Watershed Description:

The Lower Bear River watershed is located in Box Elder County, Utah, and includes the following waterways: the main Bear River from Cutler Dam to its confluence with Great Salt Lake; the Malad River from the Utah-Idaho state line to its confluence with the Bear River; Box Elder Creek from its headwaters to its confluence with Black Slough and the Bear River; and numerous springs and small tributaries. The watershed encompasses approximately 260,000 acres. Land within the watershed is used primarily for small grains production, truck crops, livestock feed production, grazing, and wildlife.

Flows leaving Cutler Reservoir average 1,500 cubic feet per second (cfs) and increase to over 1,700 cfs at the lowest gauging station on the Bear River, near Corrine, Utah. Flows in this watershed vary due to seasonal and annual changes, as well as the generation of hydroelectric energy by Cutler Dam. The lowest recorded daily flow on the Bear River near Corinne was 23 cfs, recorded in 2004, and the highest flow of 14,300 cfs was recorded in 1984.

Several major water diversions in this watershed are used for irrigation and wildlife support. The largest of these diversions are 191,000 acre-feet per year to the West Side Canal and 84,000 acre feet per year to the Bear River Migratory Bird Refuge. In Box Elder County, Utah, 100 irrigation companies and private users are involved in delivering water from the Bear River to irrigate over 105,800 acres. The Bear River Canal Company alone maintains over 120 miles of canal and lateral lines in Box Elder County.
**Project Description:**

In recent years, water quality improvements along the Lower Bear River have focused primarily on the proper utilization of manure produced in animal operations. Manure is often applied to agricultural land to add nutrients and improve the quality of the soil without the added expense of synthetic fertilizers. Manure must be applied at the appropriate agronomic rate and under appropriate conditions. This is done to avoid excess nutrients inadvertently running off into nearby water bodies, which can cause over-fertilization of the water and result in algal blooms, fish kills, and other water quality problems.

Typically, waste storage facilities are constructed to store manure in a way that protects nearby water bodies and groundwater until it can be properly applied to the soil. Waste storage facilities can be constructed by excavating a pit or by building berms. Many storage facilities are lined to prevent leaching into the groundwater. Waste storage facilities are an integral part of a producer’s nutrient management plan and are essential in protecting agricultural land and water resources.

**Partners**

Northern Utah Conservation District  
U.S. Fish and Wildlife Service  
EPA  
Utah Division of Water Quality  
Utah Division of Wildlife Resources  
Natural Resources Conservation Service  
Utah Association of Conservation Districts  
Local Landowners  
Local Irrigation Companies  
Utah Watershed Coordinating Council  
Utah State University Extension  
Lower Bear River Advisory Committee

**Related Projects**

- Soil testing and training  
- Mountain Wilds to Wetland Wonders  
- Stream restoration  
- Animal feeding operation inventory  
- Animal feeding operation improvements  
- Wildlife habitat improvements  
- Water quality outreach and education  
- Spring development

**Funding**

- EPA 319 funding  
- Utah State Nonpoint source funds  
- NRCS Environmental Quality Incentive Program (EQIP)  
- NRCS Wildlife Habitat Improvement Program (WHIP)  
- Local Landowners

To learn how you can participate or lend your support to Utah community water quality projects, please contact your local conservation district or county agent.