

**Redwood County CD-100
Redetermination of Benefits
Viewers Report
July 16, 2023
(Draft)**

Valuation prior to drainage

Beginning land use, property value, and economic productivity have been determined with the consideration that the benefited properties within the watershed originally did not have an adequate outlet for artificial drainage.

- “A” – Standing water or cattails, wetland classification with economic productivity for agriculture purposes of \$0 per acre, and a market value of \$1,000 to \$2,000
- “B” – Seasonally flooded/pasture ground. Pasture classification with economic productivity of \$105 per acre based on grazing days and/or hay values, and a market value of \$2,500 to \$4,500.
- “C” – Wet subsoil – Generally farmable land with moderate crop potential, with annual economic productivity of \$615 per acre based upon average annual yield of 75% of optimum with \$373 production costs, and a market value of \$4,000 to \$6,000.
- “D” – Upland areas needing very little artificial drainage and intermixed with wetter soils, with annual economic productivity of \$737 per acre based upon an average annual yield of 90% of optimum with \$373 production costs, and a market value of \$5,000 to \$7,000.

Valuation with NRCS recommended drainage

Potential land use, property value, and an increase in economic productivity, after public and private drainage have been installed as NRCS design standards as recommended in the Minnesota Drainage Guide, using current crop rotation, income, and expense:

- “A” – Drained slough area, medium classification land with economic productivity of \$615 per acre based upon average production of 75% of optimum with \$373 per acre production costs, and a market value of \$5,000 to \$7,000.
- “B” – Well drained ground, high land classification with economic productivity of \$647 per acre based upon average annual production of 79% of optimum with \$373 production costs, and a market value of \$5,500 to \$8,000.
- “C” – Well drained ground, highest land classification with economic productivity of \$729 per acre based upon average annual production of 89% of optimum with \$373 production costs, and a market value of \$6,000 to \$9,000.
- “D” – Well drained ground, high land classification with improved farm ability, with economic productivity of \$795 per acre based upon average production of 97% of optimum with \$373 production costs, and a market value of \$5,500 to \$8,500.

Utilizing these productive values, potential benefit values were determined for the system based upon a 25 year effective life with proper maintenance, private tile improvement cost were depreciated over the same 25 year period, and an allowance of 0.5% return on the system investment. A three year average Township yield was used for the benefit value calculations along with a three year average sale price for the corn and beans.

Increased productivity

<u>Crop</u>	<u>Yield</u>	<u>Value</u>	<u>Income</u>	<u>%</u>	<u>Adjusted</u>
Corn	185.1	\$5.32	\$985	50%	\$492
Beans	52.4	\$12.49	\$654	50%	\$327
					\$819

Production costs

Corn \$490 X 50% = \$245
 Beans \$256 X 50% = \$128
 \$373

Potential Benefit value

Benefit value with increased drainage	A	B	C	D
% of production income	75%	79%	89%	97%
Gross income	615	647	729	795
Minus production cost	373	373	373	373
Net income	242	274	356	422
Minus income before drainage	0	105	242	364
Increased income	242	169	115	57
Minus private tile cost	56	31	27	18
Net annual increased income	186	138	88	39
Capitalized for 25 years @ 1/2% = 23.45 = Optimum benefit value	\$4,352	\$3,244	\$2,057	\$923
	41%	31%	19%	9%

% of potential benefit	90%	90%	90%	90%
Reduced benefit value Direct outlet to the open ditch	\$3,916	\$2,920	\$1,851	\$831

% of potential benefit	60%	60%	60%	60%
Reduced benefit value Indirect outlet to the open ditch	\$2,611	\$1,947	\$1,234	\$554

The potential benefit values have been reduced to reflect a less than optimum yield.

Summary

Redwood County CD-100 consists of 1,193.23 acres of farmland, building sites and roads, with benefits of \$1,941,945

- a. 1,154.53 acres of farmland and building sites in Redwood County in Sheridan and Vesta Townships with benefits of \$1,880,552
- b. 38.70 acres of County and Township roads with benefits of \$61,394
- c. 1,193.23 total acres with benefits of \$1,941,945

Average land benefits, (potential) over a 25 year period are **\$2,644** per acre

- a. A soil \$4,352
- b. B soil \$3,244
- c. C soil \$2,057
- d. D soil \$932

Building site benefits

- a. (Average of B + C + D soils) X 1.5 = **\$3,112**

Ponds, woodland, and non-benefited acres

- a. **\$10**

Road benefits

- a. Gravel roads, Township
(Average land benefit) X 1.0 = **\$2,644**

Tile benefits

- a. A tile benefit was given for most County tile at a rate of **\$0.50 per linear foot**. This value was given because of the ease of access for private tile, and also for the drainage the County tile may provide. 18,220 feet of County tile, **\$9,110 of tile benefits**

Grass strip right of way easement acres

The Viewers and Engineer recommend establishment of a permanent one rod grass strip on each side of the total length of the open ditch, as per Minnesota Ditch Law, 103-E.021. This State law requires establishment of this 16.5 foot grass strip, beginning at the top of the berm, and extending outward. This strip must be planted in perennial vegetation of grass or legumes. The landowner is responsible for the control of noxious weeds. No fences or grazing of livestock is allowed within the one rod grass strip. The Viewers and Engineer recommend that no trees be allowed within this right-of-way.

Grass strip right of way easement damages on cropland acres

\$8,000 is the value per acre for the cropland acre easement
\$8,000 X 7.90 = \$63,200

Grass strip right of way easement damages on trees, building sites or non-benefited acres

\$800 is the value per acre for the trees, building sites or non-benefited acre easement
\$800 X 0.34 = \$272

Total easement damages

Grass strip right of way easement = **\$63,472**

Crop damages

Crop damages will be paid per acre on standing crops damaged by construction or repair on the County open ditch or County tile as determined by the Redwood County Drainage Department.

Benefits and damages statement

This report covers the redetermination for a previously constructed drainage system. The basis for determining benefits and damages is therefore, based upon a comparison of the conditions that would have existed prior to the County open ditch and County tile systems construction, with those that do exist with the drainage system in a reasonable state of repair. Supporting documentation for the analysis and conclusions of the report are contained in our files and are available for inspection. The figures stated herein are based on a full and fair comparison of all pertinent facts and information that we were aware of at the time of this redetermination process. The following aids were used in this viewing process.

- Redwood County online GIS parcel information site
- USDA web soil survey
- Google Earth aerial satellite photos
- Yield averages taken from USDA national agriculture statistics service
- Production costs taken from University of Minnesota FinBin
- Average commodity sale prices taken from University of Minnesota FinBin
- Sales data from the Redwood County Assessor office and website
- Visual inspection of each 40 acre parcel or less
- Consultation with Redwood County Auditor / Treasurer and the Redwood County Drainage Department

The Viewers determined that the lands affected by the drainage system are generally similar and that the following comments refer to all such tracts.

1. **Existing land use, property value and economic productivity:**

Land is presently used for building sites, roads, and for agricultural purposes. The property value is consistent with most agricultural land sales within Redwood County. Agricultural lands are primarily used for the production of corn and soybeans. The land has good economic productivity when properly drained.

2. **Potential land use, property value and economic productivity from the drainage system:**

The drainage system has been in existence for many years and provides drainage for agricultural purposes. The property value is consistent with most agricultural land sales within Redwood County. Land affected by the drainage system has the potential to produce above average yields.

3. **The benefits or damages from the drainage system:**

Benefits derived by lands affected by the drainage system are due to (A) Improved capacity to remove surface waters due to previous construction and maintenance of the County open ditch and County tile system, which results in an increase in the current market value of property; or (B) an increase in the potential for agricultural production as a result of the previous construction and continued maintenance of the drainage system; or (C) increased value of the property as a result of potential different land use.

4. There is no damage to any riparian rights.

5. There are no acres added to any tract or lot and there are no public waters, wetlands, and other areas not currently being cultivated, that are proposed to be drained in this proceeding.

6. There are no acres which before the drainage benefits could be realized would require a public waters work permit to work in public waters under 103G.245 to excavate or fill a navigable water body under United States Code, Title 33, Section 403, or a permit to discharge into waters of United States under United States Code, Title 33, Section 1344.

7. There are no acres being assessed for drainage of areas that would be considered conversion of a wetland under United States Code, Title 16, Section 3821, if the area was placed in agricultural production.

This report is respectfully submitted to the Drainage Authority of Redwood County by:

Mark Behrends _____

Robert Hansen _____

Kendall Langseth _____

Bruce Ness _____

Submitted this 16th day of July 2023

DRAFT