PROJECT DESCRIPTION

RESTORATION ENGINEERING LLC
Aquatic Restoration and Environmental Hydraulics

Stream Restoration

Fleshman Creek

Stream Restoration & Flood Mitigation

Location: Livingston, Montana

Client: Park County

Key Project Elements:

- Flood Mitigation
- Geomorphic Assessment
- Hydraulic Analysis
- Hydrologic Assessment
- Natural Channel Design
- Hydraulic Structure Design
- Sod Bank Construction

Project Description:

Fleshman Creek is a left-bank tributary of the Yellowstone River. Its headwaters begin west of Livingston, Montana in the Bangtail Mountains where it is joined by several small tributaries before entering the city of Livingston. Fleshman Creek traverses 2.7 miles through residential, commercial and public properties within Livingston. The focus of the Fleshman Creek Flood Mitigation Project was to assess the creek's hydrology and flooding characteristics, and design solutions to mitigate risk and restore natural channel function.

The project reach of Fleshman Creek is urbanized and passes under a footbridge adjacent to a city park, as well as through six street crossings with varying culvert types and lengths. Additionally, two above grade sewer pipes crossed the creek at or just above the streambed elevation. This $3.4 million project was funded by a $300,000 Montana DNRC Reclamation & Development Grant which was matched by Park County and a $2.8 million Federal Emergency Management Administration's Pre-Disaster Mitigation Grant.

The project involved hydraulic and civil design and installation of six crossing structures and comprehensive natural stream restoration design of over 6,800 feet of the creek channel. Extensive reaches of the channel plan form, profile and cross sections were completely re-established to achieve project goals.