

Jackson County Drainage Authority:

RE: Jackson County
Judicial Ditch No. 42 Improvement
Determination of Benefits

February 28, 2022

In accordance with the Minnesota Statute 103E.315 law, we herewith submit the following Viewers' Report. The values have been amended to reflect the most current market sales and values.

Benefits and Damages Statement

This report covers the determination of benefits for an improvement previously constructed drainage system. The basis for determining benefits and damages is, therefore, based upon a comparison of the conditions that would exist with the system in a reasonable state of repair with those anticipated to exist upon completion of the improvement.

Jackson County Judicial Ditch No. 42 was originally constructed around 1916. The drainage system is an open ditch. The project serves as an outlet for parcels in sections 19, 20, 21, 22, 27, 28, 29, 30, 32, 33, and 34, all in Delafield Township, and section 4 in Heron Lake Township, in Jackson County. The outlet is into an unnamed stream and the Des Moines River. The proposed improvement is for a separable portion of the drainage system.

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 consideration of all pertinent facts and information that we were aware of at the time of this appraisal. The following aids were used during the viewing process.

1. Soil Survey Manuals and Maps of Jackson County
2. GIS photos and data
3. Minnesota LiDAR
4. Yield averages and production costs taken from Minnesota State College and University Farm Management Records
5. Sales data from the Jackson County Assessor's office
6. Visual inspection of each 40-acre tract

Land classification benefit values are based upon an increase in the potential for agricultural production as a result of constructing the drainage project and reconciled with sales value increases. Existing individual land management practices were not considered. All present land use was evaluated under estimated best land management practice. Special consideration was given to areas, which were considered to be in a native/non-converted condition or identified as wetlands under wetlands inventory and restricted from drainage by state or federal regulations.

Benefits for lands used for industrial agricultural purposes, such as large bin sites or hog production facilities, have been determined with consideration of the drainage system providing an outlet for the accelerated runoff and for a different land use. No direct consideration was given to structure values within the watershed.

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 currently do not have an adequate outlet for artificial drainage.

"A" Standing water or cattails, wetland classification with a market value for agricultural purposes of \$0.00 per acre, economic productivity of \$0.00.

"B" Seasonally flooded/pasture ground. Pasture classification with a market value of \$1000.00 to \$2000.00 per acre, economic productivity of \$125.00 based on grazing days and/or hay values.

"C" Wet subsoil -- marginal crop land, low to medium crop land classification with a market value of \$6000.00 to \$7500.00 per acre, annual economic productivity of \$777.75 based upon average annual yield of 85 % of optimum with \$424.88 production costs.

"D" Upland areas not needing artificial drainage but irregular in shape and intermixed with wetter soils. Medium to high cropland classification with a market value of \$7500.00 to \$9000.00 per acre, annual economic productivity of \$869.25 based upon average annual yield of 95 % of optimum with \$424.88 production costs.

Valuation with NRCS Guideline Drainage

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

"A" Drained slough area, medium classification land with a market value of \$7000.00 to \$8000.00 per acre, economic productivity of \$841.80 based upon average production of 92% of optimum \$424.88 production costs.

"B" Well drained ground, high land classification with a market value of \$8000.00 to \$9000.00 per acre, economic productivity of \$874.40 based upon average annual production of 96 % of optimum with \$424.88 production costs.

"C" Well drained ground, best land classification with an estimated market value of \$9000.00 to \$10000.00 per acre, economic productivity of \$915.00 based upon average annual production of 100 % of optimum with \$424.88 production costs.

"D" Well drained ground, high land classification with improved farmability and market value of \$8000.00 to \$10000.00 per acre. Economic productivity of \$915.00 based upon average production of 100% of optimum with \$424.88 production costs.

Road benefits were determined with consideration of the reduced construction and maintenance costs that were realized after construction of the drainage system. No tile benefits were given as the footage was minimal.

Utilizing these productive values, potential benefit values were determined for the system based upon a 25-year effective life, with proper maintenance, private improvement cost depreciated over the same 25-year period, and a market derived capitalization rate of 4.0%. Adjustment was made to each land class based upon consideration of the change in hydraulic capacity and the subsequent increased productivity that the construction of the drainage system provided. Benefit values were rounded off for ease of computation

Example: "B" Benefits per Acre	
Potential productivity Value	\$915.00
Adjusted Value at 96%	878.40
Production Cost	-424.87
Beginning Productivity Value	<u>-125.00</u>
Change in Productivity Value	328.53
Private Improvement (\$900/25)	<u>-36.00</u>
(Waterway or tile)	
Annual Benefit Value	\$292.53

\$292.53 x 25 years, discounted @ 4.0% = \$4569.85 (\$4570.00)

The existing drainage system has open ditch and tile capacities that do not have adequate size and capacity to meet the NRCS recommended drainage capacities for tile outlets for agricultural drainage. The proposed improvement will increase the current system capacity and provide additional benefit to the affected parcels. Adjustment to the potential benefit value is made by the application of an efficiency and proximity rate. These rates reflect the viewer's determination of that portion of the potential benefit from the proposed improvement.

The net benefit provided by the ditch system is determined by the adjusted potential benefit value being applied to the number of acres determined to be in each class per tract, accumulating the sum of these benefit values, and then applying the proximity rate percentage.

Where required, damages have been given for the temporary construction and permanent easement for the area required to construct the proposed improvement.

Respectfully submitted,

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JACKSON COUNTY
 JUDICIAL DITCH No. 42

2022 DETERMINATION OF BENEFITS

INCOME APPROACH TO VALUE WORKSHEET

PRODUCTION INCOME

CROP PLANTED	AVERAGE YIELD	SALES VALUE	OB GROSS INCOME	ROTATION PERCENTAGE	ADJUSTED INCOME
CORN	210 BU	5.00	1050.00	50	525.00
SOYBEANS	60 BU	13.00	780.00	50	360.00
					915.00

DIRECT PRODUCTION EXPENSE

CROP PLANTED	PRODUCTION COST	ROTATION PERCENTAGE	ADJUSTED EXPENSE
CORN	592.25	50	296.12
SOYBEANS	257.50	50	128.75
			424.87

BENEFIT VALUE CALCULATION

PRODUCTION CAPABILITY BASED UPON CONSTRUCTED DRAINAGE SYSTEM
 MEETING N.R.C.S. OPEN DITCH GUIDE LINE DESIGN

LAND CLASS	"A"	"B"	"C"	"D"
% PRODUCTION	92.0%	96.0%	100.0%	100.0%
GROSS INCOME	841.80	878.40	915.00	915.00
PRODUCTION COST	424.87	424.87	424.87	424.87
NET INCOME	416.93	328.53	490.13	490.13
PREVIOUS INCOME	0.00	125.00	307.13	444.38
INCREASED INCOME	416.93	328.53	183.00	45.75
PVT TILE COST	36.00	36.00	36.00	0.00
NET ANNUAL INCREASE	380.93	292.53	147.00.00	45.75
CAPITALIZED FOR 25 YEARS @ 4.0 %	5950.34	4569.85	2296.45	714.71
BENEFIT VALUE	\$5950.00	\$4570.00	\$2300.00	\$710.00