

**Redwood - Brown Counties JD-38
Redetermination of Benefits
Viewers Report
October 21, 2019
(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 \$80 per acre based on grazing days and/or hay values, and a market value of \$2,500 to \$3,500.
- “C” – Wet subsoil – Generally farmable land with moderate crop potential, with annual economic productivity of \$498 per acre based upon average annual yield of 80% of optimum with \$335 production costs, and a market value of \$4,000 to \$5,000.
- “D” – Upland areas not needing artificial drainage and intermixed with wetter soils, with annual economic productivity of \$560 per acre based upon an average annual yield of 90% of optimum with \$335 production costs, and a market value of \$5,000 to \$6,000.

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 \$560 per acre based upon average production of 90% of optimum with \$335 per acre production costs, and a market value of \$5,000 to \$6,000.
- “B” – Well drained ground, high land classification with economic productivity of \$579 per acre based upon average annual production of 93% of optimum with \$335 production costs, and a market value of \$5,500 to \$6,500.
- “C” – Well drained ground, highest land classification with economic productivity of \$598 per acre based upon average annual production of 96% of optimum with \$335 production costs, and a market value of \$6,000 to \$7,500.
- “D” – Well drained ground, high land classification with improved farm ability, with economic productivity of \$616 per acre based upon average production of 99% of optimum with \$335 production costs, and a market value of \$5,500 to \$6,500.

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	196.2	\$4.01	\$787	50%	\$393
Beans	57.1	\$8.03	\$458	50%	<u>\$229</u>
					\$623

Production costs

Corn \$474 X 50% = \$237
 Beans \$195 X 50% = \$98
 \$335

Potential Benefit value

	<u>"A"</u>	<u>"B"</u>	<u>"C"</u>	<u>"D"</u>
	90% of \$623	93% of \$623	96% of \$623	99% of \$623
	\$560	\$579	\$598	\$616
Minus cost of production	<u>\$335</u>	<u>\$335</u>	<u>\$335</u>	<u>\$335</u>
Net income	\$226	\$244	\$263	\$282
Previous income	<u>\$0</u>	<u>\$80</u>	<u>\$164</u>	<u>\$226</u>
Increased income	\$226	\$164	\$100	\$56
Private tile costs	<u>\$56</u>	<u>\$31</u>	<u>\$27</u>	<u>\$18</u>
Annual increase	\$170	\$133	\$73	\$38
Capitalized for 25 years @ ½ %	\$3,981	\$3,129	\$1,703	\$892
% of potential Benefit	%60	%65	%70	%90
Reduced benefit Value	\$2,389	\$2,034	\$1,192	\$803

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

Summary

Redwood - Brown Counties JD-38 consists of 1,199.52 acres of farmland, roads, and building sites with benefits of \$1,904,440

- a. 1,049.43 acres of farmland and building sites in Redwood County in Morgan and Sherman Townships
- b. 120.79 acres of farmland and building sites in Brown County in Eden Township
- c. 26.60 acres of County and Township roads in Redwood County
- d. 2.70 acres of Township roads in Brown County
- e. 1,199.52 total acres

Average land benefits, (reduced) over a 25 year period are \$1,604 per acre

- a. A soil \$2,389
- b. B soil \$2,034
- c. C soil \$1,192
- d. D soil \$803

Building site benefits

- a. (Average of B + C + D soils) X 1.5 = **\$2,014**

Wetland benefits

- a. Documented permanent wetland benefits = (Average land benefit) X 0.1 = **\$160**

Ponds, woodland, and non-benefited acres

- a. **\$0**

Road benefits

- a. Gravel roads, County or Township
(Average land benefit) X 1.0 = **\$1,604**
- b. Paved roads, County or Township
(Average land benefit) X 1.5 = **\$2,406**

Tile benefits

- a. A tile benefit was given for most County tile at a rate of **\$2.00 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. 30,760 feet of County tile, **\$44,820 of tile benefits**

Crop damages

Crop damages will be paid per acre on standing crops damaged by construction or repair on the County tile, as determined by the Brown or Redwood County Ditch Inspector.

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 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.

- Brown and Redwood Counties 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 Farmdoc
- Sales data from the Brown and Redwood Counties Assessor office and website.
- Visual inspection of each 40 acre parcel or less.
- Consultation with Brown County Auditor / Treasurer, Brown County ditch inspector, Redwood County Planning and Environmental Services Director, Redwood County ditch inspector

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 Brown County or 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 Brown County or 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 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 - Brown Counties JD-38 by:

Mark Behrends _____

Kendall Langseth _____

John Thompson _____

Bruce Ness _____

Submitted this 21st day of October 2019