Reservoir Intake Retaining Wall  
Product: Maccaferri Galvanized & PVC Coated Gabions

Problem
The Rocky Boy's Reservation in Montana is home to the Chippewa Cree Tribe who negotiated their Water Rights Claims through the Reserved Water Right Commission, ratified by the Montana Legislature in 1997 and signed by President Clinton in December of 1999. This provided a water allocation to the Tribe from the Tiber Reservoir, on Lake Elwell, located south of Chester, MT. This involved the construction of an intake structure to draw water from the reservoir at Tiber Dam.

Solution
A gabion gravity wall was selected partially due to its job creation potential, and many members of the Chippewa Cree Tribe were hired as labor for the construction of the intake retaining wall. The intake super structure uses raw water pumps to draw water from the reservoir in a building that is comprised of an electrical room and a pump room sitting atop an intake Caisson of 24 ft in diameter and 80 ft deep. The gravity wall was constructed with galvanized and PVC coated gabions. The wall was 36 feet in height and used 1,970 cubic yards of galvanized gabions and 858 cubic yards of PVC gabions to complete. Designs were completed in April of 2008 and construction began that October and finished in April of 2010. Work on the intake retaining wall was limited to fair weather months and was tied to the construction schedule of the pump building. The gabion crew consisted of four people with a production average of one man hour per cubic yard.
### Client

**NORTH CENTRAL MONTANA REGIONAL WATER SYSTEM**

### Main Contractor

**CHIPPEWA CREE CONSTRUCTION**

### Designer

**DOWL HKM**

### Construction Engineering Services

**AE2S (ADVANCED ENGINEERING & ENVIRONMENTAL SERVICES, INC.)**

### Products Used

**MACCAFERRI GABIONS - GALVANIZED & PVC COATED**

### Date of Construction

**OCTOBER 2008 – APRIL 2010**

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**MACCAFERRI**

www.maccaferri-usa.com

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**Headquarters:**

10303 Governor Lane Boulevard  
Williamsport, MD 21795-3116  
Tel: 301-223-6910  
Fax: 301-223-6134  
email: hdqtrs@maccaferri-usa.com

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