



Restoring our love for the Martis Wildlife Area

Reconnecting a
floodplain and meadow,
protecting our future

Michele Presowitz
Program Manager
January 28, 2020

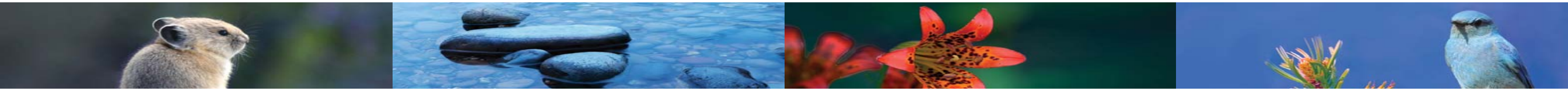




B. Hastings, Balance Hydrologics

Martis Wildlife Area Restoration Project

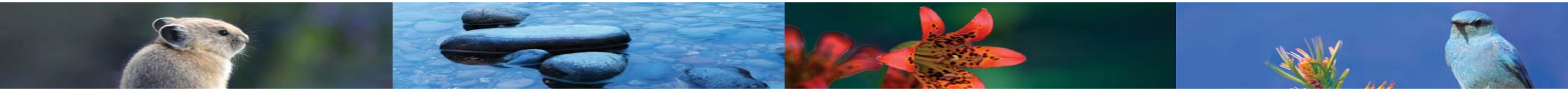
- Martis Valley Overview
- The Project
 - Problems
 - Goals
 - Construction
 - Next Steps
- Questions



Thank You Partners!

- US Army Corps of Engineers
- Northstar Community Services District
- Northstar California





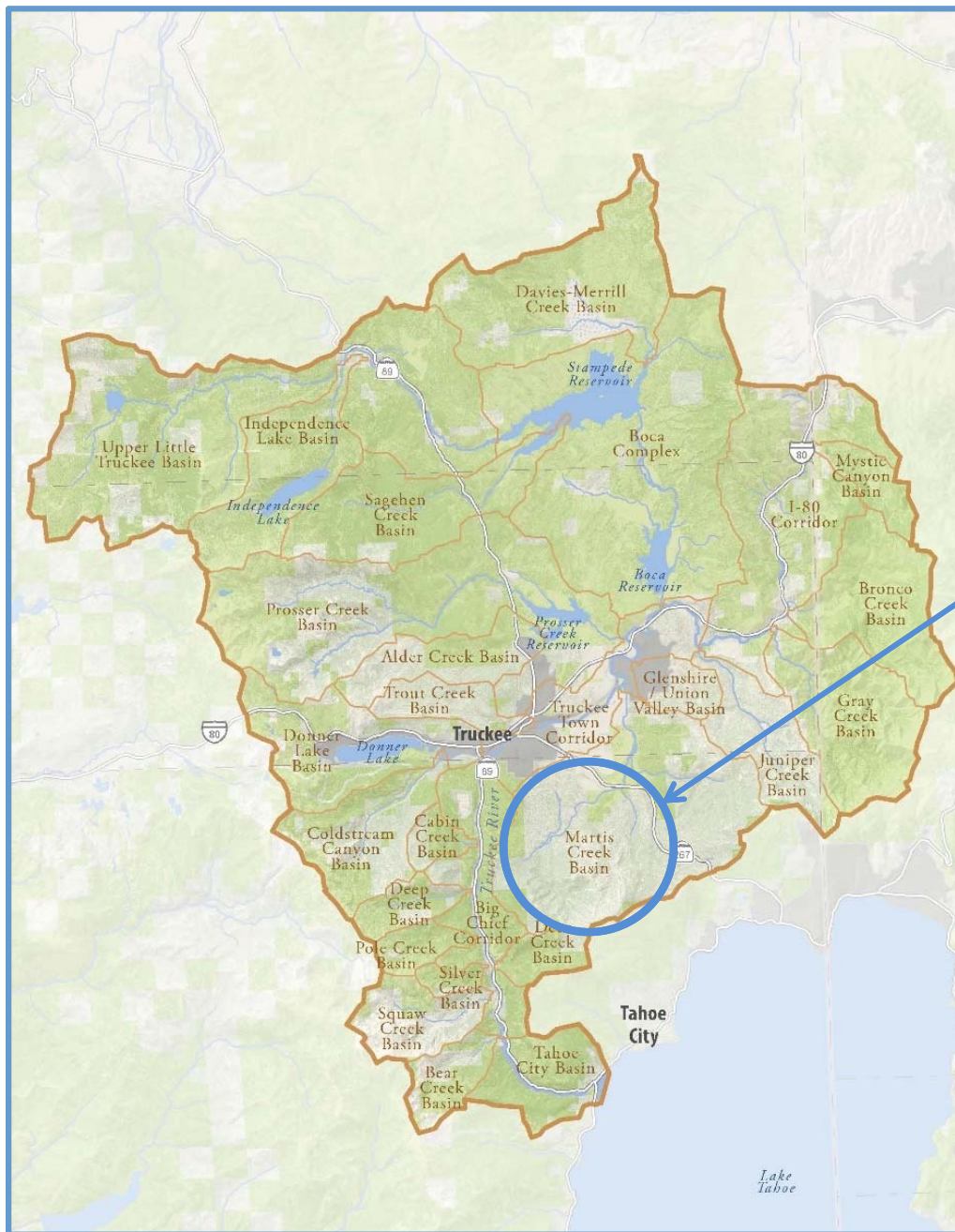
Thank You Funders!

- Donors to the Truckee River Watershed Council
- CA Department of Fish and Wildlife
- US Bureau of Reclamation
- Martis Fund
- Bella Vista Foundation

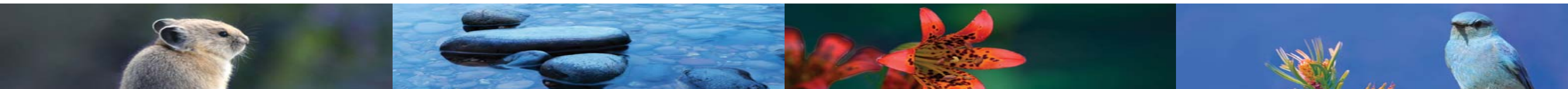




Martis Valley Overview

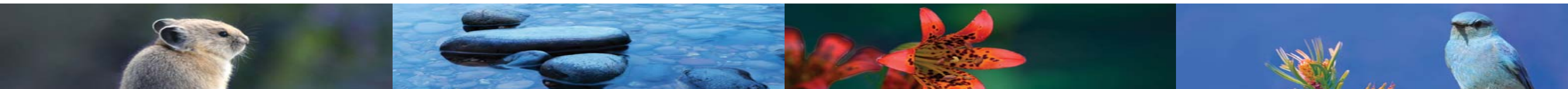


Martis Valley

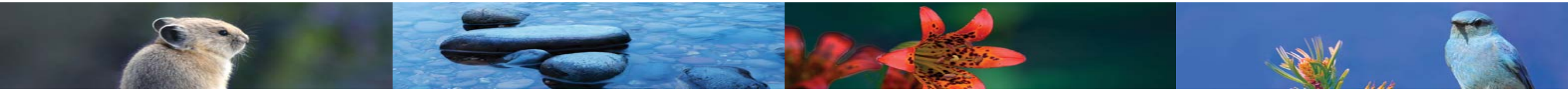


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Martis Valley, May 2017



Mainstem Martis Creek, August 2015



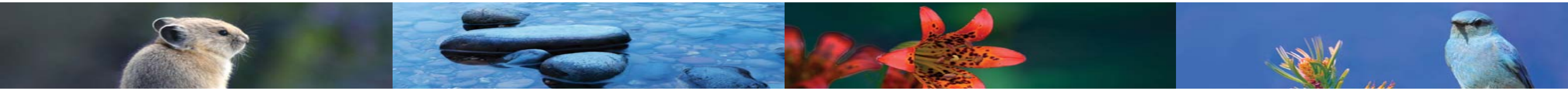
TRWC and Partners in Martis Valley

Project History	
Numerous projects	Small scale and Truckee River Day
2010 – 2012	Martis Watershed Assessment – 20 projects identified
2012 – 2016	Middle Martis Wetland Restoration
2015 – 2018	East Martis Creek Restoration
2015 – 2019	Martis Wildlife Area Restoration

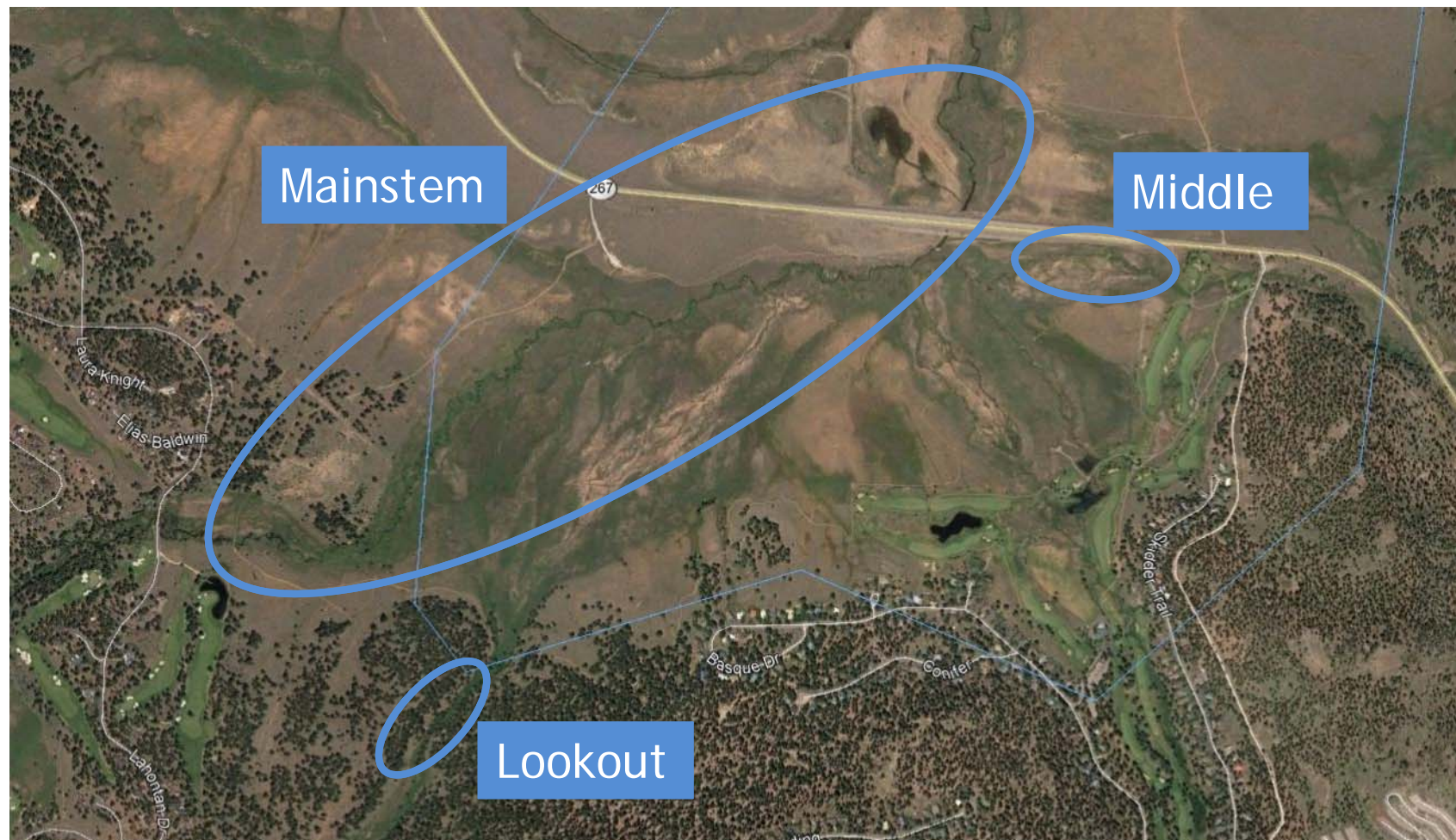


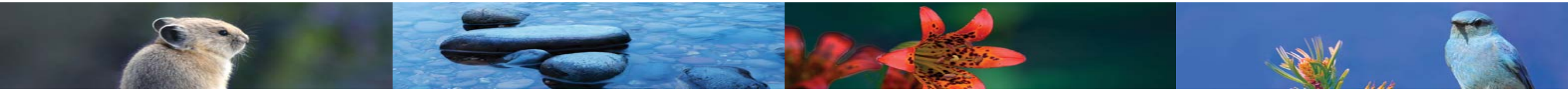


The Project

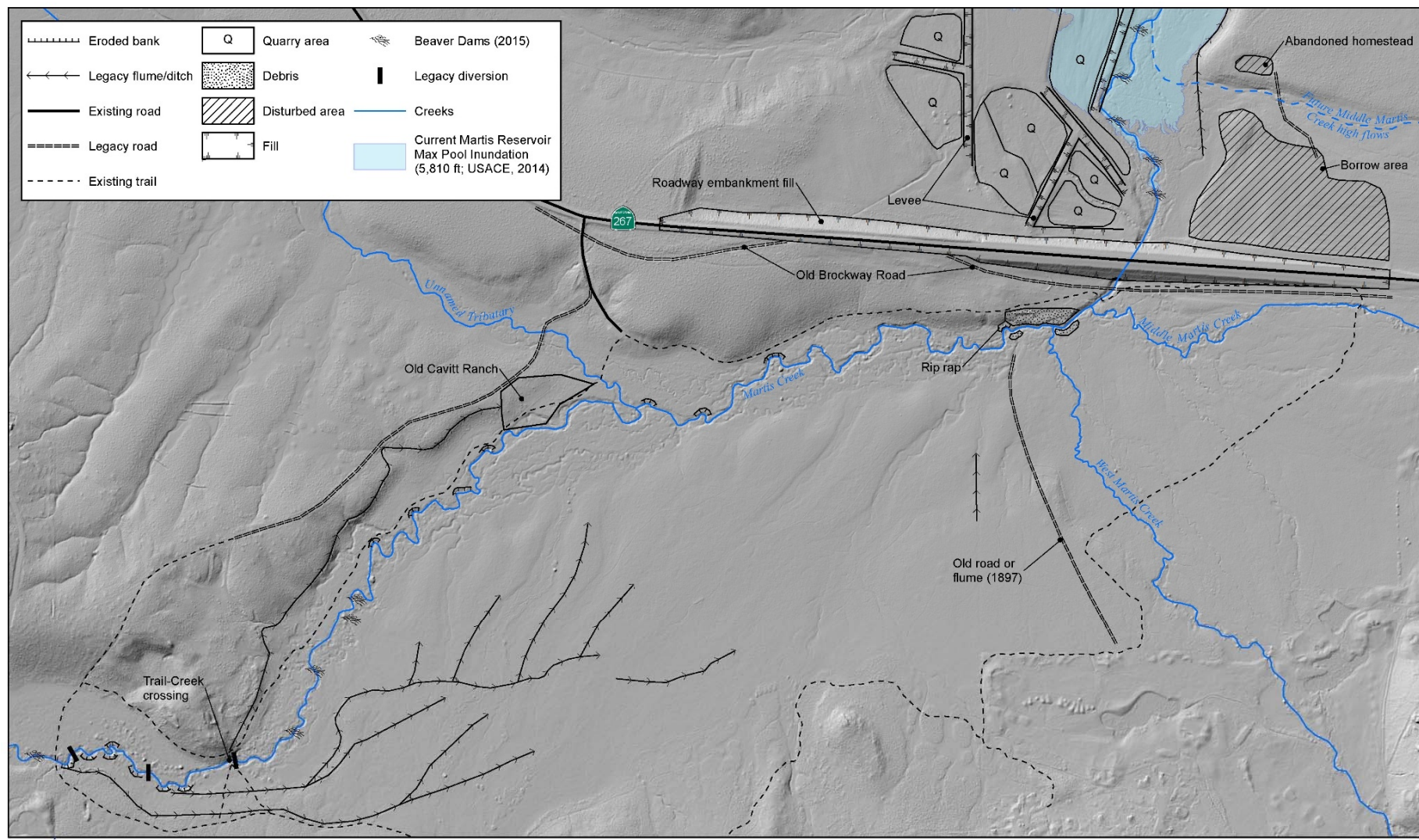


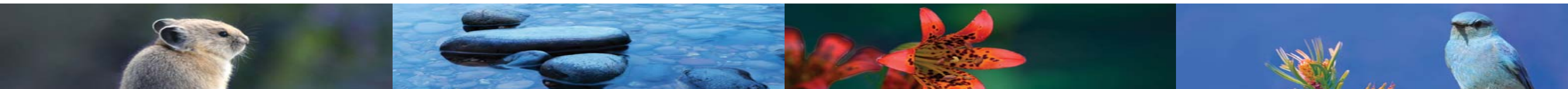
Martis Wildlife Area Restoration



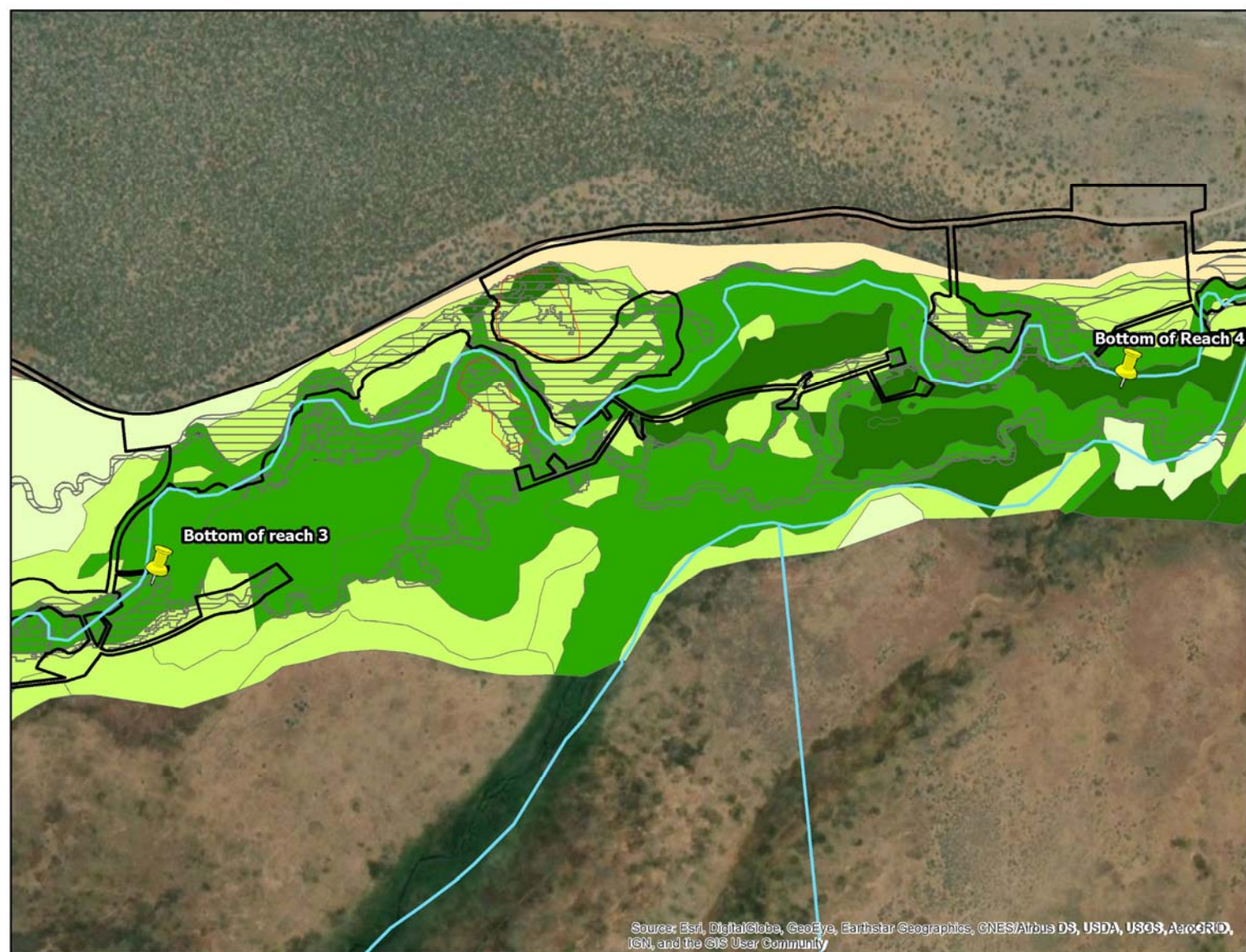


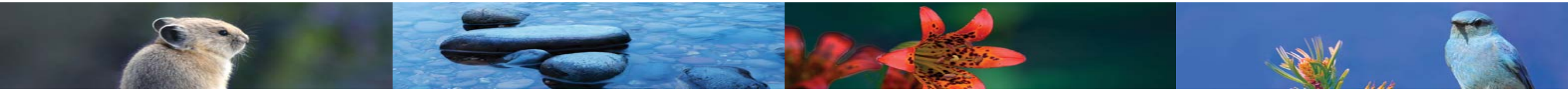
What's the problem? Historical context





What's the problem? Vegetation





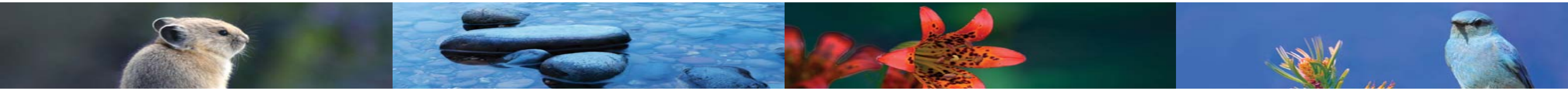
What's the problem?

- Incised channel
- Disconnected floodplain
- Dry meadow
- Reduced habitat

Restoration **WILL** work!



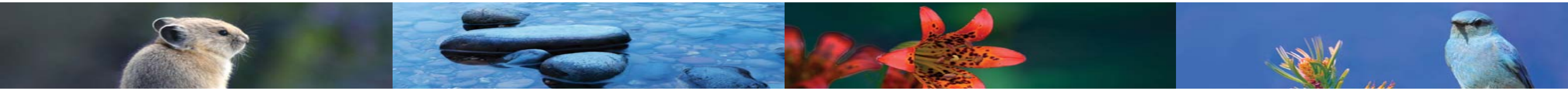
B. Hastings, Balance Hydrologics



Goal: Restore resilience to the Martis Wildlife Area

- Reconnect meadow to channel
- Restore floodplain
- Reduce erosion
- Improve habitat
- Catch problems early

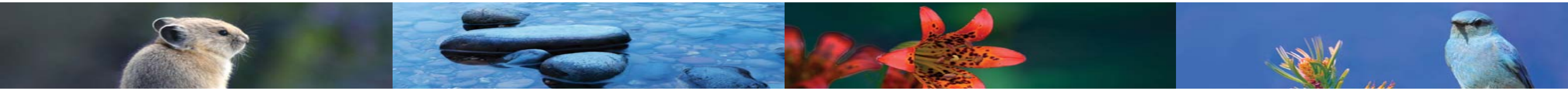




Solutions mimic natural functions



- Re-establish new inset floodplain
- Vegetation and natural bioengineering for erosion control

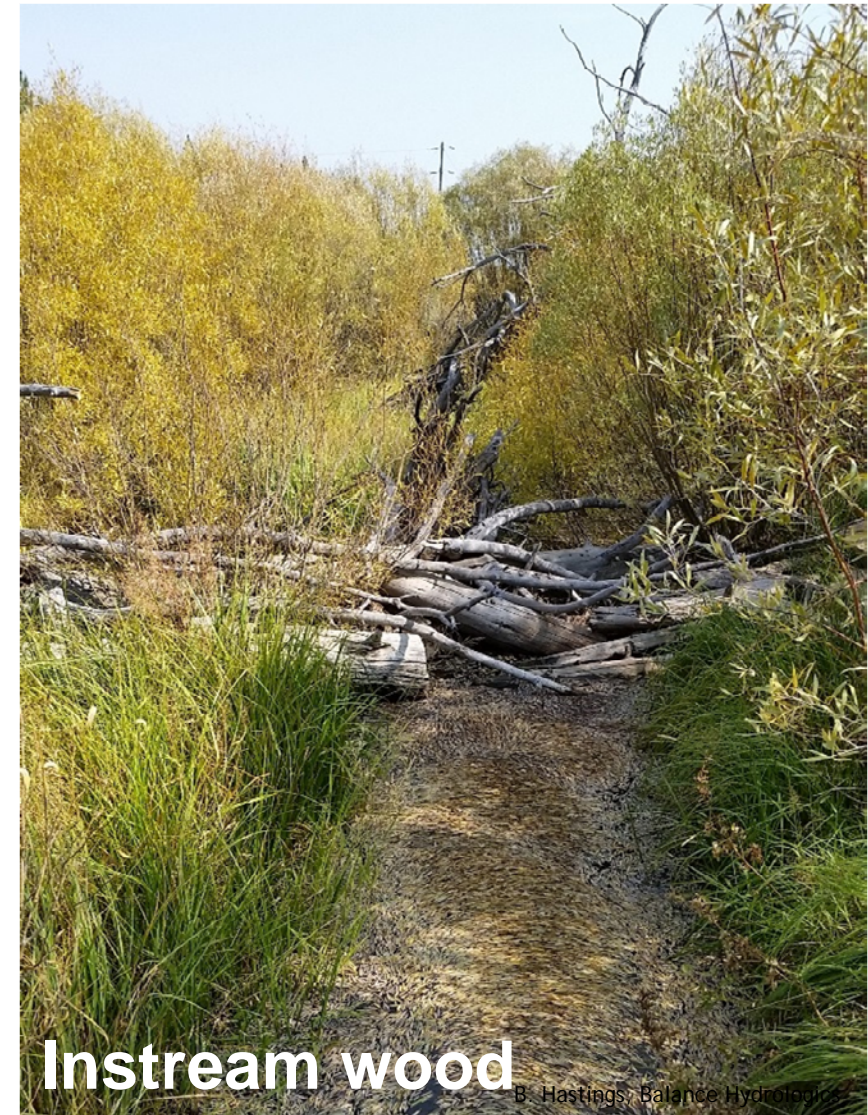


Solutions mimic natural functions

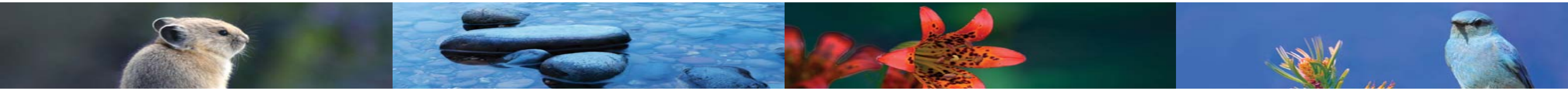
- Raise water surface elevations



Beaver Dam



Instream wood



Expected Benefits of Restoration

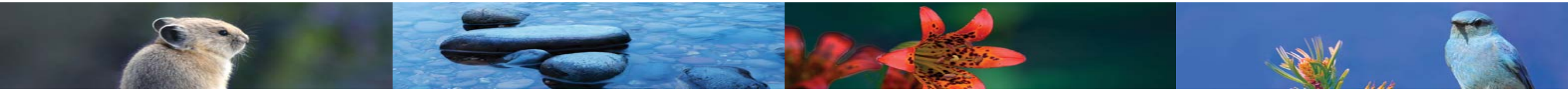
- Restore 70 acres of meadow and 2 miles of stream
- Reduce 75% of erosion and sedimentation
- Improve fish and wildlife habitat
- Ecosystem more resilient to climate change and ongoing recreation use



B. Hastings, Balance Hydrologics



Construction



Reconnect the channel





Martis Wildlife Area

greener forever

The greener the meadows the greener the future. Meadows are the heart of the community. And green is the future.

Martis Wildlife Area

wetter forever

We make meadows wetter. That makes our future better. It's our future. And yours.

Martis Wildlife Area

wilder forever

We're helping meadows and wildlife flourish. It's our future. And yours.

Martis Wildlife Area Restoration Project

A wetter meadow is a greener meadow. A greener meadow supports more wildlife up and down the food chain. By restoring 70 acres of meadow and 2 miles of stream, we're making the meadows healthier forever.

Helping the 2019 community plan:

- Respect signage about trail interruptions
- Stay on walking trails at all times
- Keep your pets on leash and on trails

Wetter meadows protect us from dangers of climate extremes. Restoring meadows means more wildlife and recreation, less runoff and decreasing sedimentation.

Wetter meadows, greener meadows. Greener meadows, better future.

Wetlands. Ponds. Spring meadows absorb excess water, reducing downstream flooding.

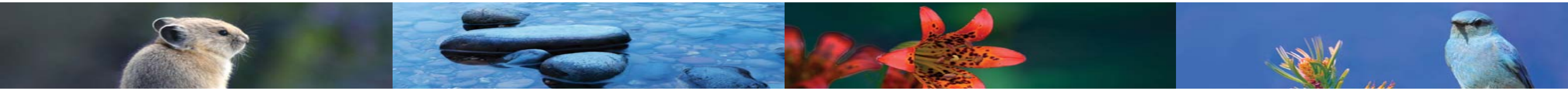
To learn more, get out your phone and go to: www.meadowsforever.org





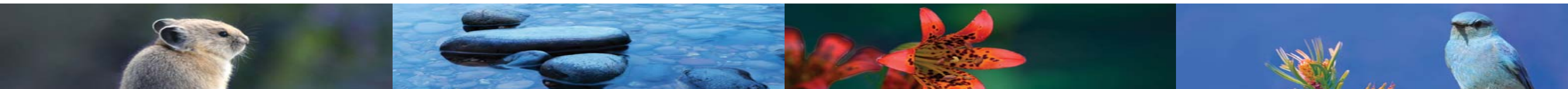




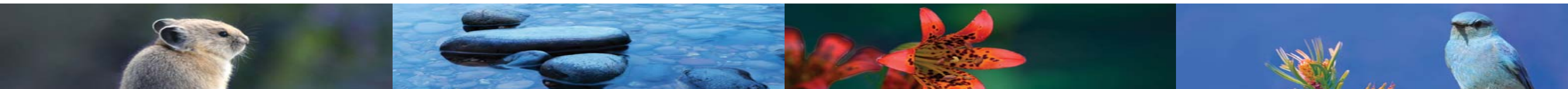


Creating inset floodplain





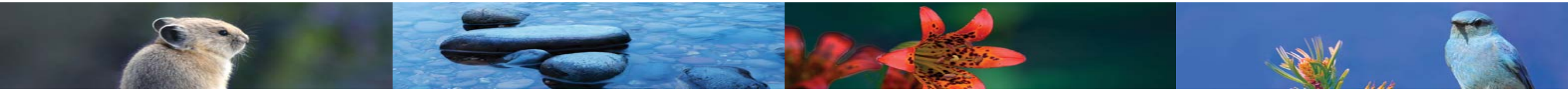
Creating an inset floodplain – salvage and grading



Creating an inset floodplain – Revegetation







Raising the surface elevation

Date & Time: Tue Sep 1 10:49:43 PDT 2015
Position: +039.30130° / -120.12762°
Altitude: 5838ft
Azimuth/Bearing: 067° N67E 1191mils (True)
Elevation Angle: -01.7°
Horizon Angle: -00.1°
Zoom: 1X





Bioengineered Check Dams





Bioengineered Check Dams



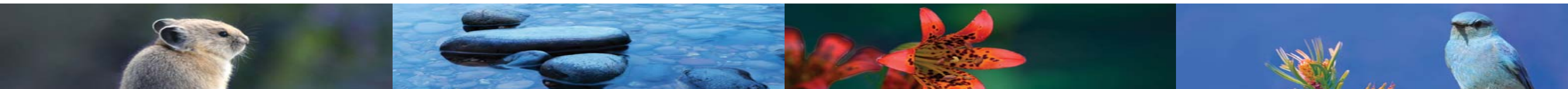


June 2019



October 2019

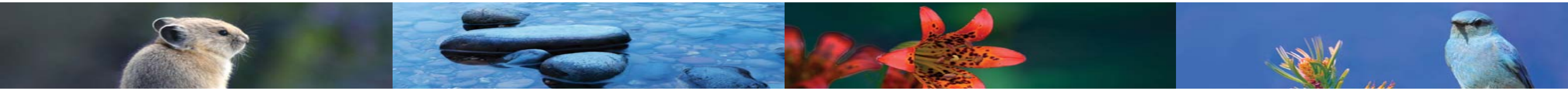




Filling Irrigation Ditches and Removing the Trail



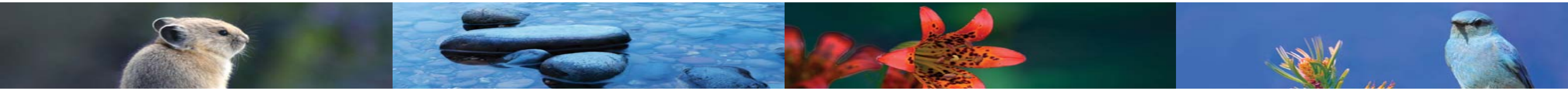




Remove Rip Rap and Levee







Restore the natural meander

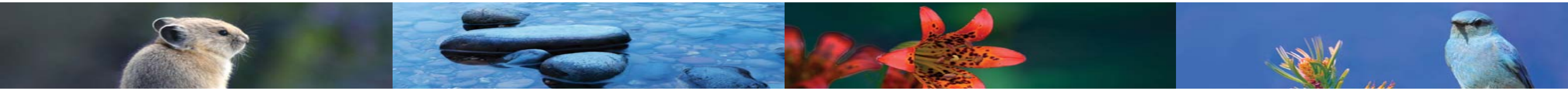






Next Steps

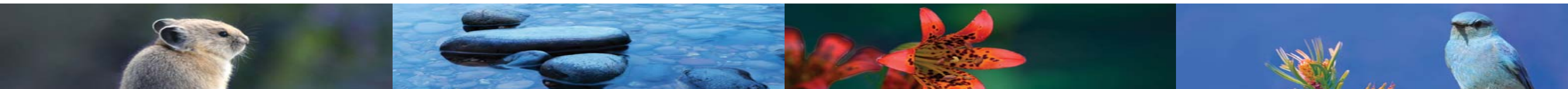
- Monitoring
- Adaptive Management



Goal: Restore resilience to the Martis Wildlife Area

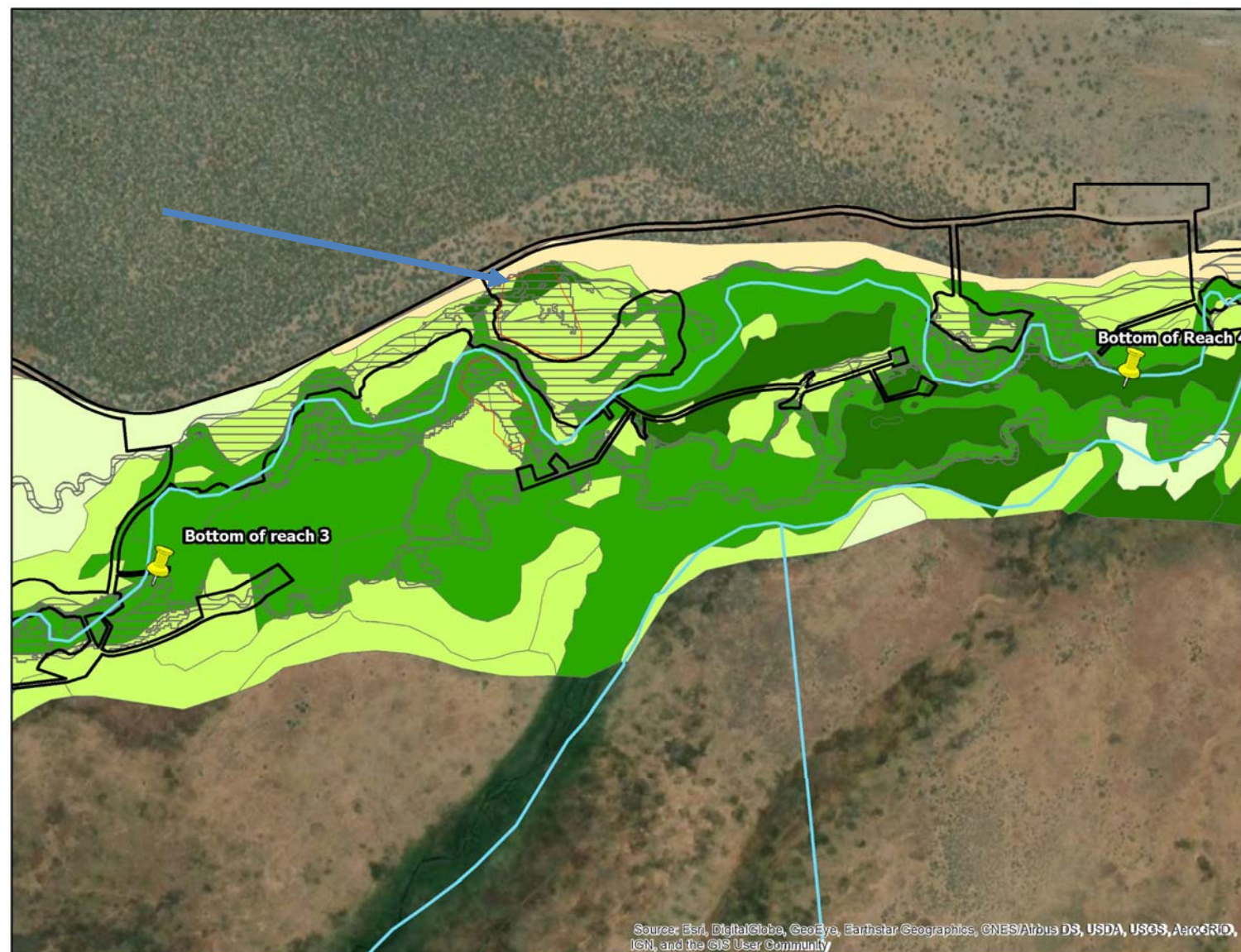
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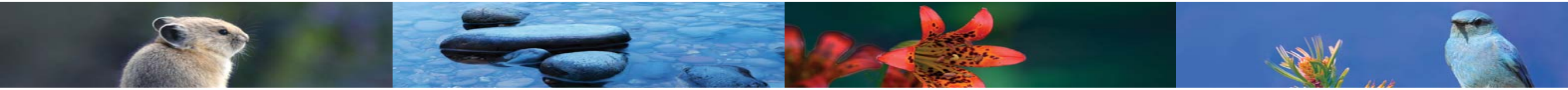




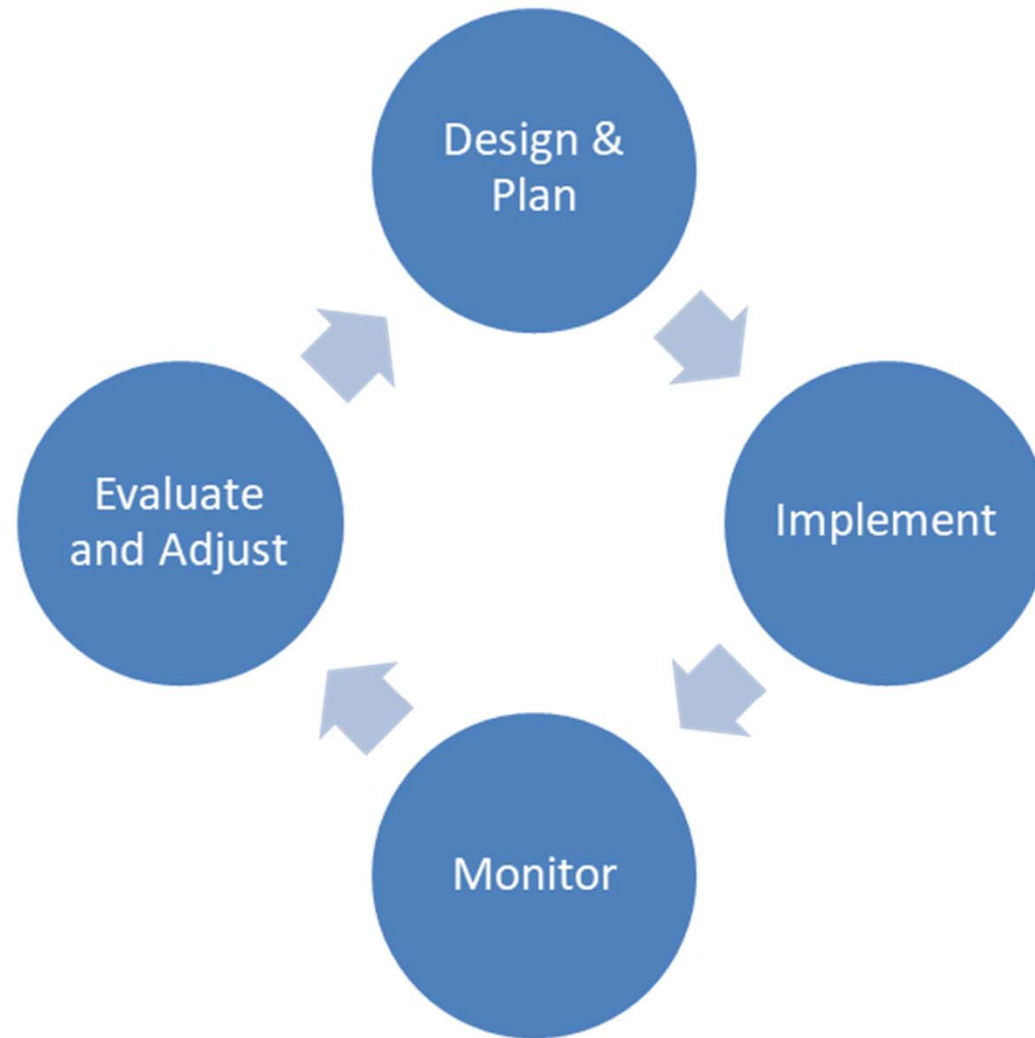
Monitoring

- Pre and Post-construction
 - Hydrology
 - Vegetation
 - Sediment production
 - Soil carbon

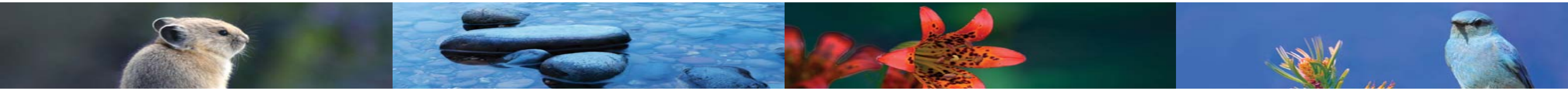




Monitoring and adaptive management







Thank You Partners and Funders!

Partners:

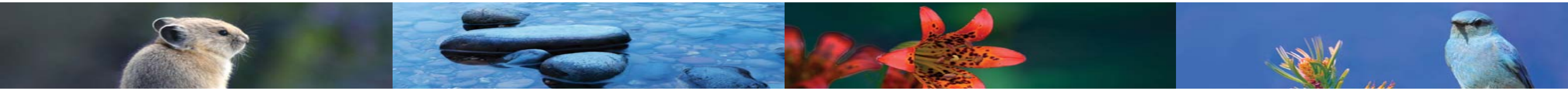
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- US Bureau of Reclamation
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- Bella Vista Foundation





Thank You Project Team!

- Balance Hydrologics
- Dudek
- Dyer Excavation
- Kelley Erosion Control
- Natural Design Systems
- Triangle Properties
- Washoe Tribe of Nevada and California
- Western Botanical Services





Thank you!
Questions and comments?

Michele Prestowitz

mprestowitz@truckeeriverwc.org