

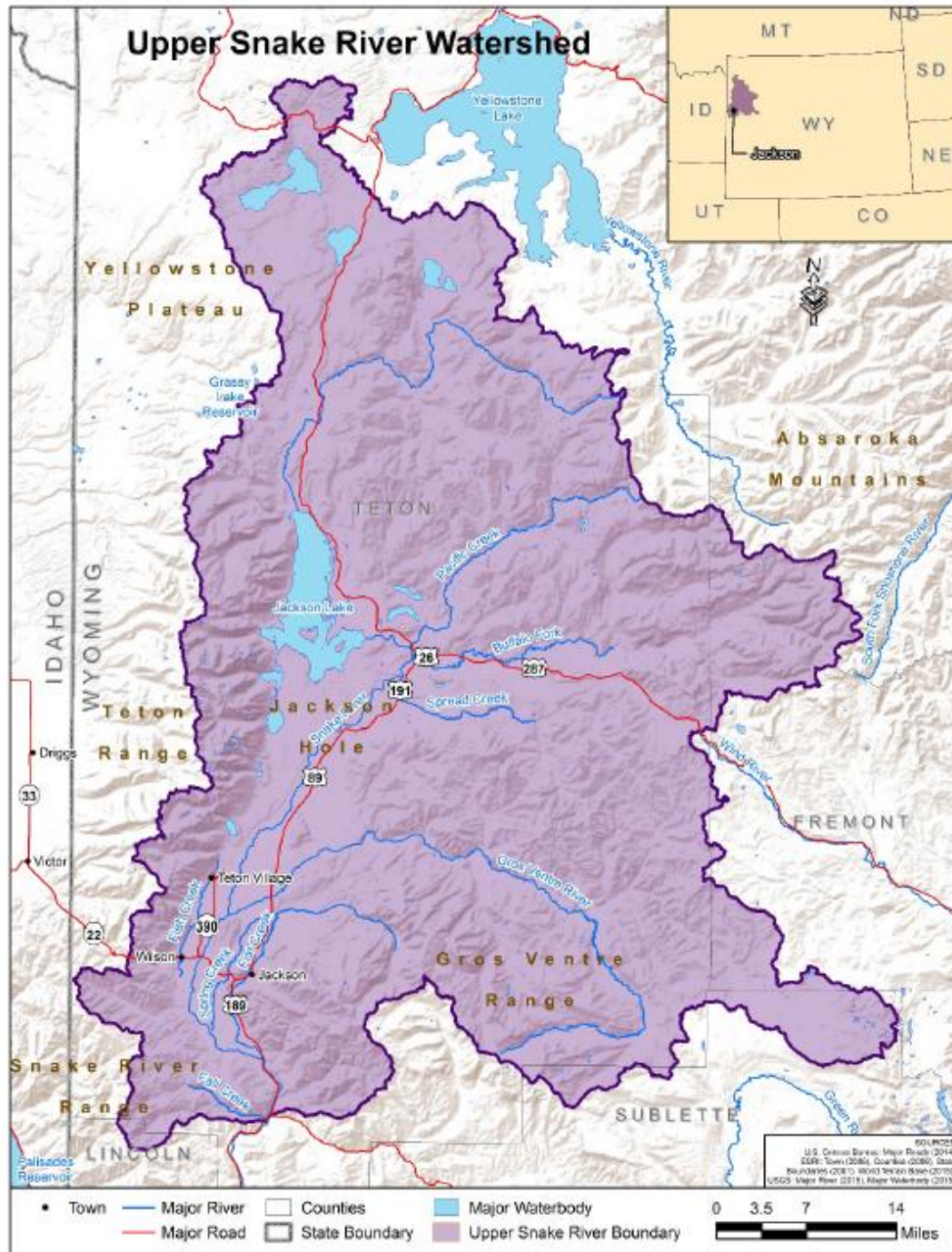
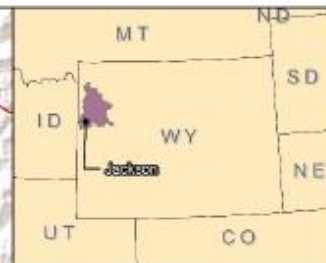
# UPPER SNAKE RIVER WATERSHED STUDY – WHAT'S NEXT?

Jodee Pring, Supervisor - River Basin Planning  
Wyoming Water Development Office

May 18, 2017

Snake/Salt River Basin - Wyoming Water Update Meeting  
Jackson, WY

# Upper Snake River Watershed



• Town
 — Major River
 □ Counties
 ■ Major Waterbody

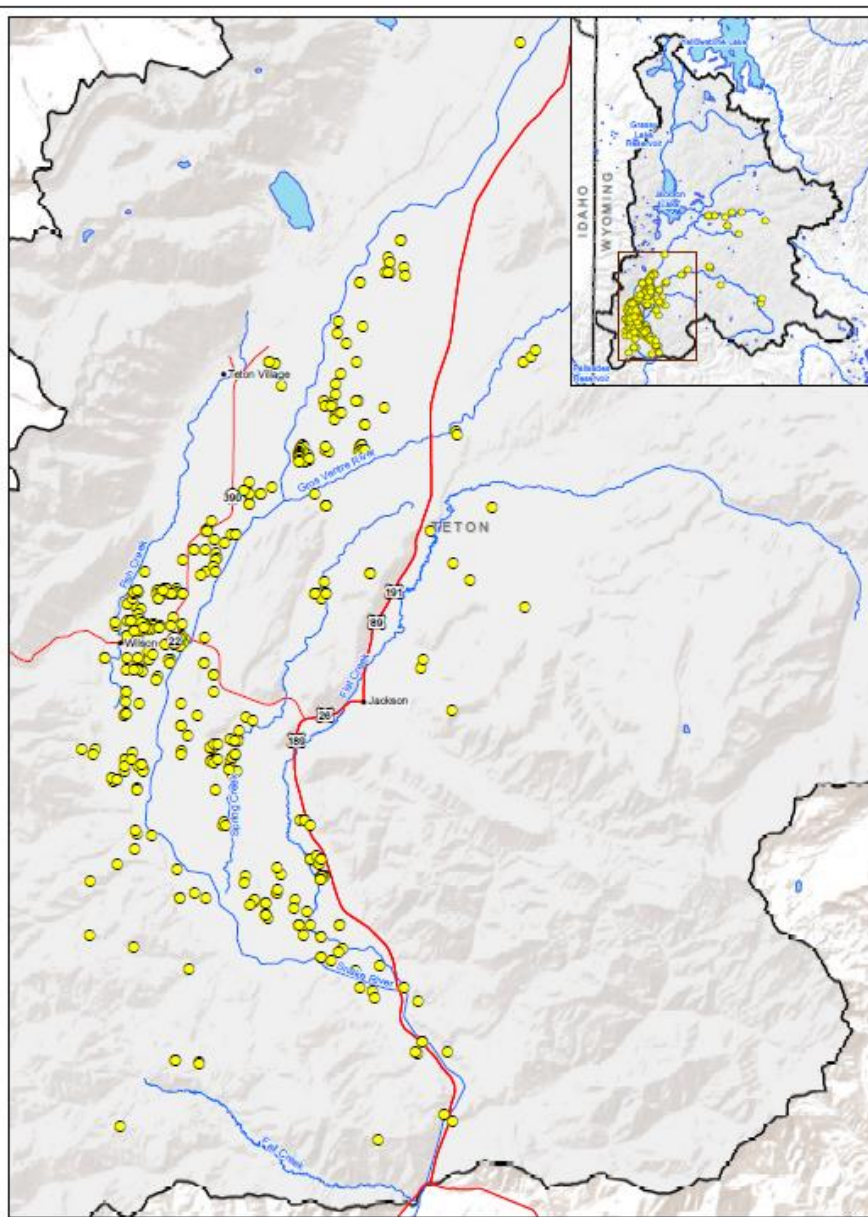
— Major Road
 □ State Boundary
 ■ Upper Snake River Boundary

0 3.5 7 14  
Miles

K0119033  
 U.S. Census Bureau, Major Roads (2014),  
 ESRI, Town (2011), County (2010), State  
 Boundaries (2011), 1:250,000 Topographic (2010),  
 USGS, Major River (2011), Major Waterbody (2010)

## In the beginning....

- Teton Conservation District requested the study
- Olsson Associates hired as Consultant on the project
- Meetings held in Jackson and Moran – September 2015, November 2015, January 2016, April 2016, July 2016, and September 2016
- Landowner Field Visits
- Looked at hydrology, geology, geomorphology, soils, land use, land management, land ownership, political subdivisions, climatic features (temperature, precipitation, etc.)
- Created a GIS (Geographic Information System)
- Final report presentations – September 20 and 22 – Jackson and Moran



# Watershed and Management Rehabilitation Plan

- Primary objective of the Watershed Study
  - Irrigation System Improvements
  - Livestock/Wildlife Upland Water Improvements
  - Surface Water Flood and Storage Improvements
  - Stream Channel Condition and Stability Improvements
  - Other Watershed Management Opportunities

Table 4.1-1 Irrigation System Improvement Projects

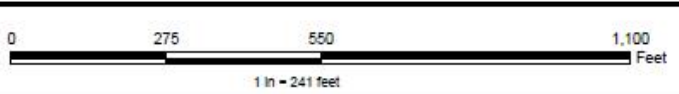
Project Number	Ranch / Site Name	Water Source	Diversion / Headgate	Ditch Improvements	Piping / Sprinkler	Other
ISI-1	Pinto Ranch	Lava Creek	Yes		Yes	
ISI-2	Hatchet Ranch	Blackrock Creek		Yes		
ISI-3	Blackrock Ranger Station	Blackrock Creek				Yes
ISI-4	Elk Ranch	Spread Creek	Yes	Yes	Yes	
ISI-5	Antler Ditch	Spread Creek		Yes	Yes	
ISI-6	Upper Snake River Ranch	Granite Creek Supplemental Ditch Headgate	Yes	Yes		
ISI-7	Upper Snake River Ranch	Millstream Ditch				Yes
ISI-8	Upper Snake River Ranch	Lake Creek and Granite Creek Supplemental Ditch	Yes			
ISI-9	Upper Snake River Ranch	Wyoming School Section 36 (T42N R117W) Hazel Ditch	Yes			
ISI-10	Upper Snake River Ranch and others	Jensen Creek	Yes			
ISI-11	R Lazy S	West Field Ditch		Yes	Yes	
ISI-12	Huidekoper Ranch	Trail Creek	Yes			
ISI-13	Jackson Hole Land Trust	Prosperity Ditch at Highway 22	Yes			
ISI-14	Jackson Hole Land Trust	Pioneer Ditch to Hardemon Field		Yes		
ISI-15	Jackson Hole Land Trust	Prosperity Ditch at Highway 390		Yes		
ISI-16	Lockhart Ranch	Flat Creek	Yes			
ISI-17	Lockhart Ranch	Wiley Ditch	Yes	Yes		
ISI-18	Lower Snake River Ranch	Alaska Ditch	Yes	Yes		
ISI-19	Game Creek	Carter Ditch	Yes		Yes	Yes
ISI-20	Fall Creek Ranch	Fall Creek	Yes			



<ul style="list-style-type: none"> <li> Headgate</li> <li> Approximate Location of Canon Ditch</li> <li> Approximate Location of Loretta No. 2 Ditch</li> </ul>	<ul style="list-style-type: none"> <li> Highways</li> <li> Stream/Ditch Flow Line</li> <li> Public Land Survey System</li> </ul>	<p><b>Land Ownership</b></p> <ul style="list-style-type: none"> <li> Forest Service</li> <li> Private</li> </ul>
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**SOURCES**  
 NADP: Teton County Imagery (2015)  
 U.S. Census Bureau: Highways (2014)  
 TCGIS: Private Land Ownership (2013)  
 WYGIS: Public Land Survey System (2006)  
 USGS: Stream/Ditch Flow Line (2015)  
 Land Ownership (2016)

PROJECT: 015-1618  
 DRAWN BY: CBT  
 DATE: October 26, 2016



**Proposed Irrigation System Improvement Location:**  
 Jensen Creek  
 Upper Snake River Watershed



MAP  
 ISI-10

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*Photo 23 Jensen Creek Diversion Structure Crushed  
by a Boulder During a Debris Flow.*



*Photo 24 Three-way Headgate, Prosperity  
Ditch at Highway 22*

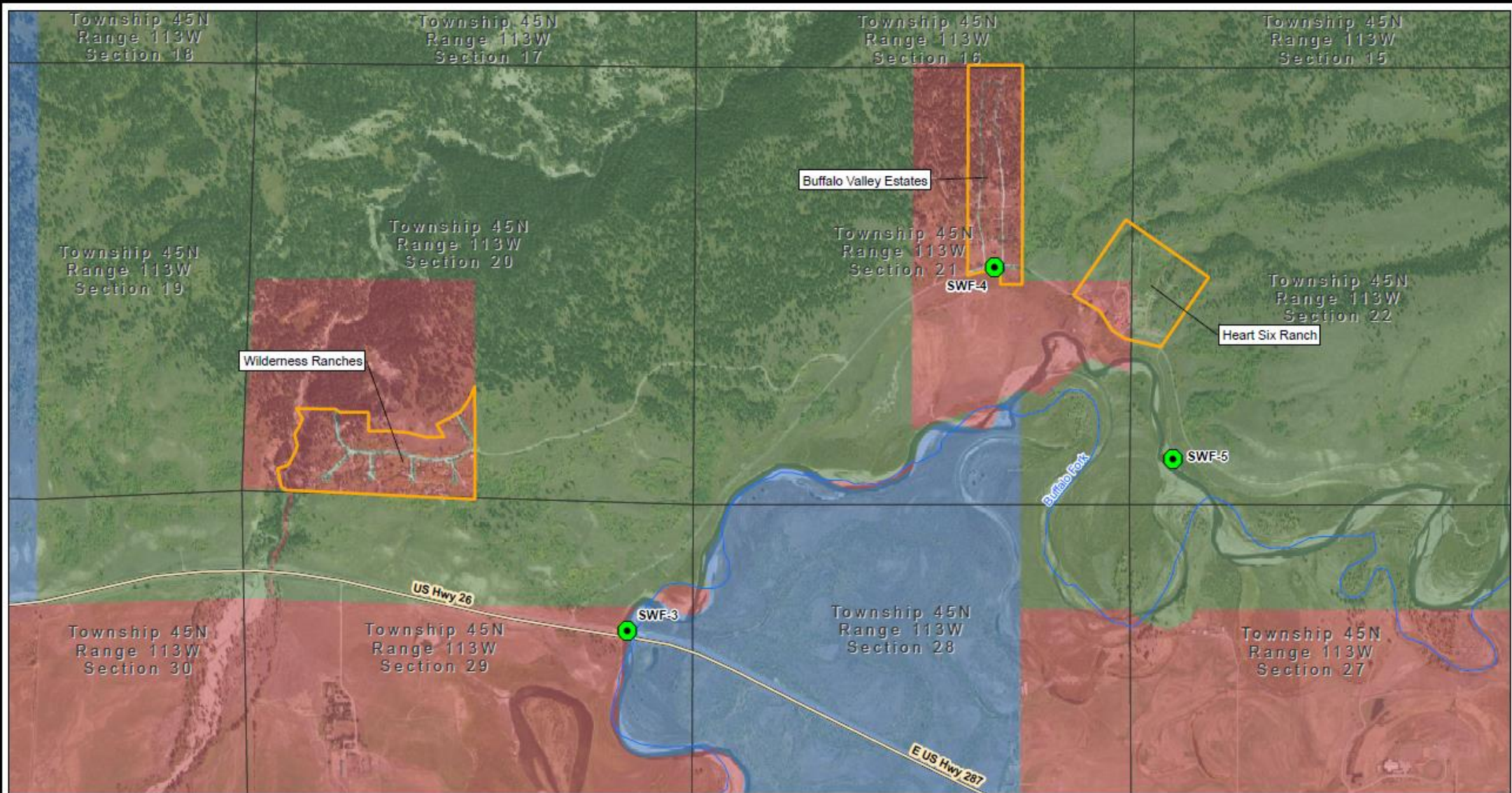


*Table 4.2-1 Livestock/Wildlife Watering Improvement Projects*

Project Number	Ranch or Site Name	Water Well/Spring Development	Stock Pond	Pipeline Length (feet)	Fencing (feet)	Solar Pump	Stock Tank
LWW – 1	Taylor Ranch Spring Development	1	0	100	100	0	1
LWW – 2	Wyoming School Section 36 (T40N R117W) Stock Pond	0	1	0	0	0	0
LWW – 3	Kelly Warm Springs Wells	2	0	200	0	2	0
LWW – 4	Lower Snake River Ranch Ridge Spring	1	0	4,500	100	0	4

Table 4.3-1 Surface Water Flood and Water Supply/Storage Improvement Projects

Project Number	Ranch or Site Name	Water Source	Project Description		
SWF-1	Jackson Hole	Flat Creek	Implement proposed recommendations from the study being conducted for the FCWID and funded by the TCD.		
SWF-2	Snake River	Snake River	Implement proposed recommendations from USACE Jackson Hole, Wyoming Environmental Restoration Draft Feasibility Study		
Drafting Sites for Fire Trucks					
Project Number	Ranch or Site Name	Water Source	Tank and pipes	Access Road Improvements (square feet)	Other
SWF - 3	Wilderness Ranches	Buffalo Fork	1 tank; 35 LF of pipe and fittings	900	NA
SWF - 4	Buffalo Valley Estates	Buffalo Fork	1 tank; 35 LF of pipe and fittings	900	NA
SWF - 5	Heart Six Ranch	Buffalo Fork	1 tank; 35 LF of pipe and fittings	2,180	NA
SWF - 6	USFS dispersed camping	Buffalo Fork	1 tank; 35 LF of pipe and fittings	4,900	NA
SWF - 7	Buffalo Fork Ranch Subdivision	Buffalo Fork	1 tank; 35 LF of pipe and fittings	900	NA
SWF - 8	Buffalo Fork	Buffalo Fork	1 tank; 35 LF of pipe and fittings	1,300	NA
SWF - 9	Turpin Meadows	Buffalo Fork	5 LF of pipe and fittings	NA	Repairs to existing drafting site with welding



- Proposed Surface Water Flood and Storage Improvement Locations
- Project Locations
- Highways
- Major River
- Public Land Survey System
- National Park Service
- Forest Service
- Private

SOURCES:  
 U.S. Census Bureau: Highways (2014)  
 NADP: Baker County Imagery (2015)  
 TOGIS: Private Land Ownership (2013)  
 WYDASC: Public Land Survey System (2009)  
 USGS: Major Rivers (2015), Land Ownership (2016)

PROJECT: 015-1618  
 DRAWN BY: CBT  
 DATE: October 27, 2016



**Proposed Surface Water Flood and Storage Improvement Projects:  
 Drafting Sites SWF-3 through 5  
 Upper Snake River Watershed**

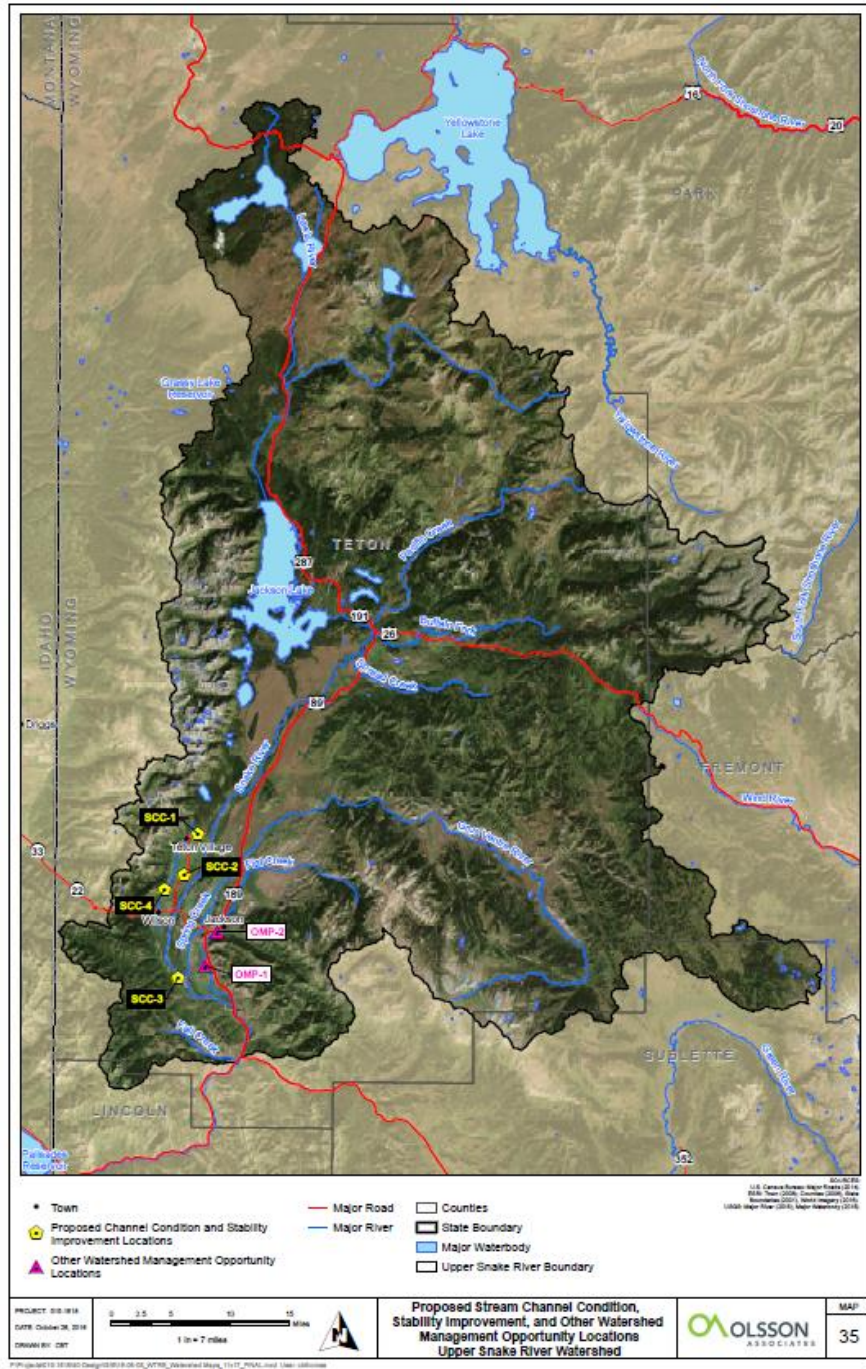


MAP  
 SWF-3-8

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*Table 4.4-1 Stream Channel Condition and Stability Improvement Projects*

<b>Project Number</b>	<b>Ranch or Site Name</b>	<b>Stream or Ditch</b>	<b>Description</b>
SCC - 1	Upper Snake River Ranch	Last Chance Ditch	Improve erosion issues and irrigation efficiency
SCC - 2	Upper Snake River Ranch	Lake Creek	Minimize bank erosion on Lake Creek
SCC - 3	Lower Snake River Ranch	Morel Creek	Restore stream and improve habitat
SCC - 4	Jackson Area	Fish Creek	Minimize sediment loads on Fish Creek



*Table 4.5-1 Other Management Practice Improvement Projects*

Project Number	Ranch or Site Name	Stream or Ditch	Description
OMP - 1	Rafter J Ranch	East Side Ditch	Mitigation for high water table
OMP - 2	Jackson Hole	Flat Creek	Karns Meadow Stormwater Treatment Wetlands Operations and Maintenance (O&M) Plan. Assess the current condition of the wetlands and develop an O&M plan.
OMP - 3	Single-family Homes	Fish Creek	Recirculating Vertical Flow (RVF) wetlands
OMP - 4	Watershed-wide	NA	Noxious Weed and Undesirable Plant Control
OMP - 5	Watershed-wide	NA	Trumpeter Swan Habitat Enhancement Opportunities
OMP - 6	Jackson Hole	Flat Creek	Fishery Habitat Improvements

# Funding Opportunities

- WWDO Small Water Project Program (SWPP)
  - 2017 Applications
    - 4 projects
  - SWP applications can be submitted at any time
  - Total project cost cannot exceed \$135,000
  - WWDC will grant up to \$35,000
  - Application deadline date – December 31<sup>st</sup>
- Other Funding Opportunities
  - TMDL
  - EQUIP
  - ???



NOVEMBER 1, 2016

# FINAL UPPER SNAKE RIVER LEVEL I WATERSHED STUDY

VOLUME I

PREPARED FOR:  
WYOMING WATER DEVELOPMENT COMMISSION  
TETON CONSERVATION DISTRICT

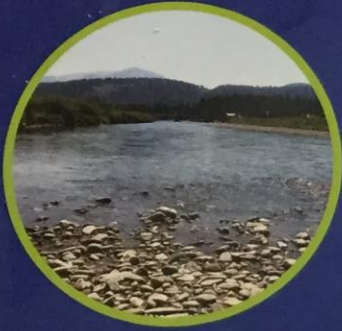
PREPARED BY:  
OLSSON ASSOCIATES

IN ASSOCIATION WITH:  
STEADY STREAM HYDROLOGY  
AND RON E. VORE, PHD



**OLSSON**<sup>®</sup>  
ASSOCIATES





NOVEMBER 1, 2016

# FINAL UPPER SNAKE RIVER LEVEL I WATERSHED STUDY

VOLUME II

PREPARED FOR:  
WYOMING WATER DEVELOPMENT COMMISSION  
TETON CONSERVATION DISTRICT

PREPARED BY:  
OLSSON ASSOCIATES

IN ASSOCIATION WITH:  
STEADY STREAM HYDROLOGY  
AND RON E. VORE, PHD

 **OLSSON**<sup>®</sup>  
ASSOCIATES



Need more  
information?

- Complete study can be found in the Water Resources Data System Library at:
  - [http://library.wrds.uwyo.edu/wwdcrept/Upper\\_Snake\\_River/Upper\\_Snake\\_River-Watershed\\_Study\\_Level\\_I-Final\\_Report-2016.html](http://library.wrds.uwyo.edu/wwdcrept/Upper_Snake_River/Upper_Snake_River-Watershed_Study_Level_I-Final_Report-2016.html)
- Jodee Pring (307) 777-5803, [jodee.pring@wyo.gov](mailto:jodee.pring@wyo.gov)
- Jodie Pavlica (307)777-7626, [jodie.pavlica@wyo.gov](mailto:jodie.pavlica@wyo.gov)
- Thanks to the Teton Conservation District for all of their help!