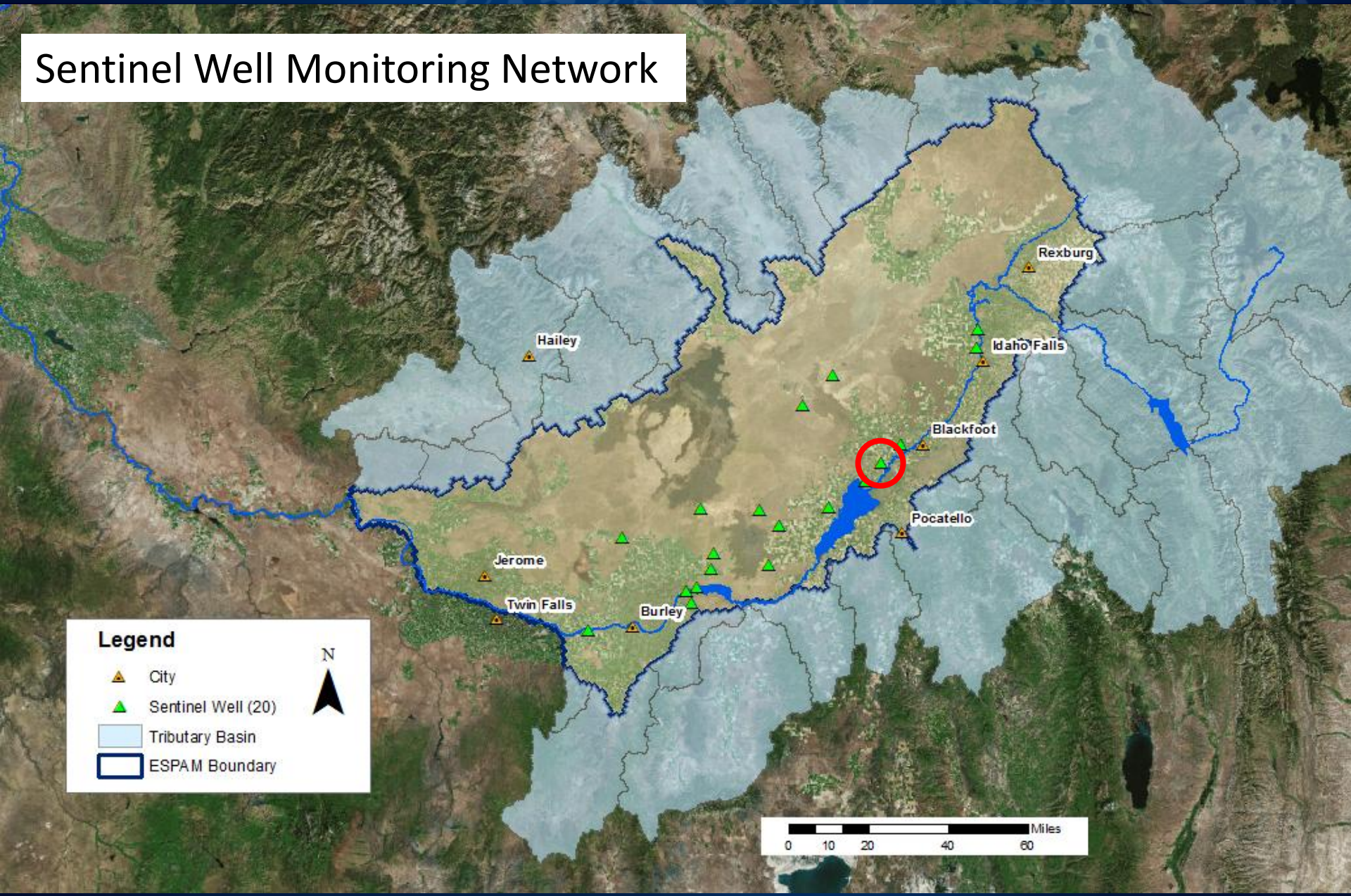
Sentinel Well Monitoring Network



Sentinel Well – Vented, Direct-read Pressure Transducer

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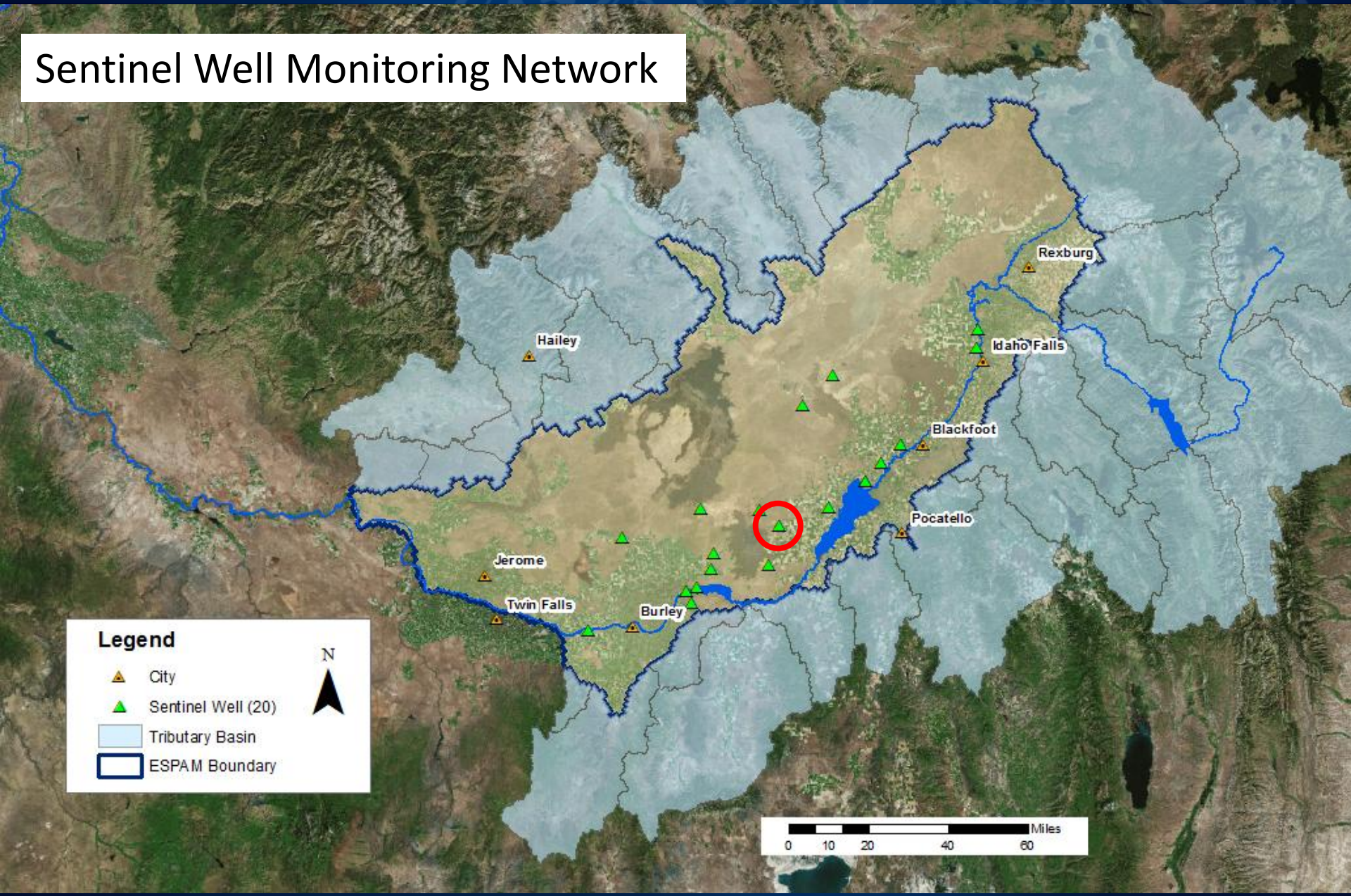
Sentinel Well Monitoring Network



Sentinel Well – Manual Monitoring

Automation

- 7 new groundwater telemetry stations
  - 2 Managed Recharge Program monitoring wells
  - 5 K-Springs area monitoring wells (IPCO/IDWR)

- Springflow gage on Ross Creek @ Ft. Hall

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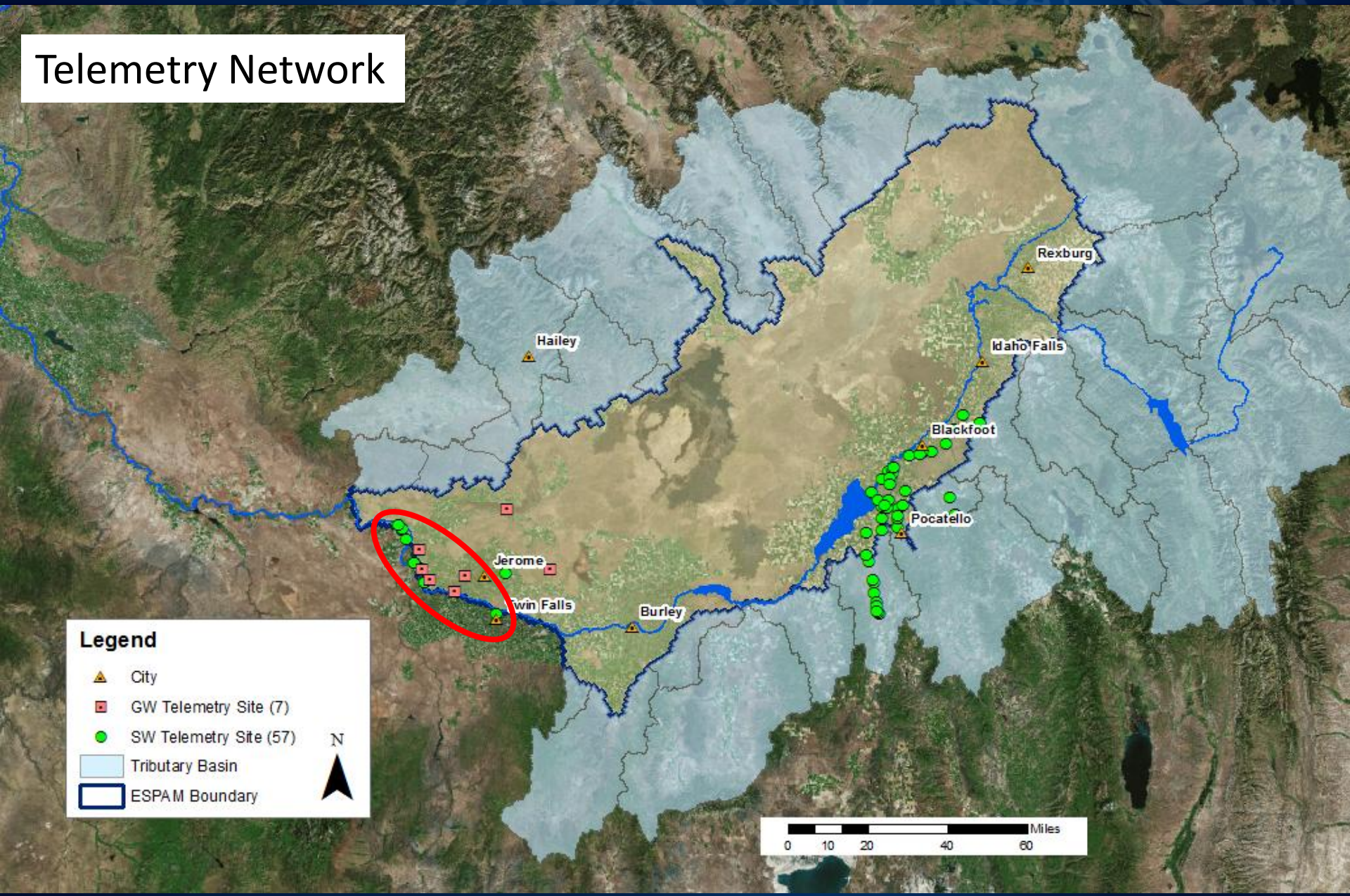
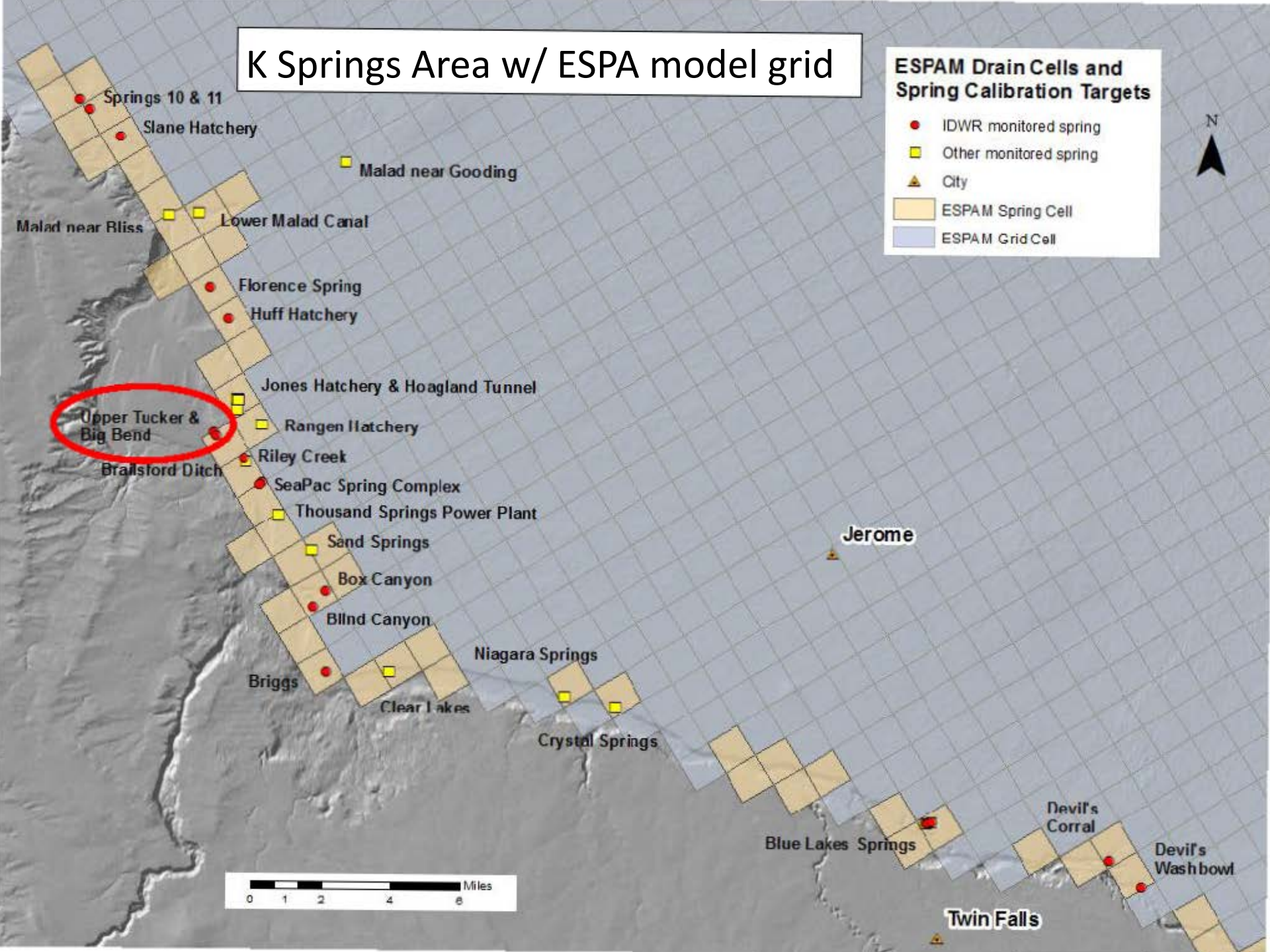
Telemetry Network




K Springs Area w/ ESPA model grid
ESPAM Drain Cells and Spring Calibration Targets
IDWR monitored spring
Other monitored spring
City
ESPAM Spring Cell
ESPAM Grid Cell
N
Springs 10 & 11
Slane Hatchery
Malad near Gooding
Malad near Bliss
Lower Malad Canal
Florence Spring
Huff Hatchery
Jones Hatchery & Hoagland Tunnel
Upper Tucker & Big Bend
Rangen Hatchery
Riley Creek
Brailsford Ditch
SeaPac Spring Complex
Thousand Springs Power Plant
Sand Springs
Box Canyon
Blind Canyon
Niagara Springs
Briggs
Clear Lakes
Crystal Springs
Jerome
Blue Lakes Springs
Devil's Corral
Devil's Washbowl
Twin Falls
Miles
0 1 2 4 6

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Automation - Telemetry Station on Upper Tucker Spring


Automation - Relay
Tower on Ferry Butte

Automation

- 8 new telemetry stations
  - 2 Managed Recharge Program monitoring wells
  - 5 K-Springs wells (IPCO/IDWR)
  - 1 springflow gage on Ross Creek @ Ft. Hall

- IDWR installed 41 pressure transducers in ESPA and tributary basin monitoring wells

Automation – Non-vented Pressure Transducer

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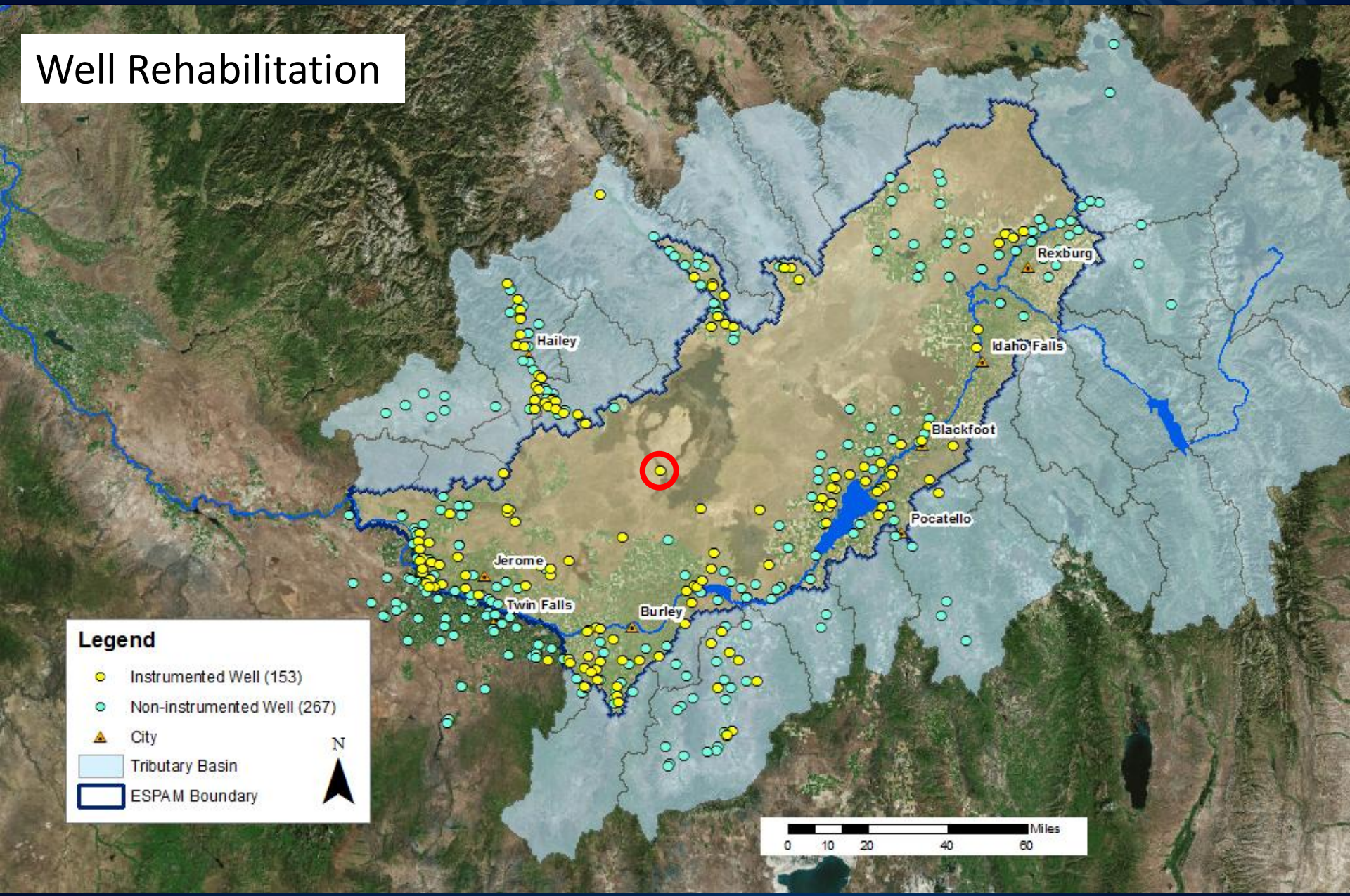
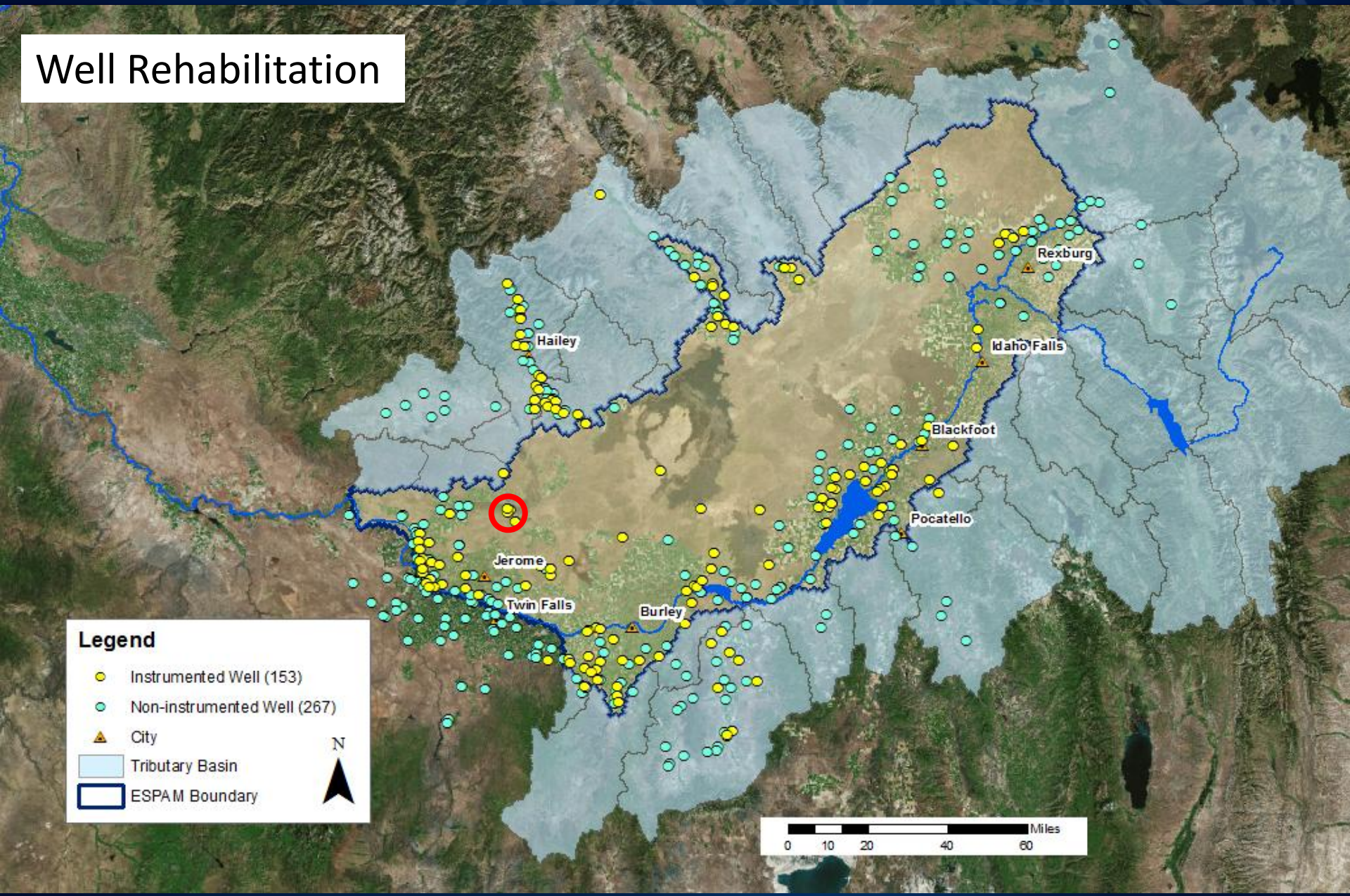
Well Rehabilitation



Well Rehabilitation – Craters of the Moon

Well Rehabilitation



Well Rehabilitation - Shoshone Recharge Site

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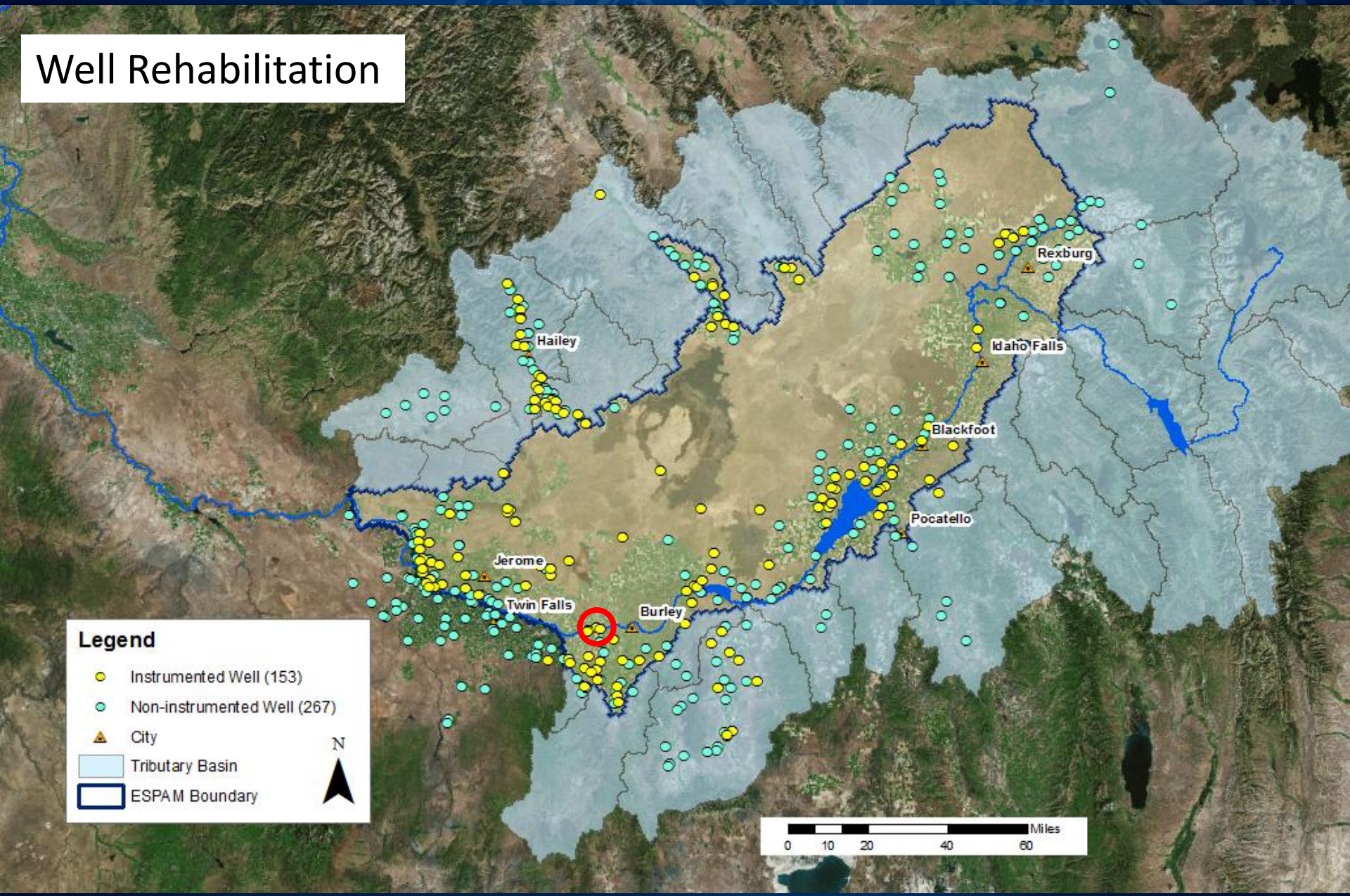
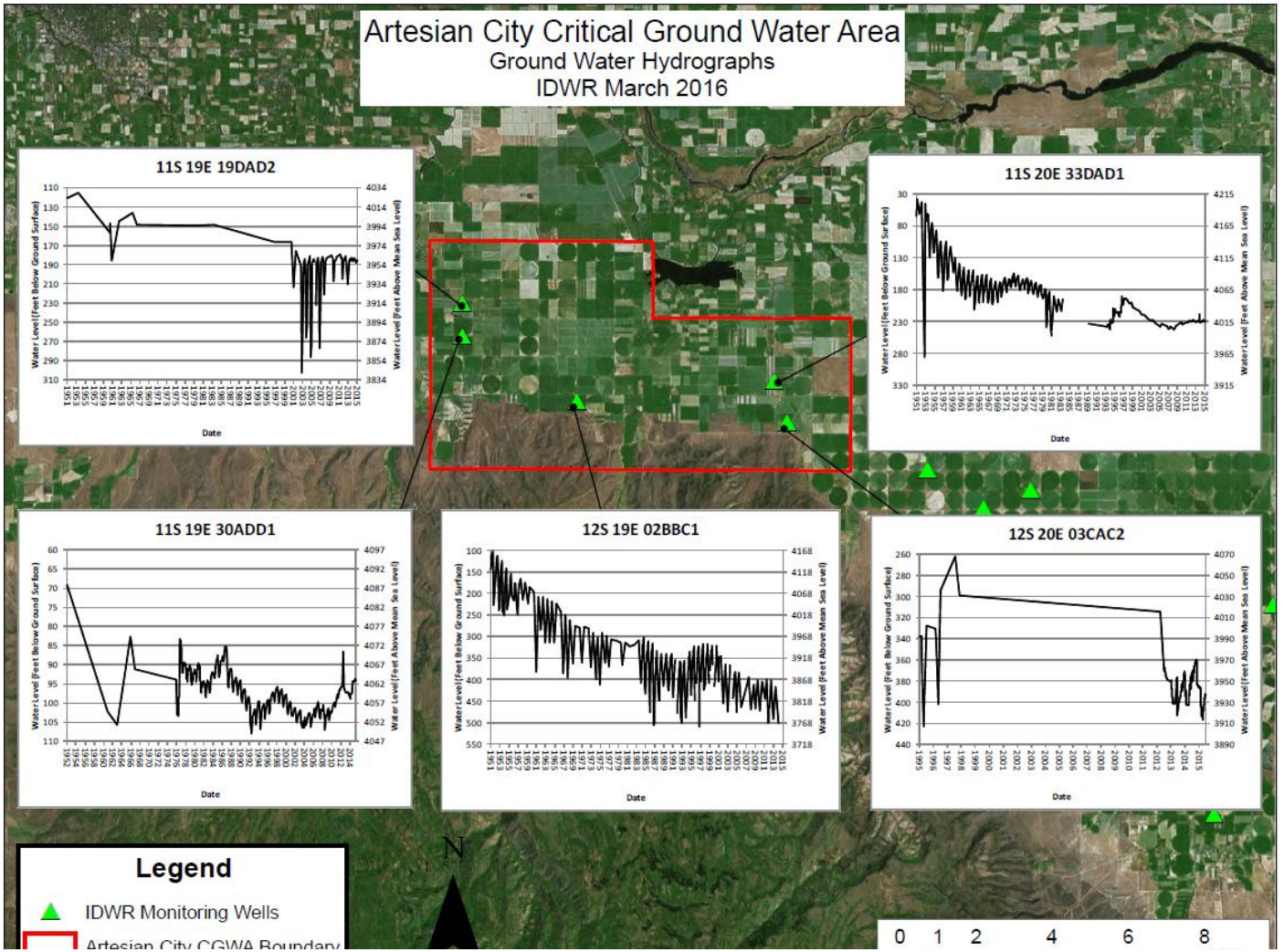
Well Rehabilitation



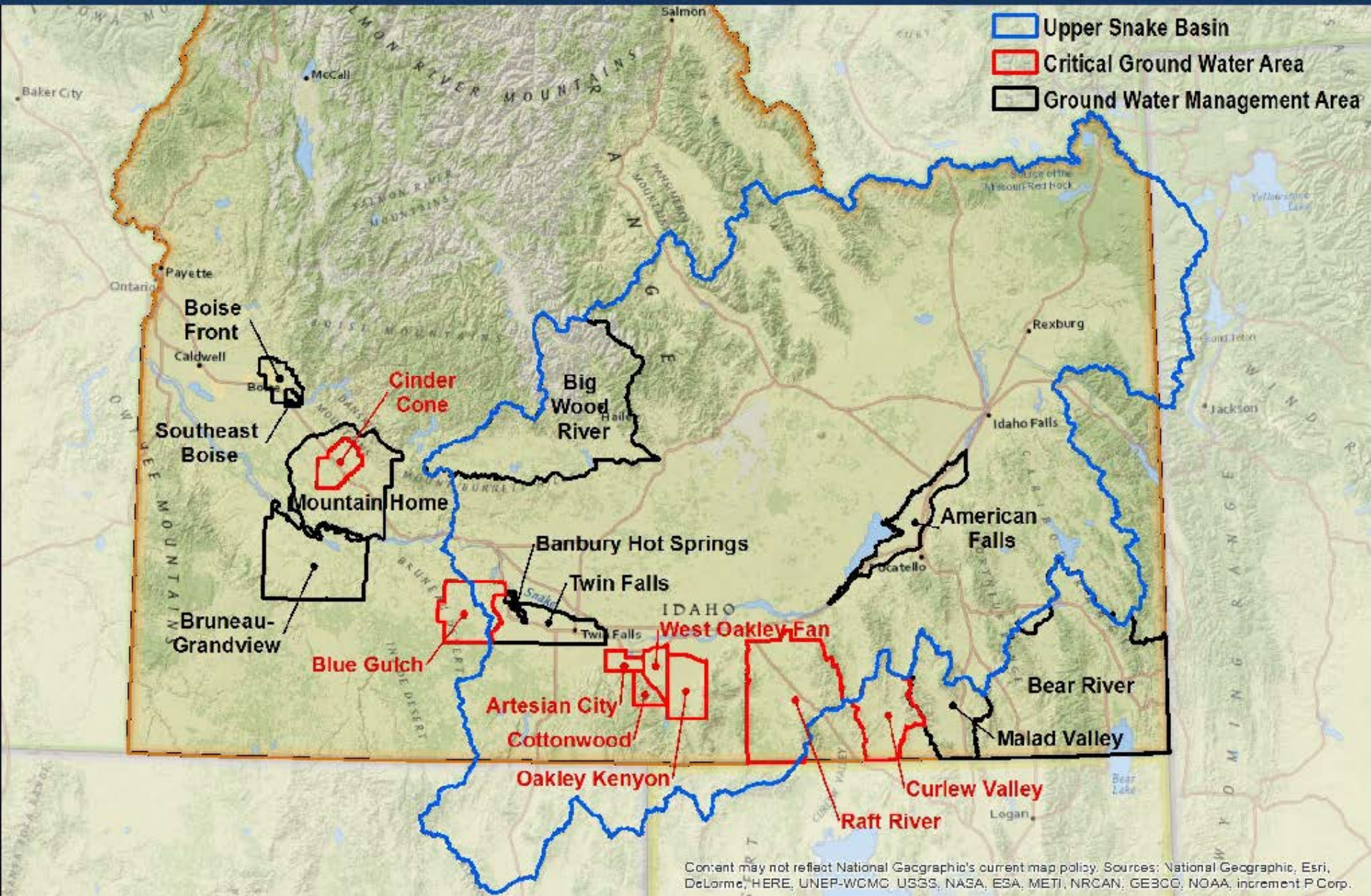
Well Rehabilitation – Milner Dam Sentinel Well

CGWAs and GWMAs

Updated hydrographs and trend analyses for GWMA & CGWA webpages



Where are the CGWAs and GWMAs?



Managed Recharge Program - Flow Measurements @ Milner-Gooding and MP-31

Managed Recharge Program – ADCP Measurement on Twin Falls Canal

Managed Recharge Program – Water Quality Sampling @ MP-31

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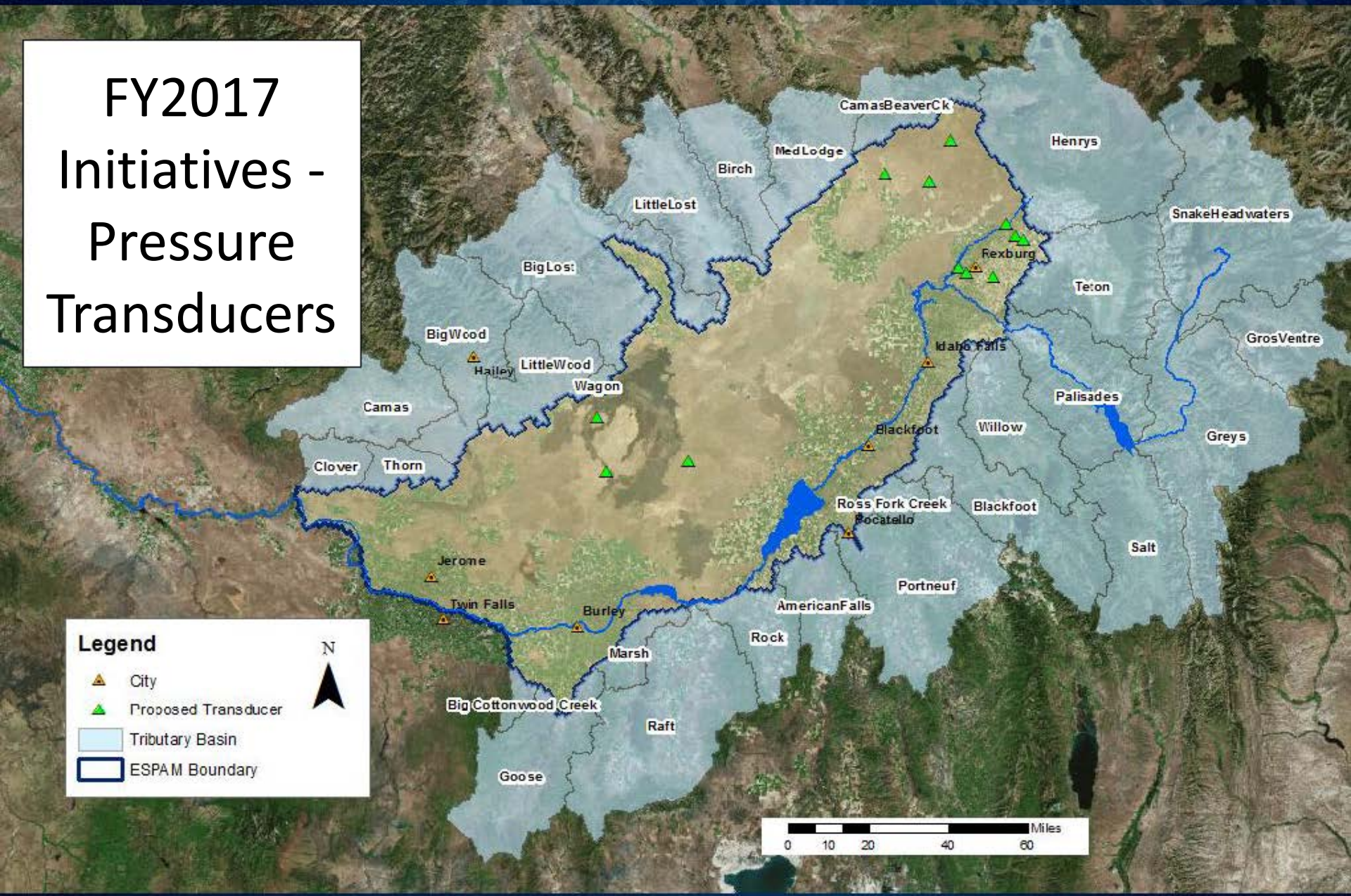
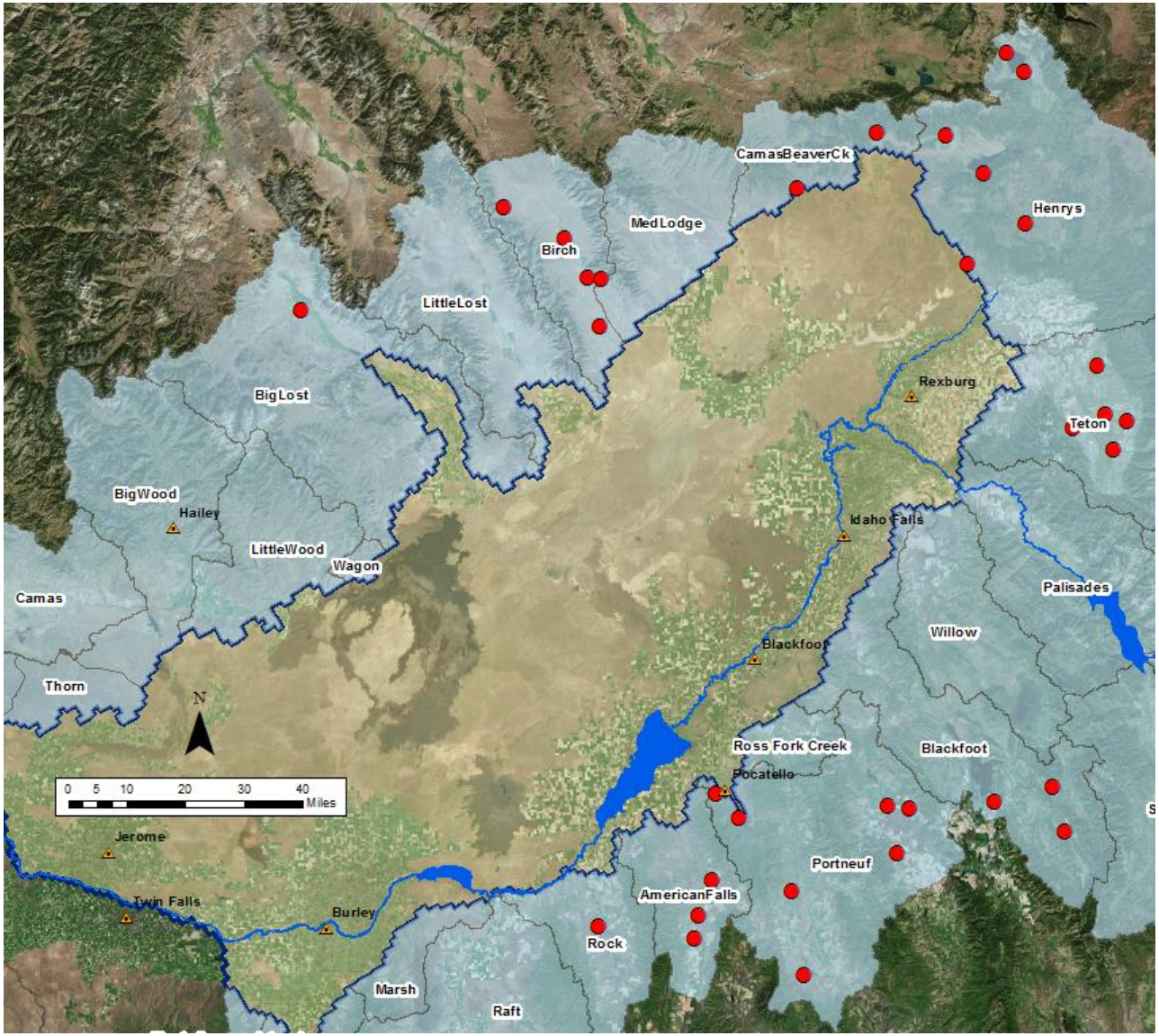
FY2017 Initiatives - Pressure Transducers

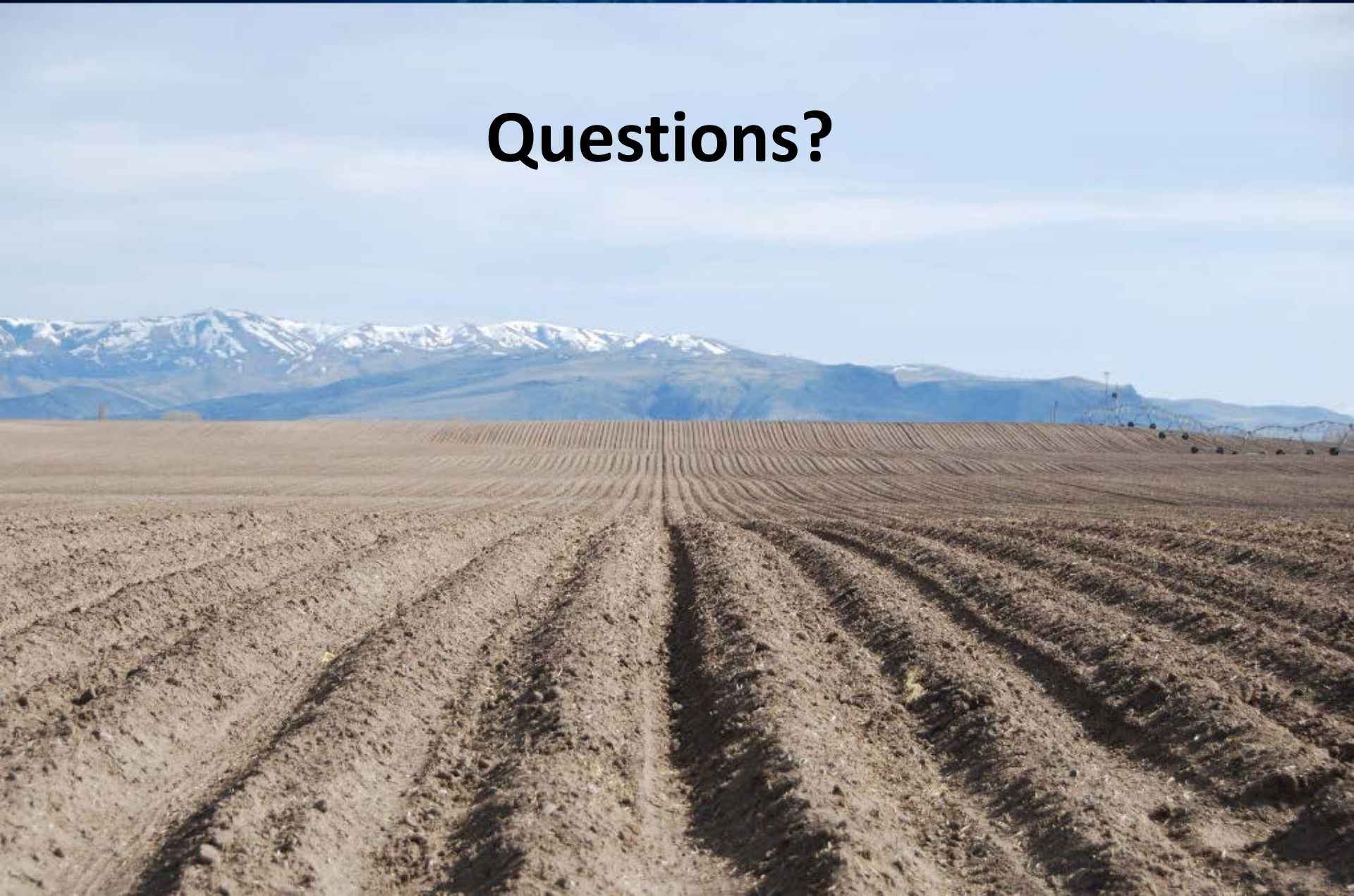


FY2017 Initiatives - Tributary Basin Monitoring

33 sites in 10 tributary basins proposed to be added to the monitoring network



Questions?



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Other Eastern Snake Plain Hydrologic Monitoring Networks

Summary

- Prioritized water level monitoring program during FY2016

- Accomplishments
  - Contract for hydrologic support services
  - Implemented two water level monitoring initiatives
  - Automation of data collection systems
  - Well rehabilitations
  - CGWAs & GWMAs updates
  - Managed Recharge Program support

- FY2017 priorities include more automation on ESRP and expansion of networks into tributary basins

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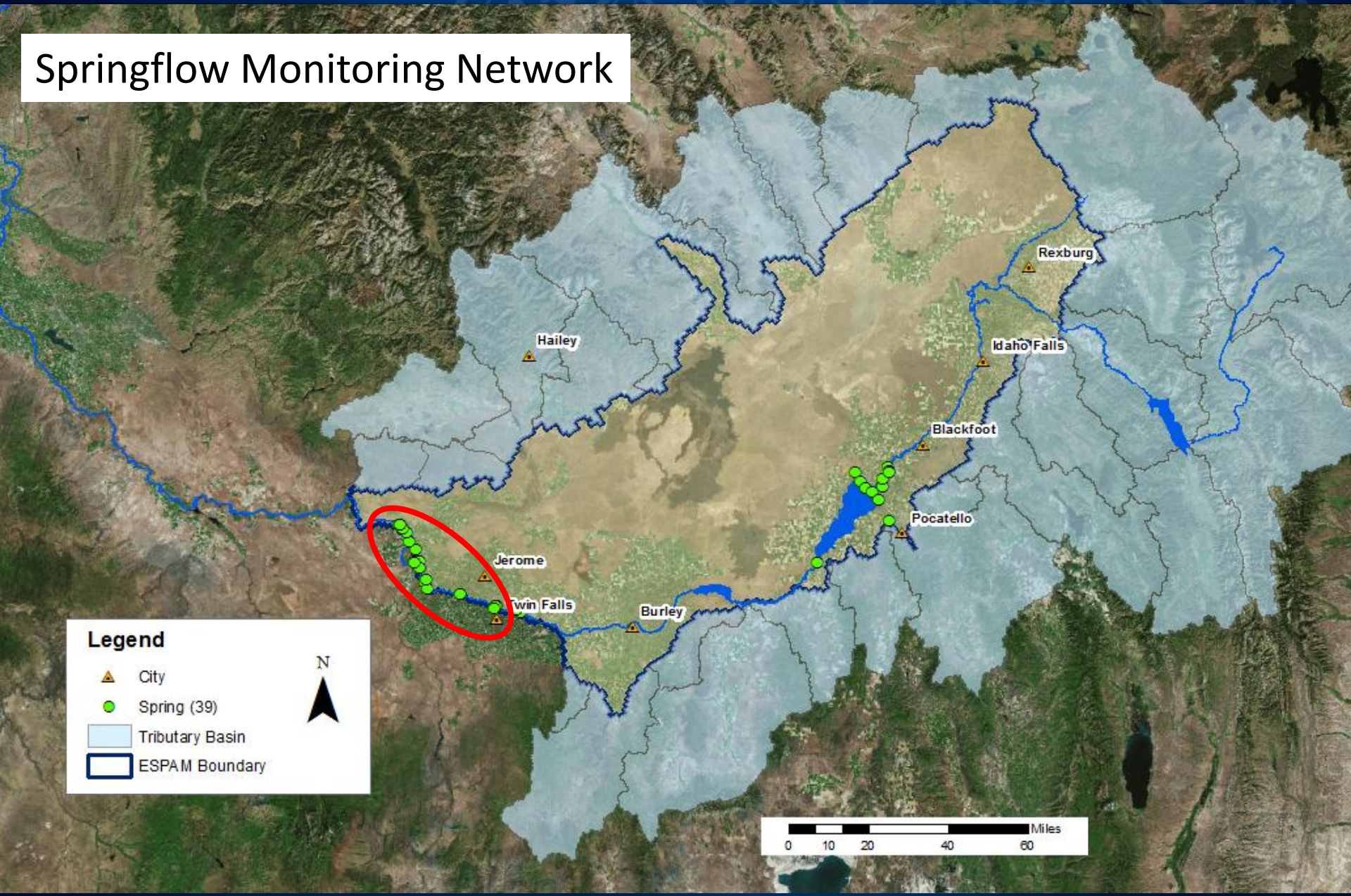
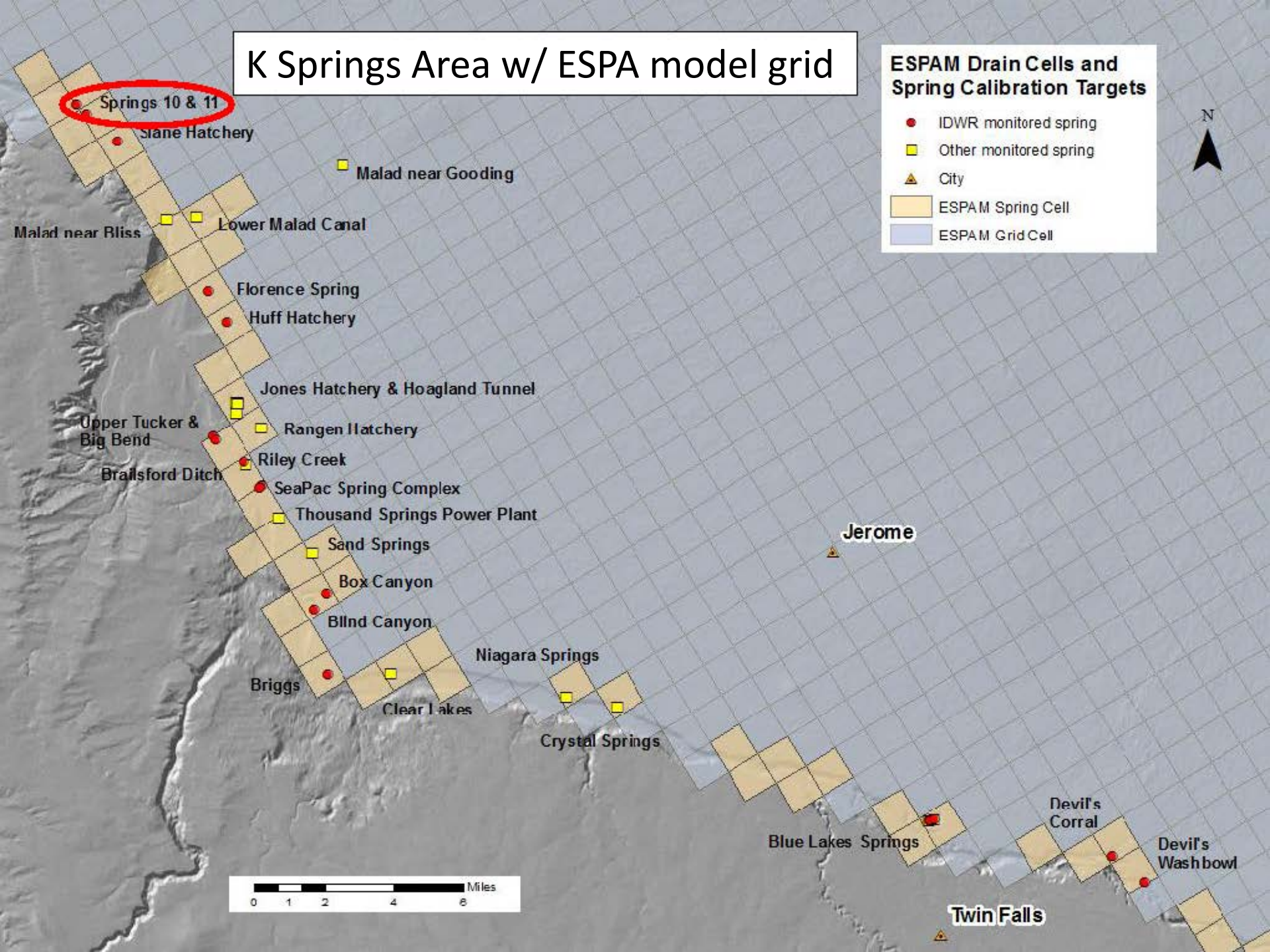
Springflow Monitoring Network

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Springs 10 & 11
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Lower Malad Canal
Florence Spring
Huff Hatchery
Jones Hatchery & Hoagland Tunnel
Upper Tucker & Big Bend
Rangen Hatchery
Riley Creek
Brailsford Ditch
SeaPac Spring Complex
Thousand Springs Power Plant
Sand Springs
Box Canyon
Blind Canyon
Niagara Springs
Briggs
Clear Lakes
Crystal Springs
Jerome
Blue Lakes Springs
Devil's Corral
Devil's Washbowl
Twin Falls
Miles
0 1 2 4 8

Ultrasonic Meter @ Black Canyon Bliss/River Road Hatchery (Springs 10 & 11)

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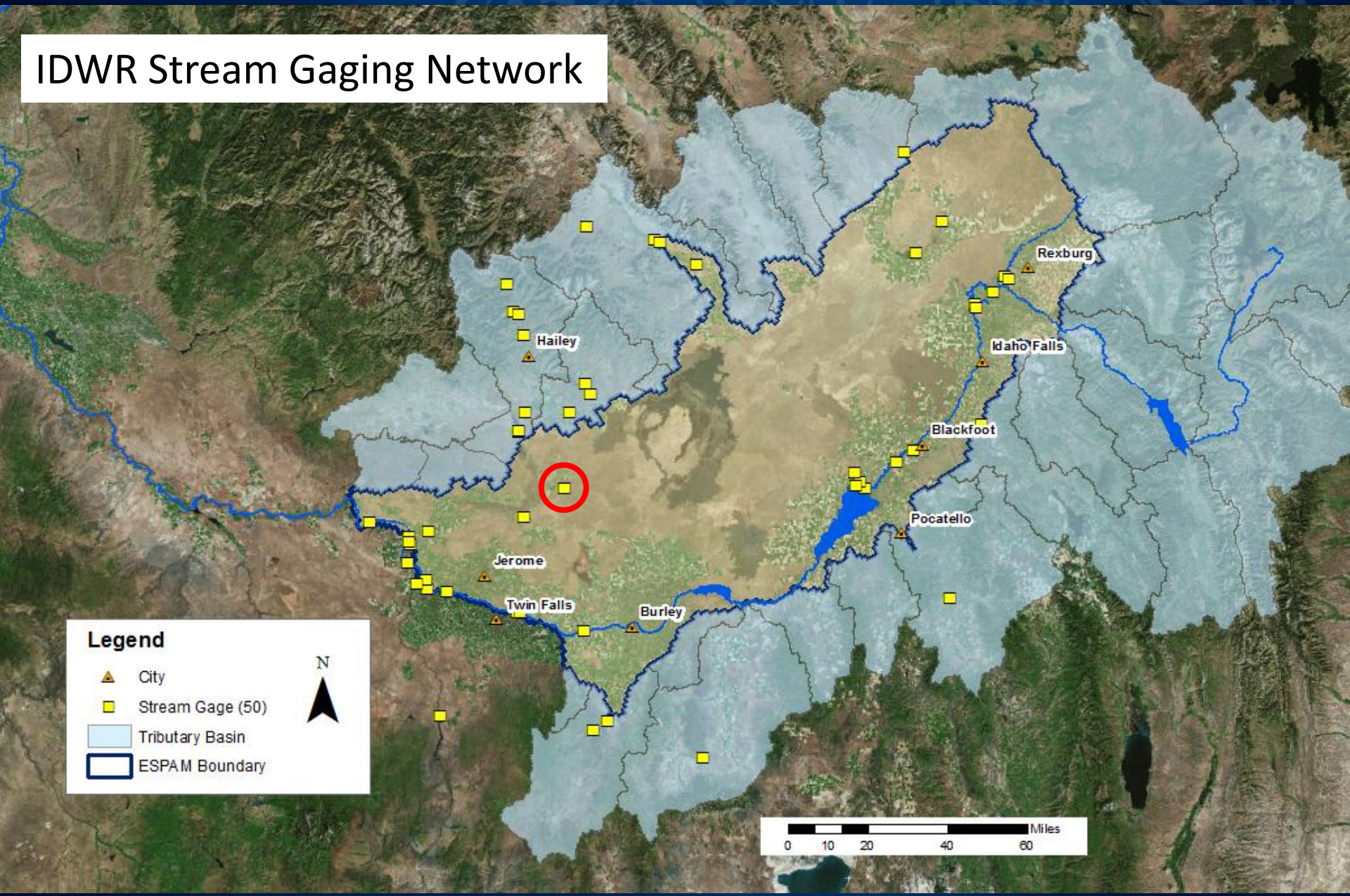
IDWR Stream Gaging Network



Gage House @ Little Wood Station 10 near Richfield

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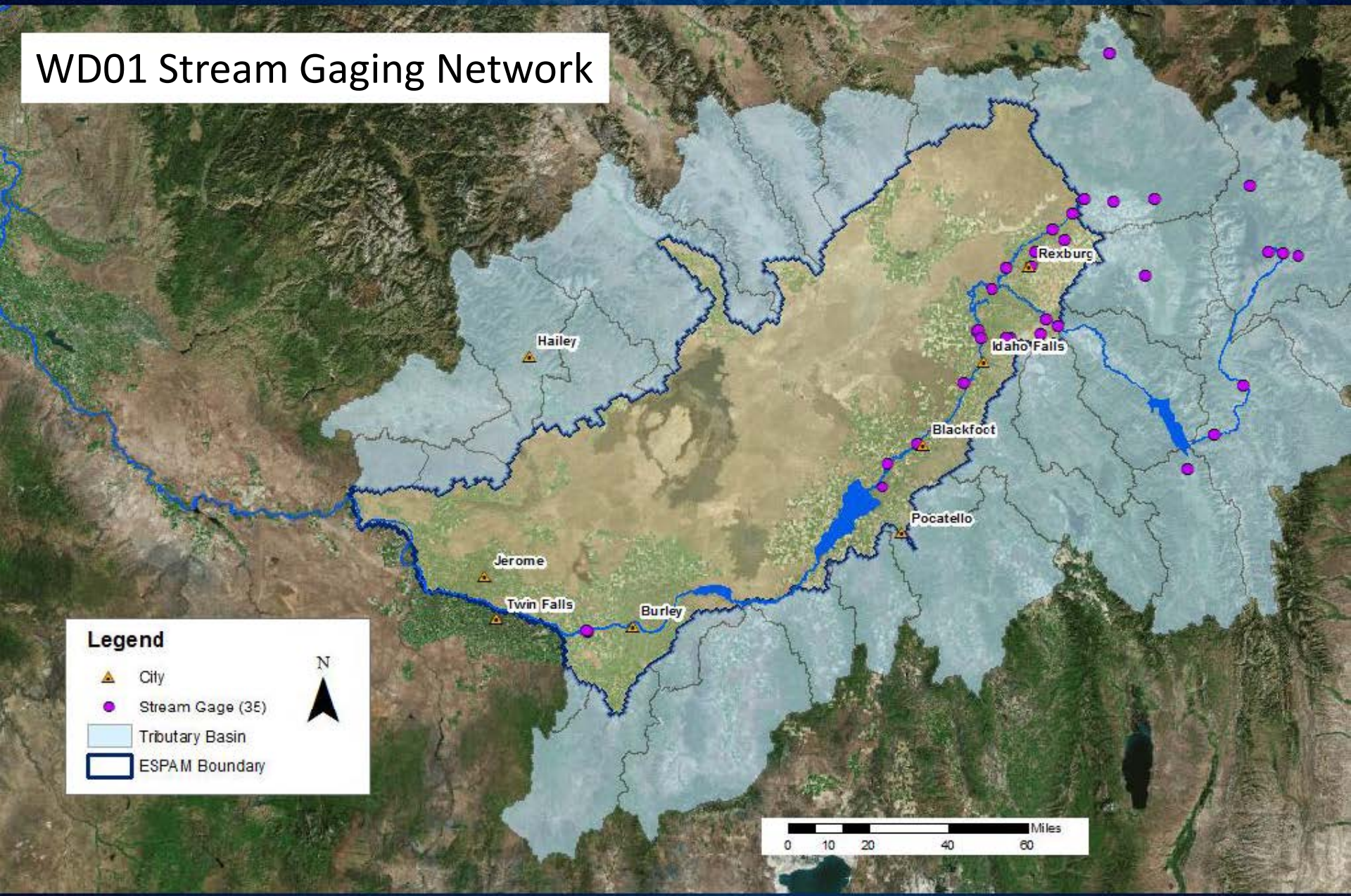
WD01 Stream Gaging Network



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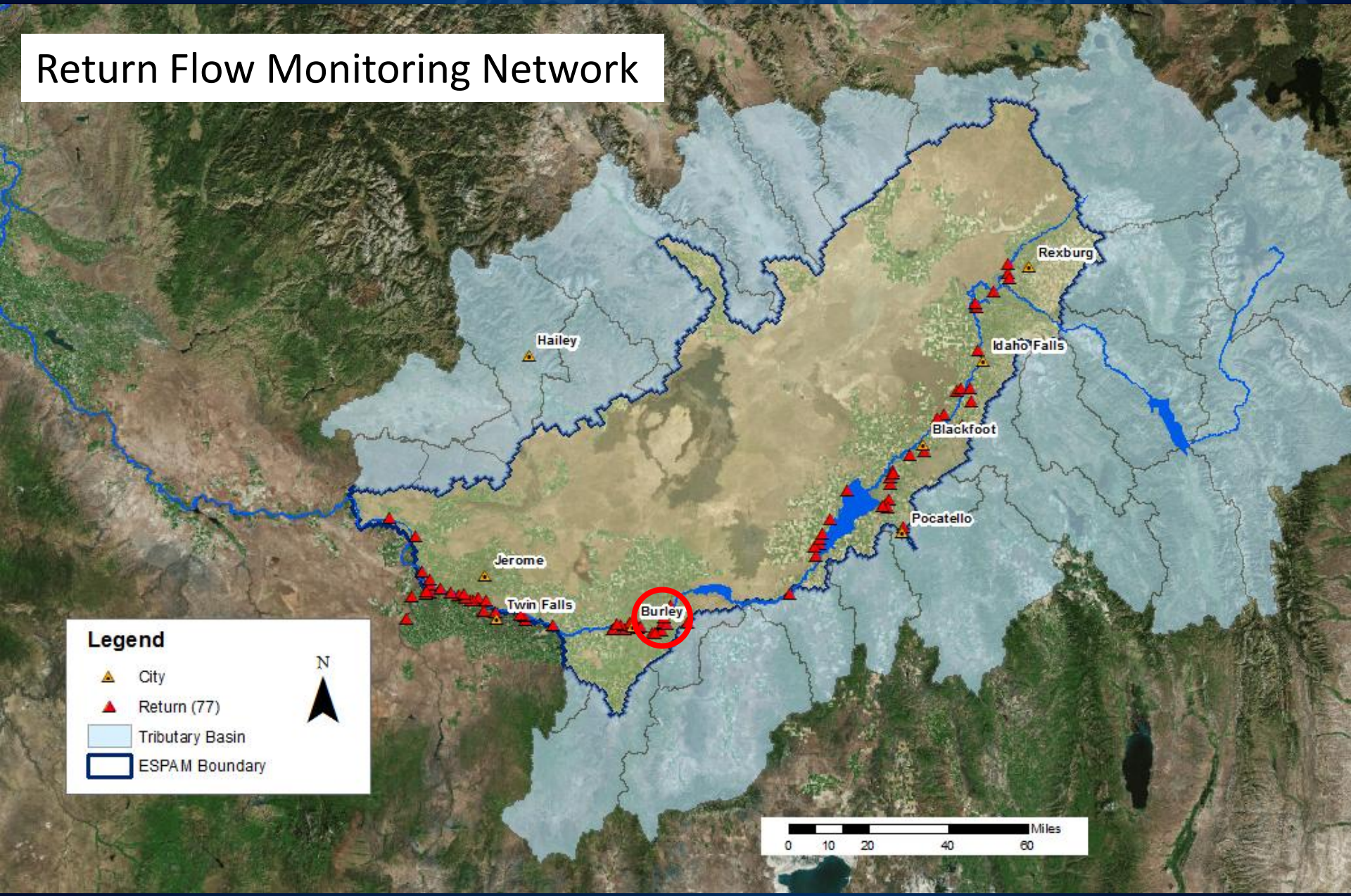
Return Flow Monitoring Network




D16 near Heyburn (MID)

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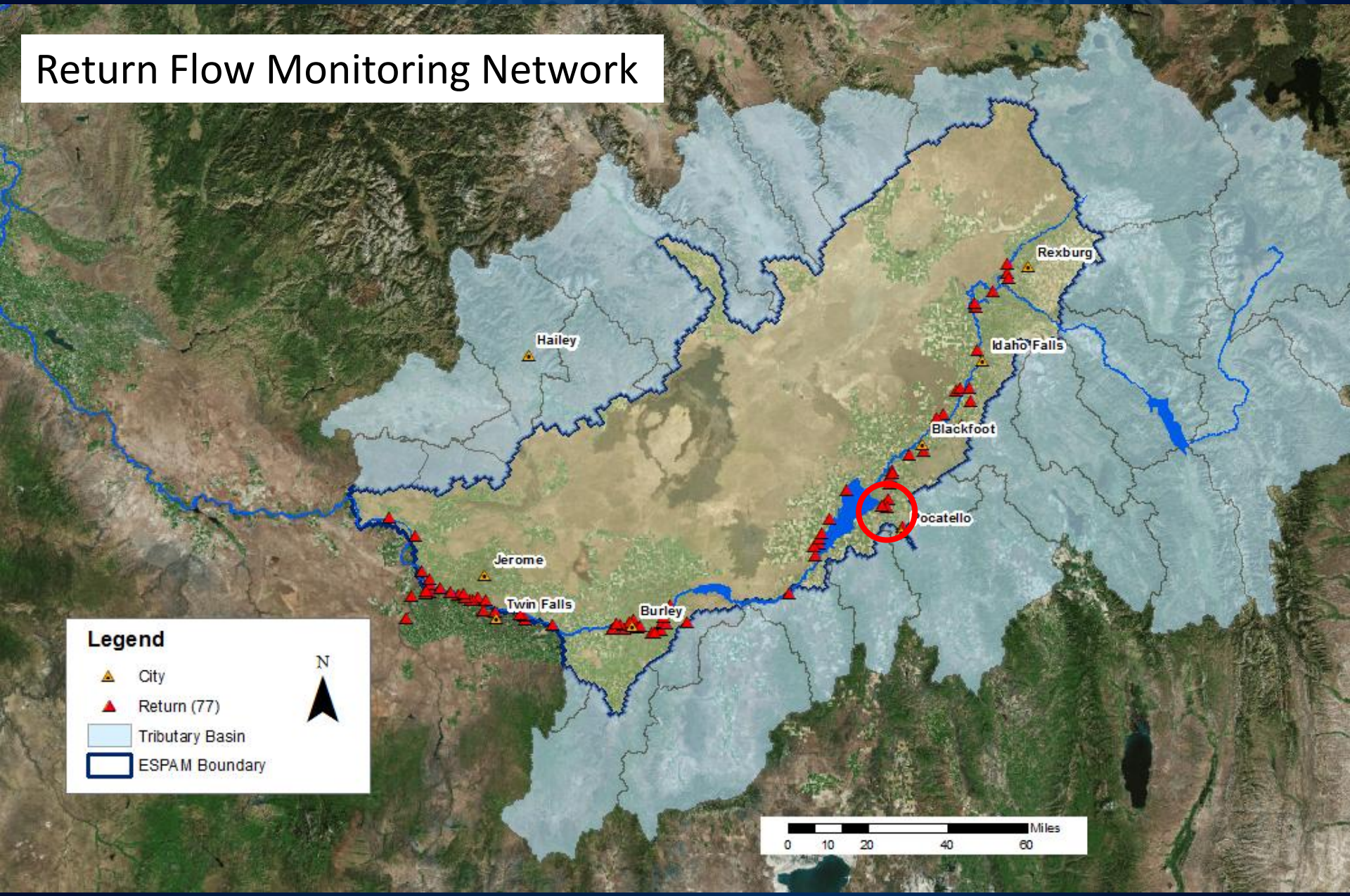
Return Flow Monitoring Network



Ramped Flume – Ft. Hall

ESPA Storage Changes

Presented by Mike McVay, P.E., P.G.

September 15, 2016

Aquifer Water Balance

Inflow – Outflow = ΔStorage

ESPA Inflows = Incidental recharge from SW irrigation, Canal Seepage, Perched River Seepage, Tributary Underflow, Precipitation.

ESPA Outflows = Evapotranspiration, Spring Discharge, Well Pumping

We spend a lot of time, money, and effort attempting to estimate these parameters. However, we can calculate change-in-storage more directly using water-level measurements. A more efficient method of calculating change-in-storage allows us to evaluate both aquifer conditions and aquifer management activities.

Water-Level Measurement Definitions

1. Mass Measurement Events:
   a. Events that are coordinated to measure a large number of wells (≈ 1,100 wells) over a short period of time.
   b. Occur in multi-year intervals. Previous mass measurement events in 1980, 2001, 2002, 2008. 2013. Planned to occur every 5 years from 2008.

2. Annual Measurements:
   a. Data obtained from regularly measured wells (≈ 500 wells) collected in the spring. Measurements not coordinated to occur over a specific period.

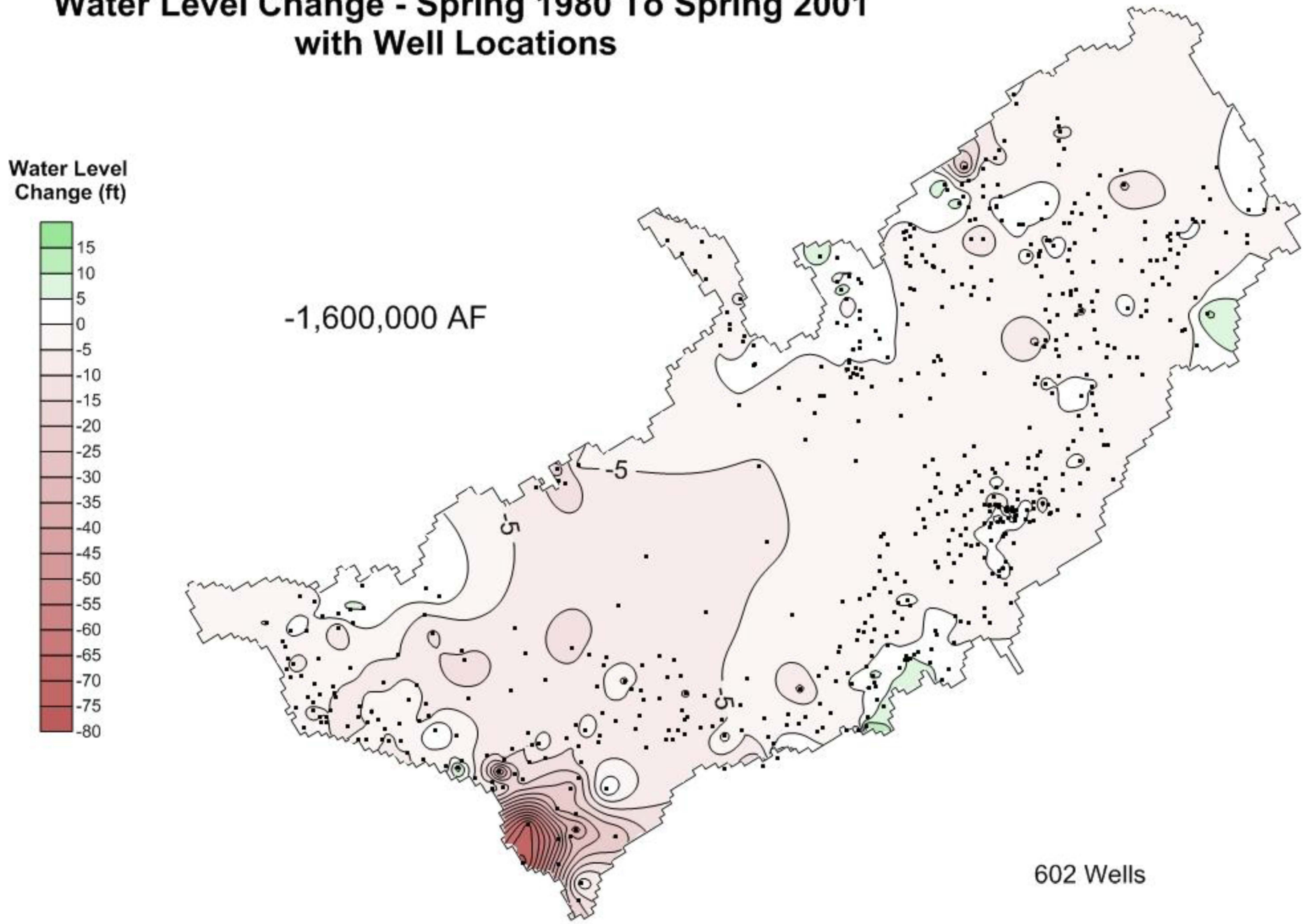
3. Synoptic Measurement Events:
   a. Coordinated annual events that use regularly measured wells (≈ 500 wells). Data collected over a specific period.

Using Water-Level Data to Estimate Changes in Aquifer Storage

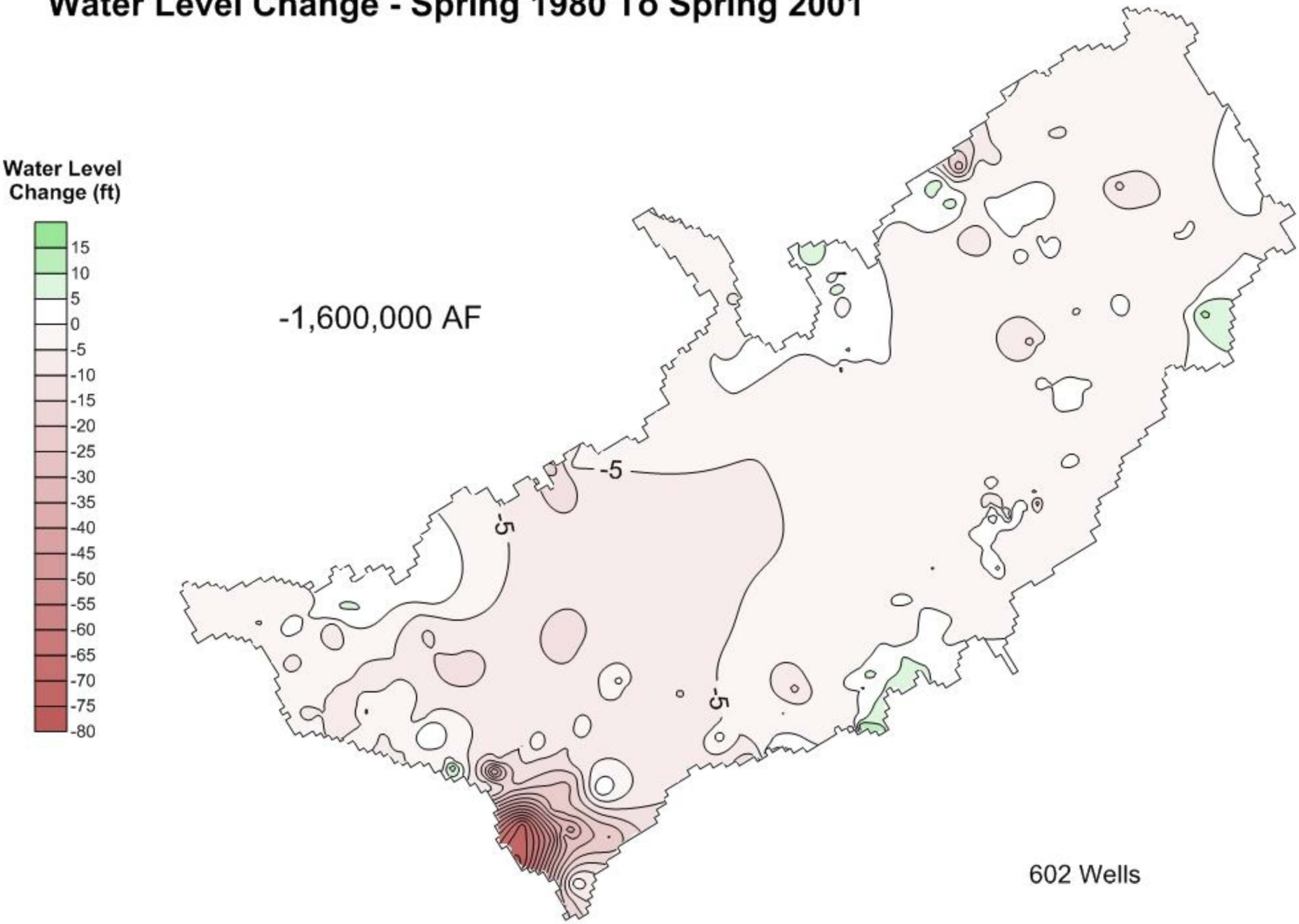
The aquifer storage volume changes have been calculated as follows:

1. Water-level data have been differenced to produce water-level changes at discrete points (at the wells).
2. Changes at the wells have been interpolated across the ESPAM2.1 model area to create water-level change maps.
   a. This results in a volume of water and rock (area of model domain x depth of changes).
3. Specific Yield (Sy) is the ratio of the volume of water that drains from a saturated rock due to gravity to the total volume of the rock.
4. Therefore, the water-level changes have been multiplied by the average, calibrated Sy from EPAM2.1 (0.06) to calculate the change in volume of water.

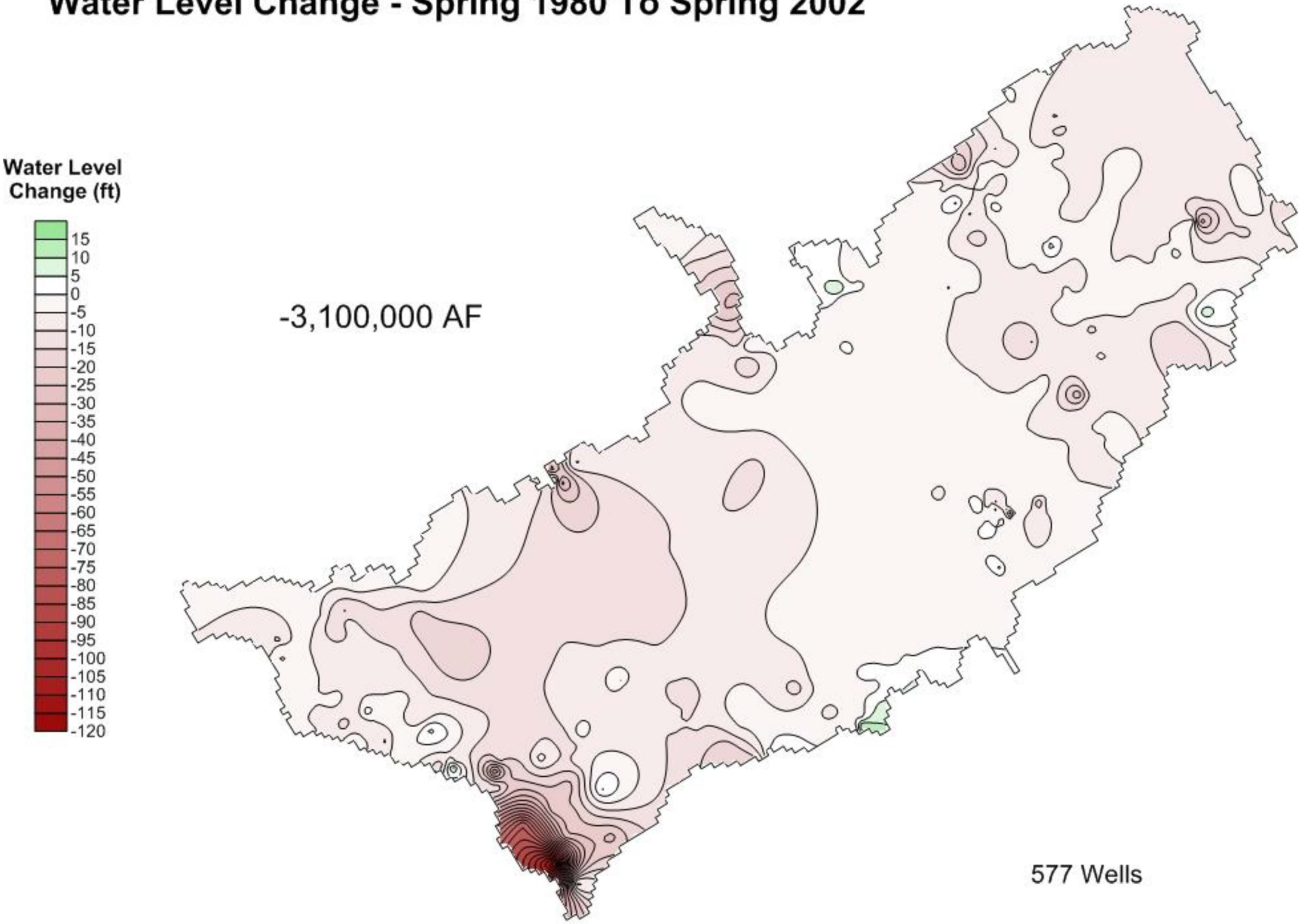
Water Level Change - Spring 1980 To Spring 2001 with Well Locations



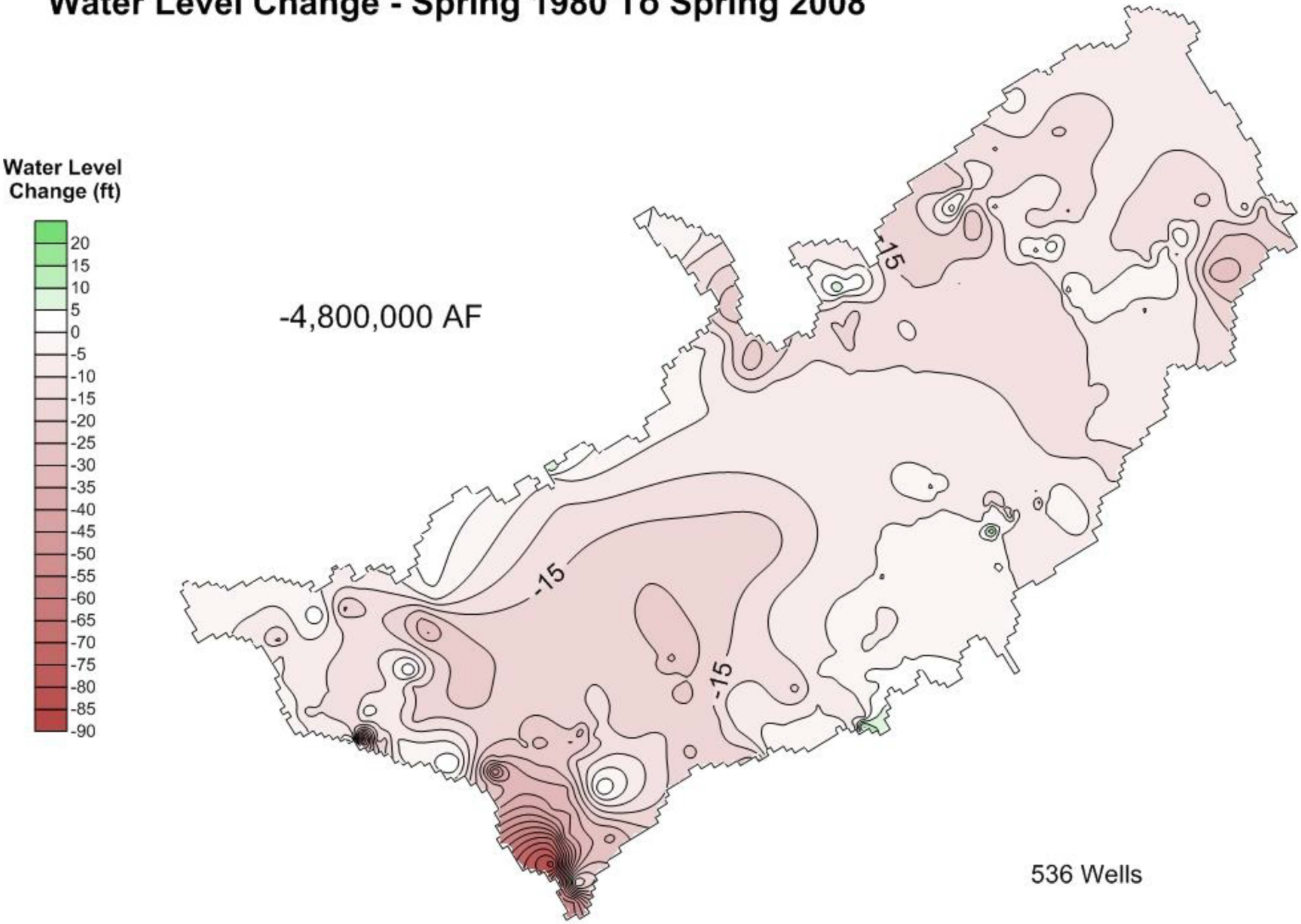
Water Level Change - Spring 1980 To Spring 2001



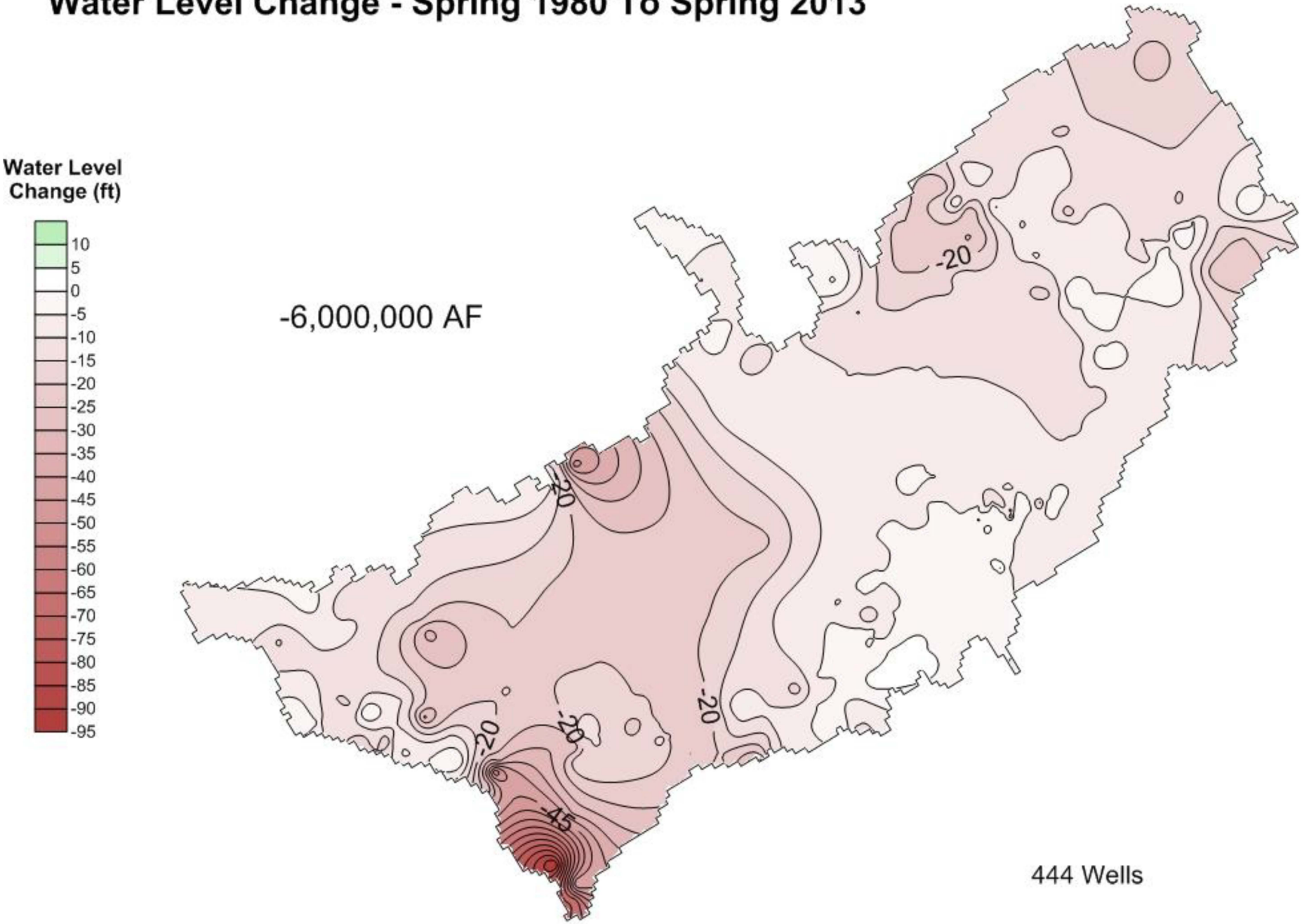
Water Level Change - Spring 1980 To Spring 2002

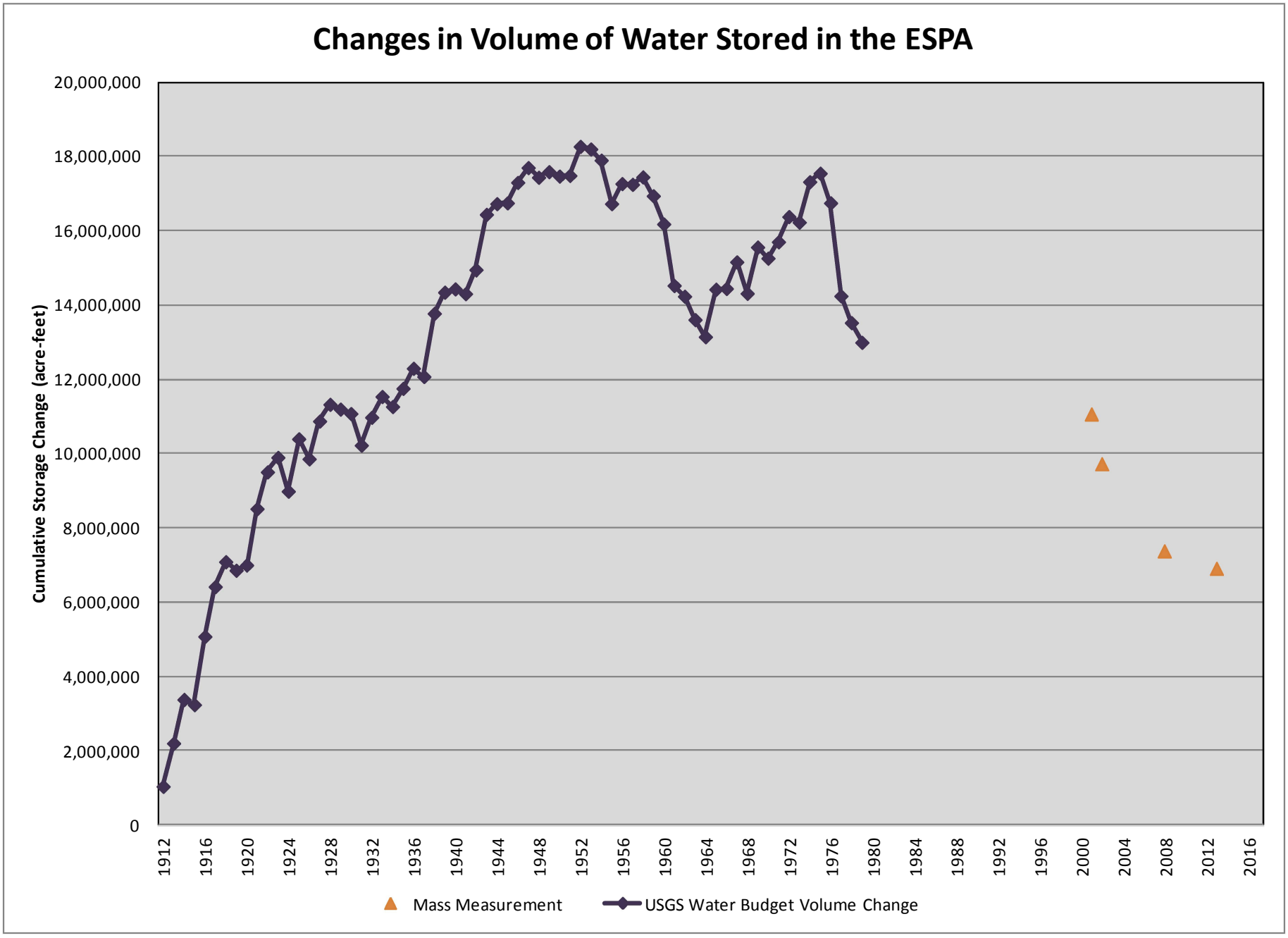


Water Level Change - Spring 1980 To Spring 2008



Water Level Change - Spring 1980 To Spring 2013




Changes in Volume of Water Stored in the ESPA
Cumulative Storage Change (acre-feet)
20,000,000
18,000,000
16,000,000
14,000,000
12,000,000
10,000,000
8,000,000
6,000,000
4,000,000
2,000,000
0
1912
1916
1920
1924
1928
1932
1936
1940
1944
1948
1952
1956
1960
1964
1968
1972
1976
1980
1984
1988
1992
1996
2000
2004
2008
2012
2016
Mass Measurement
USGS Water Budget Volume Change

Storage Change between Mass Measurements

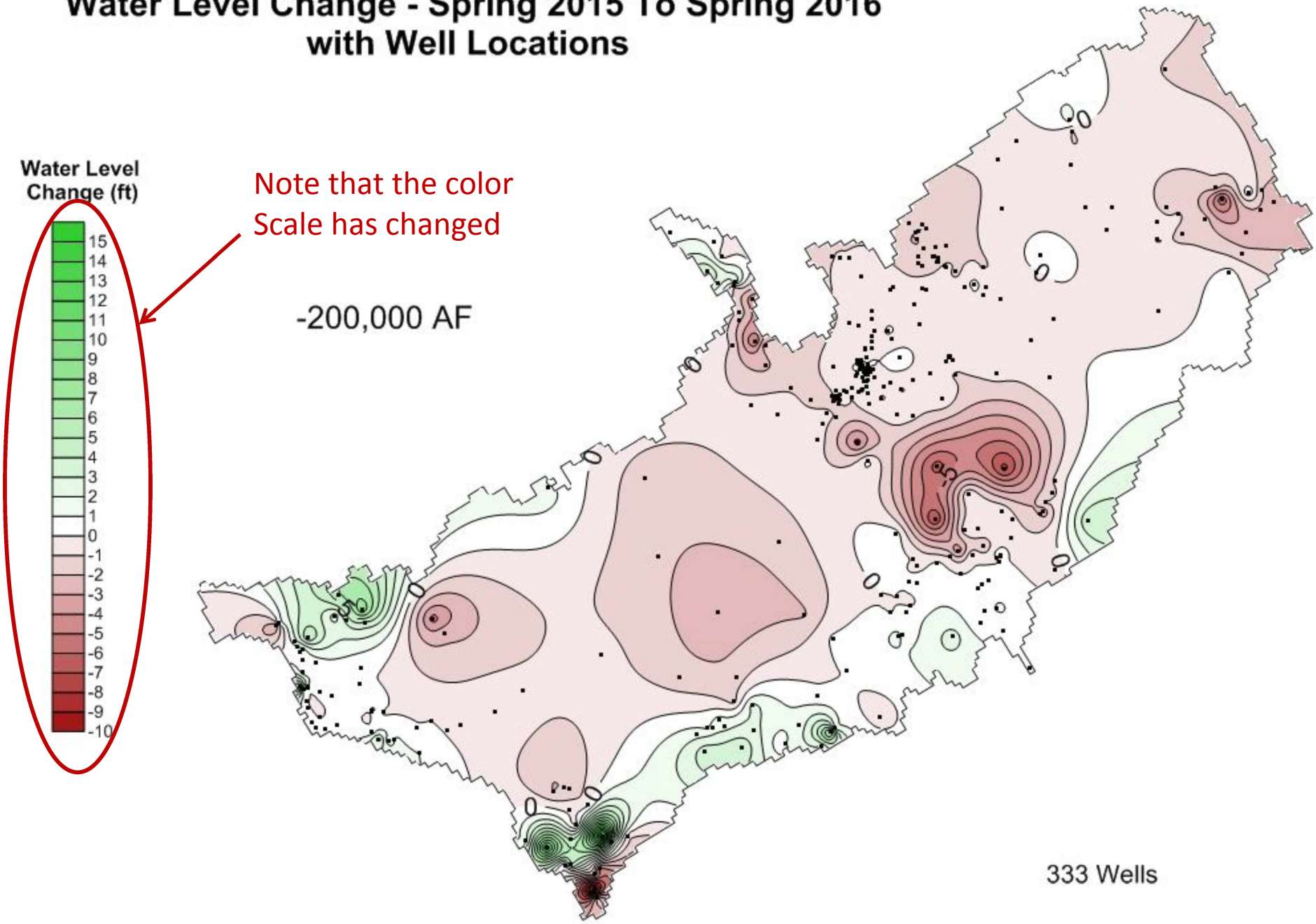
- Mass measurements provide an efficient method for calculating storage changes every few years.
- Mass measurements indicate the volume of water stored in the aquifer is declining over time; however, it is difficult to make management decisions with this information.
- Hundreds of wells are measured in the spring each year. Perhaps we can use these annual data to calculate storage changes.

Difference between Mass and Annual Measurements

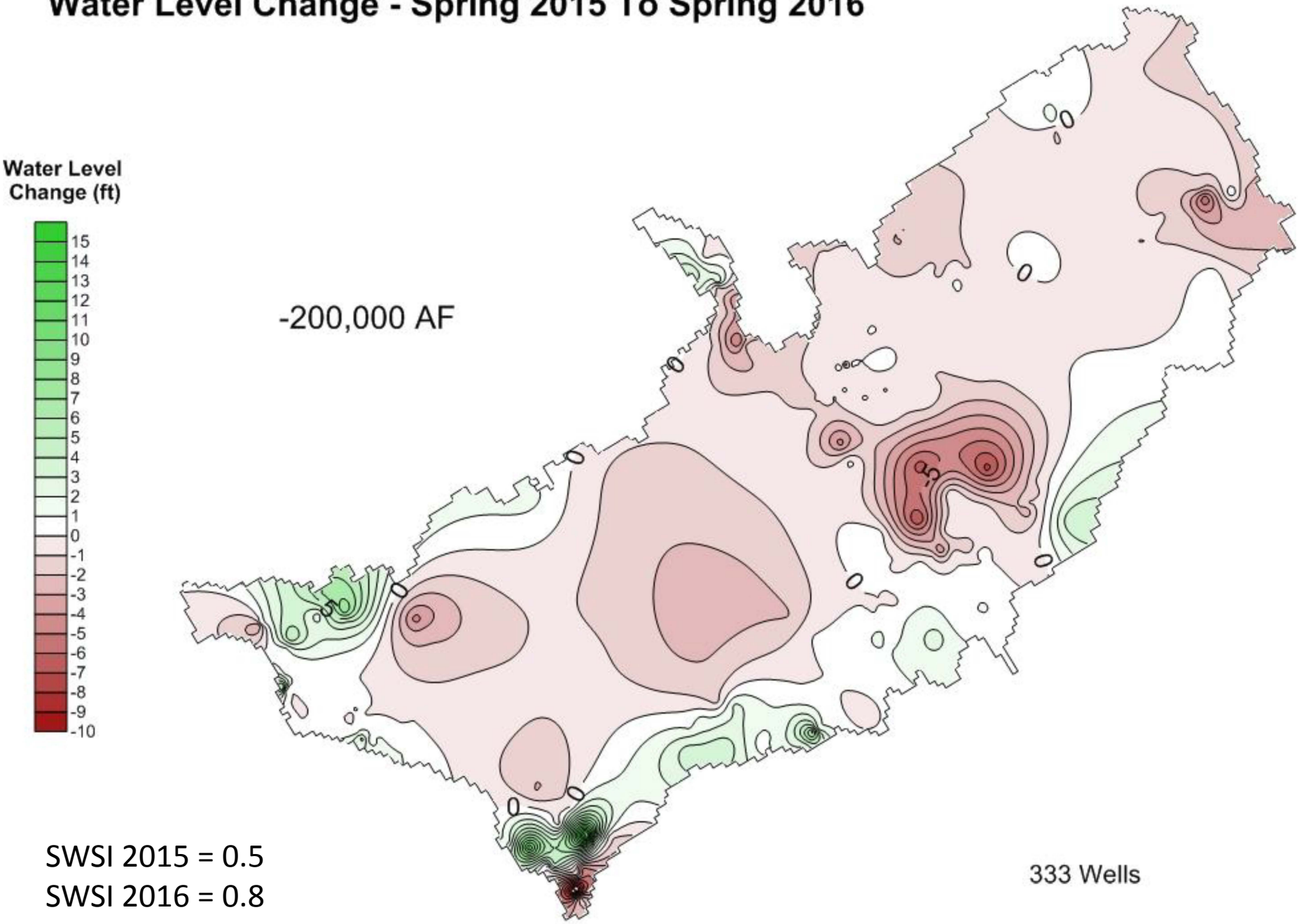
- Mass measurement events include as many wells (≈ 1,100 wells) as logistically possible to provide a snapshot of the aquifer.
- The large number of wells provide robust storage-change estimates but are difficult and expensive.

- Annual measurement events utilize the standard well networks to measure hundreds of wells (≈ 500 wells), but not as many as the mass events.
- The smaller scope and use of regularly-measured wells reduces the logistical pressure, but storage-change estimates may be less robust.
- Annual measurements are now coordinated to occur over a specified time-frame to provide a snapshot of the aquifer.
- These coordinated annual events are SYNOPTIC events.

Water Level Change - Spring 2015 To Spring 2016 with Well Locations



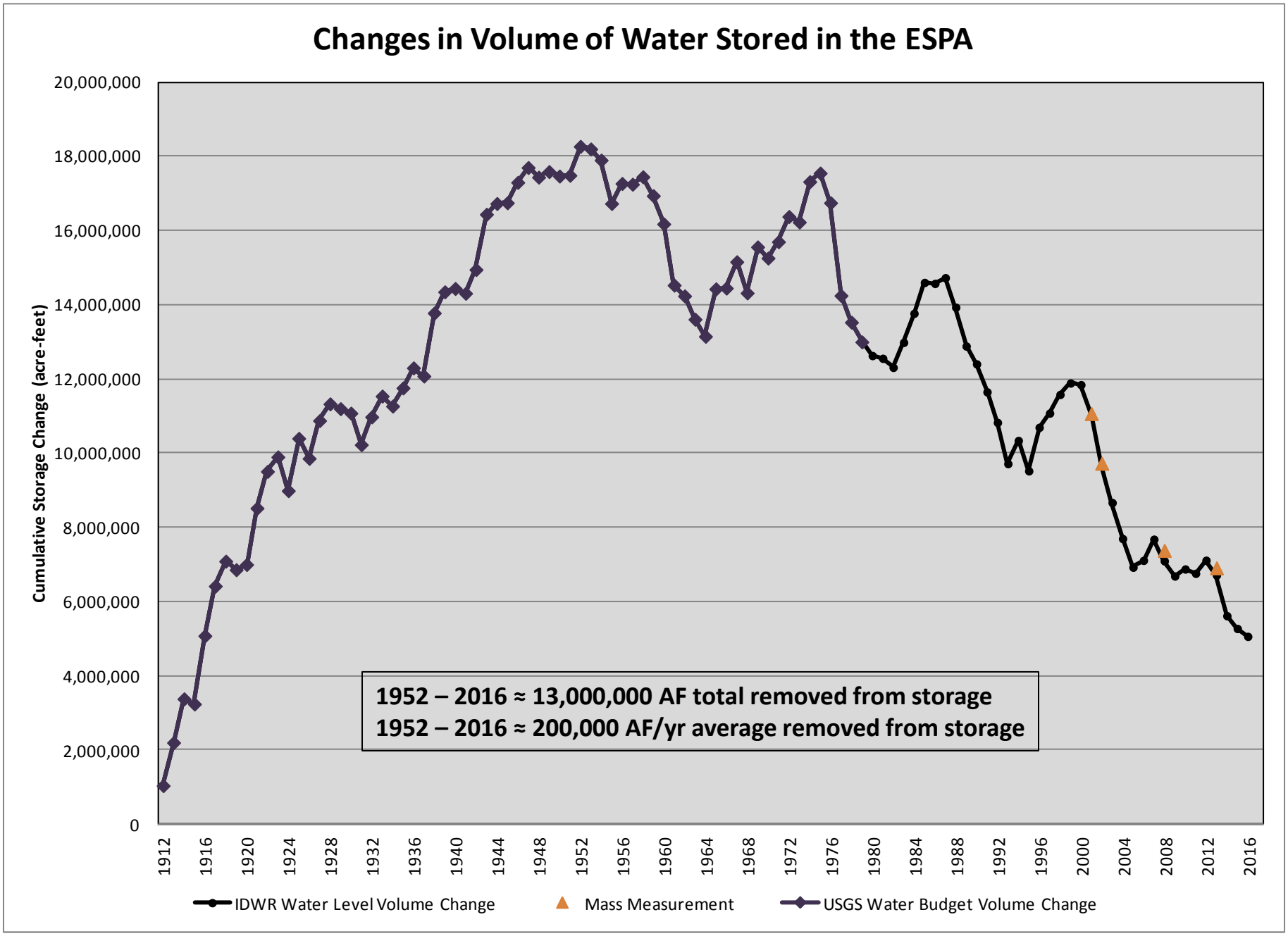
Water Level Change - Spring 2015 To Spring 2016



SWSI 2015 = 0.5
SWSI 2016 = 0.8

Synoptic Water-Level Measurements

- Synoptic measurement events will occur every year (starting in 2016) using the standard well network.
- Because annual events occur every year (synoptic events moving forward), we can use this data to construct an aquifer history.
- This history allows us to both review the past and assess the current situation.
- Synoptic events use fewer wells. Is this a concern?
  - More like a reality that needs to be acknowledged.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16,000,000
14,000,000
12,000,000
10,000,000
8,000,000
6,000,000
4,000,000
2,000,000
0
1912
1916
1920
1924
1928
1932
1936
1940
1944
1948
1952
1956
1960
1964
1968
1972
1976
1980
1984
1988
1992
1996
2000
2004
2008
2012
2016
1952 – 2016 ≈ 13,000,000 AF total removed from storage
1952 – 2016 ≈ 200,000 AF/yr average removed from storage
IDWR Water Level Volume Change
Mass Measurement
USGS Water Budget Volume Change

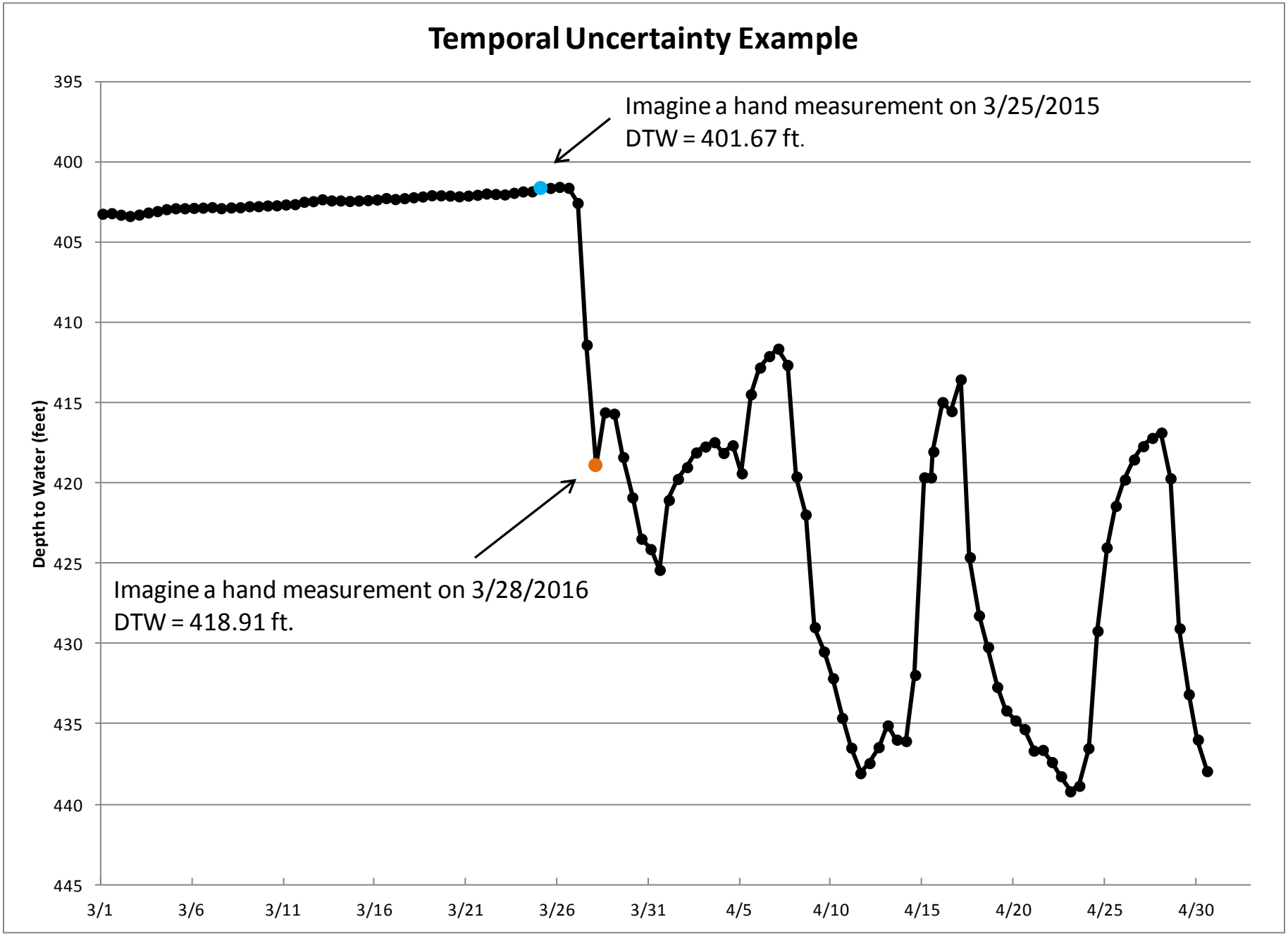
Water Balance Uncertainty

All water balance estimates are fraught with uncertainty. Water-level estimates of storage changes are easier and cheaper than traditional water-budget calculations, but still not definitive.

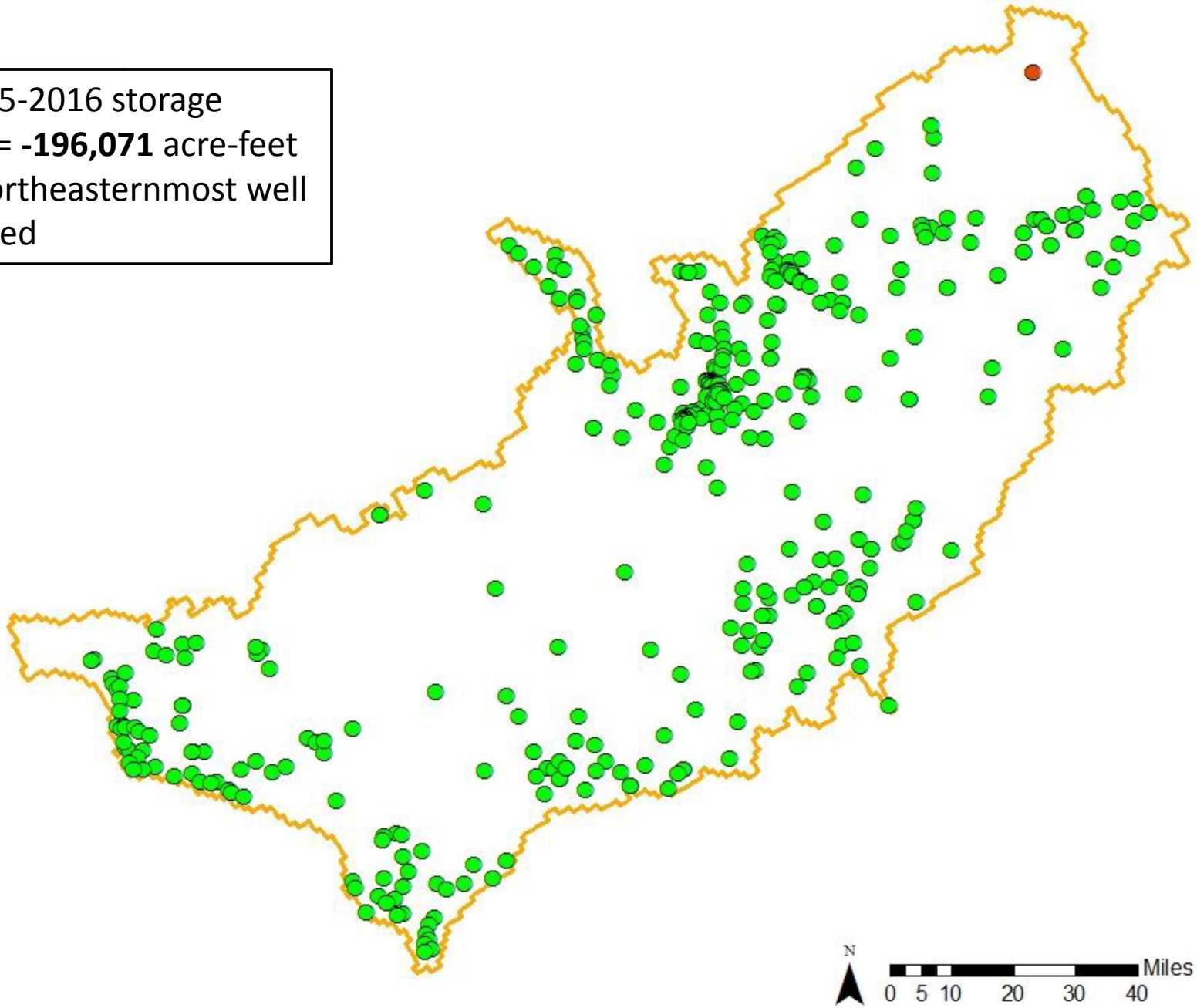
Much of the uncertainty associated with the water-level method is related to:

1. Measurement timing differences – Well measurements taken on different dates or different irrigation regimes from year-to-year .

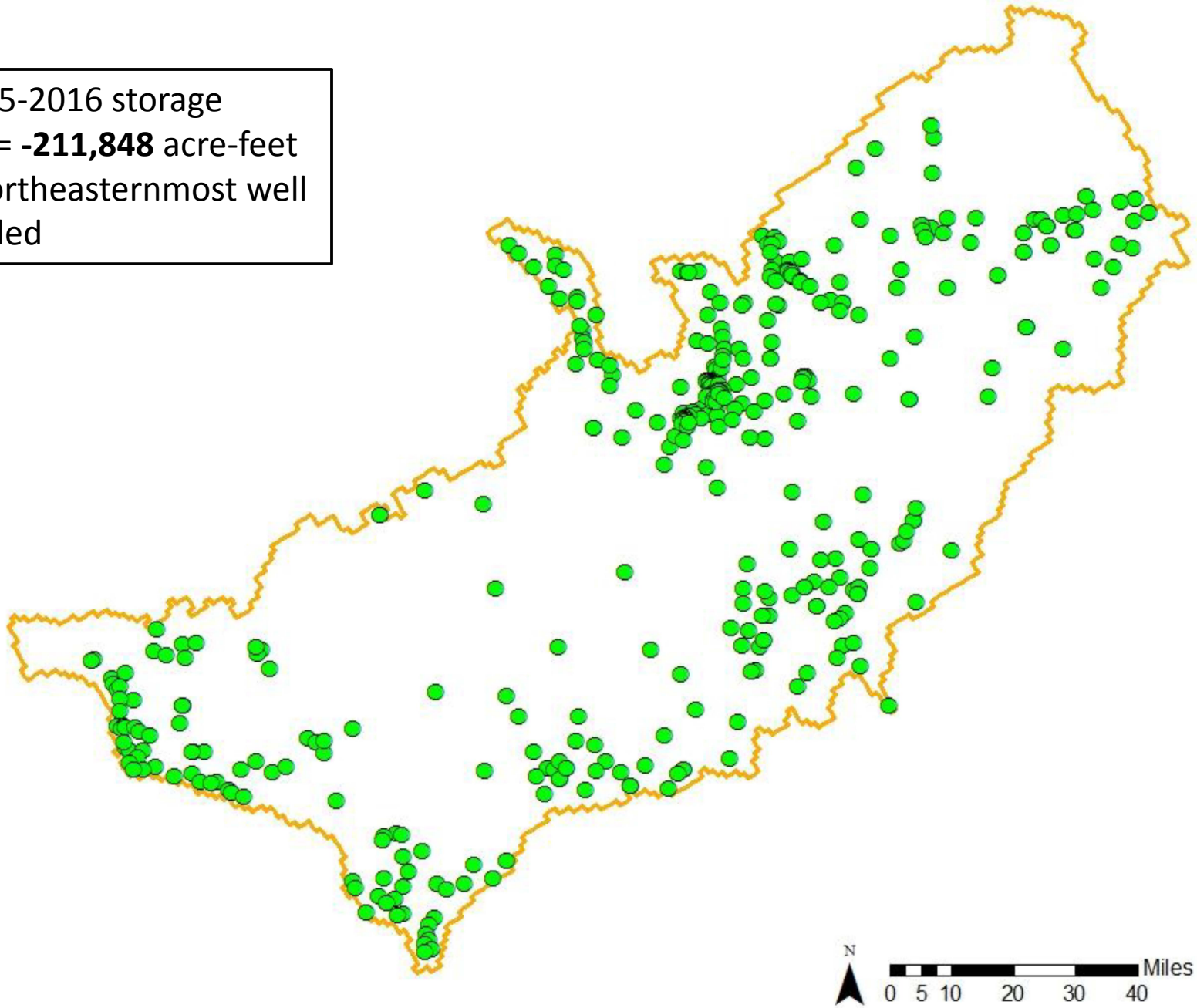
2. Measurement location differences – The network of wells measured each year differs slightly from year-to-year.


Temporal Uncertainty Example
Imagine a hand measurement on 3/25/2015
DTW = 401.67 ft.
Imagine a hand measurement on 3/28/2016
DTW = 418.91 ft.
Depth to Water (feet)
395
400
405
410
415
420
425
430
435
440
445
3/1
3/6
3/11
3/16
3/21
3/26
3/31
4/5
4/10
4/15
4/20
4/25
4/30

The 2015-2016 storage change = **-196,071** acre-feet
If the northeasternmost well is included

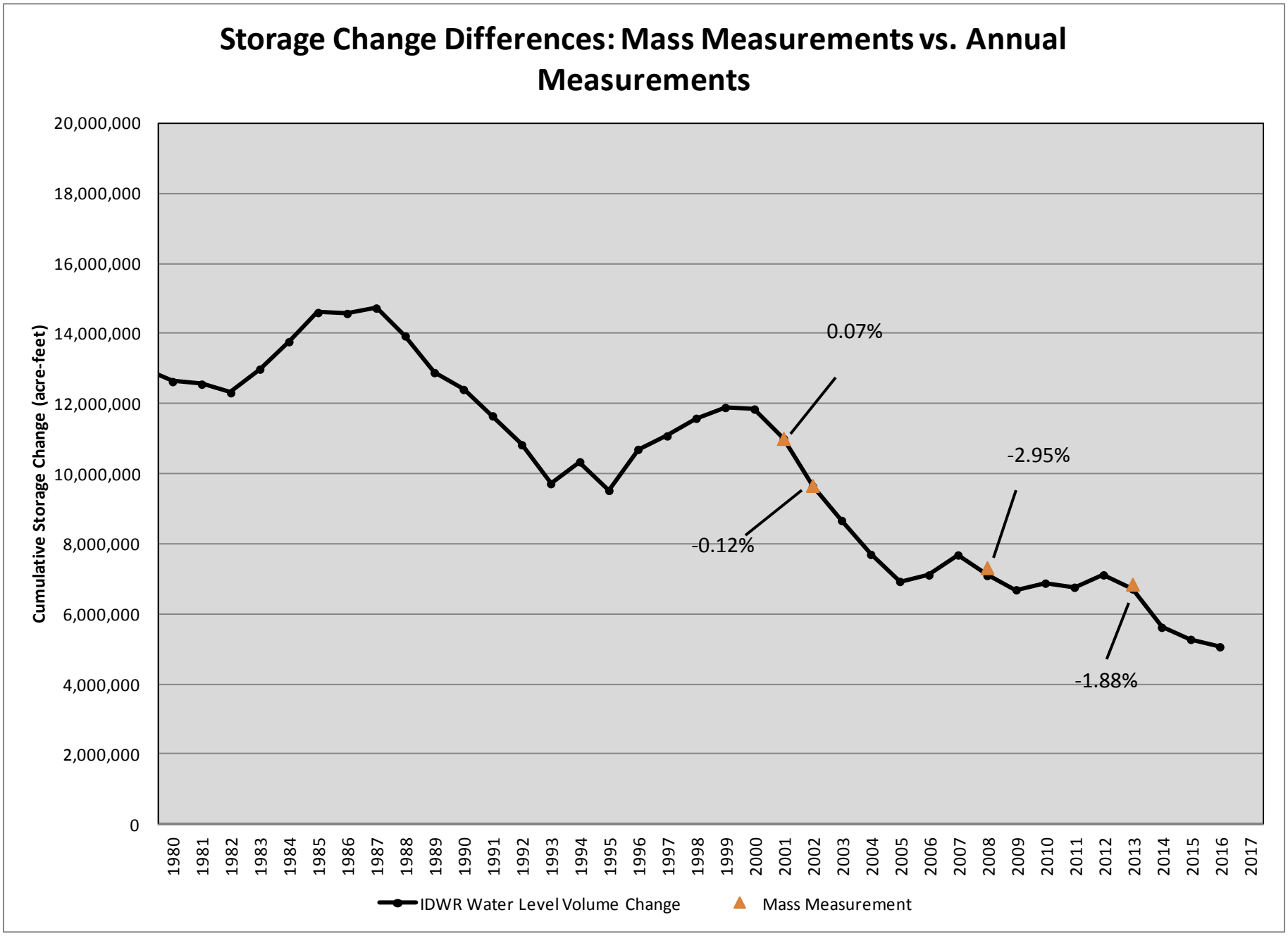


The 2015-2016 storage change = **-211,848** acre-feet
If the northeasternmost well is excluded



Water Budget Uncertainty, Continued

- There are uncertainties associated with using water levels to determine storage changes.
- Annual volume changes are likely more uncertain than mass volume changes due to the use of fewer wells.
- However, because the storage-change estimates resulting from mass measurement events are not certain, it is not possible to assign an error value to annual (or synoptic) measurements. We can only compare the mass-measurement and annual/synoptic estimates.


Storage Change Differences: Mass Measurements vs. Annual Measurements
Cumulative Storage Change (acre-feet)
20,000,000
18,000,000
16,000,000
14,000,000
12,000,000
10,000,000
8,000,000
6,000,000
4,000,000
2,000,000
0
1980
1981
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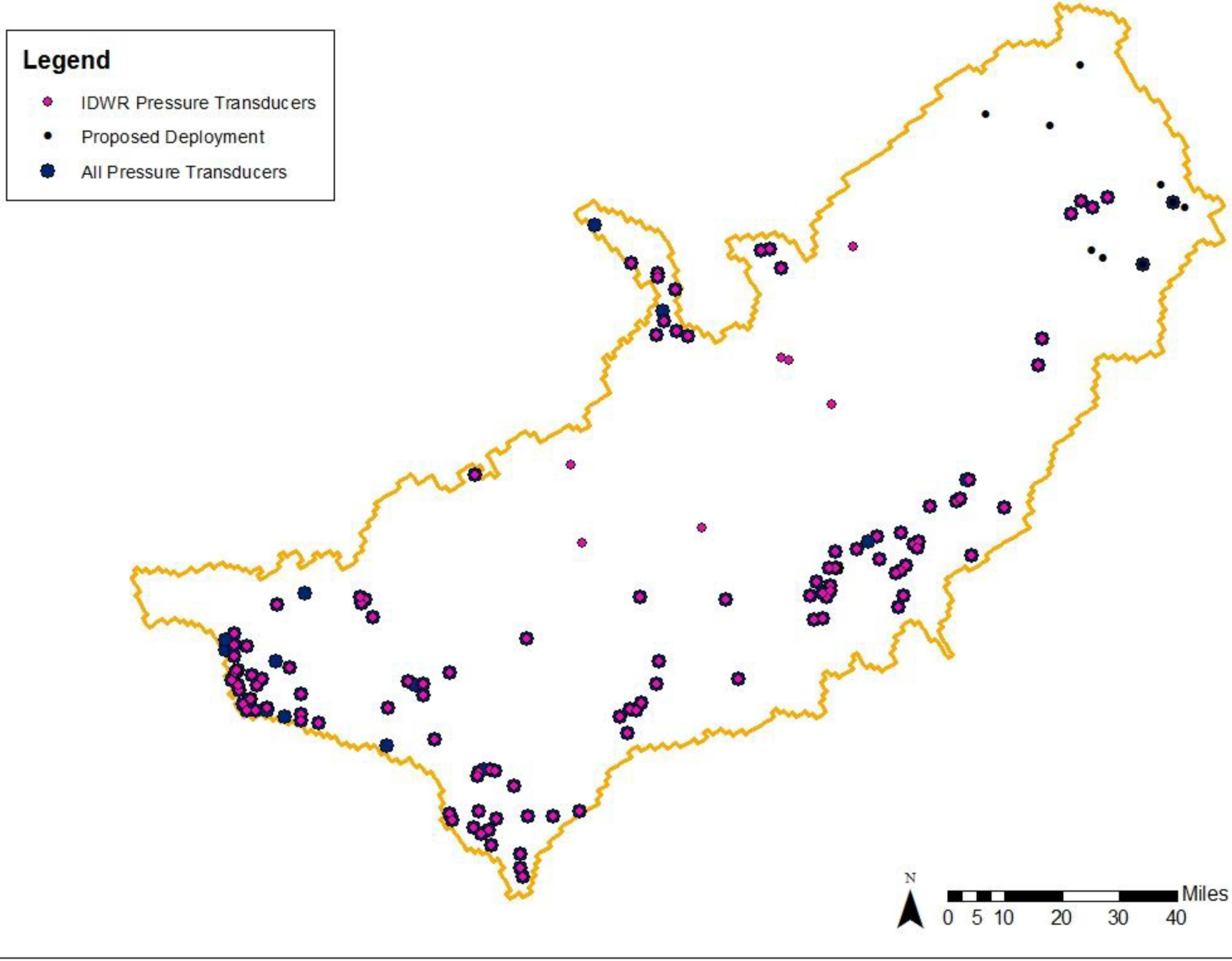
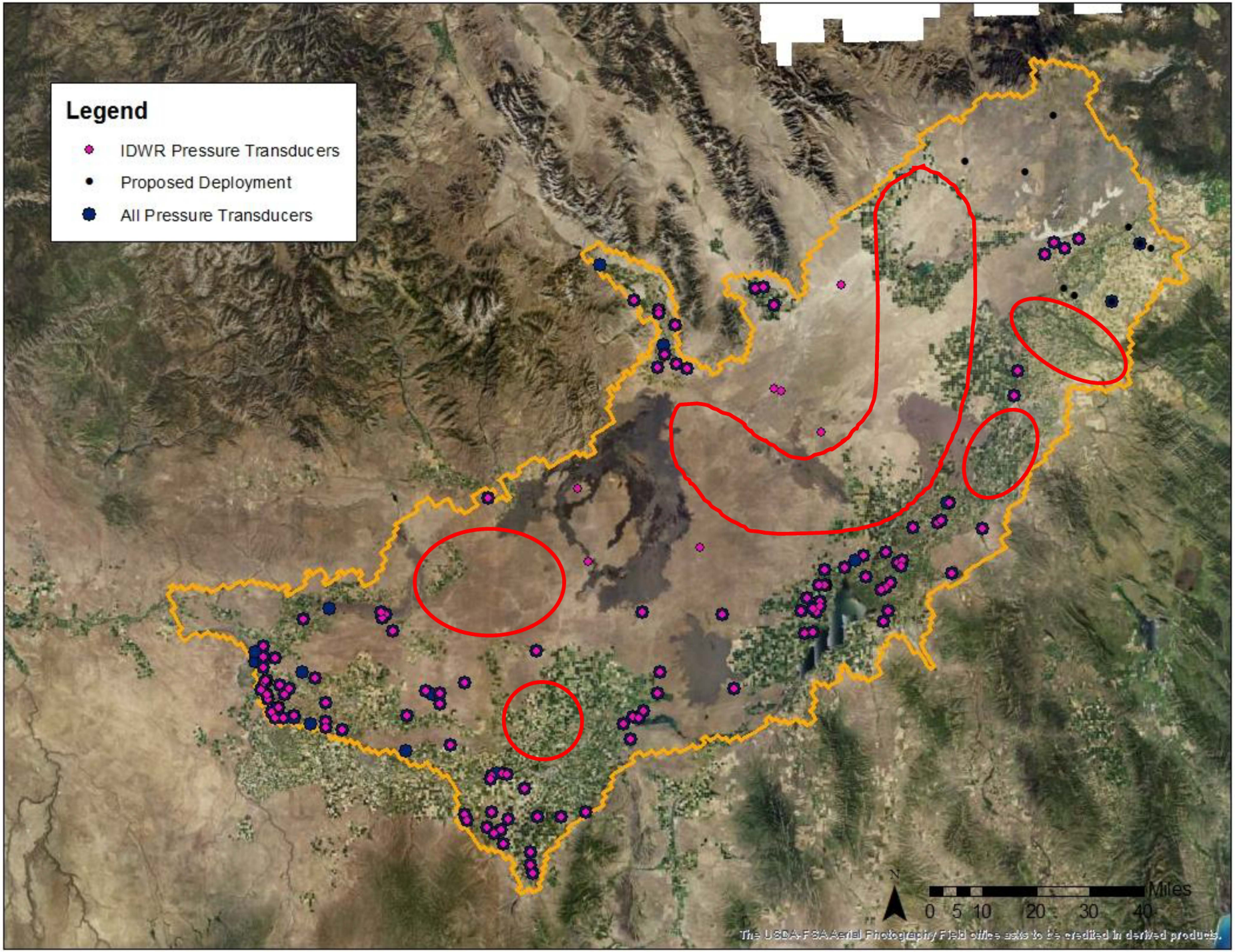
2009
2010
2011
2012
2013
2014
2015
2016
2017
0.07%
-0.12%
-2.95%
-1.88%
IDWR Water Level Volume Change
Mass Measurement

Reducing Uncertainty

- IDWR has been installing pressure transducers across the plain in an effort to bolster the reliability of storage-change estimates.
- Pressure transducers allow for temporal fidelity in choosing water-level measurements.
  - This allows for the selection of appropriate, pre-irrigation water-level measurements.
- We are quickly developing a network of instrumented wells, or a spatial framework, that will improve the "stability" of the storage-change estimates.
  - Although we will continue to rely on hand measurements, an appropriately distributed framework of transducers will minimize the impact of well-location variability.


Legend
IDWR Pressure Transducers
Proposed Deployment
All Pressure Transducers
N
Miles
0 5 10 20 30 40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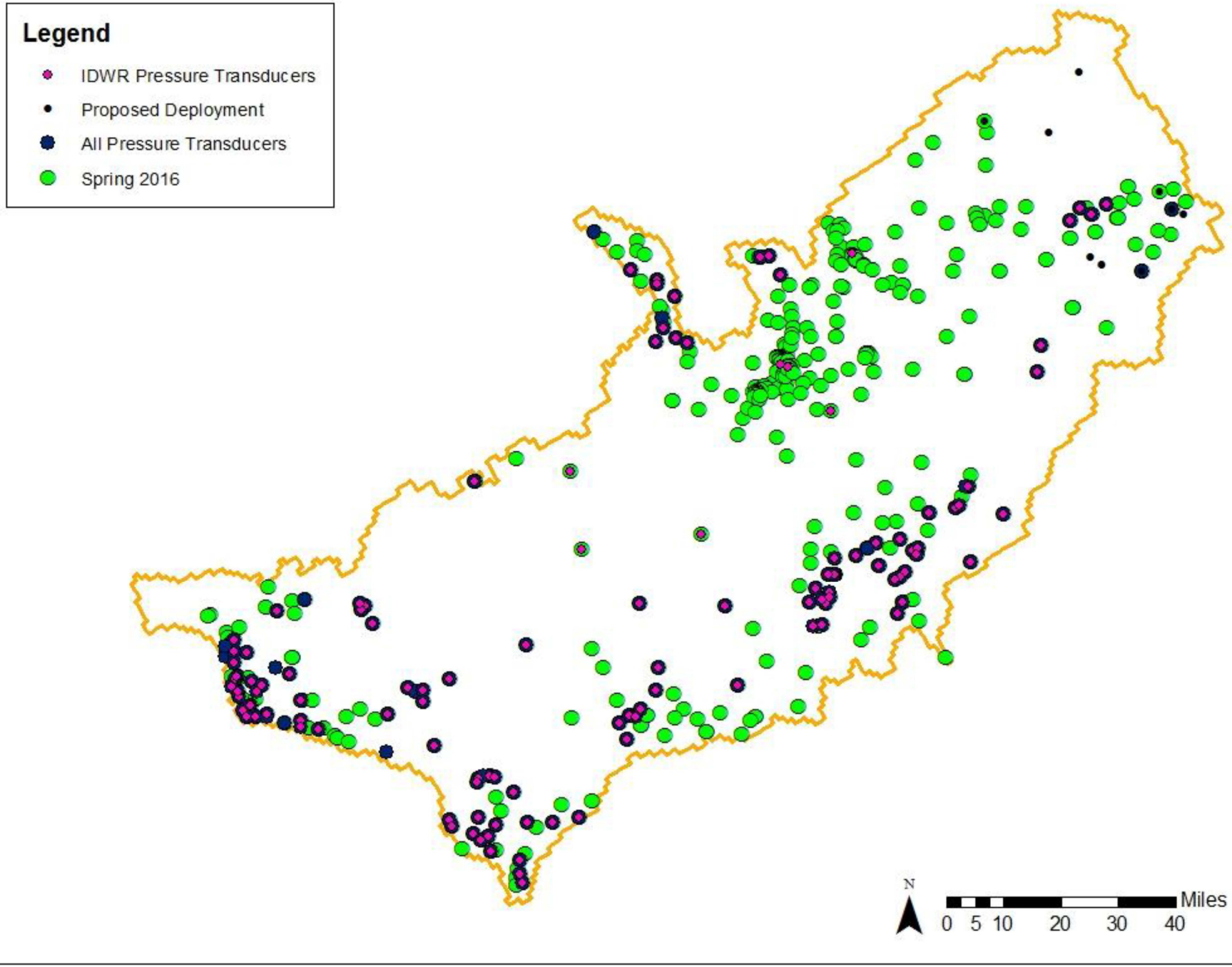
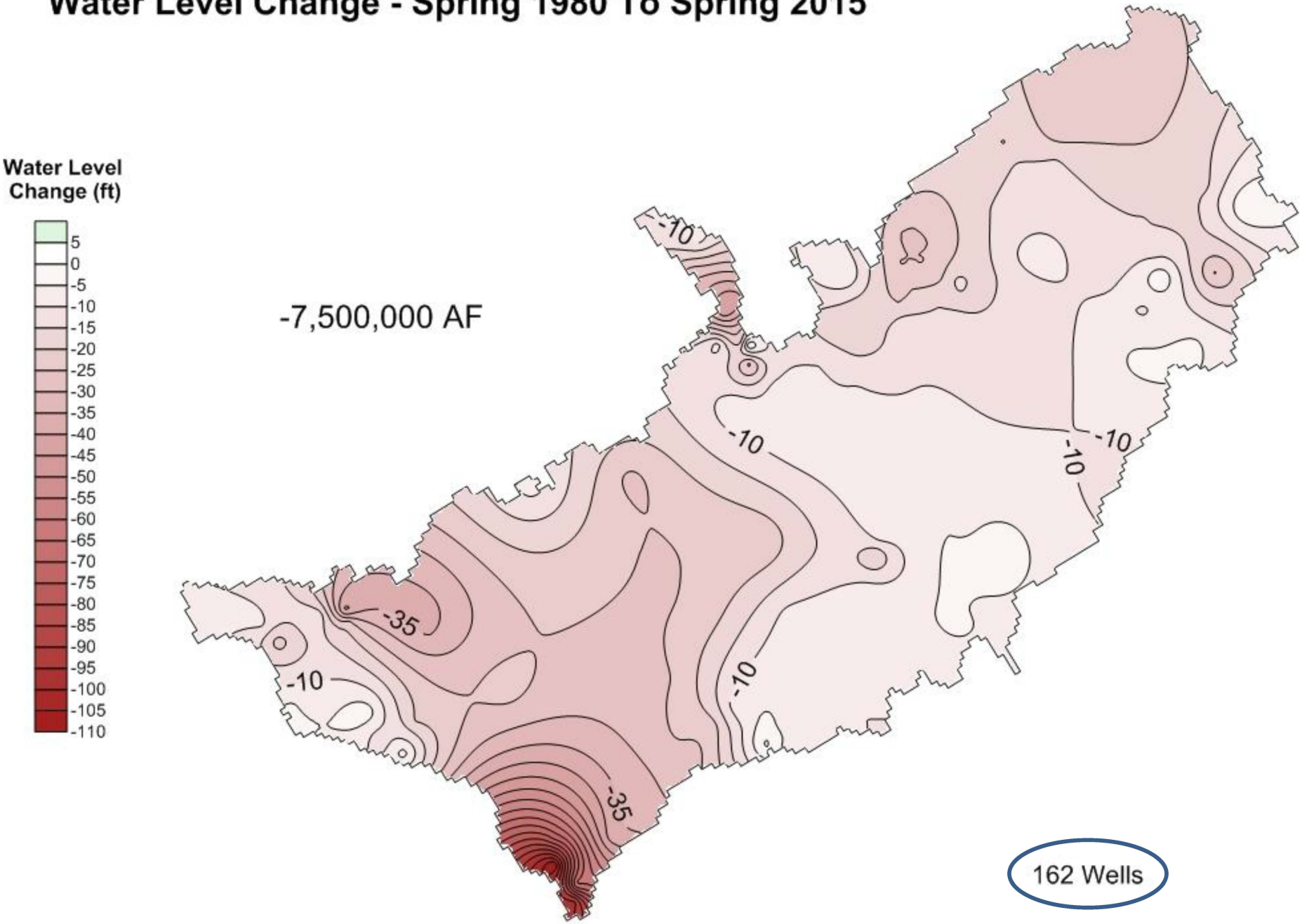
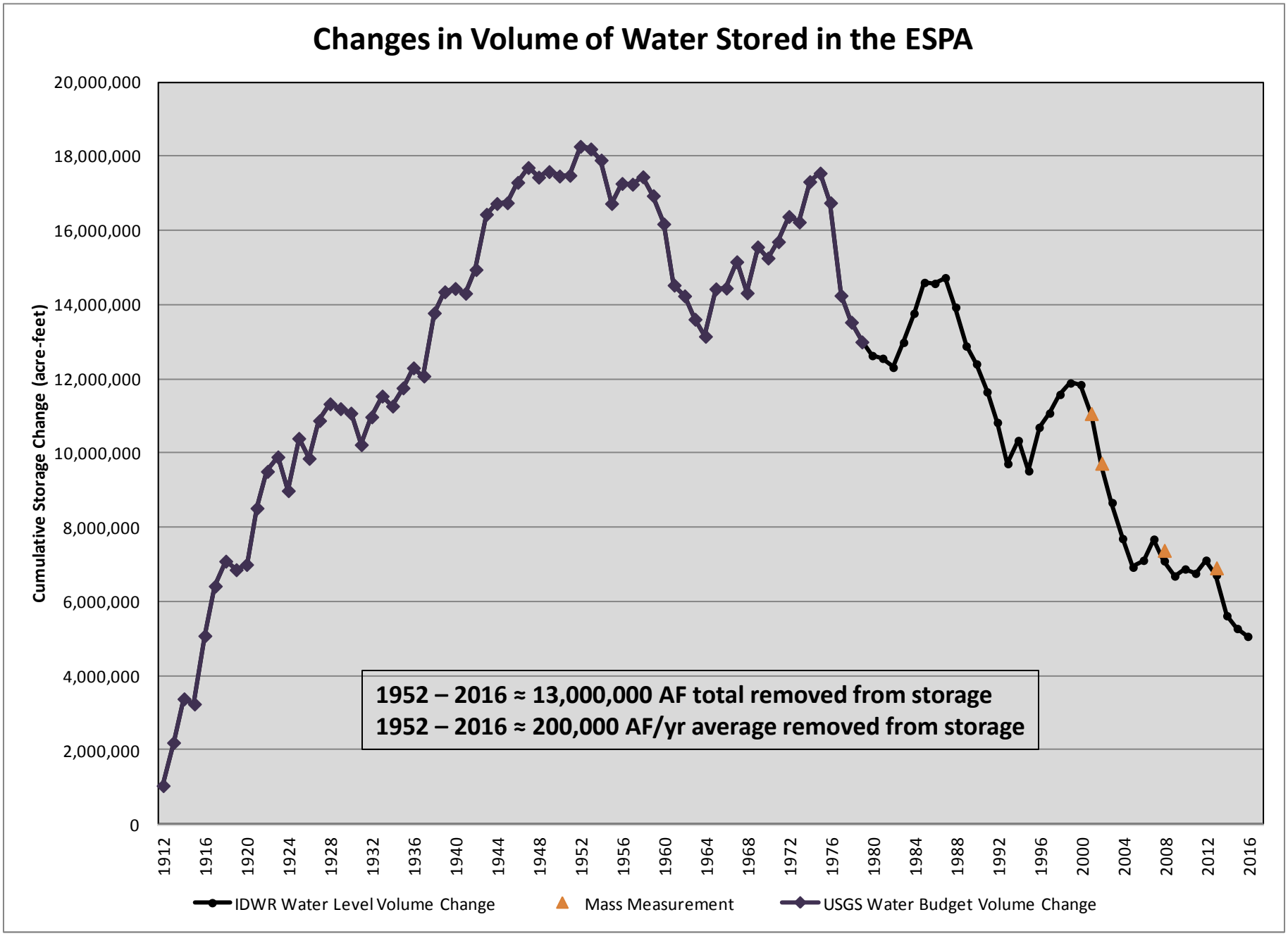
IDWR Pressure Transducers
Proposed Deployment
All Pressure Transducers
N
Miles
0 5 10 20 30 40
The USDA-FSA Aerial Photography Field Office asks to be credited in derived products.


Legend
IDWR Pressure Transducers
Proposed Deployment
All Pressure Transducers
Spring 2016
N
Miles
0 5 10 20 30 40

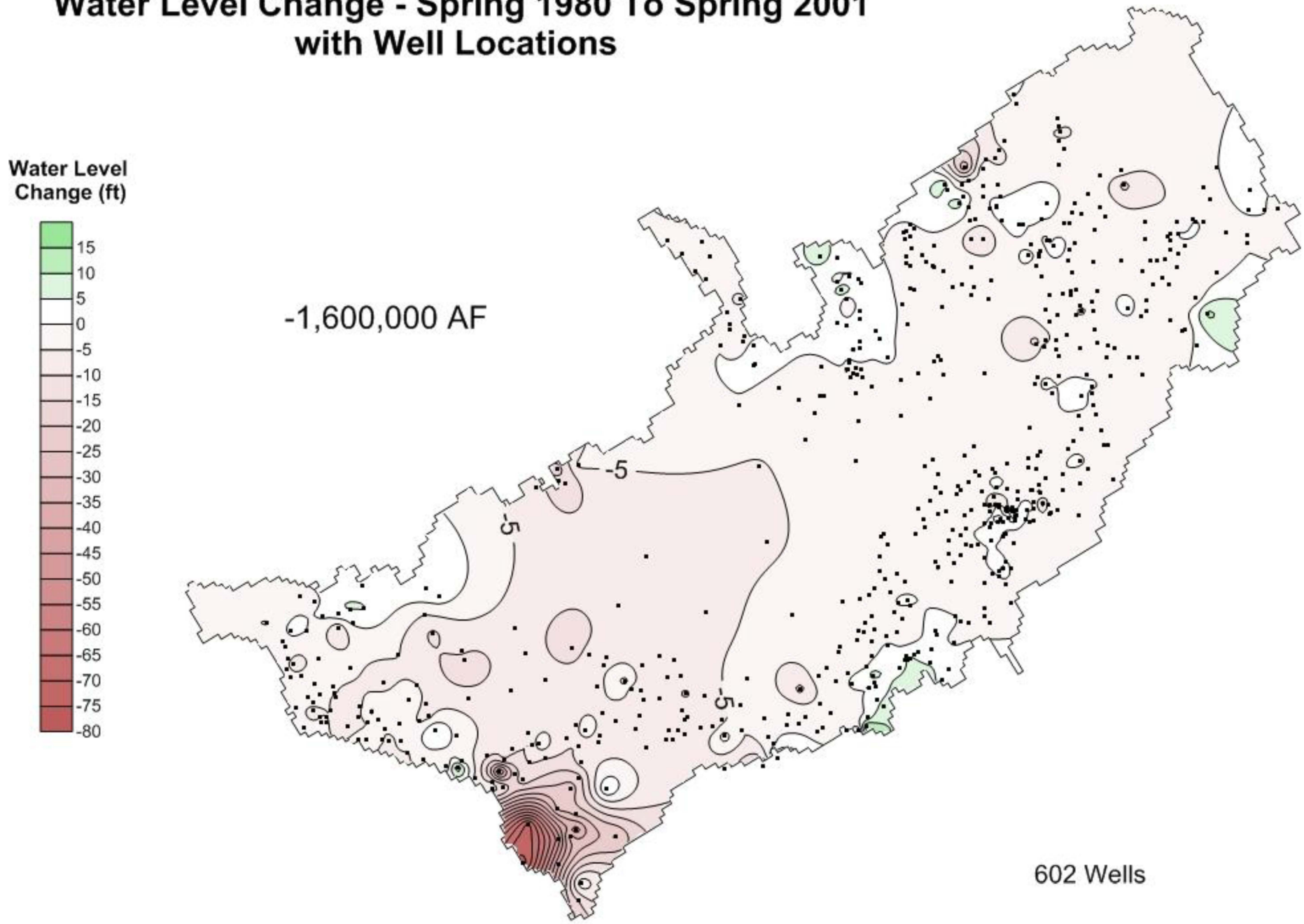
Water Level Change - Spring 1980 To Spring 2015



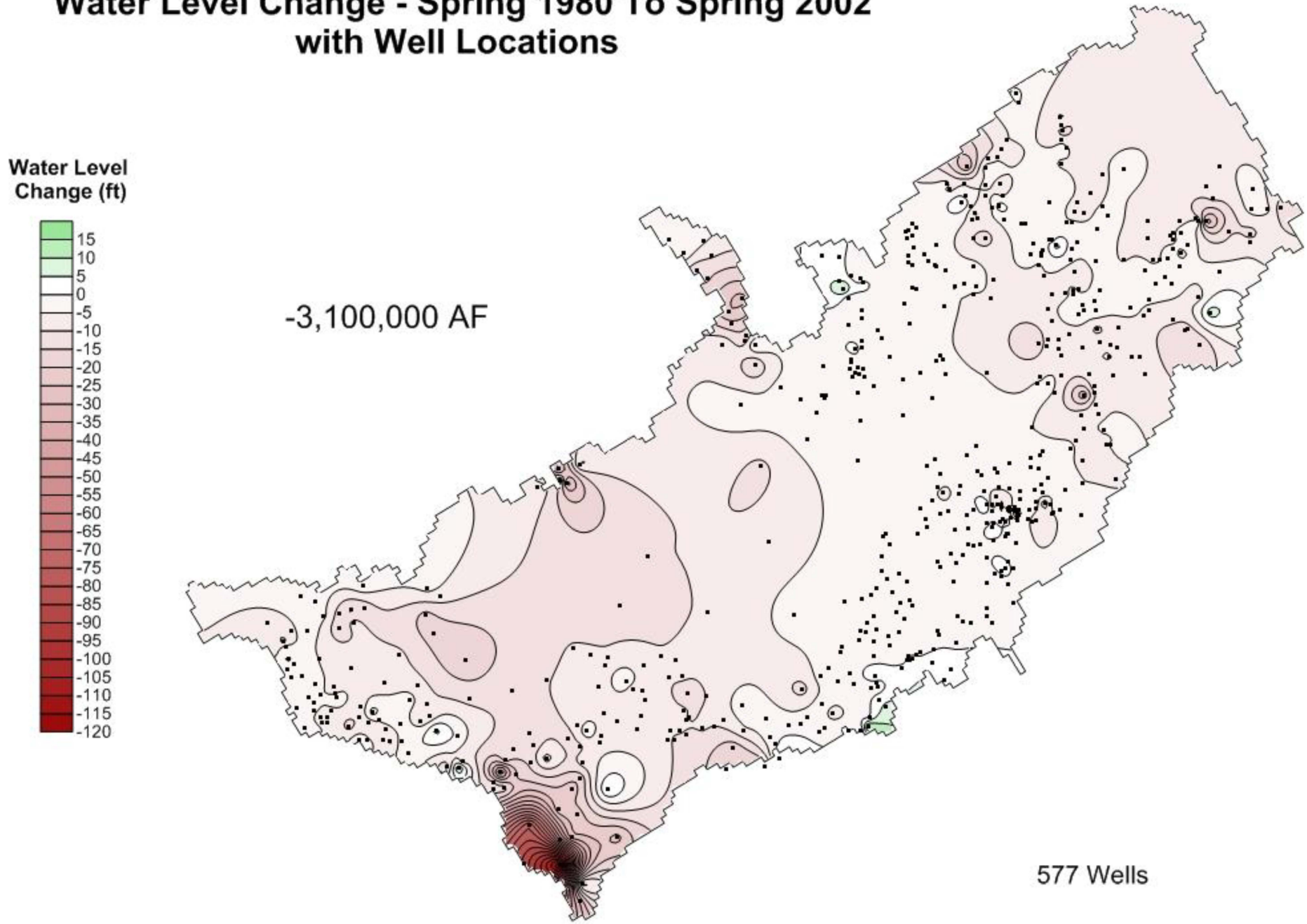

Changes in Volume of Water Stored in the ESPA
Cumulative Storage Change (acre-feet)
20,000,000
18,000,000
16,000,000
14,000,000
12,000,000
10,000,000
8,000,000
6,000,000
4,000,000
2,000,000
0
1912
1916
1920
1924
1928
1932
1936
1940
1944
1948
1952
1956
1960
1964
1968
1972
1976
1980
1984
1988
1992
1996
2000
2004
2008
2012
2016
1952 – 2016 ≈ 13,000,000 AF total removed from storage
1952 – 2016 ≈ 200,000 AF/yr average removed from storage
IDWR Water Level Volume Change
Mass Measurement
USGS Water Budget Volume Change

Discussion

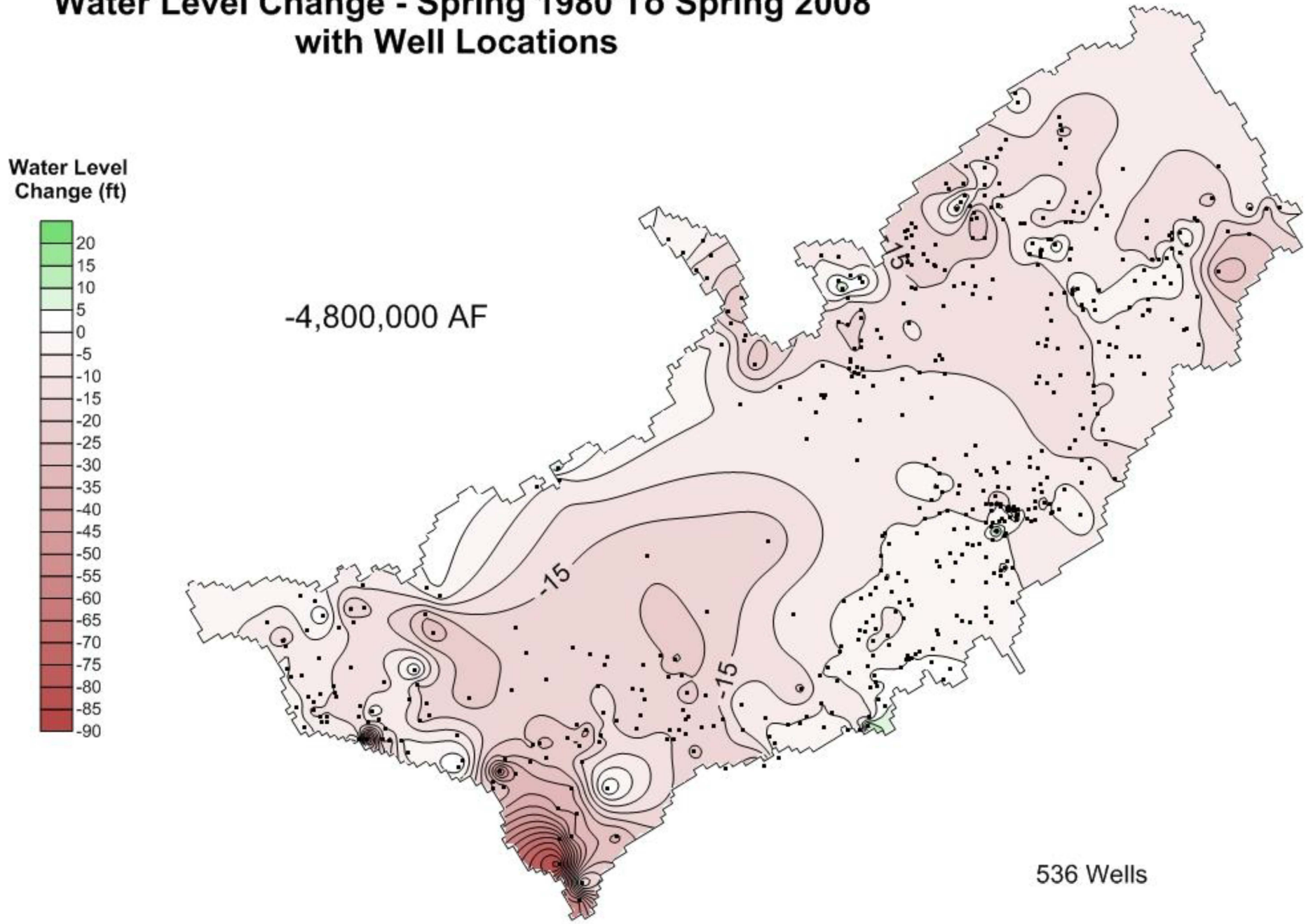
Water Level Change - Spring 1980 To Spring 2001 with Well Locations



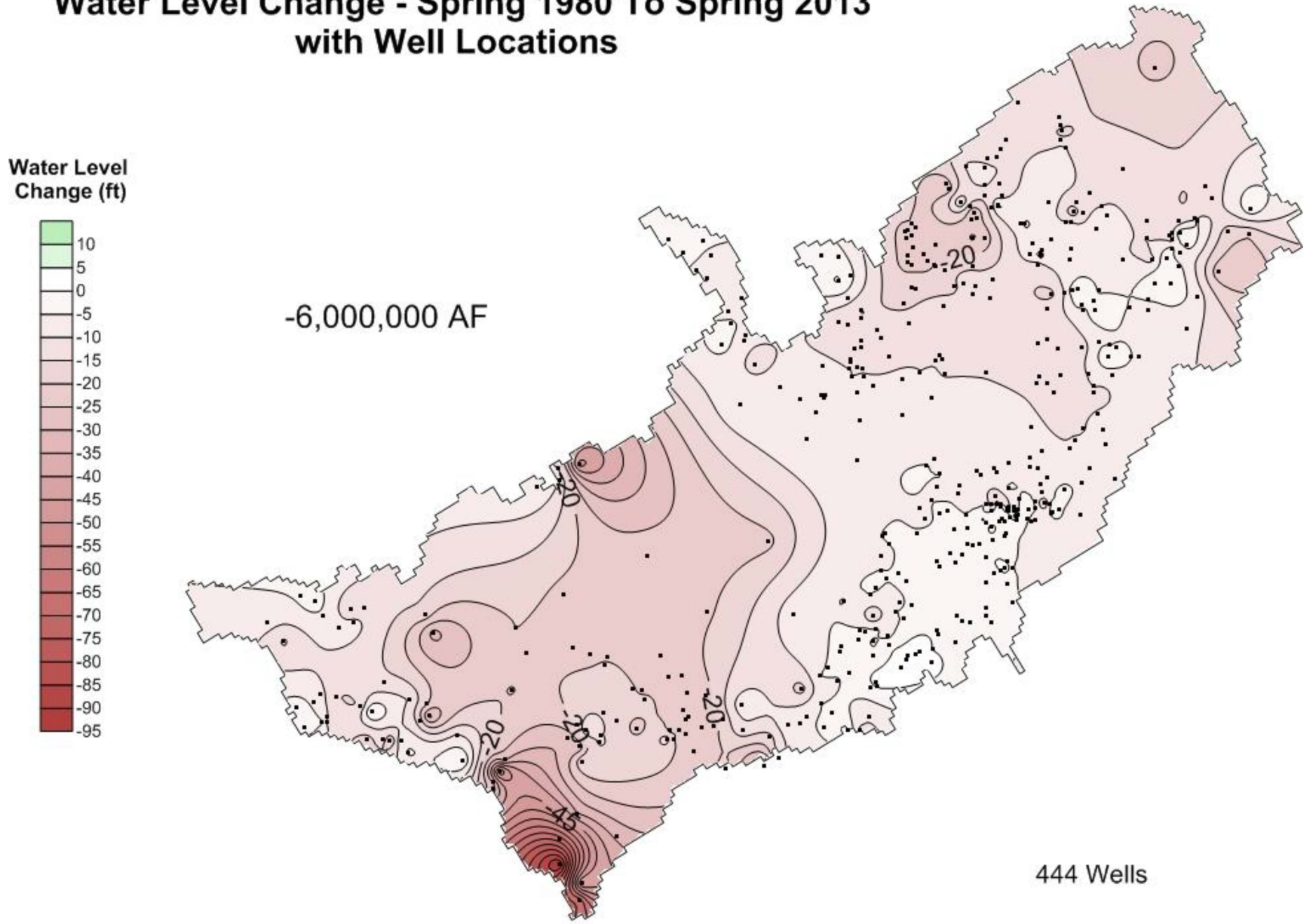
Water Level Change - Spring 1980 To Spring 2002 with Well Locations



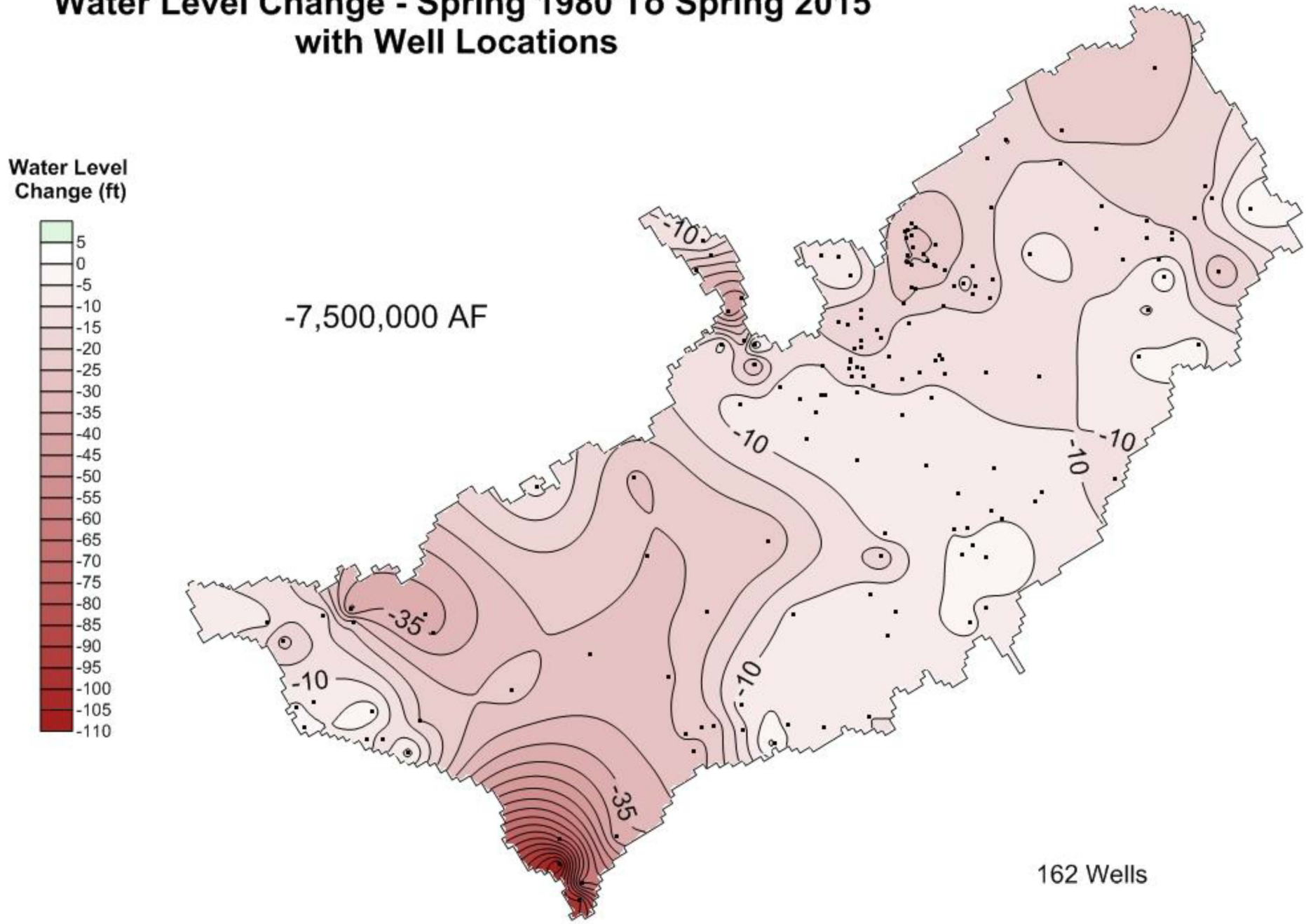
Water Level Change - Spring 1980 To Spring 2008 with Well Locations



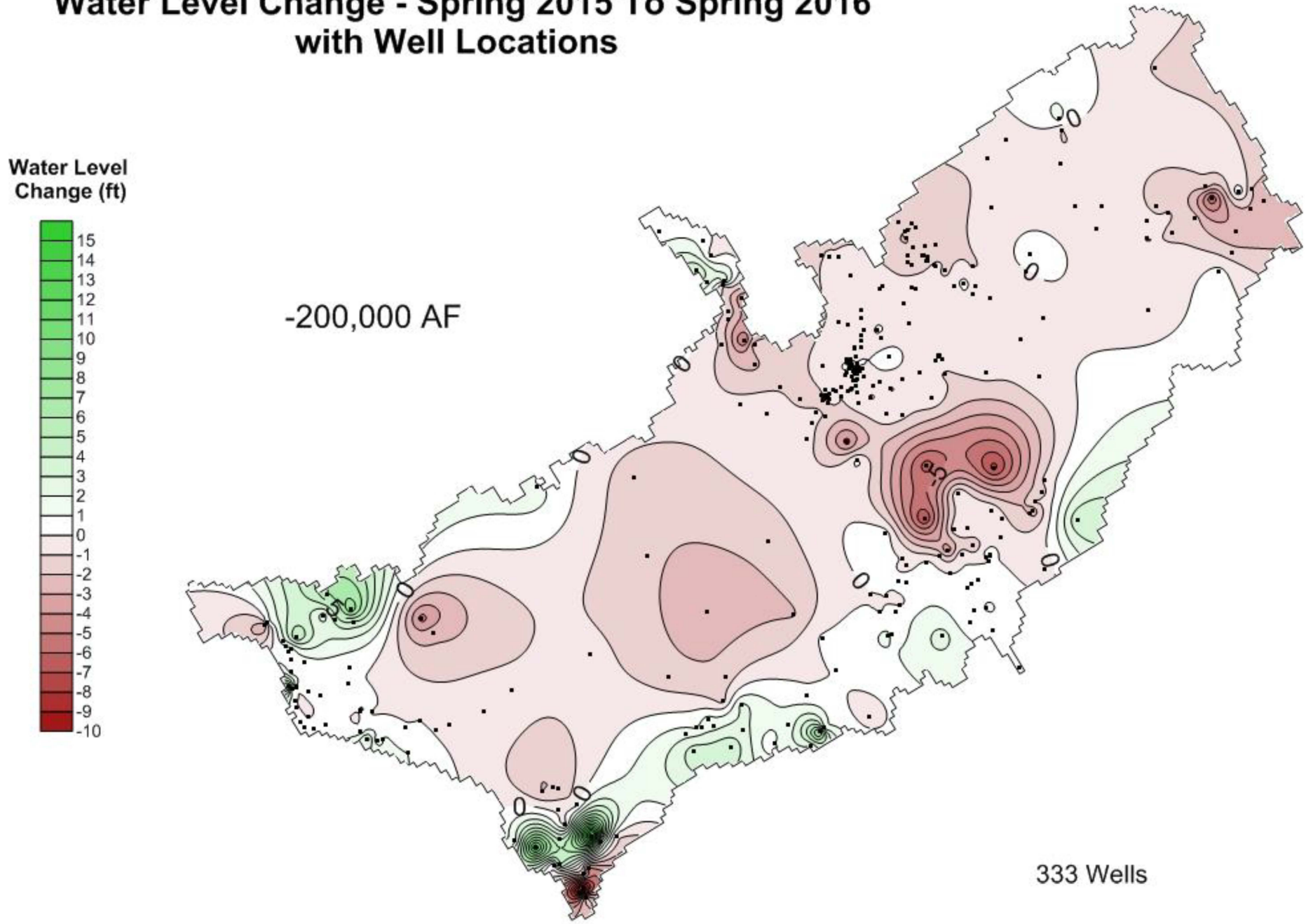
Water Level Change - Spring 1980 To Spring 2013 with Well Locations



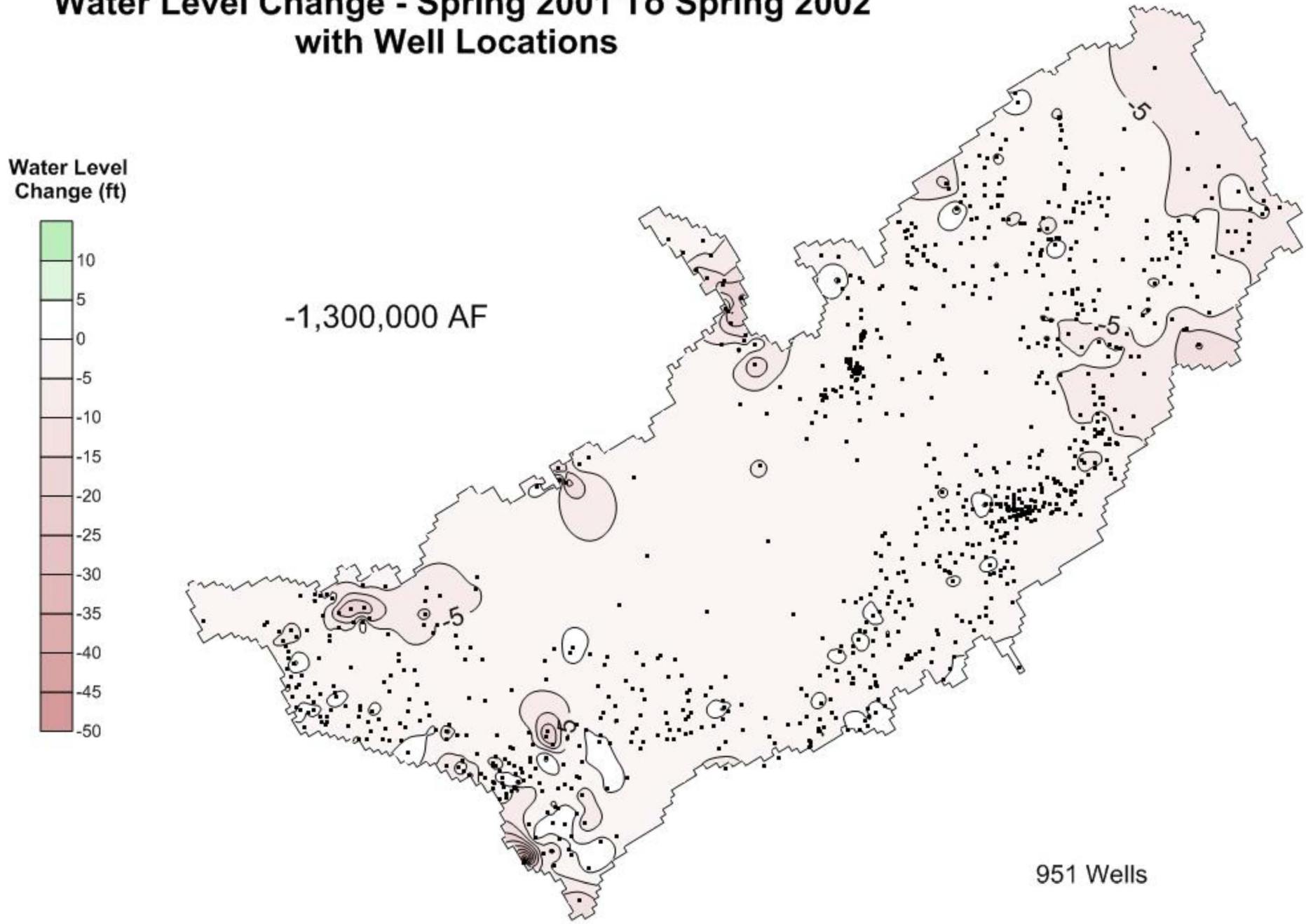
Water Level Change - Spring 1980 To Spring 2015 with Well Locations



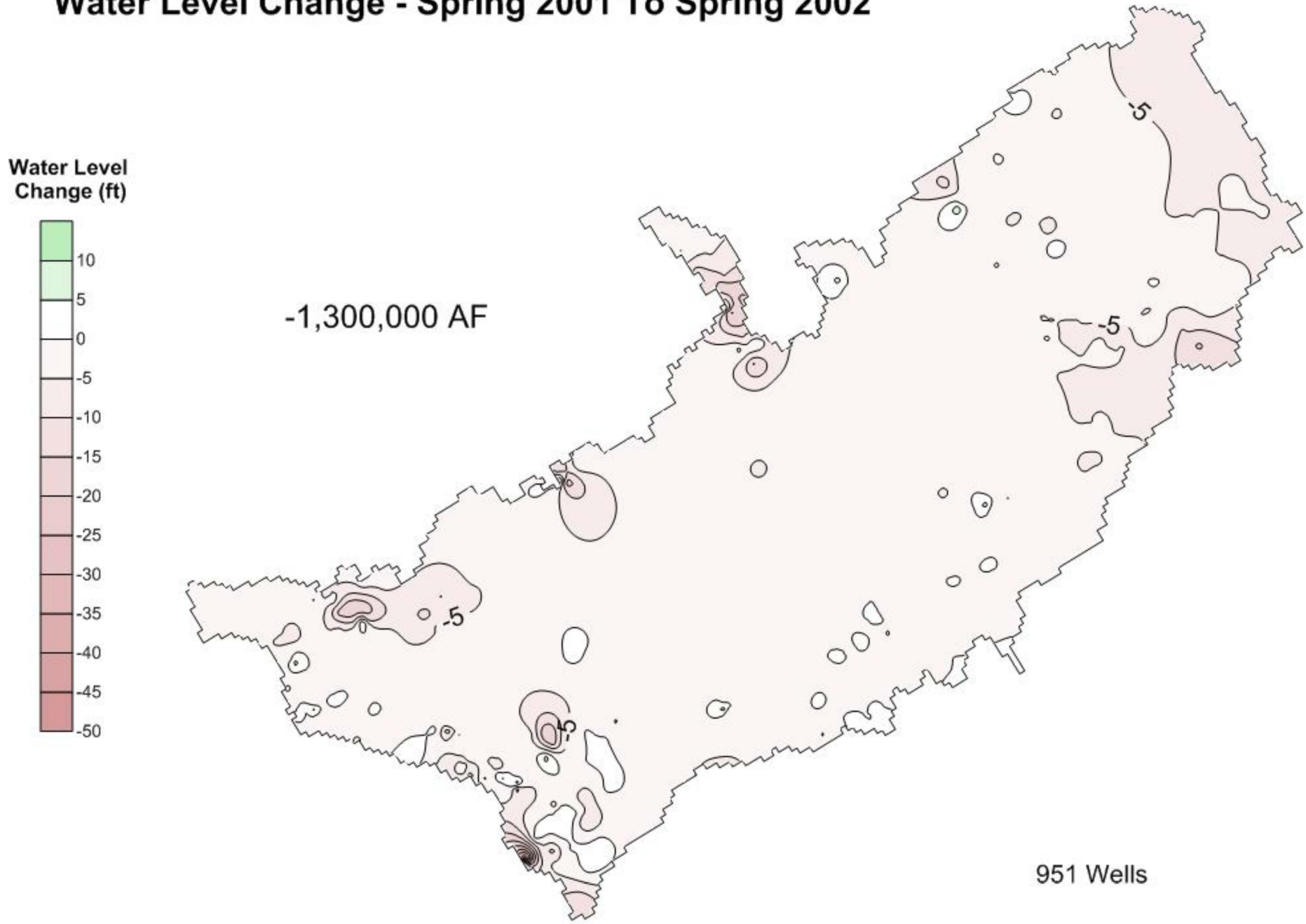
Water Level Change - Spring 2015 To Spring 2016 with Well Locations



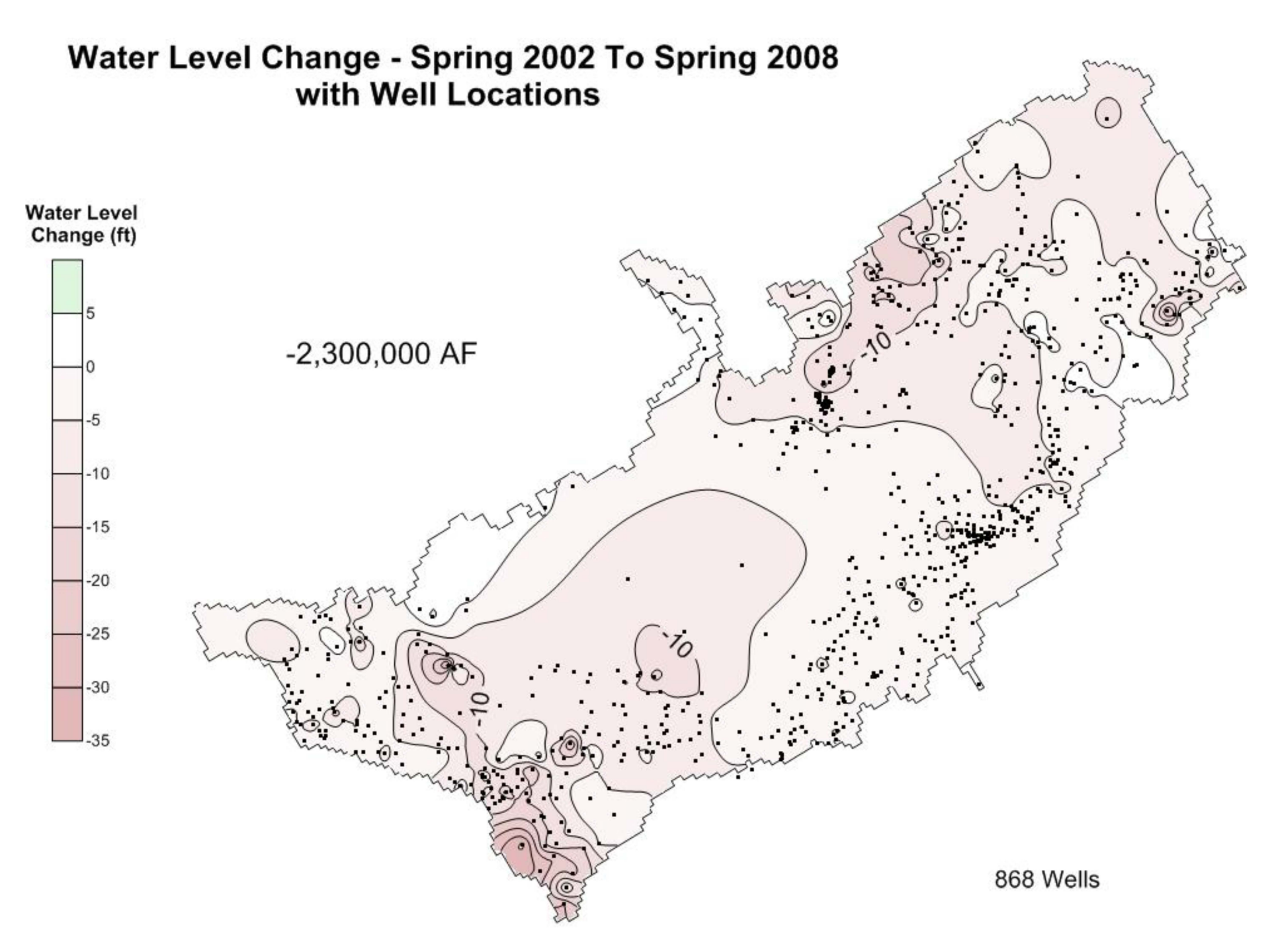
Water Level Change - Spring 2001 To Spring 2002 with Well Locations



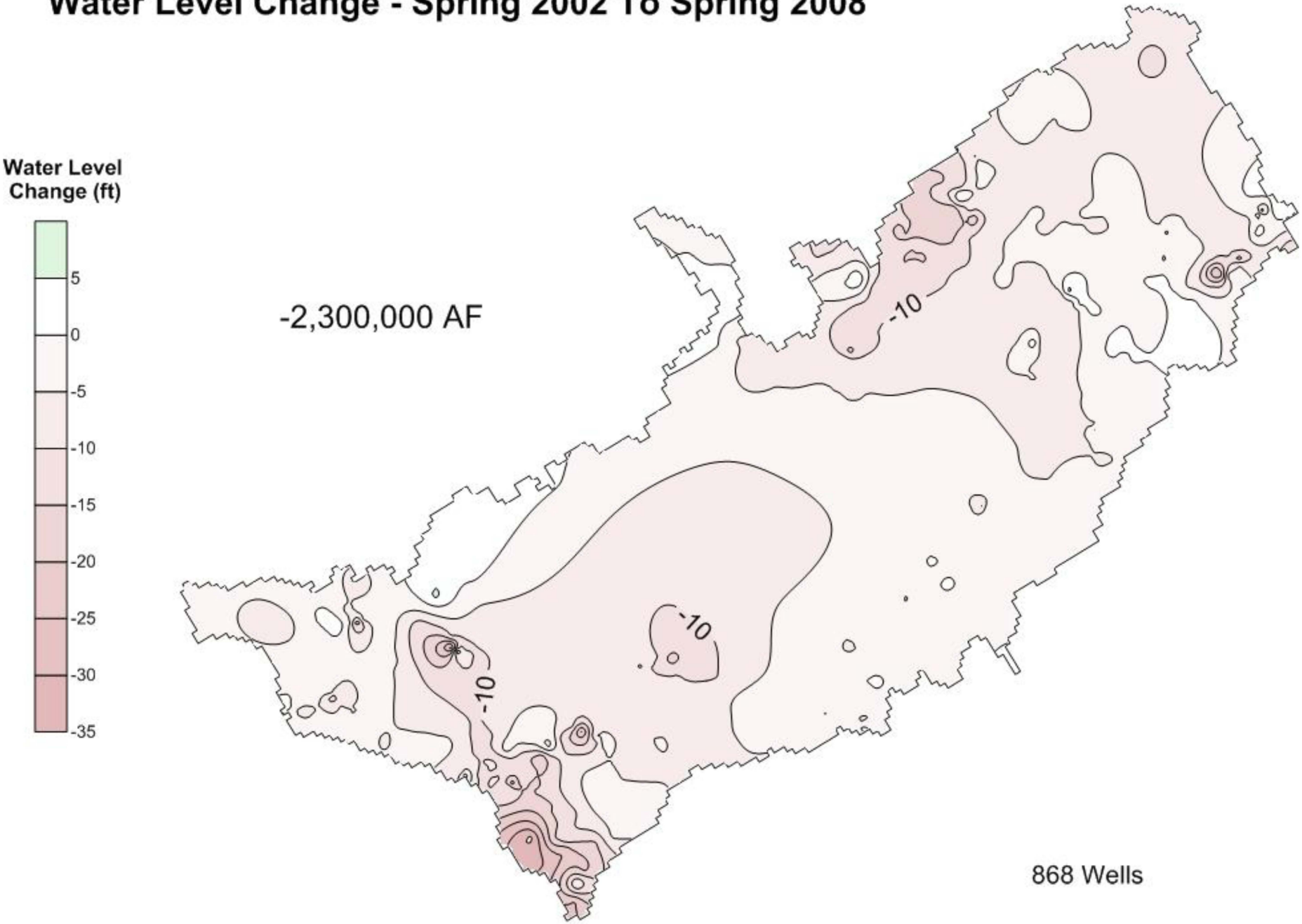
Water Level Change - Spring 2001 To Spring 2002



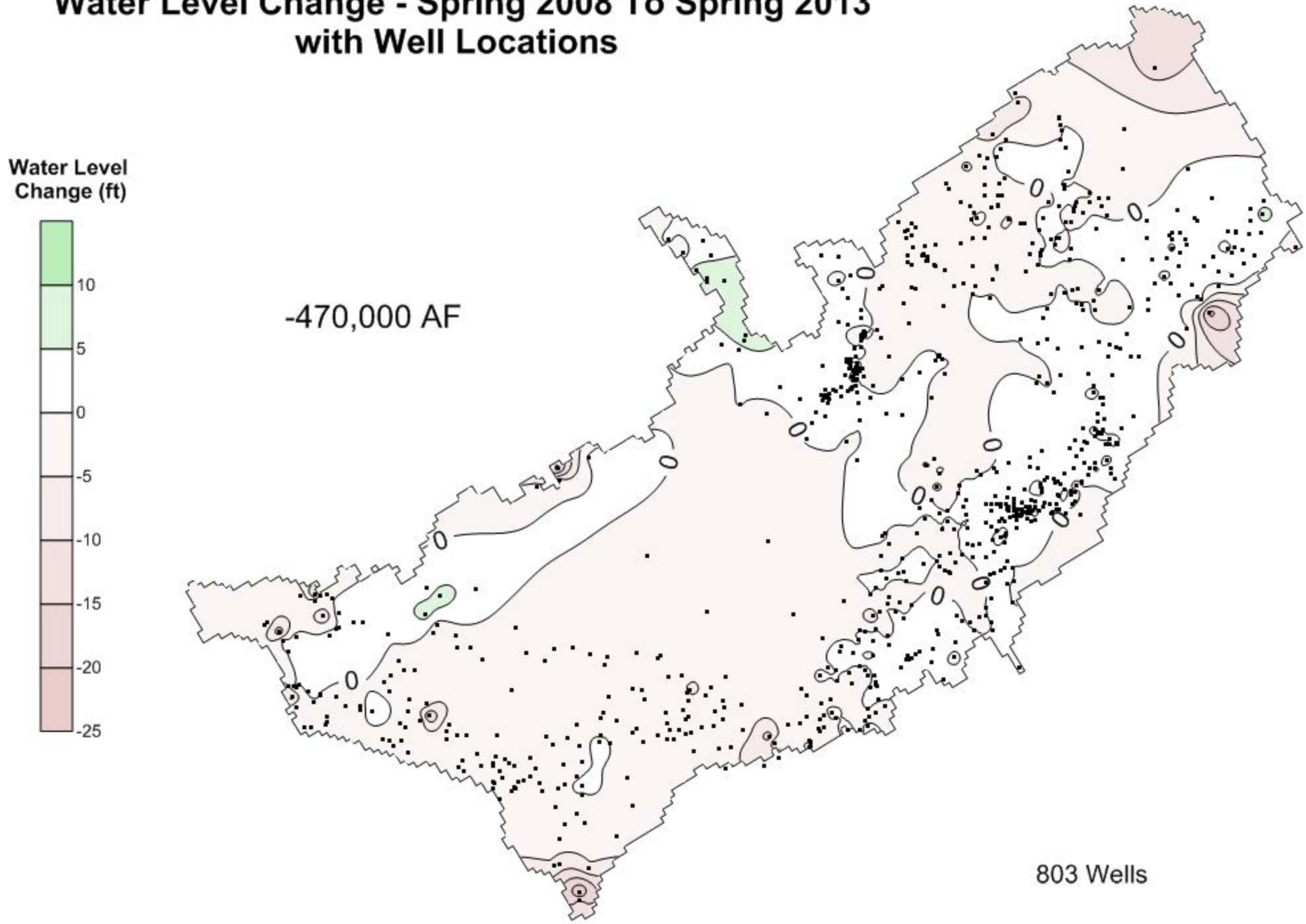
Water Level Change - Spring 2002 To Spring 2008 with Well Locations



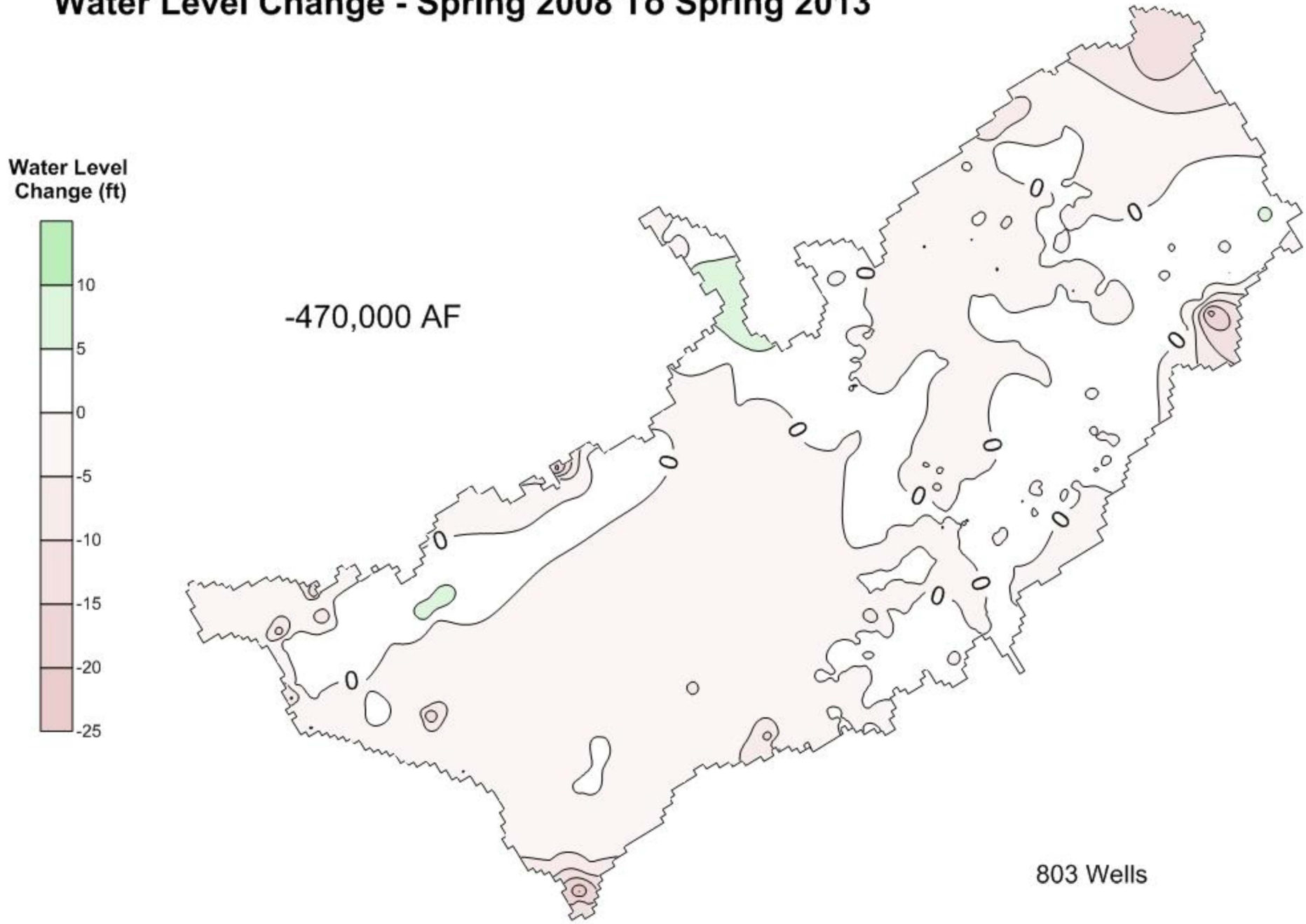
Water Level Change - Spring 2002 To Spring 2008



Water Level Change - Spring 2008 To Spring 2013 with Well Locations



Water Level Change - Spring 2008 To Spring 2013



MATERIALS MAY BE PROVIDED AT THE

IWRB MEETING

MEMO

To: Idaho Water Resource Board

From: Rick Collingwood

Date: August 29, 2016

Subject: North Side Canal Company - Loan Application

Action Item: $5,200,000.00 loan

1.0 INTRODUCTION

The North Side Canal Company (NSCC) is requesting a $5,200,000 loan from the Idaho Water Resource Board (Board) at 3.5% interest with a 20-year term to complete the North Side Main Canal Lining Project (Project). The Project includes lining approximately 4,200 lineal feet of the North Side Main Canal immediately downstream of the main head gates at Milner Dam.

The existing concrete lining was constructed in 1908 and 1909 and now requires significant annual maintenance and repair. In the past 3 years, NSCC has spent approximately $80,000 per year patching and repairing the cracked and settled areas of the canal lining. The existing concrete section of the Main Canal is degrading rapidly, undermining ongoing efforts to repair the lining. NSCC is concerned that failure of the deteriorated concrete could result in collapse of the underlying canal bank and discharge water back into the Snake River. Loss of the canal water would severely impact the water users dependent upon NSCC water for irrigation. Therefore, NSCC is pursuing a more comprehensive and sustainable solution to preserve the operation of the Main Canal.

CH2M was hired by NSCC to evaluate the concrete section of the canal and provide improvement recommendations to restore the integrity and extend the life of the existing canal lining. Several lining alternatives were detailed in the 'North Side Canal Company Canal Rehabilitation Project" report. The option selected by NSCC, based on cost and the anticipated construction timeline, includes stabilization of the existing canal lining as needed, and installation of two layers of geotextile fabric, a PVC liner, a layer of reinforced concrete, and drain pipes above and below the PVC liner to collect and remove drainage. This option is also designed to protect the PVC liner from wear associated with the existing concrete lining, UV radiation, and vandalism.

On August 19, 2016, the North Side Canal Company Board passed a resolution authorizing NSCC to seek a loan or other indebtedness necessary to finance the Main Canal lining project.

2.0 PROPOSED PROJECT

The North Side Canal Company, established in 1907, is comprised of approximately 2,200 shareholders and operates an irrigation canal system that diverts water from the Snake River at the Milner Dam to irrigate approximately 160,000 acres of farm land in Jerome, Gooding, and Elmore Counties. The project site is located between the main head gates at the Milner Dam and the N. 5250 E. bridge (See Site Map, pg 4).

The project includes repair and reconstruction of approximately 4,200 lf of canal lining of the North Side Main Canal. The total project cost estimate is $5,200,000. Construction is scheduled to begin in the Fall of 2016, with completion in the Spring of 2019. The project includes the following canal lining improvements:

- Stabilization of existing concrete lining
- Installation of geotextile fabrics
- Installation of PVC geomembrane liner
- Installation of 6" thick reinforced concrete cap on canal bottom
- Installation of 4" thick reinforced concrete cap on canal side walls

NSCC proposes to finance the project using funds from a Board loan.

3.0 BENEFITS

There are a number of anticipated benefits from the project for NSCC. This project will improve the long-term structural integrity of the Main Canal and reliability of water delivery to NSCC's shareholders and the hydroelectric facilities located within NSCC's canal conveyance system. It will also significantly reduce annual maintenance costs of the canal system.

4.0 FINANCIAL ANALYSIS

NSCC is requesting a loan of $5,200,000 at 3.5% interest for a 20-year term. The following analysis reflects the Board's current interest rate of 3.5% for this type of project. Currently, the NSCC shareholders are assessed a water user rate of $25 per share. An increase in the assessment is not anticipated at this time.

Payment Analysis

Term (Years)	Estimated Annual Payment-Revolving Account Loan	Current Assessment Cost/Share/Year	After Assessment Cost/Share/Year
10	$625,255.11	$25.00	$28.91
15	$451,490.36	$25.00	$27.82
20	$365,877.60	$25.00	$27.29
25	$315,504.98	$25.00	$26.97

Note: Calculations in this table are based on the number of acres ~ 160,000. Total number of shares is 160,348, or approximately 1 share per acre.

Loan History:

To date, NSCC has not requested a loan from the IWRB.

5.0 WATER RIGHTS

North Side Canal Company water rights are as follows:

WATER RIGHT	SOURCE	FLOW (cfs)	WATER USE	BASIS	PRIORITY DATE
	(See Attachment)				

6.0 SECURITY

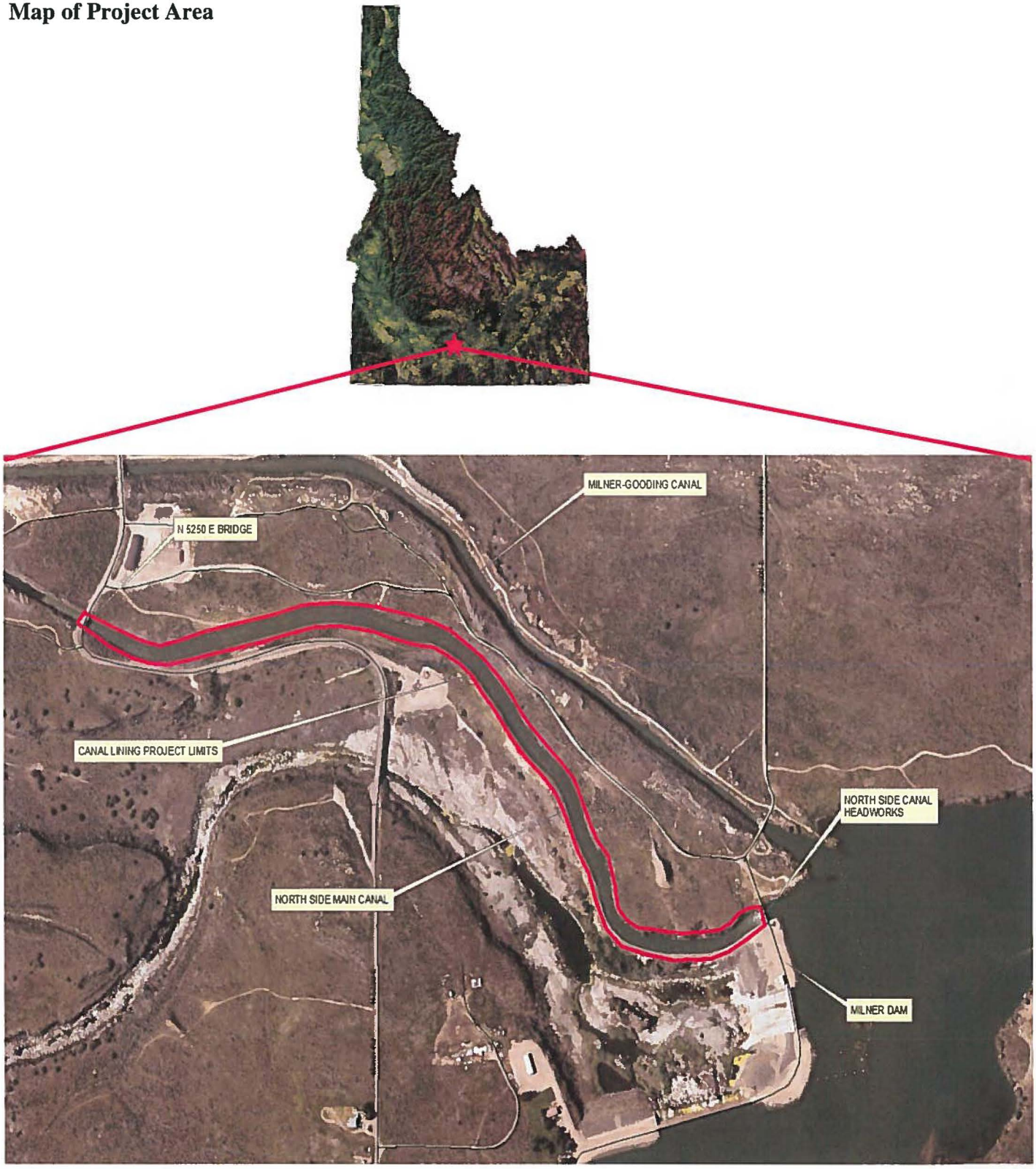
The IWRB is authorized to hold NSCC's water rights, irrigation facilities, equipment, and all materials associated with this project as collateral for the loan.

7.0 CONCLUSION AND RECOMMENDATION

This loan will be used to construct a lining system in the Main Canal to improve the integrity of the existing concrete section of the Main Canal for delivering irrigation water to NSCC's shareholders.

The NSCC Main Canal lining project will benefit NSCC, their shareholders, and the hydroelectric facilities by extending the life of this concrete section of the Main Canal, and providing a reliable long-term water delivery system without the costly annual maintenance to the existing concrete section of the Main Canal. Staff recommends approval of the requested loan.

Map of Project Area



BEFORE THE IDAHO WATER RESOURCE BOARD

IN THE MATTER OF THE NORTH SIDE CANAL COMPANY, LTD	))	A RESOLUTION TO MAKE A FUNDING COMMITMENT
	)	MAIN CANAL LINING PROJECT

WHEREAS, the North Side Canal Company, Ltd. (Company) submitted a loan application to the Idaho Water Resource Board (IWRB) in the amount of $5,200,000 for a canal lining project; and

WHEREAS, the Company operates and maintains an irrigation canal system to deliver irrigation water to approximately 160,000 acres of farmland in Jerome, Gooding, and Elmore Counties; and

WHEREAS, significant annual costs are incurred by the Company to patch and repair cracks and settled areas due to the instability of the existing concrete section in the Company's Main Canal immediately downstream of its primary headworks at the Milner Dam; and

WHEREAS, the Company has concerns that failure of the deteriorated concrete section could result in significant damage to the canal and underlying bank as well as considerable water loss from the canal system; and

WHEREAS, over the next three (3) years, the Company proposes to install 4,200 lineal feet of new canal lining over the existing concrete section of the Main Canal; and

WHEREAS, the canal lining project includes the stabilization of the existing concrete section and canal liner as needed, and installation of a new canal liner and drain pipes; and

WHEREAS, the Company will use the loan funds to install a new canal liner in the Main Canal to improve the integrity and longevity of the existing concrete section, and reduce annual maintenance costs; and

WHEREAS, the Company is a qualified applicant and the proposed project qualifies for a loan from the Revolving Development Account; and

WHEREAS, the proposed project is in the public interest and is in compliance with the State Water Plan.

NOW THEREFORE BE IT RESOLVED that the IWRB approves a loan not to exceed $5,200,000 from the Revolving Development Account at 3.5% interest with a 20-year repayment term and provides authority to the Chairman of the Idaho Water Resource Board, or his designee, to enter into contracts with the Company on behalf of the IWRB.

BE IT FURTHER RESOLVED that this resolution and the approval of the loan are subject to the following conditions:

1) The Company shall comply with all applicable rules and regulations that apply to the proposed project.

2) The Company shall provide acceptable security for the loan to the IWRB including but not limited to the Company's water rights and canal system facilities.

3) The Association shall establish a reserve account in an amount equal to one annual payment.

DATED this 16th day of September, 2016.

_____
ROGER W. CHASE, Chairman
Idaho Water Resource Board

ATTEST _____
VINCE ALBERDI, Secretary

IDAHO WATER RESOURCE BOARD
322 East Front Street, Statehouse Mail
Boise, Idaho 83720
Tel: (208) 287-4800
FAX: (208) 287-6700

APPLICATION FOR FINANCIAL ASSISTANCE FOR NON-POTABLE WATER SYSTEM CONSTRUCTION PROJECT

Answer the following questions and provide the requested material as directed. All pertinent information provided. Additional information may be requested by the Idaho Water Resource Board (IWRB) depending on the scope of the project and amount of funding requested. For larger funding amounts an L.I.D. may be required.

Incomplete documents will be returned and no further action taken will be taken by IWRB staff. All paperwork must be in twenty eight (28) working days prior to the next bi-monthly Board meeting.

Board meeting agendas can be found at: http://www.idwr.idaho.gov/waterboard/

I. Prepare and attach a "Loan Application Document".

The Loan Application Document requirements are outlined in the Water Project Loan Program Guidelines. The guidelines can be found at: http://www.idwr.idaho.gov/waterboard/Financial%20program/financial.htm. You can also obtain a copy by contacting IWRB staff.

II. General Information:

A. Type of organization: (Check box)

- ☐ Irrigation District
- ☒ Canal/Irrigation Company
- ☐ Lateral Association
- ☐ Flood Control District
- ☐ Homeowners Association
- ☐ Water User's Association
- ☐ Municipality
- ☐ Reservoir Company
- ☐ Other

Explain: _____

North Side Canal Co., Ltd.
Organization name

Alan W. Hansten, Manager
Name and title of Contact Person

921 N. Lincoln
PO Box/Street Address

(208) 324-2319
Contact telephone number

Jerome, Jerome, Idaho, 83338
City, County, State, Zip Code

ahansten@cableone.net
e-mail address

Project location legal description: T. 10S., R. 21E., Section 29

B. Is your organization registered with the Idaho Secretary of State's office? Yes ☒ No ☐

C. Purpose of this loan application.

- ☐ New Project
- ☒ Rehabilitation or replacement of existing facility
- ☐ DEQ requirement
- ☐ Other: _____

D. Briefly describe the project:

This project will line approximately 4,200 feet of the existing concrete North Side main canal immediately downstream of the main gates at Milner Dam.

III. WATER SYSTEM:

A. Source of water:

- ☒ Stream
- ☒ Reservoir
- ☐ Groundwater
- ☐ Other

B. Water Right Numbers:

Water Right	Stage	Priority Date	Source	Amount
		See Appendix B of Loan	Document Narrative	

Note: Stage refers to how the water right was issued. (License, Decree, or Permit)

C. If irrigation/lateral system:

Number of acres served: Approximately 160,000

Number of shareholders served: Approximately 2,200

Water provided annually (acre-feet): 1,044,000

D. If flood control system, drainage system, groundwater recharge, or other type of system:

Number of acres within District or service area: N/A

Number of people within District or service area: N/A

E. If an Association/Municipality the number of residences served by the system:

Number of residences served: N/A

Number of hookups possible: N/A

IV. USER RATES:

A. How des your organization charge users rates?

- ☐ Per acre
- ☐ Per hook up
- ☒ Per share
- ☐ Tax assessment

Explain what a share is: A share is 5/8" of a Miner's-Inch at 100% delivery.

- ☐ Other, explain _____

B. Current rate? $ 25 per Share
(Share, hook-up, month, year, etc)

C. When was the last rate change? October 2012 (month/year)

D. Does your organization measure water use? Yes ■ No ☐
If yes, explain how: Submerged orifices and weirs.

E. Does you organization have a regular assessment for a reserve fund? Yes ☐ No ■
If yes, explain how it is assessed:
N/A

F. Does your organization have an assessment for some future special need? Yes ☐ No ■
If yes, explain for what purpose and how it is assessed:
N/A

V. PROPOSED METHOD FOR REVENUE FOR REPAYMENT OF LOAN

How will you plan to assess for the annual loan payments?

Check revenue sources below:

☐ Tax Levies
☐ Capital Improvement Reserve Account or Sinking Fund
☐ User Fees and Tap/Hookup Fees
■ Other (explain) Revenue from outside sources and shareholder O&M charges.

Will an increase in assessment be required? Yes ☐ No ■
When will new assessments start and how long will they last?
N/A

VI. SECUREMENT OF LOAN

List all land, buildings, waterworks, reserve funds, and equipment with estimated value that will be used as collateral for the loan:

Property	Estimated Value
Annual Operations and Maintenance Assessment	$4,000,000

For property Securement, attach a legal description of the property being offered along with a map referencing the property.

VII. FINANCIAL INFORMATION:

A. Attach a copy of each of the last 3 year's financial statement. **(Copies must be attached)**

B. Reserve fund (current) $183,543.66

C. Cash on hand $1,564,145.88

D. Outstanding indebtedness:

To Whom	Annual Payment	Amt. Outstanding	Years Left
Western States Equipment	$67,052.41	$190.581.35	3
Western States Equipment	$81,029	$303,412.85	4

E. What other sources of funding have been explored to fund the project? (example: NRCS, USDA Rural Development, Banks, Local Government, etc.)

None

VIII. ORGANIZATION APPROVAL:

Is a vote of the shareholders, members, etc. required for loan acquisition? Yes ☐ No ■
If yes, a record of the vote must be attached.

Amount of funds requested: $5,200,000

By signing this document you verify that all information provided is correct and the document is filled out to the best of your ability.

Authorized signature& date:

Financial Ratios

Entity Name: North Side Canal Company

Loan amount requested: **$5,200,000**

The following information is required for the loan application with the Idaho Water Resource Board. Please fill out as completely as possible in the spaces provided. The sheet will do the calculations based on your input. This sheet will not save so you must print it out and attach it to the Loan Document. If you have any questions please contact the loan staff.

Number of units serviced (acres or residences) 160000

Interest rate 3.5%
(use 6% for residential and 5.5% for agriculture)

Total Debt $493,994.20

Current Assessment $25.00

Assessment Charged by share
(How is current assessment charged? By share, acre, residence, etc.)

Is the assessment 1
(use 1 for yearly and 12 for monthly)

Yearly Expenditures, Revenues, and Cash - last 3 years required

Year	Revenue	Expenditures	Cash
2013	$4,773,173.00	$4,973,928.00	$613,736.00
2014	$4,900,540.00	$4,488,927.00	$1,241,297.00
2015	$4,827,076.00	$4,782,124.00	$1,330,171.00
Average:	$4,833,596.33	$4,748,326.33	$1,061,734.67

Loan Term	Assessment after loan	Estimated Payment
5 years	$32.20	$1,151,703.14
10 years	$28.91	$625,255.11
15 years	$27.82	$451,490.36
20 years	$27.29	$365,877.60
25 years	$26.97	$315,504.98
30 years	$26.77	$282,730.92

Indicator	5 year	10 year	15 year	20 year	25 year	30 year
Revenue/Expenses	1.01	1.02	1.02	1.02	1.02	1.02
Debt Service ratio	1.07	1.14	1.19	1.23	1.27	1.30
Cash /Expenses	0.38	0.31	0.29	0.28	0.27	0.27
Debt/Unit	$7.20	$3.91	$2.82	$2.29	$1.97	$1.77

Note: Current assessment is an average of the quarterly residential assessment of $66.00, and the quarterly commercial assessment of $111.00.

Loan Application Document for

North Side Main Canal Lining Project

Near Milner Dam

Submitted by:

North Side Canal Company, Ltd.

John Beukers, President

Alan W. Hansten, Manager

August 15, 2016

TABLE OF CONTENTS

North Side Canal Company, Ltd.:

921 N. Lincoln Ave.
Jerome, ID 83338
(208) 324-2319

John Beukers, President

Mike Elliott, Vice-President

Alan W. Hansten, Secretary/Treasurer

Attorney for North Side Canal Company, Ltd.:

Travis Thompson
Barker, Rosholt, and Simpson LLP
163 2nd Avenue West
Twin Falls, Idaho 83301-5672

Engineering:

Dan Murrer, P.E.
CH2M Hill
322 E. Front Street, #200
Boise, ID 83702
(208) 383-6108

Introduction

North Side Canal Company, Ltd. (NSCC) operates an irrigation canal system that diverts water from the Snake River at Milner Dam. There are roughly 900 miles of canals within the system that are used to deliver irrigation water to approximately 160,000 acres of farmland throughout Jerome, Gooding, and Elmore Counties. The main canal at Milner was originally constructed around 1907 and the existing 2-mile concrete section was constructed in 1908 and 1909. Since that time, NSCC crews have routinely patched and repaired cracked and settled areas of this section of canal. In the past 3 years the company has spent roughly $80,000 per year patching and repairing the canal. It has become evident that a more comprehensive and longer lasting solution is necessary to preserve the operation of the canal.

In the spring of 2016, NSCC hired CH2M Hill to perform a study on the concrete section of the canal and make recommendations as to how best to extend the life of the facility. It was determined that the most cost effective solution was to leave the existing concrete in place, stabilize areas where there are voids, and then apply a lining system over the top of the existing concrete.

This loan is being applied for to finance the project to stabilize the existing concrete and construct a new liner with a concrete overlay. The project will be completed over the span of 3 years starting in the fall of 2016 and being completed the spring of 2019.

Project Sponsor

The project sponsor is North Side Canal Company, Ltd. (NSCC). Approximately 2,200 shareholders are served by the company. Water is not delivered to a shareholder unless they have paid their annual assessment. The board of NSCC is authorized by state law (Idaho Code§30-30-302(7)) and the by-laws of the corporation to enter into a loan to finance projects (Article 5, section 2).

Project Service Area and Facilities

Water from the Snake River at Milner is diverted and delivered via a network of irrigation canals that are operated and maintained by NSCC through the counties of Jerome, Gooding, and Elmore. The network of canals is approximately 900 miles in length and delivers water to roughly 160,000 acres of land. Milner dam, 8 hydroelectric plants, and 1 regulating reservoir (Wilson Lake) are some of the major facilities that also make up the system.

Hydrology and Water Rights

NSCC's irrigation water rights are primarily on the Snake River and include both natural flow and reservoir rights. A summary of the water rights that NSCC holds is included in Appendix B.

Project Description and Alternatives

The purpose of this project is to ensure the integrity of the existing concrete section of the main canal near Milner. Cracking of the concrete and settlement have occurred since the concrete was originally poured and the company repairs failing areas annually in an effort to keep the canal serviceable. It has become apparent that a more aggressive solution is needed to ensure continued operation of the canal. Should the canal fail, most of the crops for that season could potentially die and the growers suffer great financial loss.

Alternative 1 – No Action (Status Quo): NSCC could continue to perform annual as needed maintenance on the concrete section, however, it appears that it is degrading faster than company crews are able to keep up with repairs. The concern is that a weak area may fail causing the canal bank to wash away and the water flow directly back to the Snake River and in turn cause catastrophic crop failure to the growers that rely on the canal to convey irrigation water.

Alternative 2 – Full Reconstruction: Full reconstruction of the concrete section was initially considered, but ruled out due to the amount of time needed to complete the work and the high cost. Significant excavation and concrete work would be required along with a lot of time that would cause the project to proceed over several years.

Alternative 3 – Lining of Existing Canal: This alternative was examined (see CH2M Hill Memo in Appendix C) to determine the most cost effective solution and acceptable construction time frame for the project. Several lining options were reviewed. The lining option selected, entails stabilizing the existing concrete as needed then installing a layer of non-woven geotextile fabric, a layer of PVC liner, a layer of geotextile fabric, and then a layer of reinforced concrete. This system will protect the PVC liner from wear associated with the existing concrete and UV radiation and vandalism. With the canal lined with this system, any piping that is occurring now will be reduced or eliminated and therefore reduce the risk of a bank failure along the canal. This alternative is the preferred option of the 3 considered.

Presently, alternative 3 is in the final design stage by CH2M Hill. Bidding documents are expected to be completed by the end of September.

Implementation Schedule

It is anticipated that this project will be completed in 3 phases over the course of 3 years. Construction on this project will begin this fall and proceed until mid-March of 2017 prior to the start of the irrigation season. This schedule will repeat again in the winter of 2017-2018 and 2018-2019 with project completion planned in the spring of 2019.

Permitting

No permits are required for this rehabilitation and repair project.

Institutional Considerations

The following are those entities that will be involved in this project:

Engineering: CH2M Hill,
Legal: Barker, Rosholt, and Simpson L.L.P.
Financing: Idaho Water Resource Board

NSCC will be managing and contracting with the above entities to complete the project.

Financial Analysis

NSCC is requesting a loan from the Idaho Water Resource Board in the amount of $5,200,000 for a 20-year term at a fixed rate of 3.5% interest. The annual payment on this amount will be $366,000. Total interest paid on the principle would be $2,100,000. The interest during construction will be carried forward as part of the long-term loan. NSCC may make additional principal payments some years depending on the financial position of the company. An increase in the annual operations and maintenance assessment is not expected, however, if needed an approximate $2 per share increase would be required to make the annual loan payment.

Credit Worthiness:
NSCC's current outstanding debt is $493,994.20. Paragraph VII.d in the loan application lists NSCC's current debt.

Alternative Financing Considerations:
NSCC has not contacted other financial institutions as of this date regarding this project.

Collateral:
NSCC annual operations and maintenance assessment income will be used to secure the loan.

Economic Analysis

This project is critical for the long-term reliability of the main canal to continue to deliver water to roughly 160,000 acres of farmland in three counties. Should the canal fail, growers that rely on the system to provide irrigation water to their crops could potentially suffer great financial loss and could jeopardize their businesses. The negative impact on the local economy could be substantial.

Social and Physical Impacts

This project is vital to growers and the agricultural economy on the North side of the Snake River in the Magic Valley to ensure the long-term operation of the canal to provide irrigation water. The culture and the history of the area on the north side of the river centers around irrigated agriculture, and the North side canal system is part of the foundation that has allowed people to live and thrive in the area, including related and indirect businesses and industry.

The project will have no adverse social or physical impacts since all work will be completed within the existing channel and right-of-way. Visually, the lined canal will appear no different than it does presently.

Conclusions

1. The board of directors of NSCC has directed Alan W. Hansten, Manager to prepare and submit this loan application on behalf of NSCC.
2. All work will be completed within the existing right-of-way.
3. Construction of the project is expected to be completed in 3 phases over a 3-year period.
4. The project will allow the canal to continue to operate for approximately 50 years with minimal maintenance.
5. The estimated cost of the project is $5,200,000 and is planned to be financed with an Idaho Water Resource Board loan for 20 years.
6. This project is necessary to ensure the continued safe and reliable operation of the canal.
7. The project is technically and financially feasible.

RESOLUTION

WHEREAS, the North Side Canal Company, Ltd. (NSCC) developed an extensive canal system to deliver water to its shareholders that irrigate approximately 160,000 acres in Jerome, Gooding, and Elmore Counties; and

WHEREAS, the first two miles of the Main Canal off the Snake River were first constructed with concrete in 1908-09; and

WHEREAS, since that time NSCC personnel have routinely patched and repaired cracked and settled areas of this section of the canal; and

WHEREAS, any failure of the Main Canal in this area would be catastrophic during the irrigation season, and could result in thousands of acres of crop loss; and

WHEREAS, NSCC recently commissioned an engineering study of this section, including evaluating voids located underneath the canal and the viability of the existing concrete; and

WHEREAS, NSCC management and consulting engineers have recommended a comprehensive and the most cost effective solution to rehabilitate and repair this section of the canal through filling the voids, stabilizing the concrete, installing liners, and then reinforced concrete; and

WHEREAS, NSCC believes it is in the best interest of its shareholders to undertake the recommended project to ensure the viability of the Main Canal and continued delivery of water to its shareholders; and

WHEREAS, NSCC currently does not have sufficient cash to undertake the project, but is authorized by its by-laws (Art. 5, § 2) and Idaho law (I.C. § 30-30-302(7) to finance such projects through loans and other indebtedness.

NOW, THEREFORE BE IT RESOLVED, by unanimous vote of the NSCC Board of Directors, meeting in their regular monthly board meeting on August 19, 2016, in Jerome, Idaho, that NSCC is authorized to enter into such loans or other indebtedness necessary to finance the Main Canal project; and

BE IT FURTHER RESOLVED, that NSCC's President is authorized to sign such loan applications and other documents necessary to carry out this action.

Dated this 19th day of August, 2016.

John Beukers - President

Attest:

Alan Hansten – Secretary

NORTH SIDE CANAL COMPANY WATER RIGHTS

WATER RIGHT	SOURCE	FLOW (cfs)	WATER USE	BASIS	PRIORITY DATE
1-5	Snake River	300.00	Irrigation	Decreed	12/23/1915
1-16	Snake River	832.00	Irrigation	Decreed	8/6/1920
1-210	Snake River	400.00	Irrigation	Decreed	10/11/1900
1-212	Snake River	2,250.00	Irrigation	Decreed	10/7/1905
1-213	Snake River	350.00	Irrigation	Decreed	6/16/1908
1-7010B	Snake River	3,000.00	Power	License	3/30/1977
1-7010D	Snake River	3,000.00	Power	License	3/30/1977
1-7011	Snake River	5,714.70	Power	License	3/30/1977
1-7084B	Snake River	3,200.00	Power	License	12/3/1984
1-7084C	Snake River	3,200.00	Power	License	12/3/1984
1-10488	Snake River	82.66	Irrigation	Decreed	3/17/1987
1-10509	Snake River	--	Irrigation	Decreed	3/1/1905
37-507	Big Wood River	15.00	Irrigation	Decreed	6/15/1890
1-10575	Snake River	2,400.00	Power	Permit	12/3/1984
1-10576	Snake River	1,200.00	Power	Permit	12/3/1984
1-10577	Snake River	1,600.00	Power	Permit	12/3/1984
1-10578	Snake River	250.00	Power	Permit	12/3/1984
1-10579	Snake River	250.00	Power	Permit	12/3/1984
1-10580	Snake River	200.00	Power	Permit	12/3/1984
1-10581	Snake River	100.00	Power	Permit	12/3/1984
1-10582	Snake River	1,300.00	Power	Permit	12/3/1984
1-10583	Snake River	370.00	Power	Permit	12/3/1984
1-10584	Snake River	800.00	Power	Permit	12/3/1984
1-10585	Snake River	800.00	Power	Permit	12/3/1984
1-10586	Snake River	500.00	Power	Permit	12/3/1984
1-10587	Snake River	350.00	Power	Permit	12/3/1984
1-10588	Snake River	200.00	Power	Permit	12/3/1984
1-10589	Snake River	230.00	Power	Permit	12/3/1984
1-10590	Snake River	90.00	Power	Permit	12/3/1984
1-10591	Snake River	100.00	Power	Permit	12/3/1984
1-10592	Snake River	90.00	Power	Permit	12/3/1984
1-10627	Snake River	--	Irrigation	Application	8/8/2013
1-2064C	Snake River	--	Irrigation	License	3/30/1921
1-10042B	Snake River	--	Irrigation	License	3/29/1921
1-10043A	Snake River	--	Irrigation	License	3/29/1921
1-10045B	Snake River	--	Irrigation	License	5/24/1913
1-10053A	Snake River	--	Irrigation	License	3/30/1921

NSCC's water rights are appurtenant to approximately 160,000 acres of surface irrigated lands in Jerome, Gooding, and Elmore counties. The Company has Snake River natural flow rights and contracted storage space with the United States Bureau of Reclamation in Jackson Lake, Palisades Reservoir, and American Falls Reservoir. NSCC holds the legal title for the Company's water rights in trust for its shareholders. NSCC water may only be applied for irrigation purposes to those acres described on the Water Stock Certificate provided to the NSCC shareholders. It is illegal to apply NSCC irrigation water to more acres or different acres than those described on the NSCC Water Stock Certificate. One (1) share of water is equivalent to five-eighths (5/8) of a miner's inch and 80 shares is equivalent to 1 cubic foot per second (CFS). The maximum number of shares that can be appurtenant to an acre of land is one and one half (1½) shares. The following table is a summary of the Company's irrigation water rights as they are accounted for in the Water District #1 accounting:

Water Dist. 1 #	Type	Reservoir	Priority	CFS/Acre-Foot
13087000	Natural Flow		10/11/1900	400 CFS
13087000	Natural Flow		10/7/1905	2,250 CFS
13087000	Natural Flow		6/16/1908	350 CFS
13087000	Natural Flow		12/23/1915	300 CFS
13087000	Natural Flow		8/6/1920	1,260 CFS
		Total Natural Flow:		**4,560 CFS**
13087000	Storage	Jackson	1913	312,007 AF
13087000	Storage	Palisades WWS	1921	116,600 AF
13087000	Storage	A.F. WWS	1921	9,248 AF
13087000	Storage	Am. Falls	1921	422,043 AF
			Total Storage:	**859,898 AF**

The Company also holds water rights in Water District 37 as well as hydropower rights. Further information regarding the Company's water rights can be viewed on the internet at: http://www.idwr.idaho.gov.

NORTH SIDE CANAL COMPANY AND SUBSIDIARY
JEROME, IDAHO
CONSOLIDATED STATEMENTS OF OPERATIONS
FOR THE YEARS ENDED
October 31, 2014 and 2013

	2014	Percent	2013	Percent
REVENUES:				
Water users	$ 4,900,540	68.99%	$ 4,773,173	76.71%
Hydro power	2,202,456	31.01%	1,449,442	23.29%
Total revenues	7,102,996	100.00%	6,222,615	100.00%
EXPENSES:				
Operation and maintenance:				
Wages, salaries, and labor	1,659,645	23.37%	1,743,735	28.02%
Repairs and maintenance	775,869	10.92%	929,906	14.94%
Weed control, rodent control, and chemicals	419,630	5.91%	301,825	4.85%
Employee benefits	381,610	5.37%	522,121	8.39%
Gas and oil	323,228	4.55%	376,181	6.05%
Insurance	143,970	2.03%	196,600	3.16%
Payroll taxes and other	167,132	2.35%	187,343	3.01%
Pension	107,255	1.51%	116,910	1.88%
Utilities	33,637	0.47%	44,449	0.71%
Miscellaneous	21,684	0.31%	36,220	0.58%
Surface water call	26,844	0.38%	28,377	0.46%
Total operation and maintenance expenses	4,060,504	57.17%	4,483,667	72.05%
General and administrative:				
Office salaries	161,248	2.27%	180,737	2.90%
Legal and accounting	205,877	2.90%	236,639	3.80%
Miscellaneous	24,467	0.34%	34,758	0.56%
Directors' fees and expenses	26,781	0.38%	18,987	0.31%
Water quality	2,217	0.03%	6,968	0.11%
Office	7,833	0.11%	12,172	0.20%
Total general and administrative expenses	428,423	6.03%	490,261	7.88%
Total expenses	4,488,927	63.20%	4,973,928	79.93%
INCOME FROM OPERATIONS BEFORE OTHER INCOME (EXPENSE), DEPRECIATION, AND INCOME TAXES	2,614,069	36.80%	1,248,687	20.07%
OTHER INCOME (EXPENSE):				
Interest income	20,236	0.28%	17,173	0.28%
Gain on investment in Milner Dam, Inc.	275,191	3.87%	174,780	2.81%
Gain/(loss) on sale of assets	(4,821)	-0.07%	(32,680)	-0.53%
Interest expense	(11,032)	-0.16%	(23,578)	-0.38%
Total other income (expense)	279,574	3.93%	135,695	2.18%
NET INCOME BEFORE DEPRECIATION AND INCOME TAXES	2,893,643	40.72%	1,384,382	22.25%
DEPRECIATION	425,430	5.99%	533,272	8.57%
NET INCOME BEFORE INCOME TAX	2,468,213	34.73%	851,110	13.68%
INCOME TAX EXPENSE:				
Current	603,811	8.50%	40,090	0.64%
Deferred	623,105	8.77%	197,284	3.17%
Total income tax expense	1,226,916	17.27%	237,374	3.81%
NET INCOME	$ 1,241,297	17.46%	$ 613,736	9.86%

See notes to consolidated financial statements.

NORTH SIDE CANAL COMPANY AND SUBSIDIARY
JEROME, IDAHO
CONSOLIDATED BALANCE SHEETS
October 31, 2014 and 2013

ASSETS

	2014	2013
CURRENT ASSETS:		
Cash and cash equivalents	$ 1,720,630	$ 2,736,757
Short-term investments-certificates of deposit	181,950	432,194
Accounts receivable - assessments	34,161	23,540
Accounts receivable - less allowance for doubtful accounts	1,066,412	1,310,956
Income taxes receivable:		
State	25,064	44,884
Federal	5,125	315,026
Contract Receivable	-	-
Inventory	334,727	410,042
Interest receivable	127	282
Prepaid expenses and deposit	2,238	1,038
Total current assets	3,370,434	5,274,719
PROPERTY, PLANT, AND EQUIPMENT:		
Land	223,839	223,839
Buildings	825,714	899,974
Jackson Lake modificaiton	1,087,341	1,087,341
Canal systems	4,225,506	999,732
Construction in progress	2,167,556	266,257
Machinery and equipment	8,081,988	7,874,005
Total property, plant, and equipment	16,611,944	11,351,148
Less, accumulated depreciation	(6,176,284)	(5,988,701)
Total property, plant, and equipment - net	10,435,660	5,362,447
OTHER ASSETS:		
Water storage rights	1,413,078	1,413,078
Investment in Jerome Butte Communications, LLC	22,288	22,288
Investment in Milner Dam, Inc	1,812,048	1,540,034
Investment in Valley Co-ops, Inc.	9,965	8,871
Total other assets	3,257,379	2,984,271
TOTAL ASSETS	$ 17,063,473	$ 13,621,437

LIABILITIES AND STOCKHOLDERS' EQUITY

CURRENT LIABILITIES:		
Accounts payable	$ 260,800	$ 256,468
Accrued liabilities:		
Vacation	106,574	103,382
Assessments paid in advance	2,607	21,828
Payroll taxes and other	17,931	15,170
Interest	30,263	15,836
Income taxes payable:		
State	-	-
Federal	-	-
Operating line of credit, Northwest Farm Credit Services	1,660,449	-
Current portion of long-term debt	458,477	88,307
Total current liabilities	2,537,101	500,991
LONG-TERM DEBT	86,898	545,375
DEFERRED INCOME TAXES	1,252,173	629,067
STOCKHOLDERS' EQUITY:		
Common stock, $1 par value, 170,000 shares authorized and issued and 161,480.48 shares outstanding	170,000	170,000
Retained earnings	13,133,846	11,892,549
Total paid-in capital and retained earngings	13,303,846	12,062,549
Less, Cost of treasury stock (8,519.52 shares)	(116,545)	(116,545)
Total stockholders' equity	13,187,301	11,946,004
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	$ 17,063,473	$ 13,621,437

See notes to consolidated financial statements.

NORTH SIDE CANAL COMPANY AND SUBSIDIARY
JEROME, IDAHO
CONSOLIDATED STATEMENTS OF RETAINED EARNINGS
FOR THE YEARS ENDED
October 31, 2014 and 2013

	2014	2013
RETAINED EARNINGS AT BEGINNING OF YEAR	$ 11,892,549	$ 11,278,813
NET INCOME	1,241,297	613,736
RETAINED EARNINGS AT END OF YEAR	$ 13,133,846	$ 11,892,549

See notes to consolidated financial statements

NORTH SIDE CANAL COMPANY AND SUBSIDIARY
JEROME, IDAHO
CONSOLIDATED STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED
October 31, 2014 and 2013

	2014	2013
OPERATING ACTIVITIES:		
Cash received from water users and customers	$ 7,317,698	$ 5,646,998
Interest received	20,391	18,002
Cash paid to suppliers and employees	(4,404,527)	(5,056,390)
Interest paid	(13,229)	(25,698)
Income taxes paid	(274,089)	(108,269)
Net cash provided (used) by operating activities	2,646,244	474,643
INVESTING ACTIVITIES:		
Change in investments	249,150	249,103
Dividends from investments	3,177	-
Proceeds from sale of assets	71,941	6,471
Purchase of plant and equipment	(5,558,781)	(961,336)
Net cash provided (used) by investing activities	(5,234,513)	(705,762)
FINANCING ACTIVITIES:		
Proceeds from short-term debt	1,660,449	-
Payments on long-term debt	(88,307)	(85,263)
Net cash provided (used) by financing activities	1,572,142	(85,263)
NET INCREASE (DECREASE) IN CASH	(1,016,127)	(316,382)
CASH AT BEGINNING OF YEAR	2,736,757	3,053,139
CASH AT END OF YEAR	$ 1,720,630	$ 2,736,757
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net Income	$ 1,241,297	$ 613,736
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation	425,430	533,272
Gain on investment in Milner Dam, Inc.	(275,191)	(174,780)
(Gain) Loss on sale of assets	4,821	32,680
Deferred income tax expense	623,106	197,284
Change in current assets and current liabilities, net of effects from non-cash investing and financing activities:		
(Increase) decrease in assets:		
Accounts receivable - assessments	(10,621)	3,316
Accounts receivable - less allowance for doubtful accounts	244,544	(556,251)
Contract receivable	-	7,725
Income taxes receivable	329,721	(68,179)
Inventory	75,315	(186,532)
Interest receivable	155	829
Prepaid expenses and deposit	(1,200)	-
Increase (decrease) in liabilities:		
Accounts payable	4,332	82,762
Accrued liabilities	(15,465)	(11,219)
Income taxes payable	-	-
NET CASH PROVIDED (USED) BY OPERATING ACTIVITIES	$ 2,646,244	$ 474,643
SUPPLEMENTAL DISCLOSURES		
Schedule of Noncash Investing and Financing Transactions		
Capitalized interest for property plant & equipment	$ 16,624	$ -

See notes to consolidated financial statements.

NORTH SIDE CANAL COMPANY AND SUBSIDIARY
JEROME, IDAHO
CONSOLIDATED BALANCE SHEETS
October 31, 2015 and 2014

ASSETS

	2015	2014
CURRENT ASSETS:		
Cash and cash equivalents	$ 3,020,117	$ 1,720,630
Short-term investments-certificates of deposit	182,181	181,950
Accounts receivable - assessments	37,103	34,161
Accounts receivable - less allowance for doubtful accounts	1,167,803	1,066,412
Income taxes receivable:		
State	10,161	25,064
Federal	145,250	5,125
Inventory	320,749	334,727
Interest receivable	316	127
Prepaid expenses and deposit	1,038	2,238
Total current assets	4,884,718	3,370,434
PROPERTY, PLANT, AND EQUIPMENT:		
Land	223,839	223,839
Buildings	825,714	825,714
Jackson Lake modificaiton	1,087,341	1,087,341
Canal systems	10,197,788	4,225,506
Construction in progress	-	2,167,556
Machinery and equipment	8,077,250	8,081,988
Total property, plant, and equipment	20,411,932	16,611,944
Less, accumulated depreciation	(6,072,564)	(6,176,284)
Total property, plant, and equipment - net	14,339,368	10,435,660
OTHER ASSETS:		
Water storage rights	1,413,078	1,413,078
Investment in Jerome Butte Communications, LLC	22,288	22,288
Investment in Milner Dam, Inc.	2,050,128	1,812,048
Investment in Valley Co-ops, Inc.	10,672	9,965
Unamortized loan fees	40,990	-
Note receivable - Milner Dam, Inc.	29,521	-
Total other assets	3,566,677	3,257,379
TOTAL ASSETS	$ 22,790,763	$ 17,063,473

LIABILITIES AND STOCKHOLDERS' EQUITY

CURRENT LIABILITIES:		
Accounts payable	$ 575,356	$ 260,800
Accrued liabilities:		
Vacation	108,415	106,574
Assessments paid in advance	10,034	2,607
Payroll taxes and other	18,721	17,931
Interest	136,059	30,263
Income taxes payable:		
State	-	-
Federal	-	-
Operating line of credit, Northwest Farm Credit Services	-	1,660,449
Current portion of long-term debt	410,534	458,477
Total current liabilities	1,259,119	2,537,101
LONG-TERM DEBT	5,320,612	86,898
DEFERRED INCOME TAXES	1,693,560	1,252,173
STOCKHOLDERS' EQUITY:		
Common stock, $1 par value; 170,000 shares authorized and issued and 161,480.48 shares outstanding	170,000	170,000
Retained earnings	14,464,017	13,133,846
Total paid-in capital and retained earngings	14,634,017	13,303,846
Less, Cost of treasury stock (8,519.52 shares)	(116,545)	(116,545)
Total stockholders' equity	14,517,472	13,187,301
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	$ 22,790,763	$ 17,063,473

See notes to consolidated financial statements.

NORTH SIDE CANAL COMPANY AND SUBSIDIARY
JEROME, IDAHO
CONSOLIDATED STATEMENTS OF OPERATIONS
FOR THE YEARS ENDED
October 31, 2015 and 2014

	2015	Percent	2014	Percent
REVENUES:				
Water users	$ 4,827,076	65.35%	$ 4,900,540	68.99%
Hydro power	2,559,875	34.65%	2,202,456	31.01%
Total revenues	7,386,951	100.00%	7,102,996	100.00%
EXPENSES:				
Operation and maintenance:				
Wages, salaries, and labor	1,717,066	23.24%	1,659,645	23.37%
Repairs and maintenance	925,127	12.52%	775,869	10.92%
Weed control, rodent control, and chemicals	454,463	6.15%	419,630	5.91%
Employee benefits	387,415	5.24%	381,610	5.37%
Gas and oil	243,498	3.30%	323,228	4.55%
Insurance	178,280	2.41%	143,970	2.03%
Payroll taxes and other	175,044	2.37%	167,132	2.35%
Pension	115,315	1.56%	107,255	1.51%
Utilities	49,395	0.67%	33,637	0.47%
Rent	28,240	0.38%	-	0.00%
Miscellaneous	21,556	0.29%	21,684	0.31%
Surface water call	16,229	0.22%	26,844	0.38%
Total operation and maintenance expenses	4,311,628	58.37%	4,060,504	57.17%
General and administrative:				
Office salaries	188,752	2.56%	161,248	2.27%
Legal and accounting	224,842	3.04%	205,877	2.90%
Miscellaneous	19,937	0.27%	24,467	0.34%
Directors' fees and expenses	23,206	0.31%	26,781	0.38%
Water quality	6,019	0.08%	2,217	0.03%
Office	7,740	0.10%	7,833	0.11%
Total general and administrative expenses	470,496	6.37%	428,423	6.03%
Total expenses	4,782,124	64.74%	4,488,927	63.20%
INCOME FROM OPERATIONS BEFORE OTHER INCOME (EXPENSE), DEPRECIATION, AND INCOME TAXES	2,604,827	35.26%	2,614,069	36.80%
OTHER INCOME (EXPENSE):				
Interest income	13,069	0.18%	20,236	0.28%
Gain on investment in Milner Dam, Inc.	229,671	3.11%	275,191	3.87%
Gain/(loss) on sale of assets	(2,172)	-0.03%	(4,821)	-0.07%
Interest expense	(141,728)	-1.92%	(11,032)	-0.16%
Total other income (expense)	98,840	1.33%	279,574	3.94%
NET INCOME BEFORE DEPRECIATION AND INCOME TAXES	2,703,667	36.58%	2,893,643	40.74%
DEPRECIATION	483,708	6.55%	425,430	5.99%
NET INCOME BEFORE INCOME TAX	2,219,959	30.03%	2,468,213	34.75%
INCOME TAX EXPENSE:				
Current	448,401	6.07%	603,811	8.50%
Deferred	441,387	5.98%	623,105	8.77%
Total income tax expense	889,788	12.05%	1,226,916	17.27%
NET INCOME	$ 1,330,171	17.99%	$ 1,241,297	17.48%

See notes to consolidated financial statements.

NORTH SIDE CANAL COMPANY AND SUBSIDIARY
JEROME, IDAHO
CONSOLIDATED STATEMENTS OF RETAINED EARNINGS
FOR THE YEARS ENDED
October 31, 2015 and 2014

	2015	2014
RETAINED EARNINGS AT BEGINNING OF YEAR	$ 13,133,846	$ 11,892,549
NET INCOME	1,330,171	1,241,297
RETAINED EARNINGS AT END OF YEAR	$ 14,464,017	$ 13,133,846

See notes to consolidated financial statements.

NORTH SIDE CANAL COMPANY AND SUBSIDIARY
JEROME, IDAHO
CONSOLIDATED STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED
October 31, 2015 and 2014

	2015	2014
OPERATING ACTIVITIES:		
Cash received from water users and customers	$ 7,290,045	$ 7,317,698
Interest received	12,880	20,391
Cash paid to suppliers and employees	(4,449,759)	(4,404,527)
Interest paid	(35,932)	(13,229)
Income taxes paid	(573,623)	(274,089)
Net cash provided (used) by operating activities	2,243,611	2,646,244
INVESTING ACTIVITIES:		
Change in investments	(38,868)	249,150
Dividends from investments	-	3,177
Proceeds from sale of assets	88,451	71,941
Purchase of plant and equipment	(4,519,029)	(5,558,781)
Net cash provided (used) by investing activities	(4,469,446)	(5,234,513)
FINANCING ACTIVITIES:		
Proceeds from short-term debt	-	1,660,449
Payments on short-term debt	(1,660,449)	-
Proceeds from long-term debt	5,993,383	-
Payments on long-term debt	(807,612)	(88,307)
Net cash provided (used) by financing activities	3,525,322	1,572,142
NET INCREASE (DECREASE) IN CASH	1,299,487	(1,016,127)
CASH AT BEGINNING OF YEAR	1,720,630	2,736,757
CASH AT END OF YEAR	$ 3,020,117	$ 1,720,630
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net Income	$ 1,330,171	$ 1,241,297
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation	483,708	425,430
Gain on investment in Milner Dam, Inc.	(229,671)	(275,191)
(Gain) Loss on sale of assets	2,172	4,821
Deferred income tax expense	441,387	623,106
Change in current assets and current liabilities, net of effects from non-cash investing and financing activities:		
(Increase) decrease in assets:		
Accounts receivable - assessments	(2,942)	(10,621)
Accounts receivable - less allowance for doubtful accounts	(101,391)	244,544
Income taxes receivable	(125,222)	329,721
Inventory	13,978	75,315
Interest receivable	(189)	155
Prepaid expenses and deposit	1,200	(1,200)
Increase (decrease) in liabilities:		
Accounts payable	314,556	4,332
Accrued liabilities	115,854	(15,465)
Income taxes payable	-	-
NET CASH PROVIDED (USED) BY OPERATING ACTIVITIES	$ 2,243,611	$ 2,646,244
SUPPLEMENTAL DISCLOSURES		
Schedule of Noncash Investing and Financing Transactions		
Capitalized interest for property plant & equipment	$ -	$ 16,624

See notes to consolidated financial statements.


Steel Ranch Rd
E 1300 S
MILNER-GOODING CANAL
N 5250 E BRIDGE
CANAL LINING PROJECT LIMITS
NORTH SIDE CANAL HEADWORKS
NORTH SIDE MAIN CANAL
MILNER DAM
MILNER POOL
W Milner Rd
The USDA-FSA Aerial Photography Field office asks to be credited in derived products.

MEMO

To: Idaho Water Resource Board

From: Rick Collingwood

Date: September 6, 2016

Subject: 3D Water Association, Inc. - Loan Application

The loan request submitted by the 3D Water Association in Ucon, Idaho has been removed from consideration at the September 15-16 Idaho Water Resource Board meetings. Additional information is required from the loan applicant prior to review by the Board.

Memorandum

To: Idaho Water Resource Board

From: Cynthia Bridge Clark,

Date: September 6, 2016

Re: Status of Storage Water Studies

The following is a status report on the surface water storage studies initiated by the Idaho Water Resource Board (IWRB). An update will be provided by staff at the upcoming IWRB Work Session on September 15, 2016.

Weiser-Galloway Project

Background/Status:

- Operations Analysis: The analysis was performed by the U.S. Army Corps of Engineers (Corps) through a Planning Assistance to States (PAS) agreement with the Idaho Water Resource Board (IWRB). It is an evaluation of different operation scenarios for a dam on the Weiser River to optimize hydropower, reduce flood risk, provide recreation, provide additional water supply for the basin, and provide flows for anadromous fish recovery efforts. Results from this analysis have not been finalized as they are being incorporated with additional analysis being performed under the Galloway Reservoir Size Optimization Study (below).
- Galloway Reservoir Size Optimization Study: This study utilizes data generated from the Operations Analysis models (hydrologic, hydraulic, flood, operational, water demands, and hydropower) to optimize the conceptual design layout of the dam and revise construction costs. The intent is to provide a more refined project design while leveraging the project expertise of the technical study team who performed the Operations Analysis and previous PAS studies. Preliminary results are scheduled to be available for initial review by IDWR in November, 2016.
- Evaluation of Weiser River Trail: The Galloway Dam and Reservoir project as proposed would impact approximately 15 miles of the Weiser River Trail (WRT). This evaluation will seek public input to identify impacts and benefits of potential alternative trail alignments for the WRT. Additional work on this study has been held pending results of the Operations Analysis and Reservoir Size Optimization Study.
- Federal Energy Regulatory Commission (FERC) preliminary permit: In accordance with preliminary permit requirements, Progress Report No. 3 was filed on April 1, 2016.
- Upon completion of preliminary results from the Reservoir Optimization Study, a planning summary report will be prepared to present the findings and conclusions of the studies. that will allow the IWRB to assess how the project should move forward in the future. Staff has begun preparing the "planning summary document" and is planning a release date in early 2017.

REQUIRED ACTIONS: No action is required by the IWRB at this time.

Boise River Feasibility Study

Background:

- The US Army Corps of Engineers (Corps) and IWRB entered into a Federal Cost Share Agreement (FCSA) in 2013 to complete a full feasibility study of alternatives to address flood risk and water supply needs in the Treasure Valley. The feasibility study built on results from the 2010 *Water Storage Screening Analysis* and 2011 *Preliminary Analysis of the Arrowrock Site.*
- The feasibility study was initiated with a planning workshop between the Corps and IWRB to identify a range of initial alternatives for flood risk management and water supply enhancement followed by a public scoping effort to identify additional alternatives capable of solving multiple water resource problems.
- A number of measures were evaluated, and either eliminated or ranked through an analysis and screening process. Measures considered included the Arrowrock Dam raise, managed aquifer recharge, upgraded irrigation headgates, replacement of push-up dams, bridge upgrades, controlled flooding of pits/ponds, temporary conveyance of water in the floodplain, flow split structure, and other non-structural measures.
- The Corps held regular meetings with state and federal agencies to evaluate the potential impacts related to each measure and worked with the cooperating agencies to coordinate the environmental evaluation and compliance process.
- The Arrowrock Dam raise was identified as having the greatest potential to provide significant flood risk reduction and water supply benefits. Detailed reservoir modeling, cost engineering, real estate impacts analysis and Environmental Impacts Statement (EIS) activities were performed on the Arrowrock Dam for heights ranging from 30 to 74 feet. The analysis also incorporated several downstream flood risk measures. The Corps coordinated modeling and engineering analyses with the US Bureau of Reclamation (Reclamation), the facility owner, and worked with local county and highway district authorities to develop mitigation alternatives associated roadways impacted by the Arrowrock Dam raise.
- Results of the hydrologic and economic modeling indicated that costs exceeded benefits of the dam raise options. Based on these results, Corps involvement in the raise of Arrowrock Dam is not viable at this time.
- On May 18, 2016, the Corps presented the results to the IWRB Water Storage Projects Committee. The IWRB was asked to consider whether to terminate the study and finalize work products or to request approval from the Corps Headquarters to reformulate the study to evaluate options that my provide sufficient flood risk reduction benefits and water supply benefits relative to project costs. Reformulation would require a revision of the study schedule, budget and scope.
- At the Committee meeting, Reclamation also discussed options for studying a raise of Anderson Ranch Dam under its feasibility study authority. Given the common interest in the viability of new storage to satisfy multiple resource needs, the Committee requested that the Corps and Reclamation investigate options for coordination between the two agencies and identify potential reformulation measures for IWRB consideration at a later date.

Status:

- On August 12, 2016, representatives from the Corps, Reclamation, and the IWRB met in Boise to discuss progress on the IWRB's request for additional information about the steps required to continue study of new storage. The two federal agencies reported on a number of topics:
    1) They summarized the outcome of several workshops between the two agencies intended to identify options for a collaborative approach to performing a feasibility study with the state, clarify agency authorities and decision making frameworks, and to identify future projects.
    2) A summary of additional measures that could be considered under reformulation of the study was presented.
    3) An outline of potential next steps was discussed including: termination of the Boise Feasibility study with the Corps; continuing the study of new storage options with Reclamation as the lead agency; executing cooperating agreements between the federal agencies; and utilization of existing appraisal and feasibility work and transfer of information between agencies.
- Based on the questions and discussion at the August 12 meeting, agency representatives and IDWR staff have continued to clarify options for additional study in the Treasure Valley. A more detailed status report and summary of the above referenced discussions will be provided by IDWR staff at the September 15, 2016 IWRB meeting.

REQUIRED ACTIONS: No action is required by the IWRB at this time.

Island Park Reservoir Enlargement Project

Status:

- Staff has initiated an assessment of potential impacts to land and real estate resulting from a potential raise of the normal reservoir water surface elevation of the Island Park Reservoir (assessment). The assessment includes two parts: 1) collection of airborne LiDAR and orthoimagery to provide high resolution elevation data and simultaneous imagery for the project area; 2) evaluation and quantification of potential impacts to land, real estate, roads, utilities, easements, and other appurtenant structures resulting from a 1to 4 foot raise of the reservoir water surface elevation in one foot increments. The elevation data collected using LiDAR will be used in the evaluation of impacts.
- Airborne LiDAR and orthoimagery for the entire Island Park reservoir, including surrounding lands and islands within the reservoir was collected in June 2016 and staff recently received the processed data and imagery (all data is publicly available on the Idaho LiDar Consortium website).
- Staff is currently reviewing the data and developing the scope of work for consultant services to complete the second part of the assessment.

REQUIRED ACTIONS: No action is required by the IWRB at this time.

Priest Lake Water Management Study

Background:

- The purpose of the Priest Lake Water Management Study (study) is to develop strategies to meet long-term water management objectives for the Priest Lake and Priest River system. This includes

development of alternatives to maintain required lake levels and river flow through operation of the Priest Lake Outlet Dam, increased water storage in the lake, and potential modifications to the dam. The study will also include options to improve conditions of the Priest Lake Thorofare and rehabilitation of the associated Breakwater structure.

- The IWRB authorized expenditure of up to $300,000 from the Revolving Development Account to complete the study.

Status:

- The IWRB toured Priest Lake on July 21, 2016 with representatives from Bonner County, the Lake Pend Oreille, Pend Oreille River, Priest Lake and Priest River Commission (Lakes Commission), and several property owners and legislators. The IWRB viewed the breakwater structure along the north end of Priest Lake and travelled up the Thorofare to observe the sedimentation and navigation issues at the mouth of the channel. IWRB members also visited the Outlet Dam at the southern end of the lower Priest Lake and discussed the history and operation of the structure with the Dam operator.
- A Request for Proposal has been issued to solicit consultant services to complete the study. The proposal submittal period closes on October 14, 2016.
- Staff continues to coordinate with stakeholders in the Priest Lake area and will give a presentation on the project purpose and status to the Lakes Commission on September 23, 2016.

REQUIRED ACTIONS: No action is required by the IWRB at this time.

USACE Options for Current Boise General Investigation (Boise River Feasibility Study) Purpose = Flood Risk Reduction & Water Supply			
Options		**Requirements**	**Remarks**
Option 1	Terminate Boise GI	1) Formal decision by IWRB to terminate study (Jan 2017) 2) Agree upon and finalize work products; complete fiscal closeout 3) IWRB & Corps outreach to decision makers and stakeholders as necessary	• Justification: Corps cannot justify a project with less than 1.0 Benefit/Cost ratio for flood risk benefits (project is more likely to be approved by Congress at significantly greater than 1.0) • Based on initial analysis, Corps was unable to identify alternative projects that would provide sufficient flood risk reduction benefits to warrant continued study • Remaining funds approx $700,000 less costs to document process and transfer data ($350k IWRB funds) • Corps will continue to pursue smaller scale flood reduction projects in the TV under other authorities/programs
Option 2	Reformulate scope of study with USACE	1) Formal decision by IWRB (Jan 2017) 2) Re-scope with Corps Project Team and HQ 3) Develop new scope, schedule and budget and submit waiver 4) Waiver approval required by HQ	• Option to reformulate must be approved by Corps HQ; budget and schedule will increase • Corps has not identified other options that would provide enough flood risk reduction to warrant continued study
USBOR Options for Feasibility Study Purpose = Water Supply			
Options		**Requirements**	**Remarks**
Option 1	Partner in Anderson Ranch Dam Raise Feasibility Study	1) Formal decision by IWRB commit all or portion of non-federal funds to partner in study 2) Extension of BOR authority beyond 2019 currently under consideration 3) Consider involvement of multiple “sponsors”	• Estimated study cost $3.5 million • 50/50 cost share – non-federal cost share $1.75 million (only partially funded to date) • Several entities have expressed interest; seeking assurance of potential space
Option 2	Partner in Expanded / Reformulated Feasibility Study (re-scope Anderson Ranch Raise Feasibility Study to include other small scale storage options)	1) Pursue preliminary “re-scoping” 2) Formal decision by IWRB to partner with BOR on expanded Feasibility Study (BOR as Lead Agency for new storage projects) 3) Develop new scope, schedule and budget (incorporate BOR’s appropriated funding request status) 4) Develop MOU with USACE as Cooperating Agency (leverage/utilize Corps technical resources where appropriate)	• Scope could include combination of smaller storage projects (Lucky Peak pool raise 10 kaf, Arrowrock Dam Raise 10 ft/20kaf, Anderson Ranch Raise 10 ft/20 kaf); other options could also be considered • PL111-11 gives BOR study authority to perform feasibility study on above referenced sites (may need to be extended or modified if other options considered) • Budget will likely increase • Utilize appraisal and feasibility work each agency has already performed

Idaho Power Company's Cloud Seeding Program

September 15, 2016

Shaun Parkinson, PhD, PE

IDACORP

Overview

- Idaho Power's history with cloud seeding
- Idaho Power's cloud seeding projects
- Benefit estimates (runoff)
- Program expansion – Boise, Wood, and Upper Snake
- Collaborative Funding

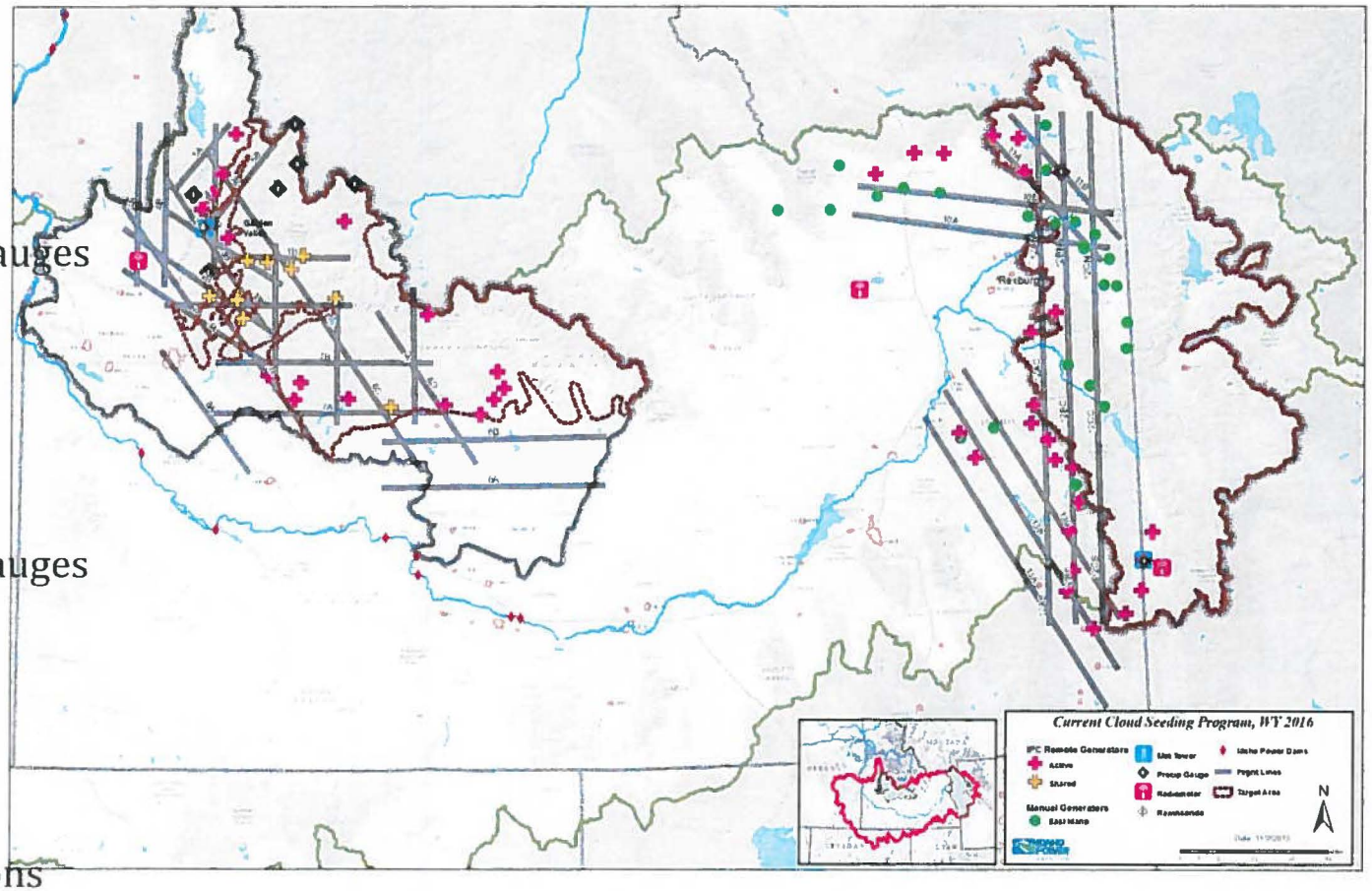
Idaho Power's History with Cloud Seeding

- 2003 - Payette project operational (7 generators, aircraft, assessment)
- 2008 - ESPA CAMP 5-year pilot project
- 2013 – (36 Generators, 1 aircraft)
- 2014 - Expansion (44 generators, 2 aircraft)
- 2015 - Expansion (53 generators, 3 aircraft)
- 2016 – Modest Expansion (56+/- generators, 3 aircraft)

Current Program

Payette, Boise, Wood & Upper Snake

- Payette
  - 17 Remote Gen's
  - Aircraft
  - Radiometer
  - Weather Balloon
  - Weather Tower
  - 8 hi-res precip gauges
- Boise and Wood
  - 11 Remote Gen's
  - Aircraft
  - Radiometer
  - Weather Balloon
  - 2 hi-res precip gauges
- Upper Snake
  - 25 Remote Gen's
  - 25 Manual Gen's
  - Aircraft
  - 2 Radiometers
  - 2 Weather Balloons
  - Weather Tower
  - 2 hi-res precip gauge



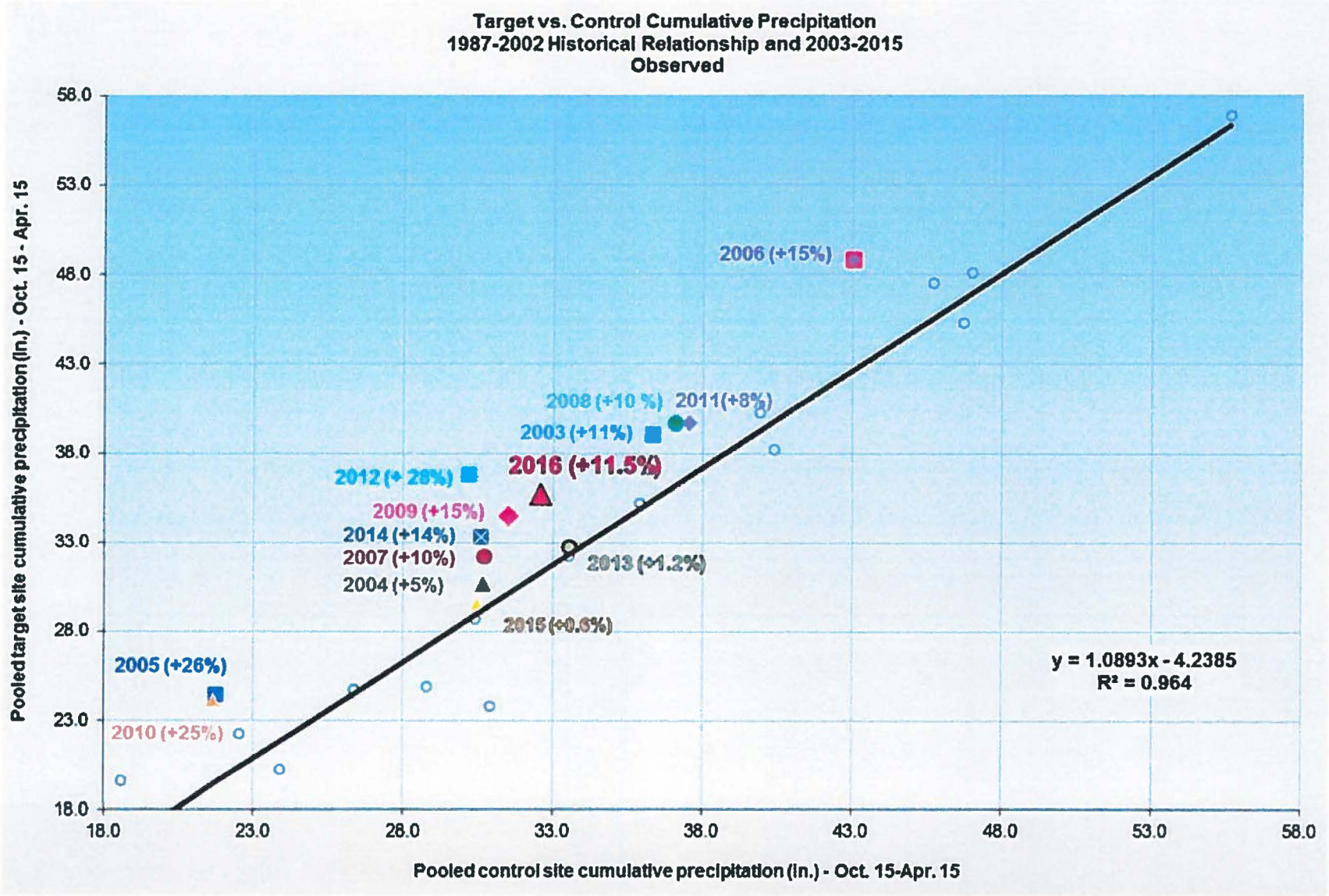
Benefit Estimates

Approaches used to assess benefits:

1. Target-Control
2. Hydrologic modeling using IPC's River Forecast System

Target – Control

Payette



Target-Control 2016

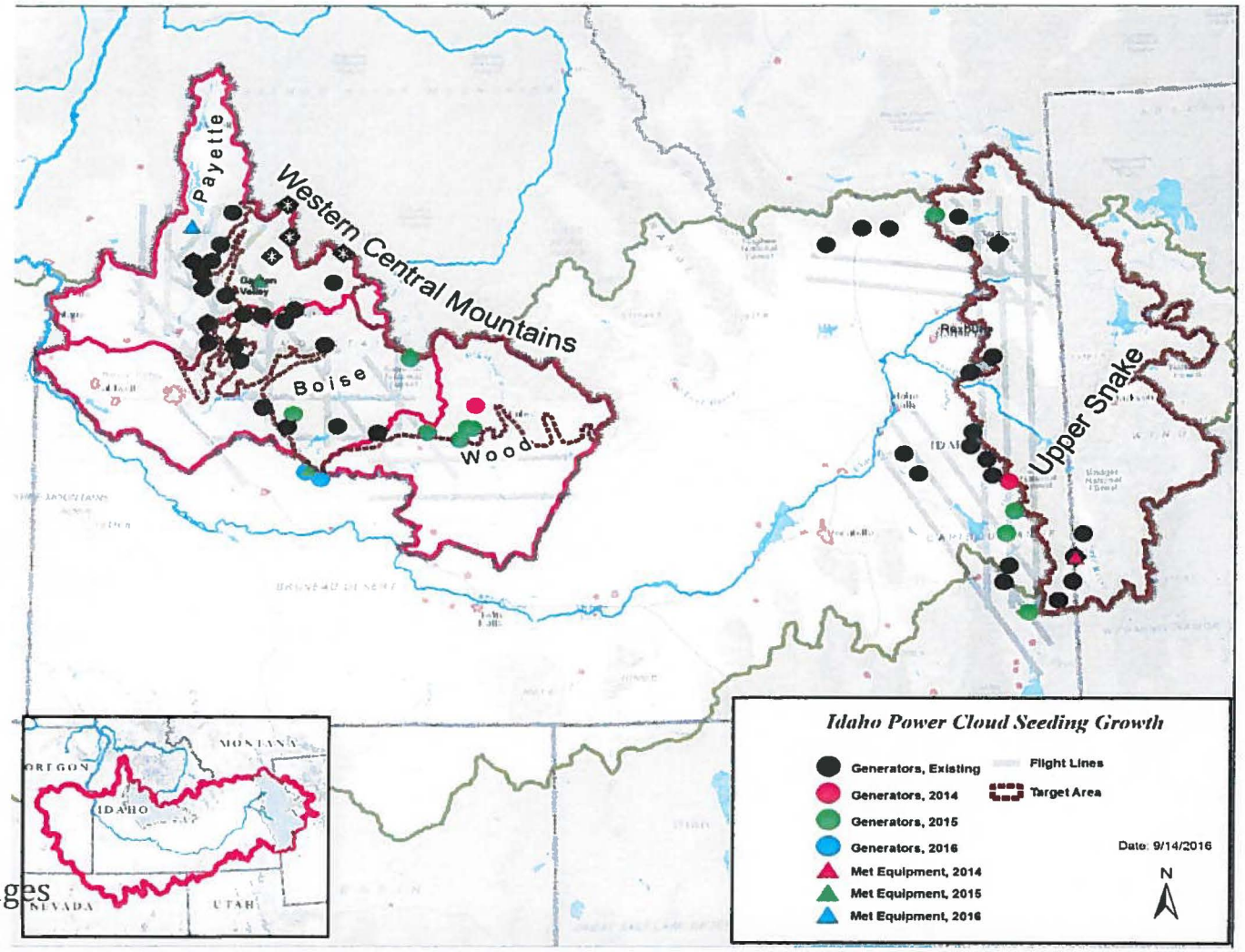
*Preliminary

	Percent Change by Basin - Target Control Analysis					
	Payette River Basin SWE*	**Boise River Basin SWE***	**Wood River Basin SWE***	**North Upper Snake Precip#**	**North Upper Snake SWE#**	**East Upper Snake SWE#**
March 1	16.0%	16.2%	14.2%	6.6%	8.5%	9.2%
March 15	14.1%	12.2%	13.0%			
April 1	11.4%	9.2%	5.1%	**4.3%**	**4.0%**	**5.4%**
April 15	**11.5%**	**9.4%**	**5.4%**			

2016-2017 Program

Payette, Boise, Wood & Upper Snake

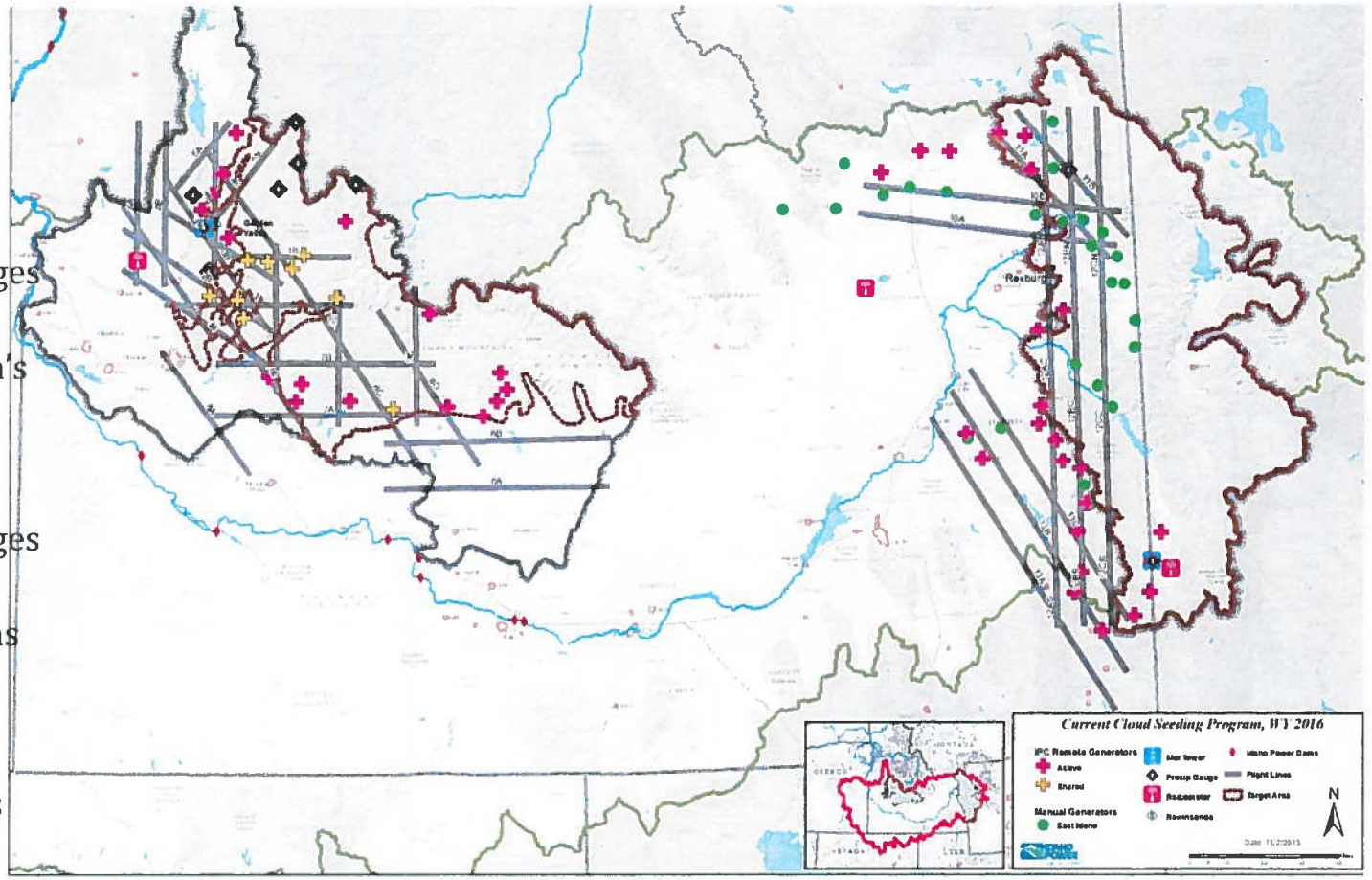
- Payette
  - 17 Remote Gens
  - Aircraft
  - Radiometer
  - Weather Balloon
  - Weather Tower
  - 7 hi-res precip gauges
- Boise and Wood
  - 20 - 26 Remote Gen's
  - Aircraft
  - Radiometer
  - Weather Balloon
  - 4 hi-res precip gauges
- Upper Snake
  - 30 - 40 Remote Gens
  - 25 Manual Gens
  - Aircraft
  - 2 Radiometers
  - 2 Weather Balloons
  - Weather Tower
  - 2 to 5 hi-res precip gauges



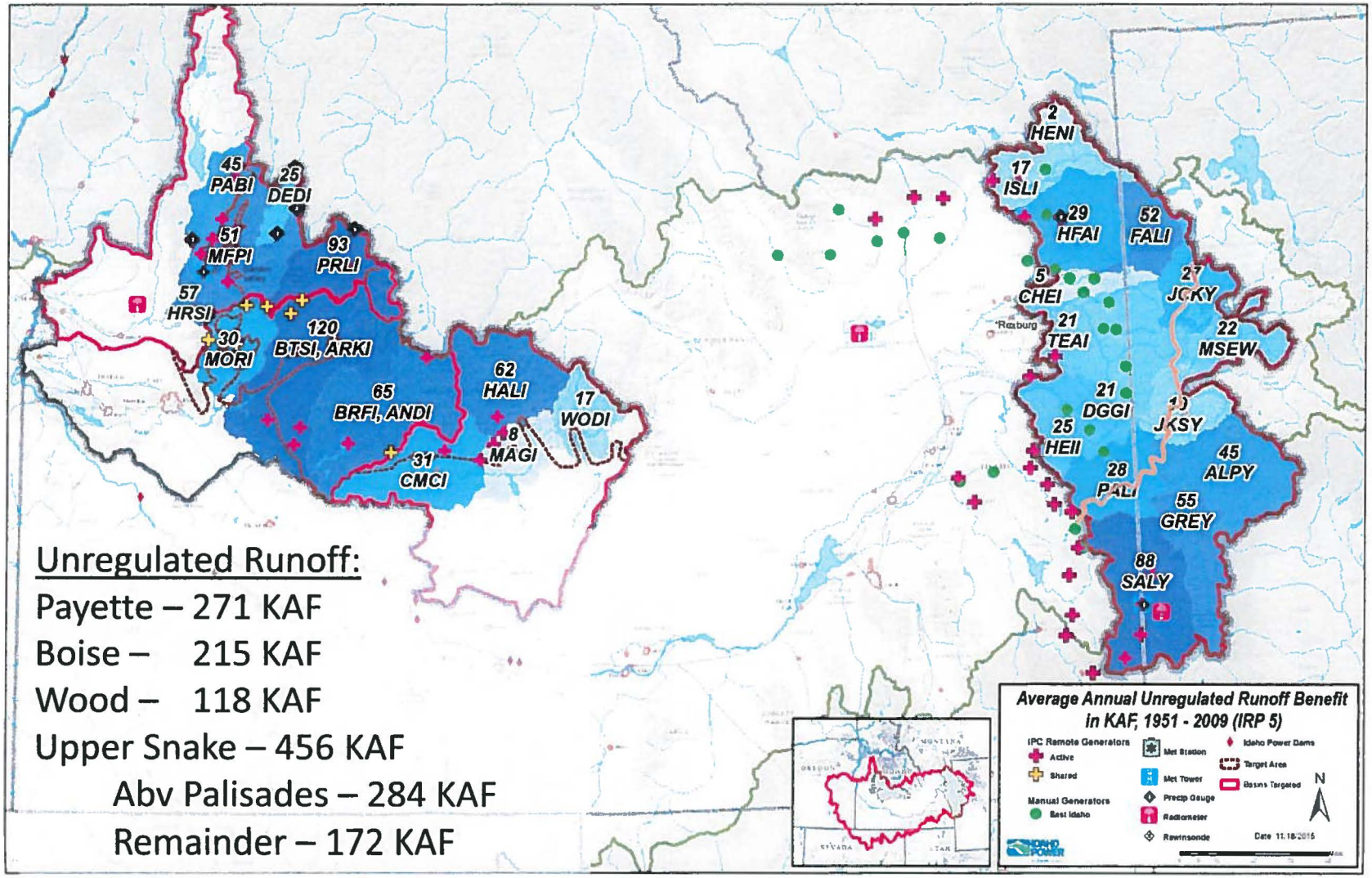
Potential Future Program

Payette, Boise, Wood & Upper Snake

- Payette
  - 17 Remote Gens
  - Aircraft
  - Radiometer
  - Weather Balloon
  - Weather Tower
  - 7 hi-res precip gauges
- Boise and Wood
  - 20 - 26 Remote Gen's
  - Aircraft
  - Radiometer
  - Weather Balloon
  - 4 hi-res precip gauges
- Upper Snake
  - 30 - 40 Remote Gens
  - 25 Manual Gens
  - Aircraft
  - 2 Radiometers
  - 2 Weather Balloons
  - Weather Tower
  - 2 to 5 hi-res precip gauges



Runoff Benefits at Build-out



Funding

Collaborative Funding ($, M)	2014	2015	2016	2017	2018	2019	2020
IWRB	**$ -**	**$ 0.182**	**$ 0.936**	**$ 0.700**	**$ 1.033**	**$ 0.983**	**$ 0.933**
Expansion	$ -	$ 0.182	$ 0.136	$ 0.100	$ 0.100	$ 0.050	
O&M (Total)	$ -	$ -	$ 0.800	$ 0.600	$ 0.933	$ 0.933	$ 0.933
US Aircraft Pilot Project	$ -	$ -	$ 0.200				
Support for ongoing opns (incl US Aircraft)	$ -	$ -	$ 0.600	$ 0.600	$ 0.600	$ 0.600	$ 0.600
4th Aircraft (2nd in US)*	$ -	$ -	$ -		$ 0.333	$ 0.333	$ 0.333
Water Users	**$ 0.015**	**$ 0.099**	**$ 0.450**	**$ 0.450**	**$ 0.450**	**$ 0.450**	**$ 0.450**
Upper Snake (WD#1)	$ -	$ -	$ 0.200	$ 0.200	$ 0.200	$ 0.200	$ 0.200
Boise Basin (WD#63)	$ -	$ -	$ 0.125	$ 0.125	$ 0.125	$ 0.125	$ 0.125
Wood River Basin (WD#37)	$ 0.015	$ 0.099	$ 0.125	$ 0.125	$ 0.125	$ 0.125	$ 0.125
Total Collaborative Funding ($, M)	**$ 0.015**	**$ 0.281**	**$ 1.386**	**$ 1.150**	**$ 1.483**	**$ 1.433**	**$ 1.383**
Idaho Power Program Costs		**$ 1.946**	**$ 2.680**	**$ 3.781**	**$ 4.232**	**$ 3.780**	**$ 3.589**
O&M		$ 1.610	$ 2.581	$ 2.867	$ 3.498	$ 3.574	$ 3.589
Capital		$ 0.336	$ 0.099	$ 0.915	$ 0.734	$ 0.206	$ -
Total Costs to IPC (w/ collaborative funding)		**$ 1.665**	**$ 1.294**	**$ 2.631**	**$ 2.749**	**$ 2.347**	**$ 2.206**

Questions?

End of Year Cloud Seeding Report to IDWR

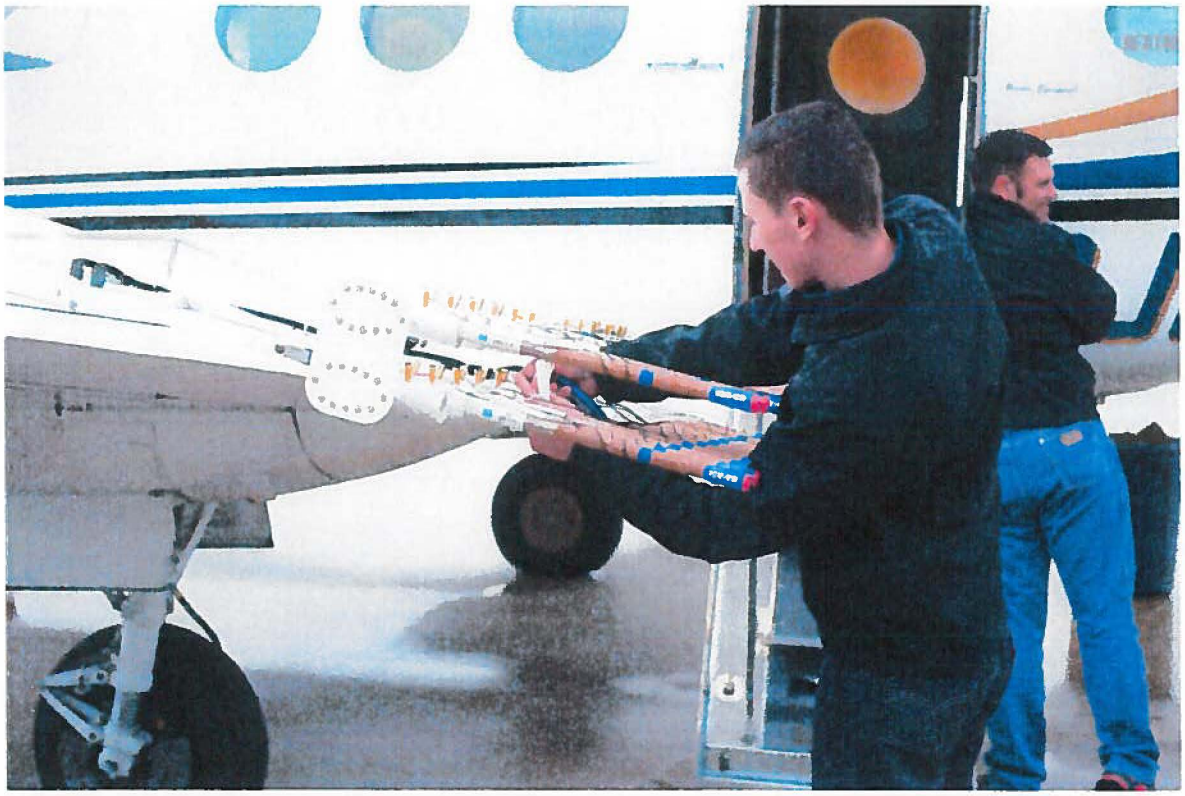
Idaho Power Company
8/22/2016

Project Overview

For the 2015-16 winter, Idaho Power conducted cloud seeding for the Central Mountains (Payette, Boise, and Wood River basins) as well as the Upper Snake region to increase mountain snowpack and spring runoff. The project began on November 1, 2015, and concluded on April 30, 2016.

Cloud seeding operations were led by three Idaho Power meteorologists who oversaw two contract meteorologists contracted through Weather Modification Incorporated (WMI). Together, the five meteorologists forecasted future seeding events, observed ongoing weather for seeding potential, organized seeding operations, conducted cloud seeding activities, and provided operational feedback.

For the 2015-16 cloud seeding season, aircraft operations continued operations in the Central Mountains and were expanded into the Upper Snake region. A total of three aircraft and crew were supplied by WMI. Two aircraft and crew were based out of Boise to target the Central Mountains, and one aircraft and crew was based out of Pocatello to target the Upper Snake region.



WMI pilots preparing seeding aircraft for cloud seeding operations

Maintenance crews for the ground-based cloud seeding generators and meteorological equipment were based out of Boise. A team of five full-time Idaho Power Technicians oversaw and maintained equipment installed in locations subject to adverse weather conditions. Having both the cloud seeding generators and meteorological equipment running smoothly is vital for cloud seeding operations as well as ongoing research.

East Hill generator installed fall 2015 near Georgetown, Idaho.

Central Mountain Project

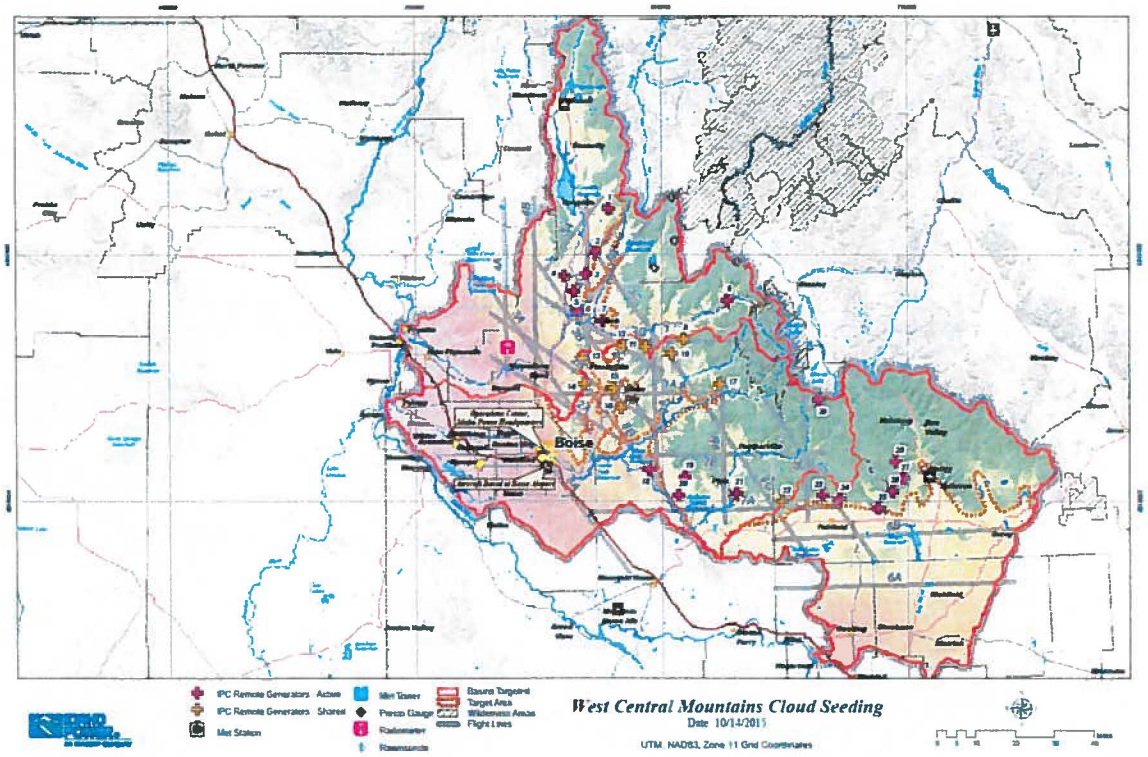
The Central Mountain Cloud Seeding Project is located in the Payette, Boise, and Wood River Basins of Central Idaho. During the cloud seeding season of 2015-16, 28 ground-based cloud seeding generators were used to target the project area. Of these generators, four were dedicated to the Boise Basin and six were dedicated for the Wood Basin. Another generator was placed as a shared resource for both the Boise and Wood basins. Nine generators that were originally used for the Payette Basin were utilized to also target the Boise Basin. Two aircraft were used to seed the entire target area of the Payette, Boise, and Wood basins. The 28 generators ran for a total of almost 1,655 hours, or an average of nearly 60 hours per generator. Seeding from aircraft totaled nearly 80 hours for the season. This is an average of nearly 40 hours per aircraft. These times are within normal ranges when compared to past central mountain cloud seeding operations. While these are around normal, Idaho Power and our contractor, WMI, are ready and available to seed more during the season if optimal cloud seeding opportunities present themselves.

Idaho Power also installed and operated the Bennett Mountain weather site. New equipment at this location included precipitation gauges, radiometer, heated anemometer and other standard weather monitoring devices. The adverse weather at this location provided the most challenging conditions IPC has encountered operating weather equipment. The instrument design and extra efforts taken in

installing this package provided extremely useful data for operating cloud seeding missions, conducting research, and finding equipment limitations.

The Central Mountains saw normal precipitation and snowpack during the cloud seeding season. The season started off with a phenomenal December. Not only did the winter storms bring above-average snowfall, these storms were ideal for cloud seeding. As the winter progressed, fewer seeding opportunities presented themselves during January and February. The final weeks of winter saw improved snow conditions, resulting in an average snowpack at the end of the season.

To estimate benefits, Idaho Power has been using a target control relationship to estimate increases in snowpack. While Idaho Power acknowledges that there can be errors in representing cloud seeding benefits this way, it is the best indicator of benefits currently available. According to these relationships, there were increases of 11.5% in the Payette Basin, 9.4% in the Boise, and 5.4% in the Wood Basin. Idaho Power is continuing to look for and develop new ways to estimate cloud seeding benefits.



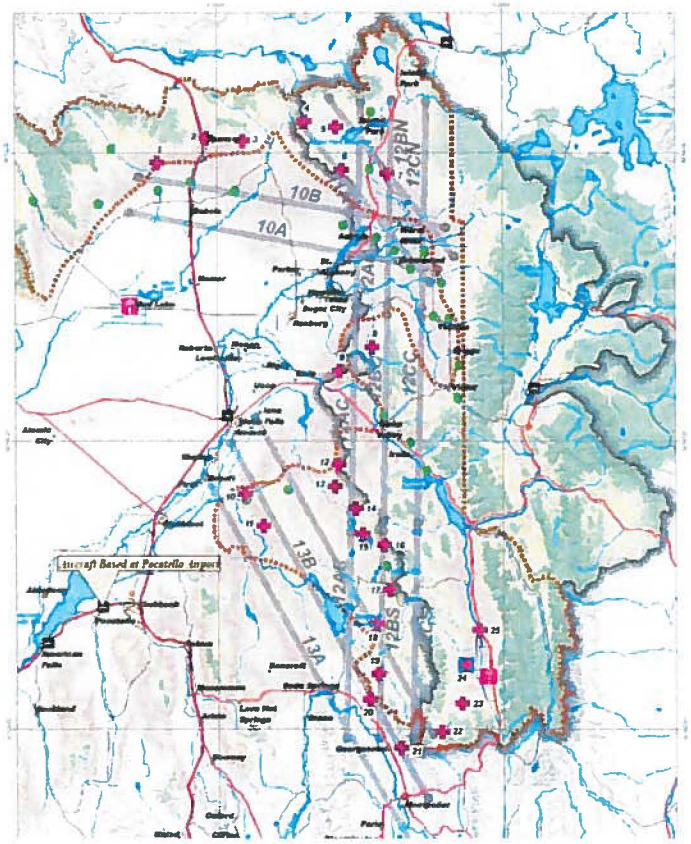
Upper Snake Project

The Upper Snake Project is located in the mountain regions of eastern Idaho and western Wyoming. Target areas include the Henry's Fork, Snake River Headwaters, Salt, and the Grey River drainages. During the cloud seeding season of 2015-16, 25 ground-based cloud seeding generators and one aircraft were used to seed this target area. These 25 generators ran for a total of almost 1,730 hours, or an average of nearly 70 hours per generator. Seeding from aircraft totaled over 27 hours for the season.

Like in the Central Mountains, these times are within normal ranges for cloud seeding operations over the past several years.

Winter weather in this region followed the same trend as that seen in the West Central Mountains. An increase in winter storm systems during the month of December provided for excellent seeding opportunities. A decrease in storm activity and seeding opportunities through the middle portion of the winter left some areas a bit below normal, but a good spring helped bring most areas to near normal for the winter months.

Using the same target control relationship for the Upper Snake Project is more challenging. Finding suitable control sites that are not impacted by cloud seeding in Western Idaho, Utah, and Wyoming is a challenge. The sites that are used are the best available locations. Using these relationships, the Northern Region of the target area saw a 4% increase and the Eastern Region saw a 5.4% increase.



USACE Options for Current Boise General Investigation (Boise River Feasibility Study) Purpose = Flood Risk Reduction & Water Supply			
Options		**Requirements**	**Remarks**
Option 1	Terminate Boise GI	1) Formal decision by IWRB to terminate study (Jan 2017) 2) Agree upon and finalize work products; complete fiscal closeout 3) IWRB & Corps outreach to decision makers and stakeholders as necessary	• Justification: Corps cannot justify a project with less than 1.0 Benefit/Cost ratio for flood risk benefits (project is more likely to be approved by Congress at significantly greater than 1.0) • Based on initial analysis, Corps was unable to identify alternative projects that would provide sufficient flood risk reduction benefits to warrant continued study • Remaining funds approx $700,000 less costs to document process and transfer data ($350k IWRB funds) • Corps will continue to pursue smaller scale flood reduction projects in the TV under other authorities/programs
Option 2	Reformulate scope of study with USACE	1) Formal decision by IWRB (Jan 2017) 2) Re-scope with Corps Project Team and HQ 3) Develop new scope, schedule and budget and submit waiver 4) Waiver approval required by HQ	• Option to reformulate must be approved by Corps HQ; budget and schedule will increase • Corps has not identified other options that would provide enough flood risk reduction to warrant continued study
USBOR Options for Feasibility Study Purpose = Water Supply			
Options		**Requirements**	**Remarks**
Option 1	Partner in Anderson Ranch Dam Raise Feasibility Study	1) Formal decision by IWRB commit all or portion of non-federal funds to partner in study 2) Extension of BOR authority beyond 2019 currently under consideration 3) Consider involvement of multiple "sponsors"	• Estimated study cost $3.5 million • 50/50 cost share – non-federal cost share $1.75 million (only partially funded to date) • Several entities have expressed interest; seeking assurance of potential space
Option 2	Partner in Expanded / Reformulated Feasibility Study (re-scope Anderson Ranch Raise Feasibility Study to include other small scale storage options)	1) Pursue preliminary "re-scoping" 2) Formal decision by IWRB to partner with BOR on expanded Feasibility Study (BOR as Lead Agency for new storage projects) 3) Develop new scope, schedule and budget (incorporate BOR's appropriated funding request status) 4) Develop MOU with USACE as Cooperating Agency (leverage/utilize Corps technical resources where appropriate)	• Scope could include combination of smaller storage projects (Lucky Peak pool raise 10 kaf, Arrowrock Dam Raise 10 ft/20kaf, Anderson Ranch Raise 10 ft/20 kaf); other options could also be considered • PL111-11 gives BOR study authority to perform feasibility study on above referenced sites (may need to be extended or modified if other options considered) • Budget will likely increase • Utilize appraisal and feasibility work each agency has already performed

Memorandum

To: Idaho Water Resource Board

From: Cynthia Bridge Clark

Date: September 6, 2016

Re: Teton Water Users Association Proposal

At the September 16, 2016 Idaho Water Resource Board (IWRB) meeting, the Teton Water Users Association (TWUA) will present a proposal to implement a "Phased Water Management Plan" in the Teton Valley. The proposal includes a request for funding from the IWRB. TWUA would like to introduce some of its members to the IWRB and receive initial comments and guidance on how to advance the proposal. A copy of the proposal is included in the IWRB meeting materials for reference.

REQUIRED ACTIONS: Action is not required at this time.

Teton Water Users Association
Phased Water Management Plan

I. Description of Teton Water Users Association

Water has long played a central role in the cultural and economic prosperity of the Teton River watershed, and currently supports robust agricultural and recreational economies. Yet, there are several emerging water issues that promise to shape a future water management paradigm that looks dramatically different from the past. These factors include declines in Idaho's aquifer and river levels, prolonged drought, development pressure to convert farmland to subdivisions, mitigation and water-supply concerns for growing cities and rural areas, continued declines of Yellowstone cutthroat trout distribution and abundance, water-quality concerns, potential changes in Rule 50, and the proposed formation of a Groundwater Management Area that would encompass the Eastern Snake Plain Aquifer and its tributary basins.

In response to these issues, the Teton Water Users Association (TWUA) formed in the fall of 2015, bringing together individuals who can, collectively, identify solutions that satisfy the needs of all constituents within the community – farmers who depend on water for crop and livestock production, municipalities that require clean and adequate water for residents, and conservation interests seeking water for fish and wildlife. The TWUA currently works exclusively in Teton Valley in Teton County Idaho. The TWUA is a collaboration of interests and is represented by a true cross-section of Teton Valley's population, being comprised of approximately 50% agricultural water users, 30% conservation water users, and 20% municipal water users.

The mission of the TWUA reflects its diversity by addressing problems and implementing projects that:

- Keep working lands working by securing and maintaining a reliable and affordable supply of water to sustain agriculture.
- Protect and restore stream flows and water quality in the Teton River and its tributaries, for the benefit of fish, wildlife, and people.
- Secure and maintain a safe, affordable, and high-quality water supply for municipalities and residential water users.

II. Phased Water Management Plan

This phased water management plan, developed by the TWUA and described in detail below, was driven largely by the realization that the incremental conversion of land from agriculture to suburban use has negatively impacted Teton Valley's prime economies. A recent multi-disciplinary study conducted by Humboldt State University and funded by the U.S. Department of Agriculture documented the loss of functionality of traditional canal and ditch irrigation systems in Teton Valley due to fragmentation of agricultural lands and socioeconomic changes within canal companies[1,2]. These declines in Teton Valley's historical agricultural practices are linked to local water-level reductions of up to 55 feet in Teton Valley's local aquifer, a dramatic reduction in base flows in the Teton River (see graph below), and decreased habitat and migratory corridors available for fish and wildlife. Cumulatively, these trends are raising concerns about long-term water availability for municipal and residential use, tributary and river stream flows for fish and other wildlife, and water availability for agricultural production.

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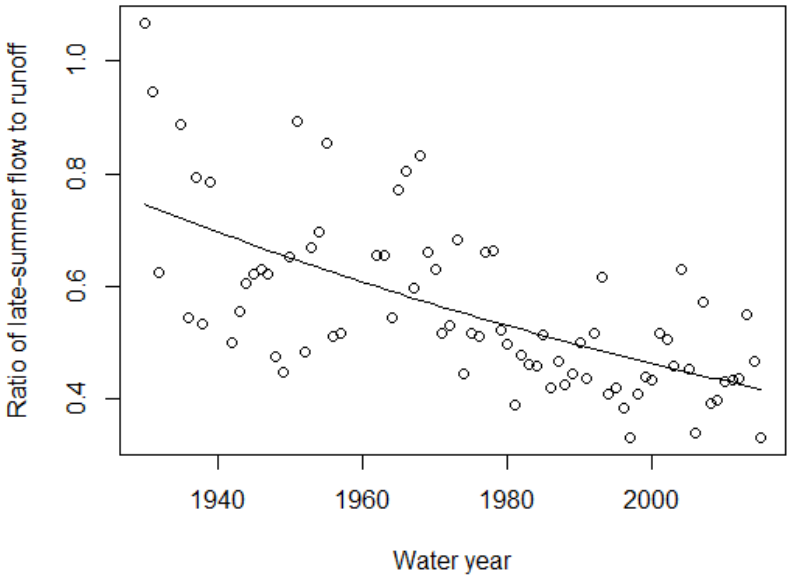
[1] R. Van Kirk et al. 2012. In the Henry's Fork Watershed, Every Drop Leaves a Ripple. Available online at http://www2.humboldt.edu/henrysfork/Documents_Presentations/HFW%20Booklet%20final.pdf

[2] J.M. Baker et al. 2014. Patterns of irrigated agricultural land conversion in a western U.S. watershed: Implications for landscape-level water management and land-use planning. *Society and Natural Resources* 27:1145-1160.



Ratio of late-summer (August 1 – September 30) mean flow in the Teton River to mean flow during runoff (May 15 – July 15). Curve depicts statistically significant decline in this base-to-peak flow ratio over time.

In an effort to work proactively, the TWUA developed a phased water management plan that seeks to restore traditional irrigation practices in the Teton Valley to the greatest extent possible, thereby improving local aquifer levels, increasing baseflows, and sustaining water availability for fish and wildlife. Over the course of its history, Teton Valley has experienced three major development booms - one in the late 1970s, one in the mid-1990s, and one in the mid-2000s. Therefore, each phase of the water management plan aims to achieve water responses equivalent to that prior to each boom.

Through the efforts described below, the TWUA's plan aims to:

1. Stabilize the Teton Valley aquifer, thereby protecting municipal and residential water supply;
2. Insulate farmers against changes in water availability and increase water-supply reliability, particularly during times of drought;
3. Maintain valuable wetland habitat and create tributary stream flow conditions beneficial for Yellowstone cutthroat trout; and
4. Quantifiably increase base flows in the Teton River, thereby decreasing water supply and demand pressure on the Henrys Fork River and Island Park Reservoir.

These goals will initially be achieved by actively and efficiently using existing irrigation water rights and, secondarily, by implementing a managed groundwater recharge program. Through the reinvigoration of Teton Valley's historic agricultural practices, groundwater/surface water modeling shows that the TWUA can take tangible steps toward stabilizing the local aquifer and increasing base flows in the Teton River, and in so doing address multiple levels of water need and begin to proactively plan for Teton Valley's water future.

This proposal is unique in that it actively manages the timing of natural flow available in the Teton River in a way that benefits water users both in and outside of Teton Valley, serving to improve the overall water budget in the Upper Snake River. The hydrogeologic properties of the Teton Valley alluvial aquifer make this possible—water recharged to the aquifer during runoff is slowly released on time scales of months rather than decades.

The efforts described in this proposal shall occur in an area commonly referred to as Teton Valley, Idaho, generally encompassing the cities of Victor, Driggs, and Tetonia, and the surrounding areas.

Phase I

Goal: Restore and reinvigorate traditional agricultural water practices in Teton Valley, mimicking water response comparable to the year 2000.

Method: More efficiently manage, divert, and distribute existing water rights in Teton Valley. Restore capacity to divert and apply an additional 85 cfs of natural flow for 60 days early in the irrigation season. Ensure that irrigation water rights are actively used for irrigation. Utilize historic flood irrigation practices when possible.

Outcomes:

- Aquifer Recharge: Approximately 10,000 acre feet of addition incidental recharge will result annually in 2017 and 2018.
- Anticipated Local Aquifer Response: Begin to stabilize the local Teton Valley aquifer.
- Anticipated Downstream Response: Increase base flows in the Teton River, measured at Harrop Bridge, by approximately 10-15 cfs.

Timeframe: 2017 – 2018

Necessary Investments and Activities to Attain Goal:

- Install stream gage downstream of Harrop Bridge to monitor river base flow response during project implementation, and compare with historic data at that gage site from years when flood irrigation was standard practice.
- GIS Work - Electronically map and document the location and condition of canals and irrigation infrastructure.
- Identify and prioritize necessary canal and infrastructure repairs.
- Identify locations for operational spills and sites where flood irrigation techniques can be intensified.
- Repair canals and irrigation infrastructure to facilitate more efficient management of water and the use historic irrigation practices.
- Increase participation from canal companies and individual water right holders with the capacity to manage water more efficiently and use historic irrigation practices.
- Utilize existing groundwater-surface water models and conduct additional water availability and supply analyses in order to prioritize infrastructure improvements and optimize allocation of water supply among different uses in Teton Valley.
- Establish a website by which to notify participates as to when, and in what quantities, water can be diverted and distributed under existing water rights to maximize incidental recharge efforts.
- Partner with conservation interests, as well as Federal and State agencies, to investigate cost-share opportunities and ensure that canal repairs and improvements promote and secure fish and wildlife values. Coordinate water measurement and website training for participants.
- Conduct community outreach and education about program.

Phase II

Goal: Restore and reinvigorate traditional agricultural water practices in Teton Valley, mimicking water response comparable to the year 1990.

Method: Continue to more efficiently manage, divert, and distribute existing water rights in Teton Valley. Restore capacity to divert and apply an additional 170 cfs of natural flow (relative to current conditions) for 60 days early in the irrigation season. Ensure that irrigation water rights are actively used for irrigation. Utilize historic flood irrigation practices when possible.

Outcomes:

- Aquifer Recharge: Approximately 20,000 acre feet of addition incidental recharge will result annually in 2019 and 2020.
- Anticipated Local Aquifer Response: Continue to stabilize the local Teton Valley aquifer.
- Anticipated Downstream Response: Increase base flows in the Teton River, measured at Harrop Bridge, by approximately 15-25 cfs.

Timeframe: 2019 – 2020

Necessary Investments/Activities to Attain Goal:

- Maintain gaging station at Harrops Bridge and comparative base-flow analysis.
- Continue to repair canals and irrigation infrastructure necessary to promote the more efficient management of water.
- Assess opportunity for the construction of additional canal systems and laterals.
- Construct additional canal systems and laterals, where appropriate.
- Continue to secure additional participation from Teton Valley water right holders.
- Continue to partner with conservation interests, as well as Federal and State agencies, to investigate cost-share opportunities and ensure that canal repairs and improvements promote and secure fish and wildlife values.
- Develop a local water bank, groundwater district or other mechanism by which to facilitate the efficient movement and trading of water rights locally.

Phase III

Goal: Restore and reinvigorate traditional agricultural water practices in Teton Valley, mimicking water response comparable to the year 1975.

Method: Continue to more efficiently manage, divert, and distribute existing water rights in Teton Valley. Restore capacity to divert and apply an additional 260 cfs of natural flow (relative to current conditions) for 60 days early in the irrigation season. Ensure that irrigation water rights are actively used for irrigation. Utilize historic flood irrigation practices when possible. Conduct management groundwater recharge.

Outcomes:

- Aquifer Recharge: Approximately 30,000 acre feet of addition incidental recharge will result annually, beginning in 2021.

- Anticipated Local Aquifer Response: Maintain the local Teton Valley aquifer.
- Anticipated Downstream Response: Increase base flows in the Teton River, measured at Harrop Bridge, by approximately 25-40 cfs, and restore the base-to-peak flow ratio depicted in the graph above to its 1975 level of 0.55.

Timeframe: 2021, and beyond

Necessary Investments/Actions to Attain Goal:

- Maintain gaging station at Harrop Bridge and base-flow response analysis.
- Assess opportunity for the construction of managed recharge sites (i.e. recharge pits and additional canal systems).
- Secure one or more recharge water rights.

FY 2017 Project Budget & Funding Request

Description	Secured Funding	IWRB Funding Request	Total Cost
Infrastructure GIS mapping • Document the location of all existing canals and diversion works. • Assess and catalog the condition of existing canals. • Identify locations for operational spills and sites where flood irrigation techniques can be intensified • Assess opportunity for the construction of new canals and laterals Repair Canals & Infrastructure, Construct New Canals • Prioritize canal and infrastructure repairs • Work with partners to develop cost share and other funding opportunities • Implement canal repair projects to facilitate the more efficient management of water • Rehabilitate old canals and construct new canals, as appropriate, to facilitate increased incidental recharge efforts	$25,000	$210,000	**$235,000**
Hydrology & Monitoring • Harrop Gaging Station • Water supply analysis • Hydrogeologic analysis • Fisheries analysis	$35,600	$10,000	**$45,600**
Legal/Water Rights Analysis • Take steps to secure water rights for future managed recharge efforts • Establish local water bank, or other mechanism, to facilitate timely exchanges	$47,850	$0	**$47,850**
Outreach, Education, & Training • Recruit and retain TWUA members • Plan and facilitate TWUA meetings • Conduct community outreach and education • Website - Establish a website which serves to notify participates as to when, and in what quantities, water can be diverted and distributed under existing water rights to maximize incidental recharge efforts. • Coordinate water measurement and website training • Secure private and federal funding to support the efforts of the TWUA	$58,550	$30,000	**$88,550**
TOTAL	**$167,000**	**$250,000**	**$417,000**

The 2017 TWUA budget, outlined above, is $417,000. Of this, the TWUA respectfully requests $250,000 from the Idaho Water Resource Board. The remainder of the 2017 project funds amount to $167,000, which will be provided through grants from the National Fish and Wildlife Foundation, Idaho Department of Lands, and in-kind match from TWUA members.

It should be noted that, while the requested funding represents "seed funding" that is vital to jump start this project, the TWUA is already working to garner funds for future phases and subsequent years of the project. A grant application has been submitted to the Regional Conservation Partnership Program, and another grant application will be submitted to the Bureau of Reclamation WaterSMART program in December. If secured, these prospective funding sources shall be used primarily for infrastructure improvements associated with the second year of phase I, as well as phases II, and III. Importantly, both of these funding sources require significant non-federal match. As such, support from the Idaho Water Resource Board will not only assist the TWUA to accomplish those tasks listed above, but it will allow TWUA to leverage additional funding critical to the long-term success of this work.

Thank you for considering this proposal. This is a multi-year endeavor, and the TWUA hopes that the Idaho Water Resource Board will be able to support its efforts now and in the future.

ITINERARY

IDAHO WATER RESOURCE BOARD

Last Chance Canal Company Tour
September 15, 2016
Grace, Idaho

Estimated Time	Activity
8:00 a.m. – 12:00 p.m.	IWRB Work Session (Pocatello)
12:00 p.m. – 1:00 p.m.	Lunch (Pocatello)
1:30 p.m. – 2:30 p.m.	Travel to Grace. Meet at Grace Legion Hall (Corner of 1st North and 1st West, Grace ID)
2:30 p.m. – 3:30 p.m.	Presentation: Last Chance Canal Company - History & Background (Marc Gibbs, Board Member & State Representative) Presentation: Time-Lapse Video of Construction of the New Diversion Dam and Canal Intake Structure (Eric Franson, Franson Civil Engineers)
3:30 p.m. – 3:45 p.m.	Travel from Legion Hall to Diversion Dam Rehabilitation Project Site
3:45 p.m. – 4:15 p.m.	Project Presentation: Eric Franson, Franson Civil Engineers
4:15 p.m. – 5:30 p.m.	Last Chance Hydroelectric Plant (Need Approval from PacifiCorp – Safety Vests, Hard Hats likely required) Last Chance Canal Company Flumes
5:30 p.m. – 6:30 p.m.	Return to Pocatello

**Please note: Restrooms will be available at the Legion Hall in Grace.*

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