



# PROJECT DESCRIPTION SHEET



## GEOTECHNICAL AND WATER RESOURCES ENGINEERING



### KEY ENGINEERING ELEMENTS:

- Hydrologic analysis
- Hydraulic analysis
- Flood Routing
- Scour potential of spillway channels

### CLIENT BENEFITS:

- Reduction of hazard classification with minimal embankment modifications
- Updated spillway to meet SEO requirements

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## ALSBURY DAM, MESA COUNTY, CO BASEPOINT DESIGN CORPORATION

Alsbury Dam is an existing embankment dam located in Mesa County, about 20 miles south of Silt, Colorado.

The Colorado Office of the State Engineer (SEO) increased the hazard classification of Alsbury Dam from a Low-Hazard to High-Hazard dam based on downstream development since construction of the dam. The higher classification was based on a downstream inundation study performed by the SEO in March 2004.

RJH Consultants, Inc. (RJH) was retained by BasePoint Design Corporation to analyze the hazard classification and the Inflow Design Flood (IDF) of the dam. RJH concluded that the IDF for Alsbury Dam could not be safely routed through the existing spillway. Therefore, a spillway notch (breach) was constructed to safely pass the IDF.

The construction of the spillway notch lowered the maximum normal water surface by 5.5 feet. Based on the spillway modifications, RJH evaluated the downstream hazards from a failure of the modified dam. RJH concluded that after modifications were complete, Alsbury Dam should be reclassified as a small, Significant-Hazard structure based on potential damage to downstream facilities.

Spillway modifications included:

- Excavation of existing approach channel and construction of a notch in existing spillway control structure.
- Removal of horizontal crest section of existing spillway control structure.
- Rock excavation of a discharge channel downstream of control structure.

