Final WNTI Report for the South Fork Chalk Reconnection project.

Evidence suggests that the Bonneville cutthroat trout within Chalk Creek display a migratory life history, in which individual fish move potentially long distances to different habitats within the watershed dependent upon their life stage. For example, adults need to ascend tributary habitats in order to spawn. Juveniles migrate downstream into the mainstem as they age. Seasonal movements in response to climatic conditions also occur. As the summer temperatures cause the Chalk Creek mainstem to heat, coldwater inputs, such as the South Fork serve as critical thermal refugia for BCT, however diversions like the one removed can act as barriers to fish moving into these habitats. The irrigation diversion located at the mouth of the South Fork of Chalk Creek was critical in blocking BCT from migrating into critical habitats in the South Fork. During many irrigation seasons, this diversion also dewatered the lower ¼ mile of the South Fork of Chalk Creek.

Construction on this project was completed on June 9, 2013. Due to the project timing and budget constraints we were unable to install monitoring equipment on the South Fork below the landowner's historic POD in 2013. We plan to install a continuous stage recorder for the 2014 irrigation season.

Major Project Benefits included:

- Flow restoration to the lower ¼ mile of the south fork of Chalk Creek
- New POD (~3/4 mile) downstream in mainstem
- Upgraded water use from flood to sprinkler
- Screened intake
- Removed a channel-spanning fish migration barrier on the South Fork of Chalk Creek
    - Reconnected approximately 23 miles of upstream habitat to the mainstem of Chalk Creek

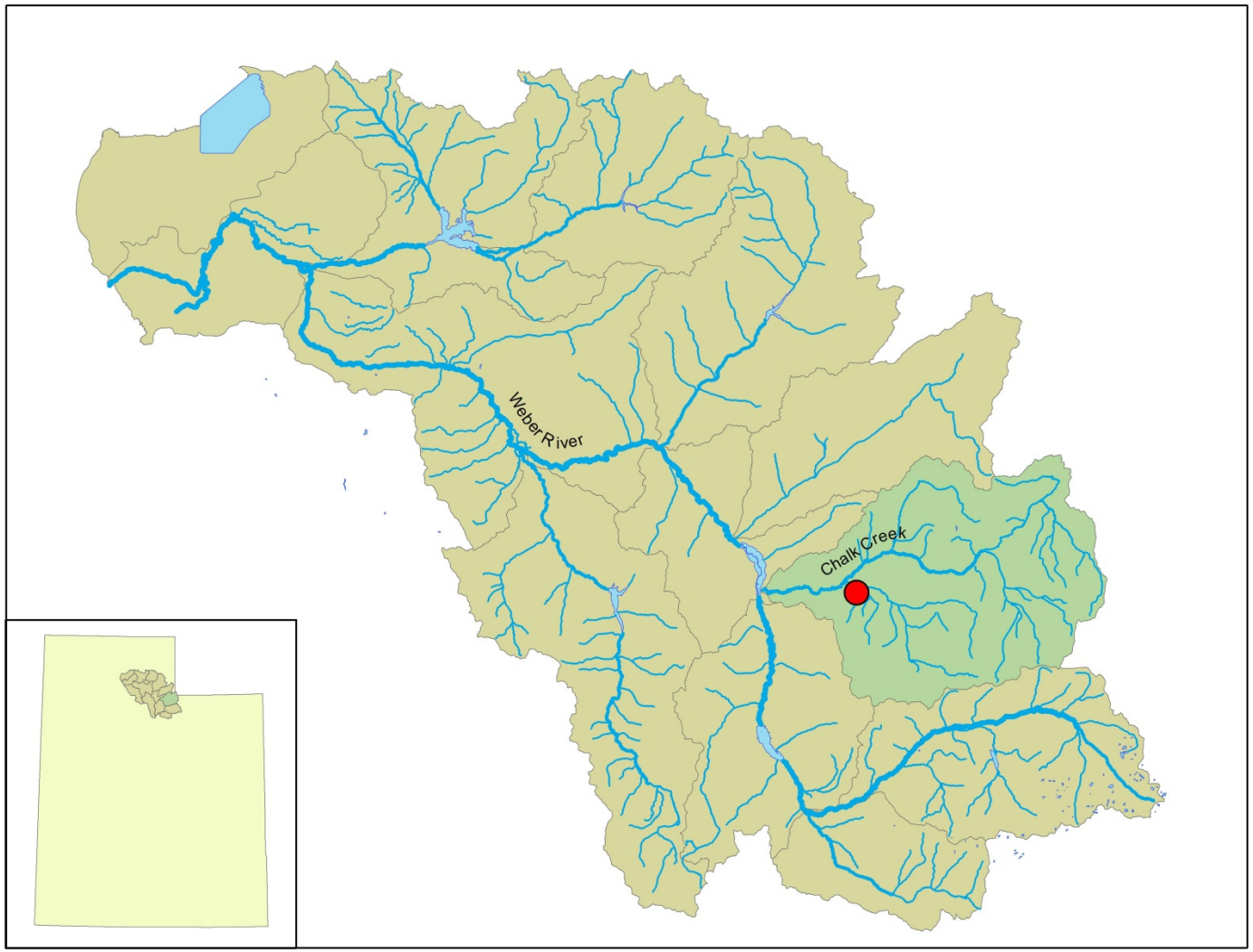

Figure 1: A map indicating the geographic location of the project in reference to the state and its specific location in the Weber River Basin. The red marker indicates the location of the historical Point-of-Diversion.

Figure 2: Pivot #3 shown in operation on June 13, 2013.

Figure 3: A photo showing the confluence of the South Fork (Upper Right) with the mainstem of Chalk Creek (Left) on July 22, 2013. During dry years like 2013, the historical diversion would typically dewater the lower South Fork. With this project, the flow from the South Fork supplemented flows in the mainstem for an additional ¾ miles beyond this point.

Figure 4: A BCT caught on the Chalk Creek mainstem below the confluence with the South Fork in July 2013.

Figure 5: The new screeened stream-side pump on the Chalk Creek mainstem.

Income	Match Requirement	Funding Type	TU Internal Account	Income
NRCS EQIP (3:1)	3:1	Federal	SFCNRC	$ 66,765.00
WNTI	1:1*	Federal	SFWNTI	$ 20,000.00
Fish Passage Mod	1:1*	Federal	SFWNTI	$ 10,000.00
FWS Partners		Federal	SFCFWS	$ 15,000.00
EPA 319	2:3	Federal	SFCDWQ	$ 60,064.00
State NPS		State	SFCDWQ	$ 20,167.00
EPA 319 TA	2:3	Federal	SFCDWQ	$ 5,000.00
NPS TA		State	SFCDWQ	$ 1,500.00
Dee		Private	WRDF13	$ 15,000.00
Swire		Private	SFCBEF	$ 10,000.00
Fish Passage (Remaining $ from Avintaquin Creek)	1:1*	Federal	AVINTA	$ 8,291.66
TU Direct			Various	$ 885.00
Jerrold Richins (Cash)		Private		$ 29,681.26
Total				**$ 262,353.92**
* There is no nonfederal match requirement. USFWS asks to fund projects at 1:1 ratio				

Expense	Services	Expenses
Pacificorp	Install power service	$ 28,844.36
Pacificorp	Initial power install survey	$ 10,842.67
Valley Implement	Electrical cable from transformer to pump	$ 3,150.00
Bulldog Drilling	Directional Bore of Electric Cable	$ 3,967.18
Ridgeline Electric	Connection of 3-phase power to Pacificorp Transformer	$ 2,986.64
AMCAST Excavating	Trench construction for electrical cable installation	$ 4,329.00
McMillen	Initial Design for In Situ Diversion Reconstruction	$ 8,728.00
McMillen	Pivot Design	$ 18,000.00
Valley Implement	Pivot Installation	$ 154,243.00
AMCAST Excavating	Construction Support for Pivot Installation	$ 11,627.19
AMCAST Excavating	Construction Support for Agricultural	$ 5,725.00
Great Basin Industrial	Fabrication of Intake Structure	$ 9,025.88
McMillen	Final Report	$ 885.00
Total		**$ 262,353.92**