

# Saltese Flats Wetland Restoration Project



Photo: April 11, 2019



**Ben Brattebo, Spokane County Environmental Services**

**Chris Bonsignore, Ducks Unlimited**

**Spokane River Forum**

**April 17, 2019**



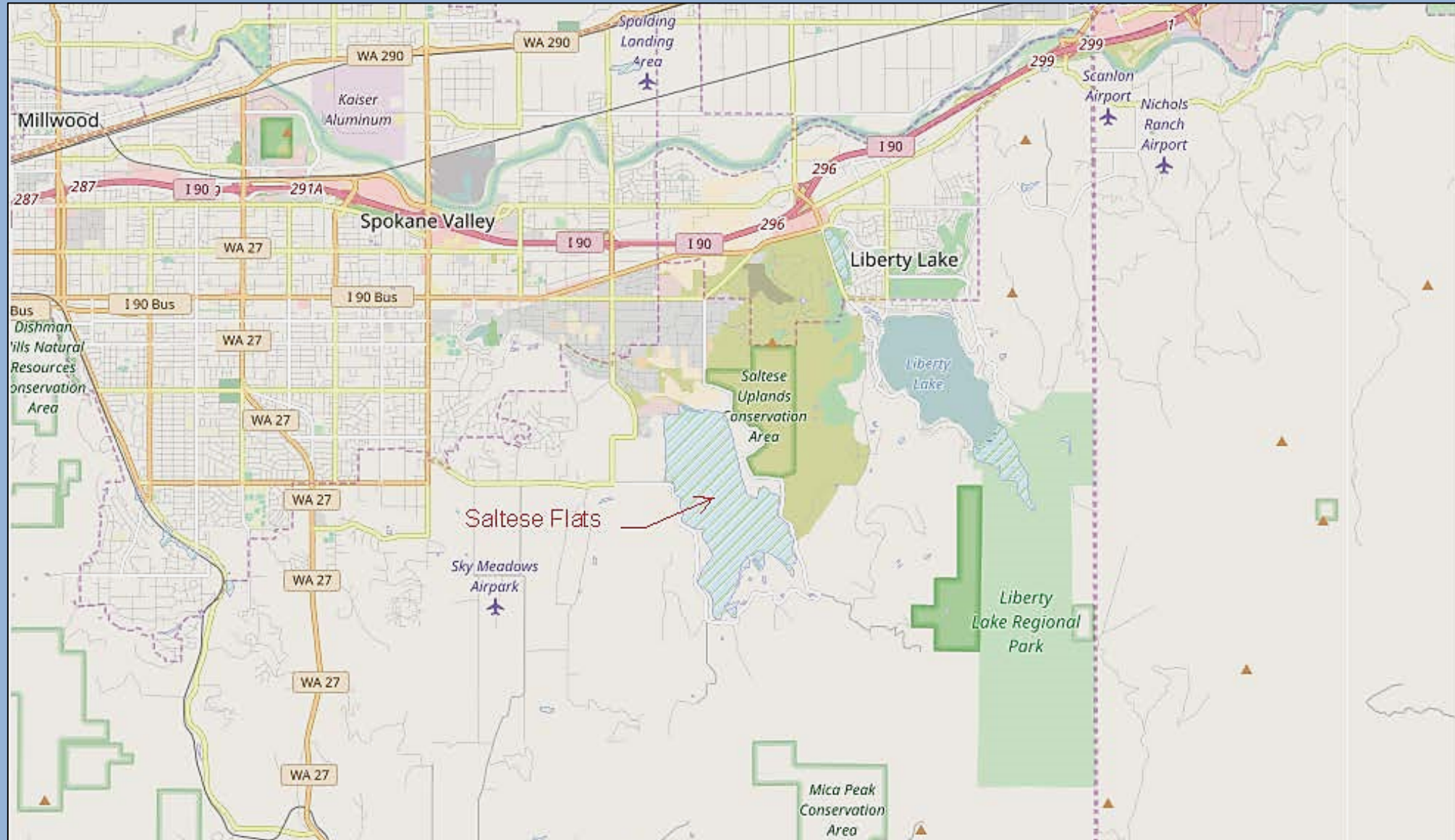


Photo: April 11, 2019

**“As we approached the river the trees became scarcer and soon we had a clear view of what was known then as Saltese lake, a beautiful body of water close to Granite peak.”**

**- James Glover, March 9, 1917, Spokane Daily Chronicle, describing his first visit to Spokane Valley in 1873**

# Site Location Map



# Presentation Overview

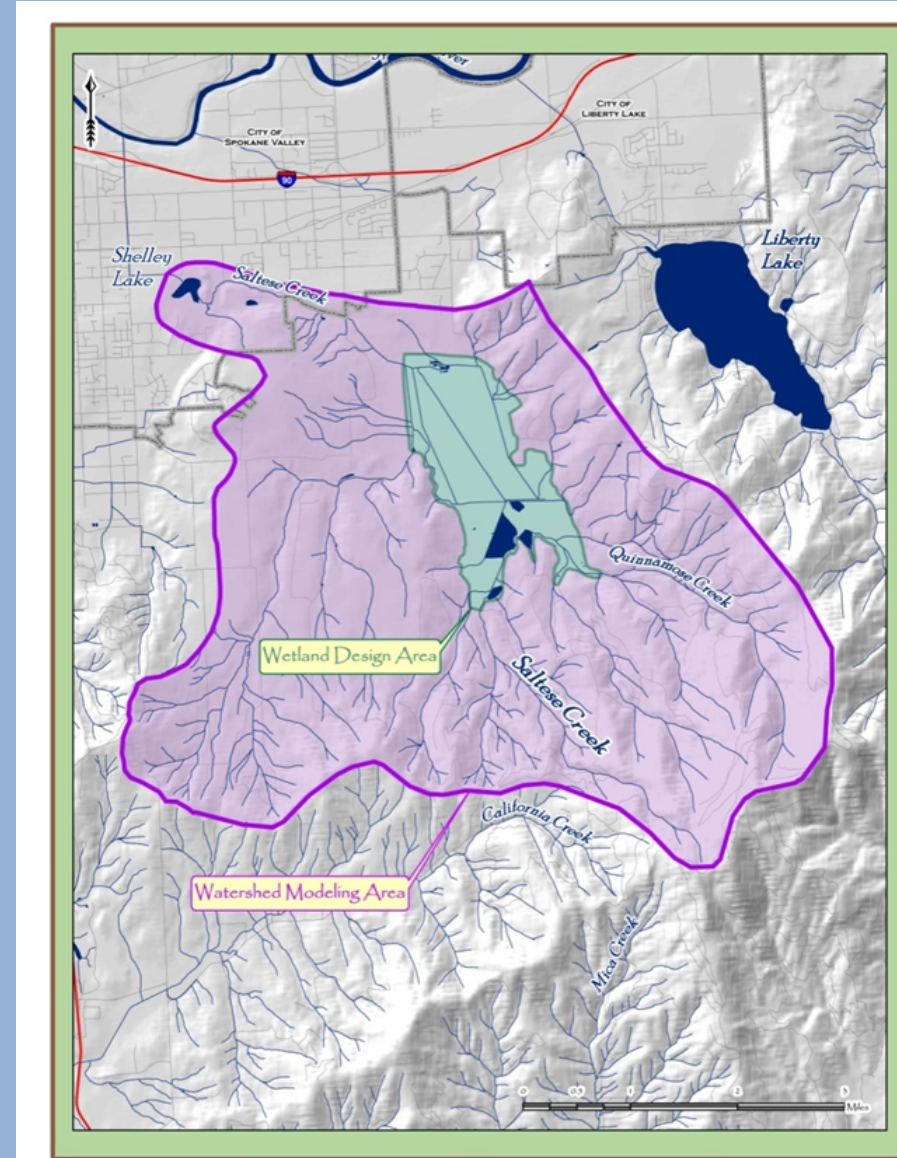
- Watershed overview
- Site background
- Spokane County Environmental Services involvement
- 2018 & 2019 construction activities
- Project phasing
- Water and vegetation management



March 19, 2019

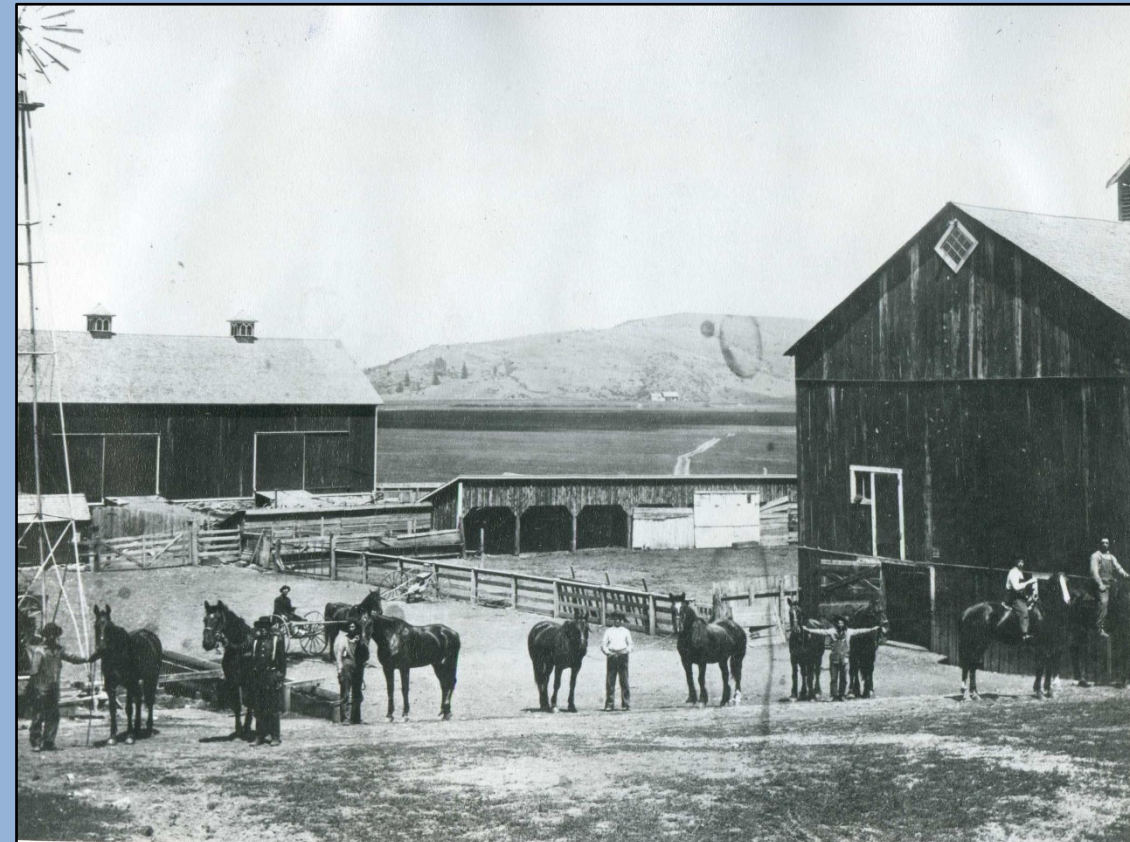
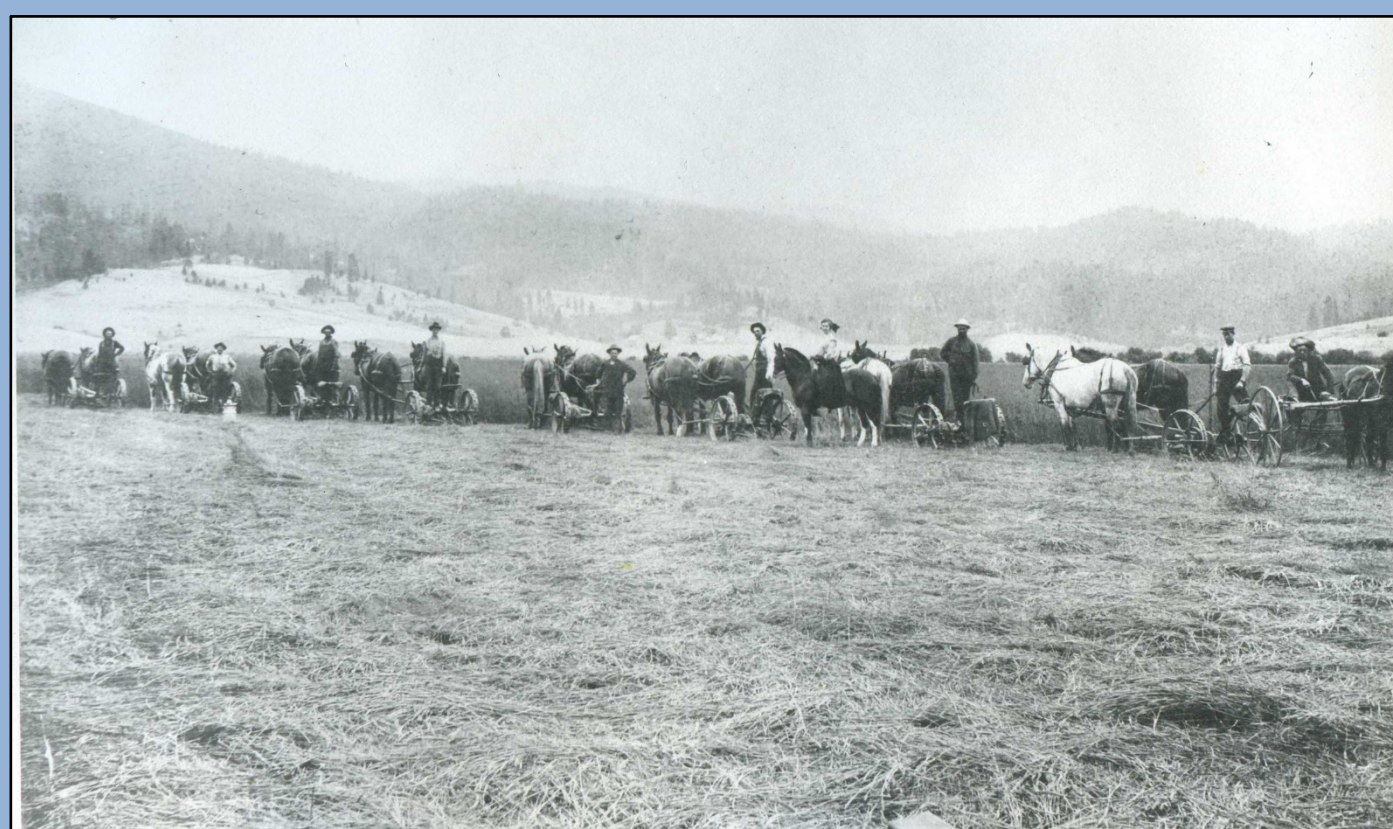
# Watershed Overview

- South of Spokane River and I-90
- West of Liberty Lake
- East of Spokane Valley
- 14,000 acre watershed off Mica Peak
- 1,200 acre former lake bottom
- County owns approx. 600 acres on Flats



# Site Background

- Saltese Lake drained beginning in 1890s for agriculture



Photos from Morrison family

# Site Background

FRIDAY MORNING, MARCH 4, 1932.

## The Weather.

Forecast for Montana: Generally fair.  
Comparative temperatures—Yesterday:  
Highest 34, lowest 23, mean 28. One  
year ago: Highest 53, lowest 32, mean 42.  
5 A.M. 12 M. 5 P.M.  
Temperature, dry bulb .23.9 30.2 31.2  
Temperature, wet bulb .21.0 26.3 25.6  
Rel. humidity (per cent) 64 60  
Observations taken at 5 p. m., Pacific  
time, March 3, 1932.

Station	Low Temp.	High Temp.	Prec. 24 hrs.	State of Weather.
Boise	28	38	...	Clear
Boston	32	40	...	Clear
Buffalo	34	36	...	Pt. Cldy
Calgary	-2	10	...	Pt. Cldy
Chicago	36	38	T	Cloudy
Denver	26	56	...	Cloudy
Des Moines	32	40	...	Clear
Edmonton	..	6	...	Clear
Evreka	36	50	...	Clear
Galveston	70	72	.04	Clear
Havrè	6	14	T	Pt. Cldy
Helena	6	16	.18	Clear
Juneau	30	30	...	Cloudy
Kalispell	14	24	...	Pt. Cldy
Kamloops	14	28	...	Pt. Cldy
*Kansas City	38	42	.04	Cloudy

## SALTESE LAKE IS BORN AFRESH

Long Dry Expanse of 800 Acres  
Suddenly Becomes Rip-  
pling Water.

## DUCKS QUACK GAILY

Farmer Is Afraid His Meadow  
Won't Dry Out in Time for  
Spring Plowing.

## BIRD CLUB FOUND MANY BIRDS AT SALTESE LAKE

The Spokane Bird club will meet  
Wednesday evening at the Grace  
Campbell Memorial home. Miss  
Mattie Burke, in charge of the  
program, presents John D. Con-  
nors, manager of Turnbull's north-  
west refuge, who will speak on  
"Bird Reserves and Bird Protec-  
tion." Wild life pictures will be  
shown.

Spokesman-Review, March 4, 1932

Spokesman-Review, March 2, 1941

\* \* \*

SALTESE lake will be used  
by the Spokane Fish Protective  
association to hatch rainbow fry  
for the purpose of stocking the  
Spokane river and the lakes in  
this vicinity. Secretary Weise-  
man of the association stated  
this morning that the hatchery  
on the Little Spokane does not  
have the capacity to furnish  
enough fry and that in securing

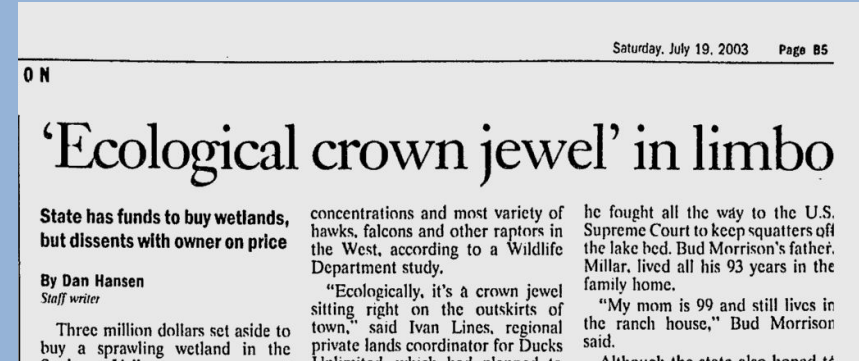
Spokane Daily Chronicle, Oct. 2, 1970

# Additional Background

## Wetlands sustain environment as well as outdoor enthusiasts

■ **Saltese marsh:** The report calls the marsh on the southern margin of Saltese Flats “one of the largest areas of high quality waterfowl habitat remaining in the Spokane Valley.”

Spokesman-Review and Spokane Chronicle  
July 11, 1991



Spokesman-Review, July 19, 2003

December 2004

-ES 7-

013-1372-001

### Saltese Flats Restoration

Saltese Flats is evaluated in this report for multiple purposes of: wetland restoration, enhanced groundwater recharge for streamflow augmentation from seasonal storage, and as a potential site for reclaimed water discharge. The Flats is located in the southwestern portion of WRIA 57, in a rapidly

WRIA 55-57 Planning Unit, Storage Assessment by Golder Associates, December 2004

# Spokane County Environmental Services

- Planned Benefits

- Delaying runoff to recharge the Spokane Valley-Rathdrum Prairie Aquifer to increase flow in the Spokane River during late summer months
- Restoring a diverse wildlife habitat
- Providing a community resource for public access and education
- Allowing for possible future application of Class A reclaimed water

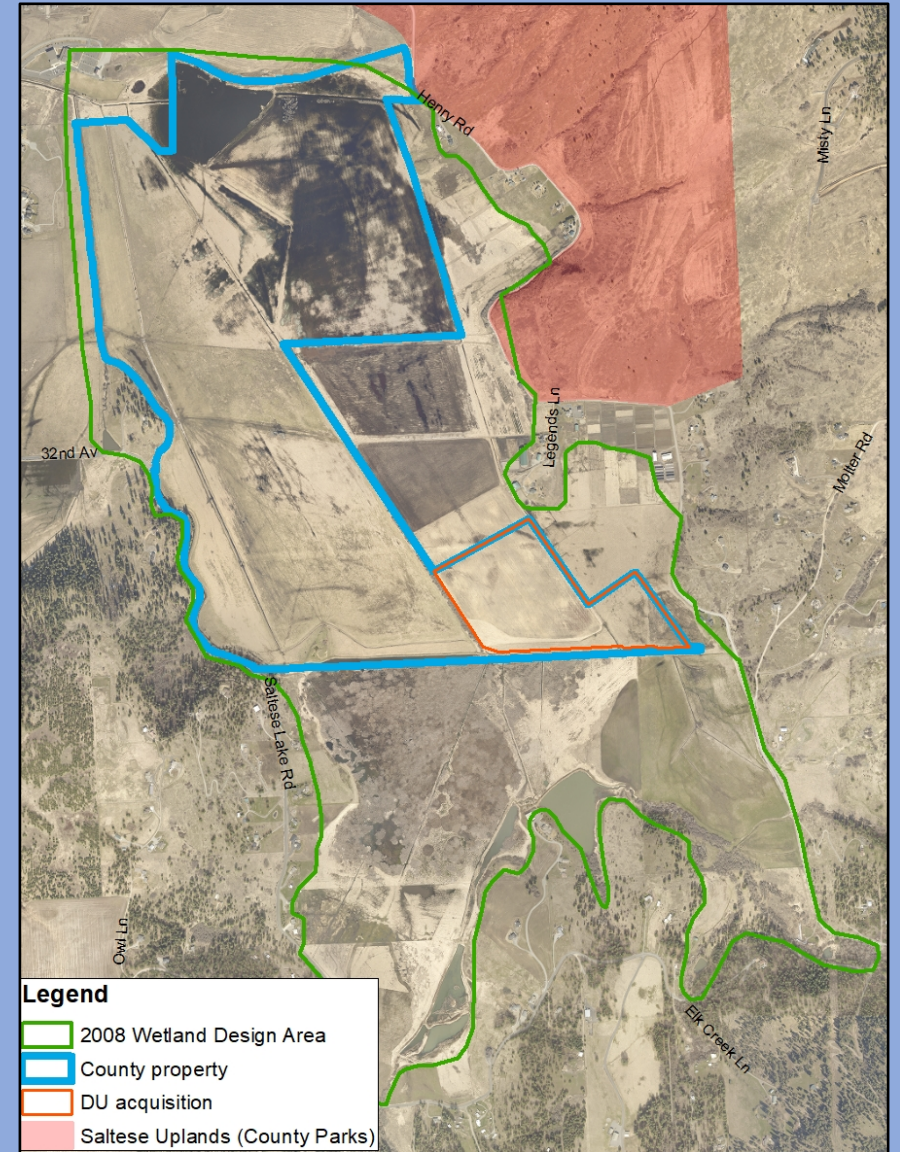


North end of Saltese Flats, looking south, March 28, 2019

# Spokane County Environmental Services

- 2009 – Final Reclaimed Water Use Study
  - included Saltese Flats as alternative location for discharge of reclaimed water
- 2010 – County purchased 346 acres of historic lake bottom with water right
- 2015 – 60 ac. land acquisition funded by DU
  - County ownership to approx. 600 acres
- 2018 – Installed water control structures
- 2019 – Planned grading to create additional wetlands and elevated trail

Note: Land purchase and restoration, to date, funded from Spokane County sewer service rates (except DU acquisition)



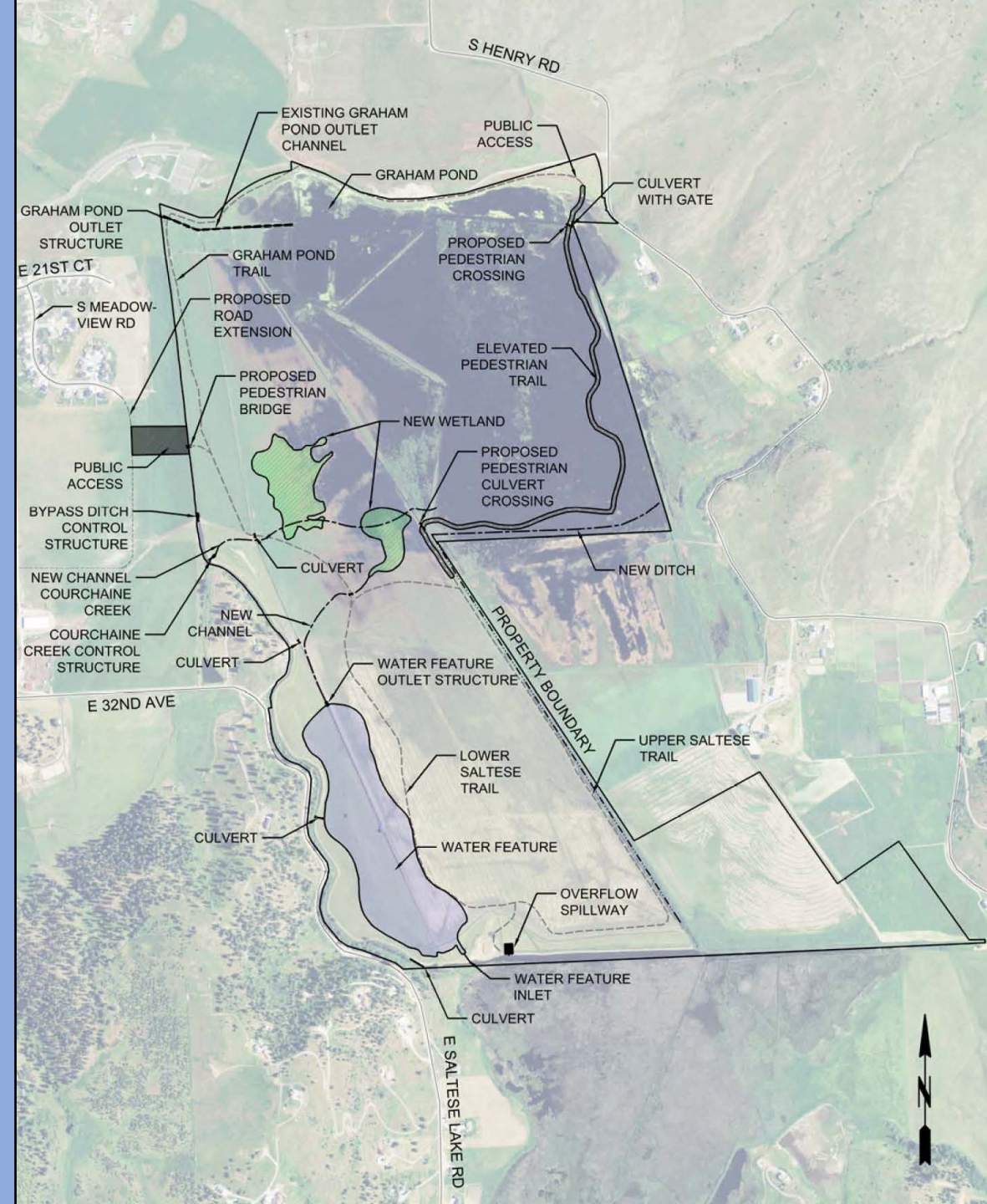
# 2018-2019 Activities

## 2018 Construction – Phase 1

- Installed water control structures
  - Outlet from northwest corner
  - Inlet from western tributary
  - Inlet at southwest corner
- Spillway over south berm
- Pedestrian bridge from west side

## 2019 Planned Construction – Phase 2

- Excavate wetland areas at southwest
- Construct elevated trail at northeast



# Restoration Phasing

- Phase 1 and 2
  - Install water control structures
  - Construct access features
- Phase 3
  - Control the water
  - Restore the vegetation

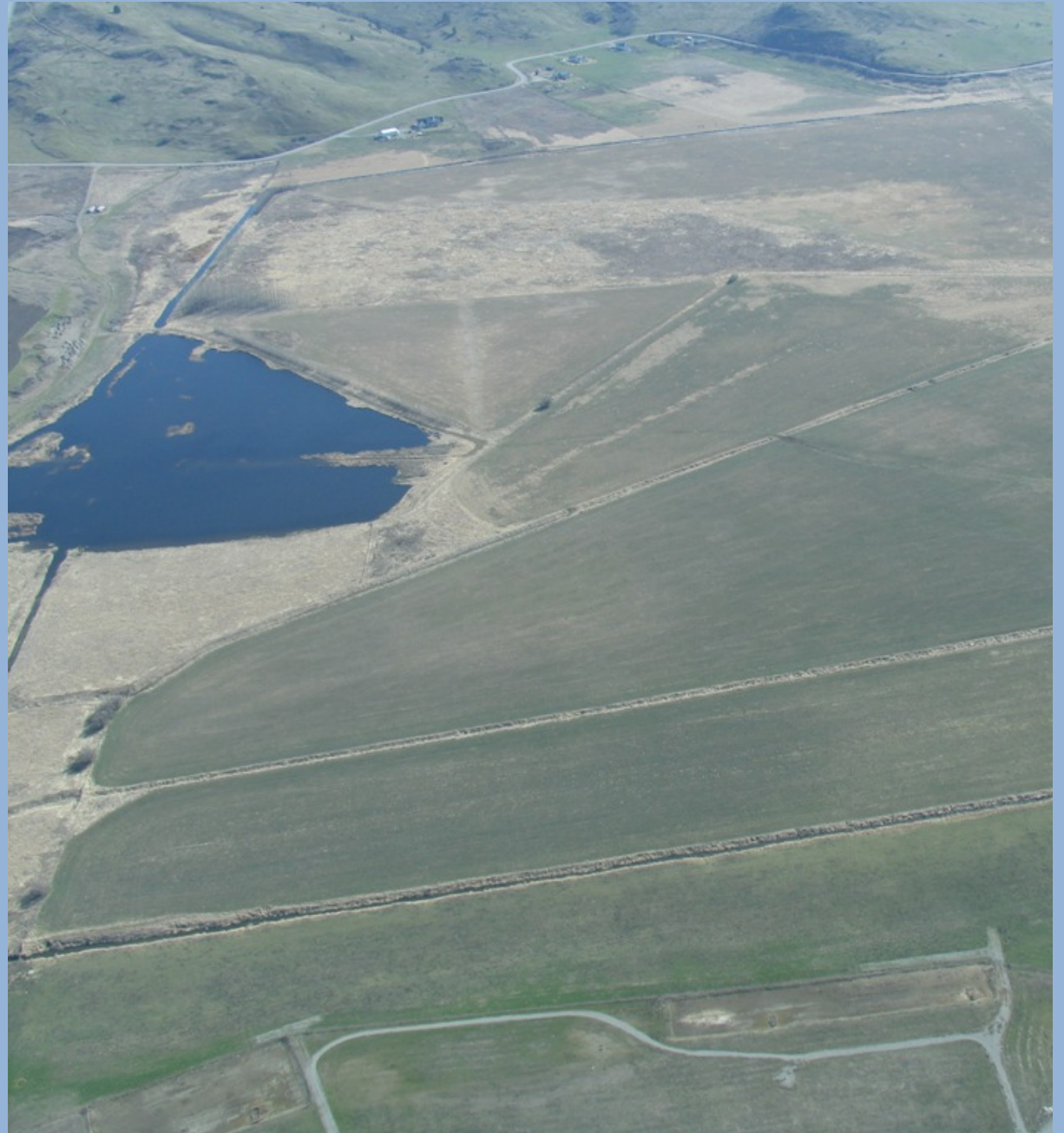


Interior of outlet control structure, including head gate and rails for elevation control boards

# Historical Conditions

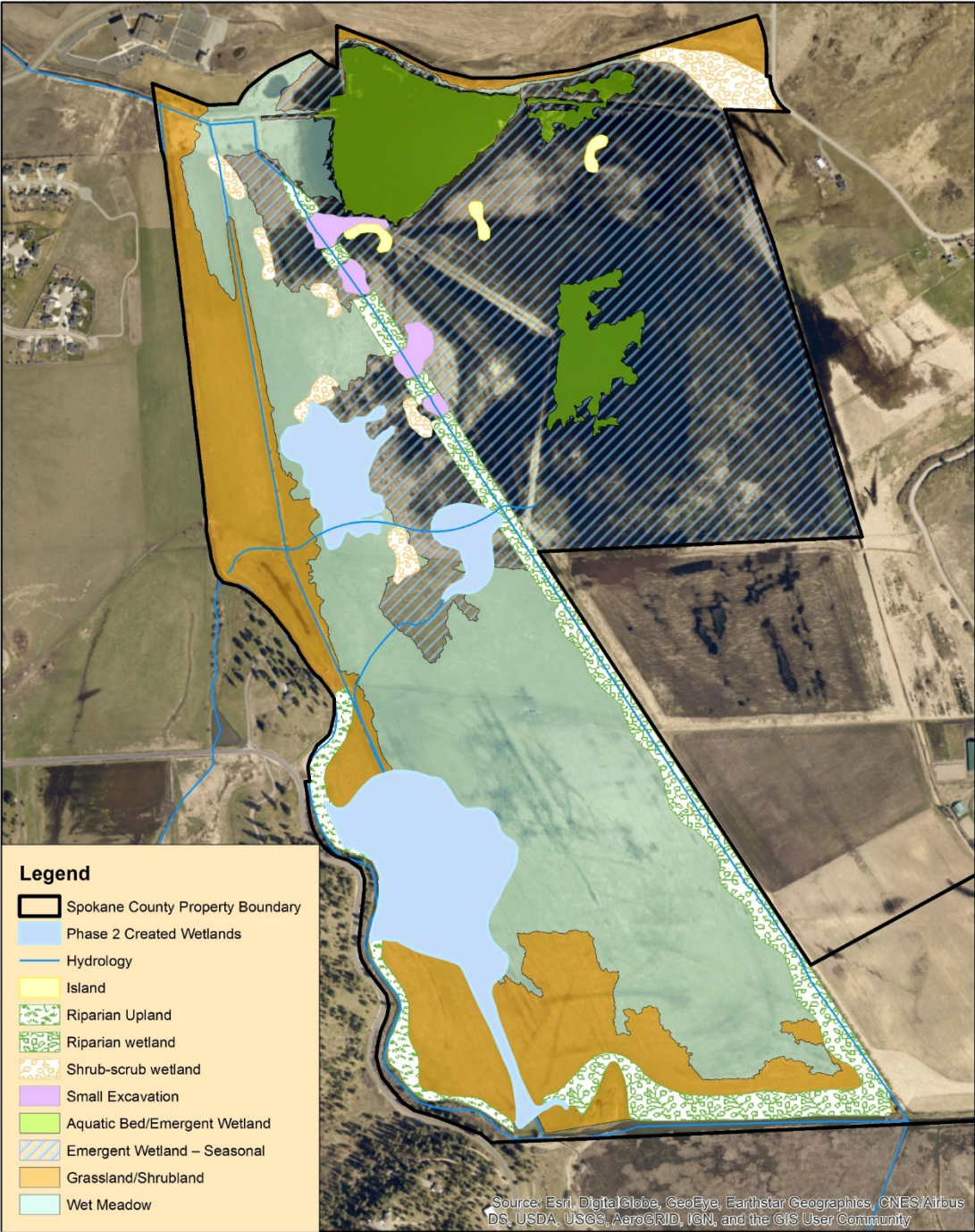


# Agricultural Conversion





# Preliminary Habitat Plan



# Phase 3 Project Design Elements

**Step 1** - Control Invasive Species

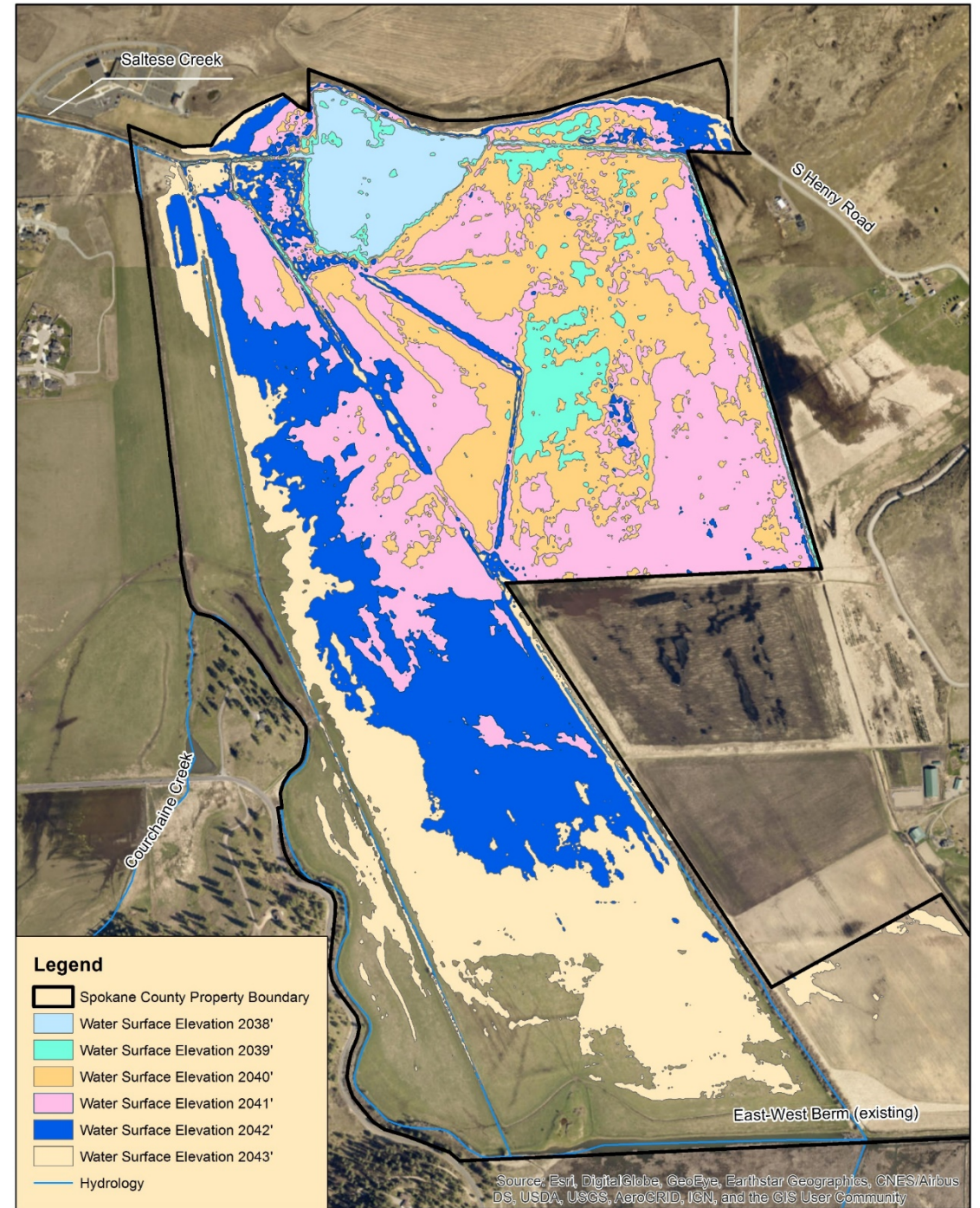
**Step 2** - Mimic Natural Hydrology with Water Management

**Step 3** – Promote Expression of Soil Seed Bank to Revegetate

**Step 4** – Revegetate with Plantings Where needed



# Water Management





# Invasive Species Control

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# Revegetation from Native Seed Bank

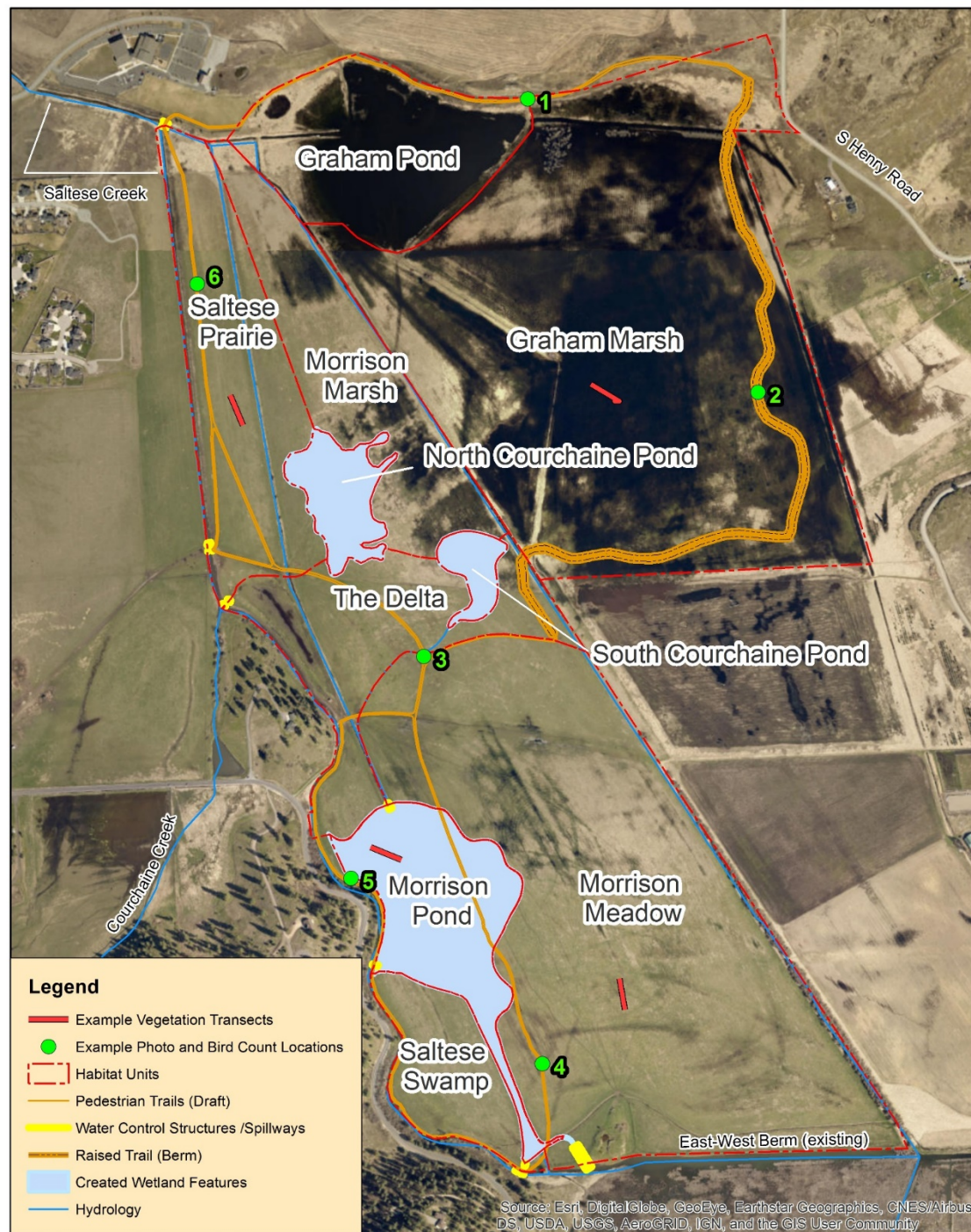
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# Revegetation by Planting

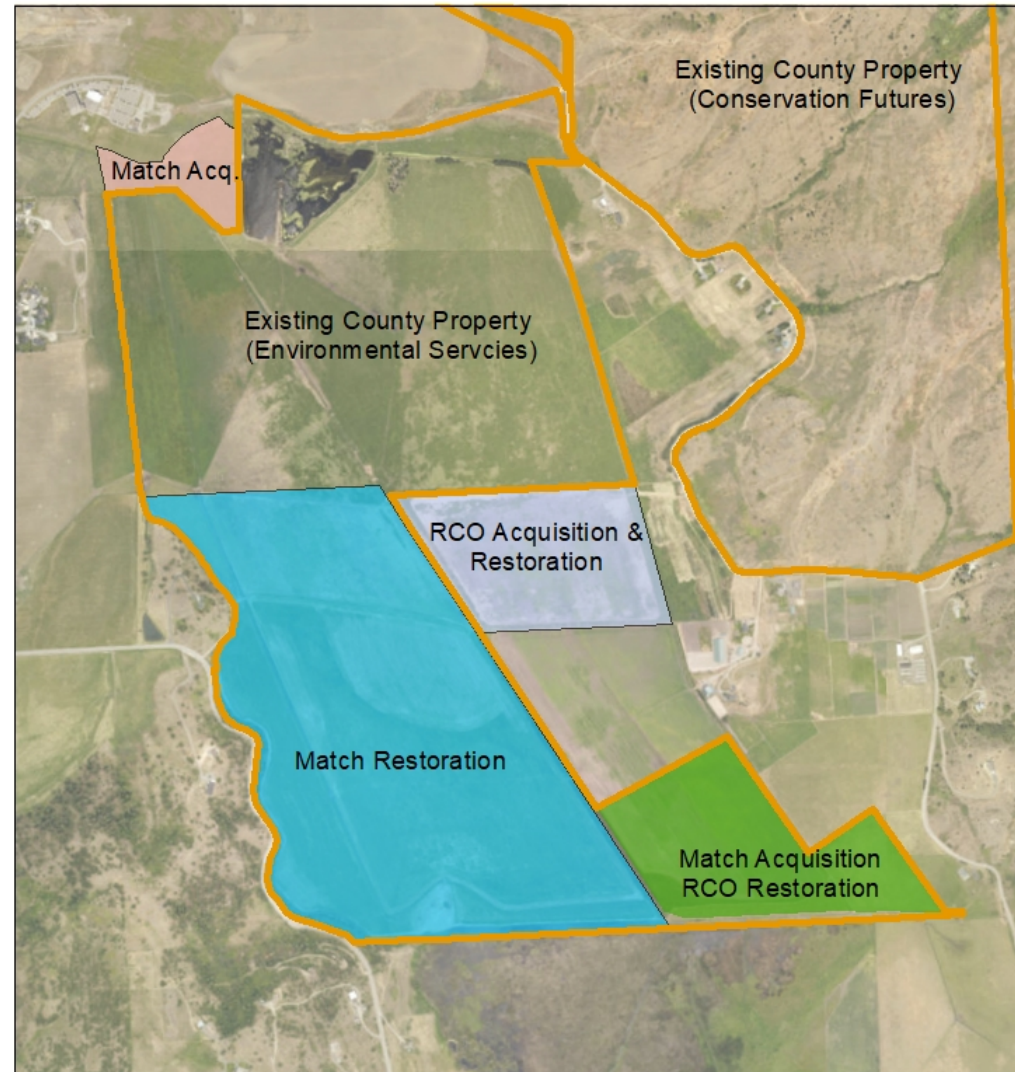
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# Project Monitoring



# Other Projects at Saltese Flats

## Parcel Map



Saltese Flats Wetland Protection and Restoration  
Ben Brattebo, 509-477-7521  
Spokane County Environmental Service  
3 August 2018  
Application No. 18-899

0 500 1,000 Feet



### Legend

- Current County Property
- Private Landowner Easement (RCO Acquisition and Restoration)
- Pettit Tract (Match Acquisition, RCO Restoration)
- Valley Real Life Property (Match Acquisition)
- West Central Tract (Match Restoration)

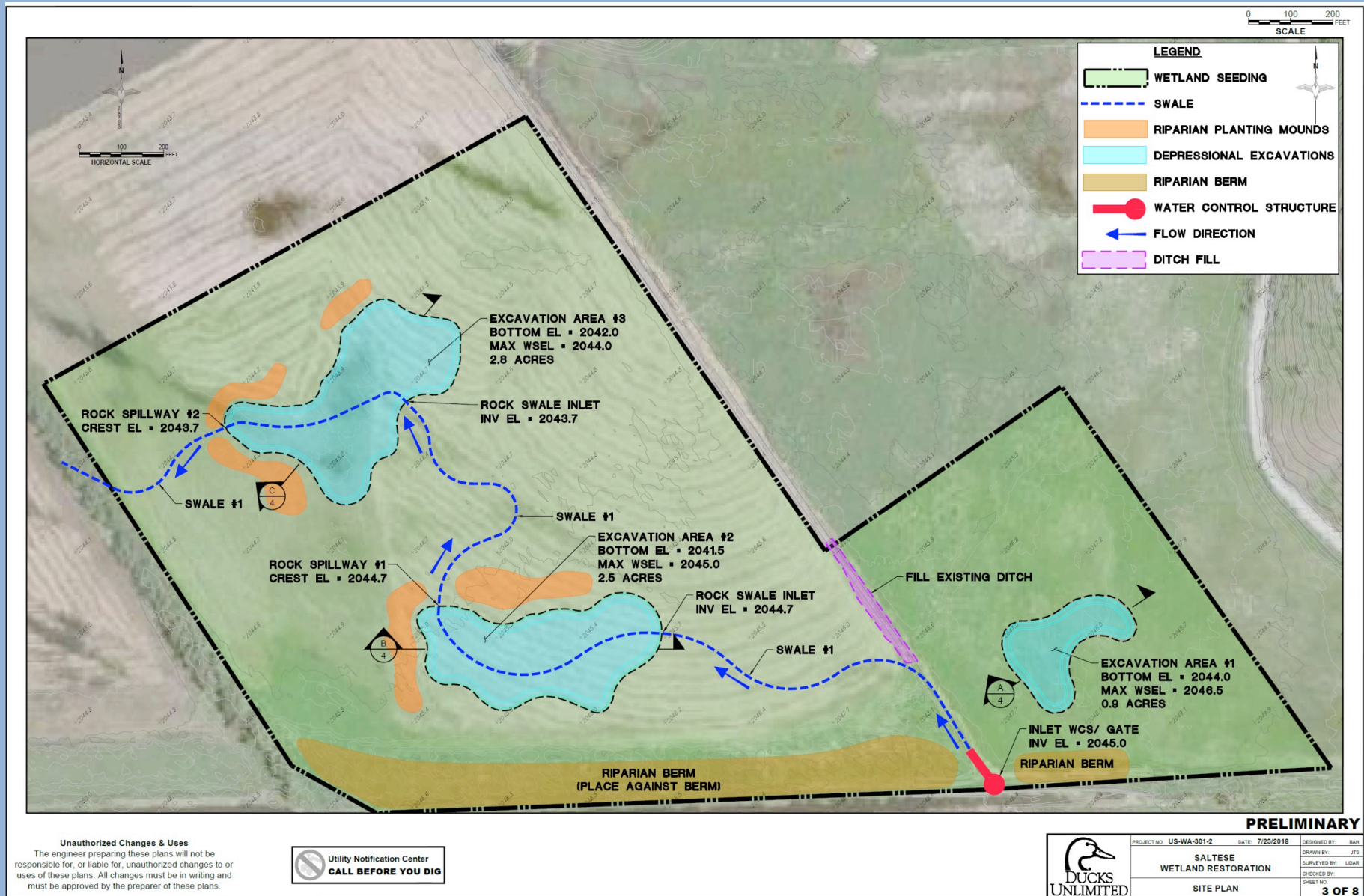
# Restoration Design Approach – Other Projects

Existing

Proposed



# Design Approach – Plan View



# Project Support

- Local community
- Central Valley School District
- Spokane Community College
- U.S. Fish and Wildlife Service – Turnbull NWR
- Washington Department of Fish and Wildlife
- Inland Northwest Land Conservancy
- Spokane Audubon
- Intermountain West Joint Venture

# Thank you!



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