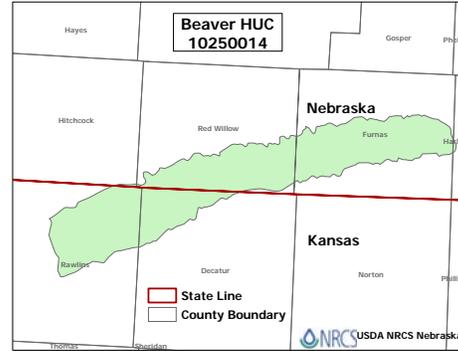




Beaver HUC
HUC#: 10250014

Introduction

The Beaver HUC is located in south central Nebraska central Kansas. This HUC covers the counties of Red Furnas and Harlan in Nebraska and Decatur and in Kansas. The total estimated area of the watershed is acres. Approximately 286,547 acres of the watershed Nebraska and 191,032 acres are in Kansas.



and north
 Willow,
 Rawlins
 477,579
 lie within

Physical Description

The Beaver Watershed area consists of silty soils that are moderately coarse to coarse textured. A majority of the area is well drained and runoff is rapid. Poorly drained areas occur in a few upland basins. Surface water drains thru tributaries of the Republican River. Slopes are nearly level and gently sloping and are divided by deeply entrenched drainage ways.

The watershed contains approximately 360 farms. Nebraska has approximately 242 of these farms covering approximately 265,202 acres with Kansas having 118 covering approximately 178,419 acres. Totally the farms within this watershed cover approximately 443,621 acres. Farm size averages 1,076 acres. Land uses in this watershed consist of irrigated cropland, dryland cropland, and pastureland. In 2002 an estimated 93,420 acres were harvested in Nebraska and approximately 47,395 acres in Kansas. Nebraska had approximately 83,171 acres of this watershed that were used primarily for pasture/range land and Kansas had 62,475 acres.

There are approximately 5,787 acres in CRP thru sign up 29 in Nebraska and 2,116 acres in Kansas.

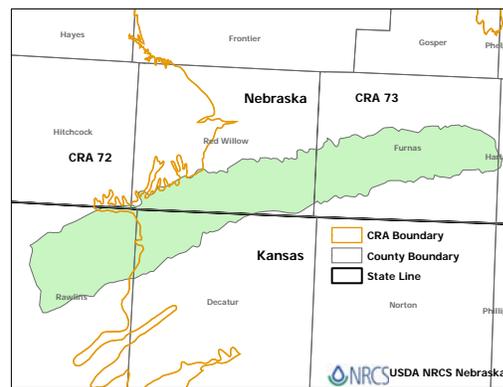
Nebraska irrigated an estimated 33,824 acres in 2002 and Kansas irrigated 3,075 acres. This included both pivot and surface irrigated fields.

Common Resource Area

The Upper Republican watershed lies within CRA and CRA Area 72. General characteristics are as follows:

CRA 73

Nearly all this area is in farms, and about three-dry-farmed cropland. Winter wheat and grain are the major crops in much of the area, but corn is in the north. Feed grains and hay are other major



Area 73
 described

fifths is
 sorghum
 important
 crops.

About 2 percent of the area, mostly narrow bands of bottom land and terraces along the Republican and Platte Rivers and their major tributaries, is irrigated. Corn, alfalfa, small grains, and hay are the principal crops grown on irrigated land, but some potatoes and vegetables are grown. One-third or more of the area is in native grasses used for grazing.

Average annual precipitation 500 to 625 mm. Maximum precipitation is from midspring to early in autumn. Precipitation in winter is snow that ranges from about 45 cm annually in the south to 60 cm in the north. Average annual temperature 10 to 13 C. Average freeze-free period—150 to 180 days, increasing from northwest to southeast.

Native Vegetation consists of little bluestem, big bluestem switchgrass, western wheatgrass, and sideoats grama characterize the vegetation on loamy soils. Blue grama, buffalograss, and western wheatgrass characterize the vegetation on clayey soils on uplands.

CRA 72

Nearly all this area is in farms and ranches, and three-fifths or more is cropland. This is a major dry farming area. Winter wheat is the main cash crop, but large acreages are planted to other small grains, grain sorghum, alfalfa, and other hay crops. Many crops are grown on the narrow bands of irrigated land along the Platte, Republican, and Arkansas Rivers. Corn, grain sorghum, and sugar beets are grown extensively on the nearly level uplands where ground water is used for irrigation. One-third or more of the area, consisting of hilly and steep slopes bordering drainage ways, is in native grasses and shrubs used for grazing.

Average annual precipitation 400 to 525 mm, but it fluctuates widely from year to year. Maximum precipitation is from late in spring through early autumn. Precipitation in winter is snow that ranges from about 40 cm annually in the south to 90 cm in the north. Average annual temperature 10 to 14 C. Average freeze-free period-140 to 185 days, increasing from northwest to southeast.

Most of the soils are Ustolls. They are well drained and medium textured and moderately fine textured.

This area supports a short grass prairie vegetation. Blue grama and buffalograss are the dominant species. Sideoats grama, blue grama, hairy grama, and little bluestem grow on the steeper dissected areas.

Common Land Unit

FSA's CLU layer is available for the entire Beaver watershed area.

Resource Concerns

Major resource concerns for this watershed are: Soil Quality, Water Quality, Surface & Ground Water Quantity. Other concerns are Rangeland/Grasslands, Wetlands, Wildlife, and Forests. Water erosion and soil blowing are the principal hazards on the upland soils within this watershed. An insufficient amount of rainfall for crops is a concern during most growing seasons. Practices that conserve water by controlling runoff and measure that maintain the fertility level of the soils are the chief management needs. Practices that control soil blowing and improve tilth and fertility are important management needs.

The Tier II third resource concern will be Wildlife.

Studies or Assessments

This HUC may also be impacted by a 3-state Republican River Riparian Project that is addressing water shortage and invasive plants.

The Nebraska Department of Natural Resources has imposed Well Moratoriums within this watershed. This restricts the drilling of new wells within the identified areas of this watershed.

Portions of this watershed also lie within a Ground Water Management area in Nebraska where the resource concerns are water quantity and water quality.

Census & Social Data

Agriculture is one of the main income sources for the communities within this watershed. It was estimated that in 2003 there approximately 195 workers engaged directly in the production of agricultural commodities, either livestock or crops; whether as a soil proprietor, partner, or hired laborer. Of the estimated 360 farms within this watershed, approximately 348 are owned and operated by Sole Proprietors who are either employed in farming full or part time. Average net farm income from agriculture in 2002 was \$14,053 per farm and average production expenses were estimated to be \$44,456 per farm. The average market value per farm of land and buildings in 2002 was \$130,001 within this watershed.

Operator characteristics are as follows for this watershed: Most farms are owned by males with the average age of principle operators being 54.1 years of age. There are approximately 15 Nebraska Limited Resource Farmers within this HU.

NRI or Progress Data

Conservation activities include the following for 2004: Conservation practices were applied to approximately 2,996 acres in Nebraska and 3,418 acres in Kansas across all resource concerns within this watershed. Specifically conservation practices were applied on 2,172 acres of cropland in Nebraska and 773 acres in Kansas.

| PRMS Profile for Beaver 8 Digit HUC - 10250014 | | | | | | | |
|---|-------|--------|-------|-------|-------|---------|---------|
| PRMS Data | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
| Planned | 3,907 | 3,384 | 3,273 | 2,801 | 3,242 | NA | 6,969 |
| Applied | 2,088 | 2,425 | 1,291 | 5,656 | 6,507 | NA | 3,822 |
| All Customer Types | 2,255 | 1,068 | 2,114 | 166 | 1,775 | NA | 27 |
| Conservation Treatments Applied | | | | | | | |
| Contour Buffer Strips (332) (ac) | 22 | 5 | 0 | | 2 | | |
| Reduction in the Acreage of Cropland Soils Damaged by Erosion (Ac.) | 801 | 1,611 | 749 | 513 | 2,342 | | 2,095 |
| Field Border (386) (ft) | 0 | 32,200 | 8,200 | | 0 | | |
| Filter Strip (393) (ac) | 22 | 3 | 0 | | 0 | | |
| Grassed Waterway (412) (ac) | 0 | 2 | 0 | | 0 | | |
| Nutrient Management (590) (ac) | 492 | 91 | 0 | 251 | 52 | | |
| Pest Management (595) (ac) | 1,006 | 1,208 | 627 | 66 | 52 | 118 | 293 |
| Prescribed Grazing (528) (ac) | 1,506 | 1,226 | 1,036 | 447 | 1,860 | 312 | 258 |
| Prescribed Grazing (528A) (ac) | | | | | | | |
| Residue Management, (329A-C) (ac) | 810 | 939 | 542 | 639 | 1,072 | 10,843 | 1,244 |
| Tree/Shrub Establishment (612) (ac) | 0 | 0 | 0 | | | | |
| Wetlands Created, Restored, or Enhanced (657, 658, 659) (ac) | 0 | 0 | 0 | | | | |
| Total Wildlife Habitat (644, 645) (ac) | 288 | 1,058 | 472 | 3 | 514 | 157 | 234 |
| Irrigation Water Management (449) (ac) | 528 | 165 | 522 | 473 | 44 | 134 | |
| Windbreak/Shelterbelt (380, 650) (ft) | 6,467 | 4,593 | 6,467 | | 1,671 | | 4,960 |
| Terrace (600) (ft) | NA | NA | NA | NA | NA | 150,621 | 225,697 |
| Fence (382) (ft) | NA | NA | NA | NA | NA | 3,970 | 2,793 |
| Conservation Crop Rotation (328) (ac) | NA | NA | NA | NA | NA | 580 | 1,271 |
| Pipeline (516) (ft) | NA | NA | NA | NA | NA | 4,240 | 2,773 |

