



# SMALL WATERSHED REHABILITATION PROGRAM

## TIBBLE FORK DAM - UTAH

**LEAD AGENCY:**

- USDA-Natural Resources Conservation Service (NRCS)

**LOCATION:**

- American Fork River Canyon, Utah County
- HUC: 16020201

**FUNDING:**

- Small Watershed Rehabilitation Program-PL-83-566, as amended by PL 106-472

**REASON FOR REHAB:**

- The intent of the proposed rehab measures is to meet the current NRCS and Utah Dam Safety engineering and performance criteria and to extend the life of the dam 59 years- starting in 2017.

**COOPERATING AGENCY**

U.S. Forest Service  
 Uinta-Wasatch-Cache National Forest

**CONTACTS:**

- **NRCS**  
 Bronson Smart,  
 State Engineer
- **Sponsor**  
 Hunt Willoughby,  
 Chair, NUCWCD

**Introduction**

Utah Congressional District: 3  
 Dam is within the American Fork-Dry Creek Watershed  
 Authorized in 1958. Dam built 1966

**Sponsoring Local Organization**

- North Utah County Water Conservancy District (NUCWCD)

- Total Sponsor Cost: \$2,302,500
- Total Federal Cost: \$5,032,500
- Total Project Cost: \$7,335,000

*Tibble Fork Dam – Utah County, Utah*



**Rehabilitation Project Benefits**

Number of lives protected: 2,300	Number of homes protected: 140
Number of businesses protected: 4	Number of Schools: 2
Number of Highways: 3	Number of Infrastructures: 50

**Benefit of the Dam to the Community:** Direct benefits are realized by the cities of Highland, Cedar Hills, American Fork and Pleasant Grove with continued flood prevention, recreation, fish and wildlife uses, water supply, and sediment retention. Also, residents from adjacent counties and metropolitan areas use the high mountain area for a variety of recreation activities. The average annual agricultural and non-agricultural benefits total to \$535,000.

**Summary Dam Rehabilitation Measures**

- Raise the dam crest 15 feet (93,000 yd<sup>3</sup>); place rock riprap on US face (2,900 yd<sup>3</sup>)
- Place additional earth fill on the downstream face for stability with access road on top
- Replace the existing auxiliary spillway with concrete/covered box inlet & raise 13 feet
- Installation of new toe drain at downstream toe of the dam to convey seepage water
- Extend seepage monitoring piping (piezometers) to account for dam raise (15 feet)
- Increase the reservoir (water surface) area from 9.8 acres to 21.6 acres
- Replace low-level outlet gate & repair outlet riser; extend 40 feet to connect to stream
- Approximate 4.6 acre borrow area excavated 13-16 feet at the NE side of reservoir; 2.6 acre area NW of the reservoir for borrow -- Add about 1 acre beach area on the N side
- Approximately 13.5 acres on the dam & around reservoir to be cleared/grubbed
- Addition of 120 to 180 acre-feet of water storage capacity (*pending final design*)
- Parking area altered from 83 spaces to 60 passenger vehicle space & 25 truck/trailer spaces -- Add new 1.1 acre gravel parking area at the base of the dam