

Concept Plan and Cost Estimate  
**Gunnison River Whitewater Park “75” Diversion  
Improvements**  
By Recreation Engineering & Planning



**The Existing Gunnison Whitewater Park**

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**Introduction:** This conceptual plan and cost estimate is for the construction of a whitewater feature on the Gunnison River, in Gunnison, Colorado at the 75 Ditch diversion. This project is the final structure within the original Gunnison River Whitewater Park. It will improve boat navigability through the existing diversion dam, not impact the diversion capability of the existing diversion, and provide for the creation of a recreational amenity.

**Project Description:** The proposed location for the park is downstream of Highway 50, below Twin Bridges, near the water treatment plant. Due to the channel width, stream gradient and diversion characteristics; this is an ideal location for a whitewater drop. The new drop and pool will create the final feature to

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the popular Gunnison Whitewater Park.

The project will consist of:

1. One in-stream whitewater feature that will be built within the lower portion of the existing 75 Ditch diversion structure. The structure will be stabilized and sealed with grout, with be no negative impact to the existing diversion capability. The left wing of the existing diversion will be sealed and stabilized, thereby reducing the need for annual maintenance due to leakage or instability. This structure will also include a fish passage area.
2. Selective right-bank access improvements including minor bank re-grading, stone terraces, seating area, and re-vegetation. A new put – in will be located on the right bank upstream of this new structure. Care will be taken to not disturb the existing wells near this area.
3. Downstream pool excavation and grade control and large random boulders.

All of these improvements are envisioned to be attractive, functional, permanent, and designed to blend in with and improve the natural environment.

**Maintenance:** In-stream improvements are virtually maintenance free unless there is a failure due to a major flooding event or damage due to erosion over time. Maintenance of future park improvements will require typical park maintenance for parking areas, restrooms, etc.

**Anticipated Use:** The improvements will be free and open to the public similar to the other whitewater park structures. Whitewater improvements will be designed for a wide range of boating enthusiasts of all skill levels.

**Costs:** See the attached cost estimate.

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**Cost Estimate**

<u>Item</u>		<u>Whitewater Cost</u>	<u>Diversion Cost</u>	<u>Total Cost</u>
1. Mobilization.	LS	\$3,000	\$3,000	\$6,000
2. Water control.	LS	\$9,000	\$9,000	\$18,000
3. Large rock acquisition and placement for new drop structure, anchoring, and terracing. ( 600 cy @ \$85/cy)		\$34,000	\$17,000	\$51,000
4. Grout for new structure. (110 cy @ \$190/cy)		\$13,000	\$8,000	\$21,000
5. 1.5’-2.0’ dia rock for pool lining. (200 cy @ \$40/cy)		\$8,000	\$0	\$8,000
6. Additional excavator hours for pool shaping, backfill, etc. (100 hours @ \$120/hour)		\$6,000	\$6,000	\$12,000
7. Contingency. (10%)	LS	\$7,000	\$5,000	\$12,000
<b>Subtotal</b>		<b>\$80,000</b>	<b>\$48,000</b>	<b>\$128,000</b>
8. Preliminary and final design, specifications, and construction phase services. (assumes there is no public bidding). 18%		\$14,000	\$ 9,000	\$23,000
<b>Total</b>		<b>\$94,000</b>	<b>\$57,000</b>	<b>\$151,000</b>

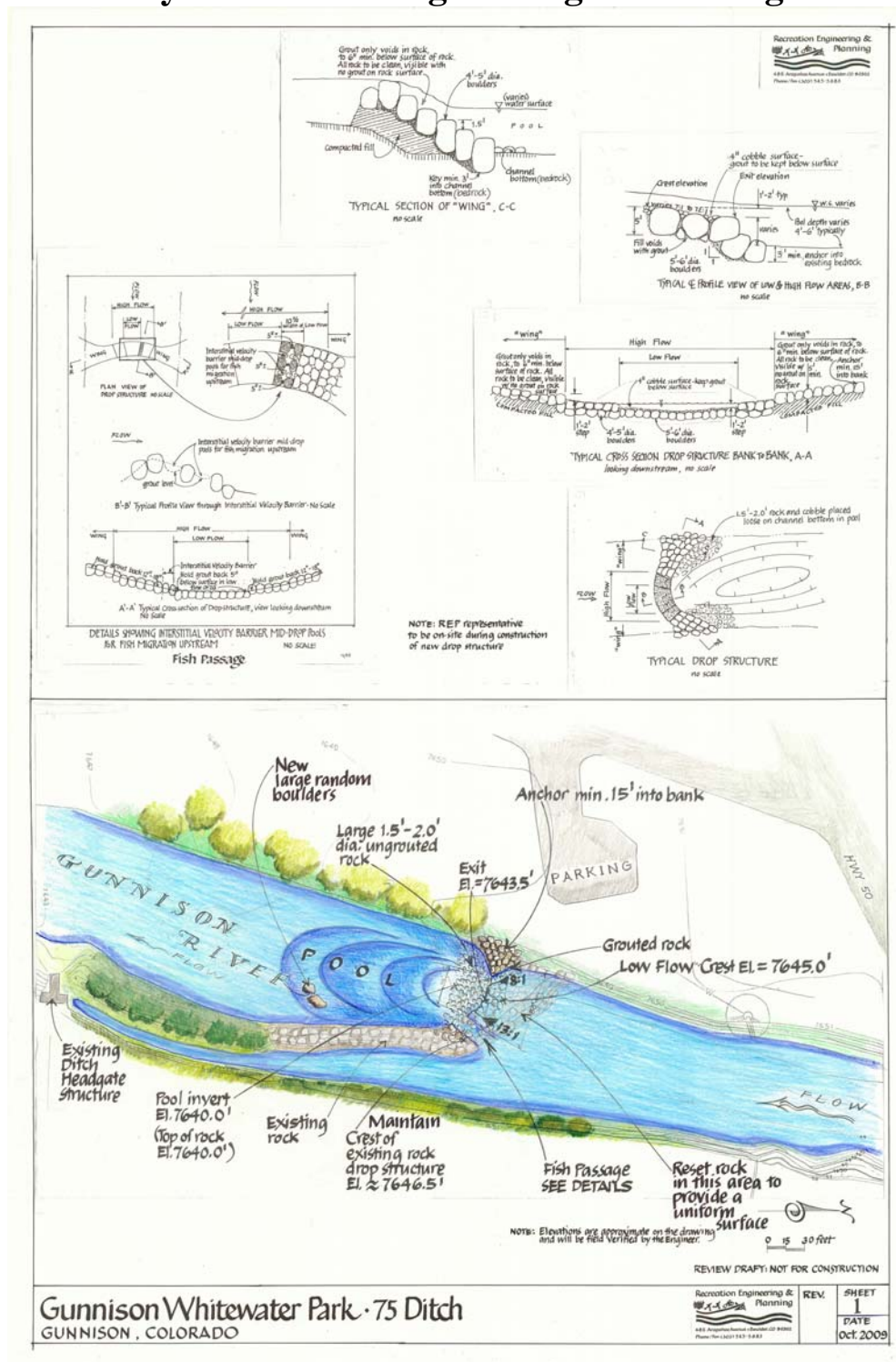
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Attachment 1: Concept Plan

# Concept Plan and Cost Estimate

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November 19, 2009

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