

Lyon County Ditch Authority

Re: Lyon Judicial Ditch No. 2
Redetermination of Benefits

April 11, 2023

In accordance with the Minnesota Statute 103E.351, we herewith submit the following viewers' report:

Benefits and Damages Statement

This report covers the redetermination of benefits for a previously constructed drainage system. The method for determining benefits and damages is based upon a comparison of the conditions that would have existed prior to the ditch system's construction with those that do exist with the drainage system in a reasonable state of repair.

Judicial Ditch No. 2 was petitioned for in 1907. It was established in 1907 and constructed in 1908. JD No. 2 provides an outlet for CD No. 55 and CD No. 4. It outlets into a private ditch in Section 1 of Vallery Township. The private ditch empties into Lone Tree Lake which empties into YM/L JD No. 24 and eventually empties into the Yellow Medicine River west of Hanley Falls. It provides drainage for parts Sections 1, 2, 9, 10, 11, 12, 13, 14, 15, 16, 23, and 24 of Vallery Township in Lyon County.

The field observations for the watershed and land classifications were started and completed in June of 2020. We made an on-site inspection of each 40 acre or smaller parcel. There are approximately 3289 acres benefited within this watershed.

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.

- Soil survey manual and maps of Lyon County
- FSA aerial photos
- Topographical and LiDAR maps
- Yield averages and production costs taken from the Farm Business Management Reports
- Visual inspection of each 40 acre parcel
- Original maps and profiles
- Sales data from the Lyon County Assessor's Office

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. Consideration was given to areas which were determined to be in a native/non-converted condition, government lands, and permanent set-aside acres (RIM, CREP)

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 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 \$2400 to \$2800 per acre, economic productivity of \$70 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 \$5800 to \$6200 per acre, annual economic productivity of \$686.00 based upon average annual yield of 80% of optimum with \$380.00 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 \$5600 to \$6000 per acre, annual economic productivity of \$814.63 based upon average annual yield of 95% of optimum with \$380.00 production costs.

Valuation with NRCS Recommended Drainage

Potential land use, property value, and economic productivity, after public and private drainage have been installed as per 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 a market value of \$5600 to \$6000 per acre, economic productivity of \$728.88 based upon average production of 85% of optimum with \$380.00 production costs.
- "B" Well drained ground, high land classification with a market value of \$6200 to \$6600 per acre, economic productivity of \$771.75 based upon average annual production 90% of optimum with \$380.00 production costs.
- "C" Well drained ground, highest land classification with an estimated market value of \$7400 to \$7800 per acre, economic productivity of \$840.35 based upon average annual production of 98% of optimum with \$380.00 production costs.
- "D" Well drained ground, high land classification with improved farmability and market value of \$7000 to \$7400 per acre, economic productivity of \$857.50 based upon average production of 100% of optimum with \$380.00 production costs.

Some acres were assigned a land classification of "A-". These acres were benefited by the ditch by converting them from standing water to hay or pasture. A "D-" classification was assigned to the building site acres. An industrial classification was assigned to animal confinements and large bin systems.

Utilizing these productive values, potential benefits 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 an allowance of 3% return on the system investment.

Increase Productivity Evaluation

<u>CROP</u>	<u>YIELD</u>	<u>VALUE</u>	<u>INCOME</u>	<u>%</u>	<u>ADJUSTED</u>
Corn	200	\$5.00	\$1000.00	50%	\$500.00
Beans	55	\$13.00	\$715.00	50%	<u>\$357.50</u>
					\$857.50

Costs

Corn	\$534.57 X 50% = \$267.29
Beans	\$225.57 X 50% = <u>\$112.79</u>
	\$380.00

BENEFITS

	<u>"A"</u>	<u>"B"</u>	<u>"C"</u>	<u>"D"</u>
	85% of \$857.50 = \$728.88	90% of \$857.50 = \$771.75	98% of \$857.50 = \$840.35	100% of \$857.50 = \$857.50
Minus cost				
Of production	<u>\$380.00</u>	<u>\$380.00</u>	<u>\$380.00</u>	<u>\$380.00</u>
Net Income	\$348.88	\$391.75	\$460.35	\$477.50
Previous income	<u>\$ 0.00</u>	<u>\$ 70.00</u>	<u>\$306.00</u>	<u>\$434.63</u>
Increase	\$348.88	\$321.75	\$154.35	\$ 42.88
Private costs	<u>\$44.00</u>	<u>\$ 44.00</u>	<u>\$ 34.00</u>	<u>\$ 0.00</u>
Annual increase	\$304.88	\$277.75	\$120.35	\$ 42.87
Capitalized for				
25 yrs. @ 3%	\$5308.82	\$4836.49	\$2095.67	\$ 745.00
Rounded to	\$5310.00	\$4835.00	\$2095.00	\$ 745.00

Proximity adjustments were made to allow for construction of the public or private laterals required to improve the drainage capacity to meet the NRCS recommendation.

The viewers' report of acres benefited show the amount of each type of soil classification ('A'; 'A-'; 'B'; 'C'; 'D'; 'D-') and the value for each type based on potential increased agricultural production. The proximity factor was applied to arrive at the net benefits.

Road benefits were determined with consideration of the reduced construction and maintenance costs that were realized after construction of the drainage system.

Tile benefits were given to reflect the additional value added as the ditch system tile provides one of the normal lines of tiles for subsurface drainage.

Damages have been given for the easement acquisition for the area required to establish the one rod seeding area adjacent to the channel as required by Minnesota Statute No. 103E.021. The lands taken are considered as a permanent easement only and will be restricted from use for commodity crop production.

This report is respectfully submitted to the Lyon County Ditch Authority by:

Steve Johnson

Jim Weidemann

Rich Kvols
