



*Damaged abutment*



*Downstream during low flow conditions*

The 80 ft long Missing Link Bridge (Bridge #13) over the Williams River was damaged beyond repair during Tropical Storm Irene when high flows of 12,000 cfs scoured the river bed, resulting in failure of the southern abutment and causing the bridge to drop approximately 5 feet at the south end.

The bridge was been inspected and evaluated by FEMA officials, who determined that the cost of repairing the bridge exceeds 50% of the cost of replacing the bridge. Based on this analysis, FEMA indicated that 75% of the bridge replacement costs will be eligible for funding.

After completing a hydrology and hydraulics report, Dufresne Group recommending replacing the bridge with a 90 ft long structure with precast concrete deck panels over rolled steel beams and a deep driven piling foundation for scour resistance.

### KEY FEATURES

- The low bid of \$526,695 allowed extra costs for work that FEMA defined as an “improved project” to be covered by the \$647,436 budget in the FEMA Project Worksheet.
- Missing Link Road was closed to traffic since the bridge failed therefore the construction project had no additional effects to the traveling public.
- The 10 ft increase in the bridge span reduces the backwater cause by the bridge by approximately 3 ft during the 100 year flood, according to HEC-RAS modeling.