



# *Granby Diversion and Channel Improvement Project*

WSRF Grant – CTGG1 2020\*2708

Final Report – July 13, 2021



## **BACKGROUND**

Trout Unlimited, in partnership with the Town of Granby, Grand County, U.S. Fish & Wildlife Service (USFWS), and Colorado Parks & Wildlife (CPW), sought to improve the Granby Diversion Structure and downstream channel to provide for fish and non-motorized boat passage while preserving and, potentially, improving municipal and agricultural diversions. The Granby Diversion structure diverts water from the Fraser River to serve the Town's municipal water supply needs as well as irrigation of downstream agricultural lands. Prior to improvements, the diversion included a boulder structure approximately 100 feet wide and 7 feet tall that spanned the Fraser River, interfering with fish passage both at high and low flows.



*Granby Diversion Before Improvements*

Thanks to a generous grant from the U.S. Fish and Wildlife Service, in late 2018, the project partners issued an RFP and selected Freestone Aquatics and FlyWater, Inc. to design improvements that would meet the following goals:

- Provide fish passage for trout and native species and for non-motorized boating recreation without interfering with water diversion for municipal and irrigation purposes
- Low maintenance of diversion structure and associated fish passage and boating features
- Resilience during future flood events
- Facilitation of natural stream processes (i.e. sediment transport)
- No rise in 100-year floodplain

A preliminary design and cost estimate was developed by the consultants and, in February of 2019, Trout Unlimited applied for a Water Supply Reserve Fund (WSRF) grant in the amount of \$212,403.84 (\$50,000 from the Colorado River Basin Roundtable and \$162,403.84 from the statewide account) for construction of the project. A match of \$113,350.00 was committed, comprised mostly of construction materials, transportation, and labor, provided by partners Northern Colorado Water Conservancy District and Grand County.

The WSRF grant was approved by the CWCB in September of 2019. Final design and engineering were completed in January of 2020. A grant contract between TU and CWCB was entered into in March of 2020. TU sub-awarded the construction funds to the Town of Granby who owns the diversion structure and the land where the structure is located. The Town in turn contracted with FlyWater to build the project. Construction began in October 2020 and was successfully completed in November of 2020, as the East Troublesome fire raged in the background.



## PROJECT DESCRIPTION

The primary feature of the project is a relatively low gradient constructed riffle. Nature-like fishways such as the one built are simple, yet efficient. The ecologically friendly design helps to promote the natural migration of fish and other aquatic species to and from required habitat types and ensures habitat connectivity by mimicking the natural bedform, substrate make-up, and velocity characteristics of a naturally formed channel riffle. The project provides fish passage for both trout and the native mottled sculpin.



*Granby Diversion Structure Before*



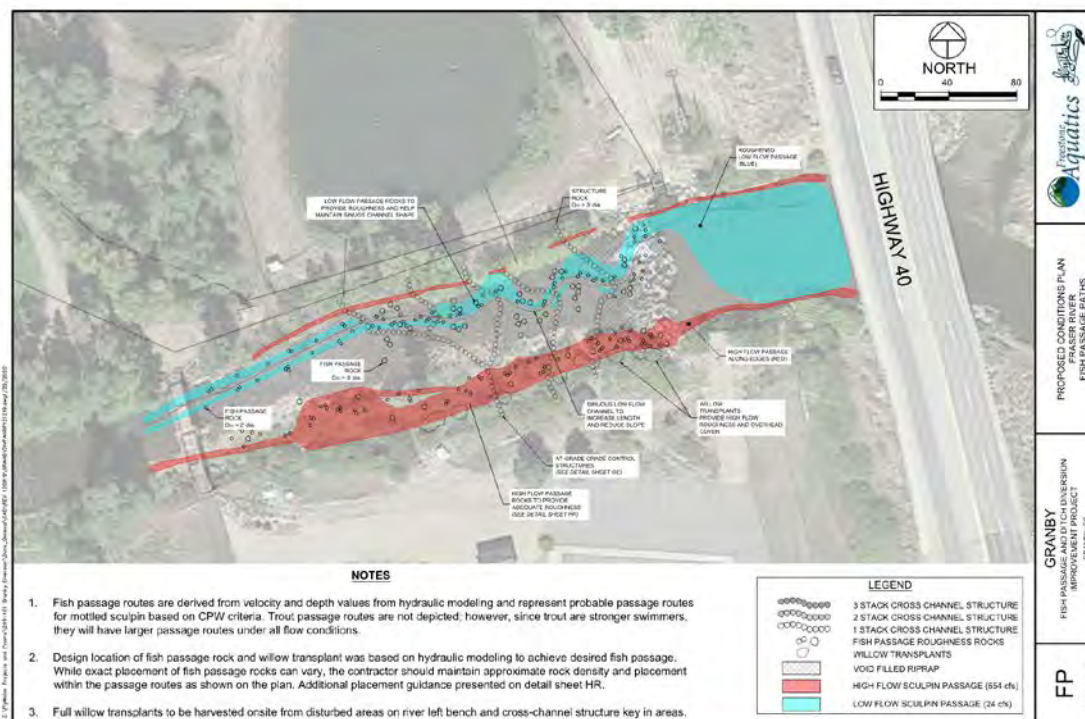
*Granby Diversion Structure After*



*Fraser River Improved Channel (View from Downstream Towards Granby Diversion)*



*Fraser River Improved Channel (View Downstream from Granby Diversion)*



The conceptual and 60% design for the project was extensively reviewed by both Colorado Parks and Wildlife and the US Fish & Wildlife Service. A copy of the 100% Final Design is attached to this report. A copy of the “as built” plans is also attached.

## SIGNAGE

An educational sign has been installed on site. A picture of the sign is attached.

## MONITORING

The Granby Diversion and Channel Improvement Project is part of CPW’s Colorado River Fish Movement Study, which will document movement of both trout and mottled sculpin between the Fraser and the Colorado River and through the proposed Colorado River Connectivity Channel. A full description of CPW’s Study is attached.

## FINAL BUDGET

The Granby Diversion and Channel Improvement Project has been completed under budget and ahead of time. Pending final reimbursement, a total of \$201,028.54 of the WSRF grant was spent on the project with a match of \$142,101.00, for a total project construction cost of \$343,129.54. The U.S. Fish and Wildlife Service contributed an additional \$54,754.55 in cash for project design and engineering, plus significant in-kind contributions in the form of a conceptual project design and design review. These contributions were not listed as match in the WSRF grant contract but are part of the project cost and contributions.

Task	Description	Total Grant Funds	Total Amount Spent	Remaining Total	Percent Complete	Matching Contribution	Additional Contributions
1	Construction	\$182,704.00	\$159,266.50	\$11,375.46	100.0%	\$136,501.00	\$ 54,754.55
2	Administration	\$ 29,700.00	\$ 29,700.00	\$ 0.00	100.0%	\$ 5,600.00	
	<b>TOTALS</b>	<b>\$212,404.00</b>	<b>\$201,028.54</b>	<b>\$11,375.46</b>	<b>100.0%</b>	<b>\$142,101.00</b>	<b>\$ 54,754.55</b>

### Contributions

	Cash	In Kind
Northern Water		All materials – estimated cost of \$134,041; equipment and labor to upload materials
Grand County		Hauling and downloading materials – estimated cost \$4340
Town of Granby		Project contracting and oversight
USFWS	\$54,754.55	Conceptual design; design oversight
Grand County OLRT	\$ 2,460.00	Signage
Trout Unlimited		Project oversight; fundraising; grant administration

## PARTNERS

This project would not have been possible without the vision and contributions of our partners. Thank you!

