

**Brown-Redwood County JD-18
Redetermination of Benefits
Viewers Report
October 26, 2021**

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 \$470 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 \$529 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 \$529 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 \$553 per acre based upon average annual production of 94% 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 \$570 per acre based upon average annual production of 97% 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 \$582 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 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	203.1	\$3.17	\$644	50%	\$322
Beans	59.1	\$9.01	\$532	50%	\$266
					\$588

Production Costs

Corn	\$474 X 50% =	\$237
Beans	\$195 X 50% =	<u>\$98</u>
		\$335

Potential Benefit value

	<u>"A"</u>	<u>"B"</u>	<u>"C"</u>	<u>"D"</u>
	90% of \$588	94% of \$588	97% of \$588	99% of \$588
	<u>\$529</u>	<u>\$553</u>	<u>\$570</u>	<u>\$582</u>
Minus cost of production	<u>\$335</u>	<u>\$335</u>	<u>\$335</u>	<u>\$335</u>
Net income	\$194	\$218	\$235	\$247
Previous income	\$0	\$80	<u>\$135</u>	<u>\$194</u>
Increased income	\$194	\$138	\$100	\$53
Private tile costs	<u>\$56</u>	<u>\$31</u>	<u>\$27</u>	<u>\$18</u>
Annual increase	\$ 138	\$107	\$73	\$35
Capitalized for 25 years @ ½ %	\$3,241	\$2,509	\$1,702	\$816
% of potential Benefit	50%	55%	65%	75%
Reduced benefit Value	\$1,620	\$1,380	\$1,106	\$612

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

Summary

Brown - Redwood County JD-18 consists of 5,031.38 acres of farmland, roads, and building sites with benefits of \$5,584,870

- a. 2,516.41 acres of farmland, building sites and roads in Brown County, Eden Township with benefits of \$2,819,926 (50.4922% of the total)
- b. 2,514.97 acres of farmland, building sites and roads in Redwood County, Morgan Township with benefits of \$2,764,944 (49.5078% of the total)

Average land benefits, (reduced) over a 25 year period are **\$1,180** per acre

- a. A soil \$1,620
- b. B soil \$1,380
- c. C soil \$1,106
- d. D soil \$612

Building site benefits

- a. (Average of B + C + D soils) X 1.5 = **\$1,549**

Wetland benefits

Documented wetland benefits receive reduced benefits based on county policy

- a. Redwood County documented permanent wetland benefits = (Average land benefit) X 0.25 = **\$295**
- b. Brown County documented permanent wetland benefits = (Average land benefit) X 0.10 = **\$118**

Ponds, woodland, and non-benefited acres

- a. **\$0**

Road benefits

- a. Gravel roads, County or Township
(Average land benefit) X 1.0 = **\$1,180**
- b. Paved roads, State, County or Township
(Average land benefit) X 1.5 = **\$1,769**
- c. Paved roads, Wide, State
(Average land benefit) X 1.25 = **\$1,475**

Tile benefits

- a. A tile benefit was given for most County tile at a rate of **\$1.00 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. 31,860 feet of County tile in Brown County, **\$29,210 of tile benefits**. 39,875 feet of County tile in Redwood County, **\$31,435 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

The average Brown and Redwood County value per CER in 2020 is about \$94.50 based on an analysis of sales data. The Average CER for Morgan and Eden Townships is 76.8. (76.8 X \$94.50 = \$7,258) \$7,258 is the value for cropland acres.

\$7,258 X 11.78 acres = \$85,499

Grass strip right of way easement damages on trees or non-benefitted acres

The average Brown and Redwood County value per CER in 2020 is about \$94.50 based on an analysis of sales data. The Average CER for Morgan and Eden Townships is 76.8. (76.8 X \$94.50 = \$7,258 X 10% = \$726) \$726 is the value for trees or non-benefitted acres.

\$726 X 0.51 acres = \$370

Construction right of way easement acres

The Viewers and Engineer recommend that a permanent easement be acquired 100 feet on each side of centerline of the open ditch. This easement gives the ditch authority the right to drive on or spread ditch spoils in the area. The area will most likely never be disturbed. If it is necessary to be on these acres during the growing season, the damaged crops will be paid at the county crop damage rate. The Brown County Drainage Authority has implemented the easement on other public drainage systems that have been re-determined. The Redwood County Drainage Authority has not implemented the construction easement on other public drainage systems that have been re-determined. No construction easement will be acquired in Redwood County. Only Brown County benefited acres will pay for the acquisition of the construction easement in Brown County. (No easement is acquired thru building sites)

Construction right of way easement acres

The average Brown and Redwood County value per CER in 2020 is about \$94.50 based on an analysis of sales data. The average CER for Morgan and Eden Townships is 76.8. ($76.8 \times \$94.50 = \$7,258 \times 5\% = \$363$) \$363 is the value for the construction easement

\$363 X 45.75 acres = \$16,607 (paid by Brown County only)

Total easement damages

Grass strip right of way and construction right of way = **\$102,477**

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 Joint County Drainage Authority.

Outlet Benefit

Brown - Redwood Counties JD-18 outlets into Brown - Redwood Counties JD-17. JD-17 needs to be slightly bigger and cleaned more often because of the additional water from the JD-18 watershed. Using acres, drainage coefficient, and amount of JD-17 open ditch used, along with other factors, the viewers have determined that **JD-18 should have a 2.00% outlet benefit into JD-17.**

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 and Brown 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 Finbin
- Sales data from the Redwood County and Brown County Assessor offices and websites
- Visual inspection of each 40 acre parcel or less
- Consultation with Brown and Redwood County Auditor / Treasurer Office, the Redwood County Environmental Office and Drainage Staff, and the Brown 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 and Redwood Counties. 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 and Redwood Counties. 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 or 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 Joint Drainage Authority of Brown and Redwood Counties for JD-18 by:

Mark Behrends _____

Robert Hansen _____

Kendall Langseth _____

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Submitted this 26th day of October 2021