



1064 N. Warren  
Helena, Montana 59601  
Telephone: (406) 449-3303  
FAX: (406) 449-3304

*Infrastructure Specialists*

Date: 10/24/11 4:15 PM

## **Memorandum**

To: Derek Brown, Lewis & Clark County Commissioner  
Eric Griffen, Public Works Director

From: Scott Anderson, P.E.  
Anderson-Montgomery Consulting Engineers  
1064 N. Warren Helena, MT 59601

Re: **Consultant Activities – Lewis & Clark County Floodwater Management Evaluation**

Project activities performed by Anderson-Montgomery Consulting Engineers during September and October of 2011 are described as follows:

### **I. HAZARD MITIGATION GRANT**

The Notice of Intent (NOI) for the FEMA Hazard Mitigation Grant Program was prepared and submitted by the end of September for the four projects, considered to be high priority projects taken from a list of several potential flood mitigation projects. Priority was based on public input, potential cost to benefit ratio and ease of implementation. The NOI is the first step in the process to procure funds from the FEMA program with final applications due by March 31, 2012. The grants provide 75% of eligible project costs. The projects submitted are described as follows:

**Forestvale-McHugh Road Improvements** - The project consists of the design and construction of drainage improvements along Forestvale Road in the north Helena valley and along McHugh Lane. The existing ditch along the south edge of Forestvale Road would be resized and regraded with appropriately sized approach culverts installed along the ditch. Flows from the ditch would be directed beneath Forestvale Road on the north along the ditch on the west side of McHugh Lane to an existing ditch leading to a local storage area north of the Forestvale cemetery. Drainage ditches along McHugh Lane from Tenmile Creek north, which flow into the Forestvale drainage system, would similarly be improved. Approaches in McHugh would also be improved, where needed.

**TOTAL ESTIMATED COST: \$1,033,000**

**Helena Gun Club Improvements** -The project consists of the design and installation of a flow interceptor/inlet structure in the base of the existing pedestrian trail along Montana Avenue to route flood waters from the ditch along the east side of Montana Avenue into a localized depression on the Helena Gun Club property. Flows at the pond outlet will be routed to a ditch located along the west side of Interstate 15. The project also will replace an undersized hydraulic structure on Sierra Road.

**TOTAL ESTIMATED COST: \$145,000**

**Sewell-Silver Creek Bypass** - The project consists of the design and construction of a drainage ditch that will redirect flows in Silver Creek around the west perimeter of the Sewell subdivision that is located in the north Helena valley, thereby removing the subdivision from the Silver Creek flood pathway. Improvements to the crossing under Montana to increase capacity are also necessary.

**TOTAL ESTIMATED COST: \$920,000**

**Drainage Survey, Drainage Plan and Easement Investigation** - The project consists of conducting a survey of the existing drainage infrastructure in the Helena valley and generating an inventory database of the system components (culverts, ditches, control structures, road grades, approaches), followed by development of a drainage plan applicable to the existing system as well as future activities. As part of the work, existing unused irrigation ditches throughout the valley will be evaluated for possible abandonment or reuse. Also, included within the scope of work will be an investigation into easements associated with the drainage system.

**TOTAL ESTIMATED COST: \$ 147,500**

## **II. DNRC RENEWABLE RESOURCES PLANNING GRANT**

AMCE, with the assistance of Laura Erickson of Lewis & Clark County, prepared a \$20,000 grant application which was submitted to the DMRC for planning funds to assist in the costs of completing the drainage survey of hydraulic structures in the County.

## **III. FLOODPLAIN MAPPING**

Using photos taken during the 2011 Ten Mile Creek flood event, AMCE prepared a flood map depicting the flood events that occurred in the Ten Mile Creek drainage area during the 2011 flood.

## **IV. PUBLIC INFORMATION**

AMCE gave 2 presentations, the first to the public meeting sponsored by the Lake Helena Watershed Group and the second to the Board of the Water Quality Protection District. The discussion provided general information on the 2011 flood followed by a summary of public input and brief discussion of proposed projects.

Several phone calls from interested residents have been received and responded to.

## **V. FLOODPLAIN PROJECT LISTING AND PRIORITIZATION**

AMCE, with local and County staff input, developed a list of potential long-term mitigation projects for the Ten Mile, Silver Creek and Prickly Pear Creek flood impacted areas. A methodology to prioritize these projects is being developed, considering many factors. This list and process will be utilized to assist in determining where funding and county resources should be focused to accomplish the greatest benefit. Additionally, the FEMA Benefit Cost Analysis (BCA) procedures will be utilized to further assess projects.