



**Benefits and Damage Statement Amendment 2 for the Redetermination of Benefits  
Stevens County Ditch 18**

In accordance with Minnesota Statute (MS) 103E.351, we the viewers, submit the following Viewers' Report:

The fundamental principle for the determination of benefits and damages is based upon a comparison of the conditions prior to the construction of the ditch system with the conditions that exist after the implementation of the ditch system or proposed drainage project.

The undersigned viewers, pursuant to the order of the Stevens County Drainage Authority, did meet prior to commencing duties on July 18, 2017. All lands affected by said proposed drainage project have been viewed.

We were able to determine the boundaries of the benefited area by processing and analyzing maps using "Light Detection and Ranging" (LiDAR) along with visually viewing the project area. Meetings were held with landowners, Stevens County Highway staff, and ISG engineering staff. We viewed the County Assessor's records to determine the number of acres of land in each parcel of each 40-acre tract of land. Other sources of information used were USDA-Natural Resources Conservation Service Web Soil Survey, 12 years of USDA satellite imagery, US Fish and Wildlife Service National Wetland Inventory (NWI) maps, and Stevens County Assessor's sales data.

We have determined the extent and basis of benefits and damages as prescribed under MS 103E.315 and MS 103E.321. We have indicated in tabular form, for each lot, 40-acre tract, and fraction of a lot or tract under separate ownership that is benefited or damaged (see Exhibit A – Amendment 2).

An easement, in the form of an additional restriction on the use of real property adjacent to the open channel of the drainage system, will be acquired and, therefore, damages will be awarded for the establishment of a permanent strip of perennial vegetation approved by the drainage authority that will not impede future maintenance of the drainage system as required in MS 103E.021. We determined the value of grass strip damages by using an average value cost of Class 1 and Class 2 as these are the classes adjacent to the open channel. Based on our analysis, the grass strip damages are \$6,536 per acre.

Right of way damages, having been determined and paid in the original proceedings for establishment of the drainage system, based on the area contemplated and included in the proceeding for the establishment or subsequent improvement of the drainage system, were not considered.

We have determined the following direct drainage benefits and indirect (outlet) benefits on and related to the redetermination of benefits for Stevens County Ditch 18. Benefits were determined based on the drainage system operating in its improved condition.

#### Direct Benefits – Class 1 (Mapped as Red)

Using the direct market value approach, giving consideration for the lands' geographic location in the watershed, location relative to the outlet, proximity to the ditch bottom elevation, soil types, as well as analyzing direct sales data for competitive properties in the market place, we determined the existing market values of land in an unimproved condition as well as in an improved condition. Though this description may not describe your lands exactly, your lands fell broadly under this category.

Class 1 lands, prior to the existence of the drainage system, had a value range of \$1,143 to \$1,715 per acre. They consisted mostly of low wetlands unsuitable for even hay or pasture most years. With the establishment of improved drainage to these lands, the market value has increased to \$5,431 to \$6,003 per acre. These lands are now used for productive row crops.

The viewers have determined based on these values, along with allowances for private improvement costs, that Stevens County Ditch 18 provides for an increased market value/benefit to agricultural/cropland acres in Class 1 by the rate of \$3,438 per acre.

#### Direct Benefits – Class 2 (Mapped as Yellow)

Using the direct market value approach, giving consideration for the lands' geographic location in the watershed, location relative to the outlet, proximity to the ditch bottom elevation, soil types, as well as analyzing direct sales data for competitive properties in the market place, we determined the existing market values of land in an unimproved condition as well as in an improved condition. Though this description may not describe your lands exactly, your lands fell broadly under this category.

Class 2 lands, prior to the existence of the drainage system, had a value range of \$3,309 to \$4,045 per acre. It was mostly utilized as hay and pasture land. Although some row crops were grown in this land class, it was not without substantial risk of loss to the grower. Now that improved drainage has been established through these lands, the market value has increased to \$6,986 to \$7,722 per acre. The lands are now used to grow some of the most productive row crops in the area.

The viewers have determined based on these values, along with allowances for private improvement costs, that Stevens County Ditch 18 provides for an increased market value/benefit to agricultural/cropland acres in Class 2 by the rate of \$2,827 per acre.

### Direct Benefits – Class 3 (Mapped as Green)

Using the direct market value approach, giving consideration for the lands' geographic location in the watershed, location relative to the outlet, proximity to the ditch bottom elevation, soil types, as well as analyzing direct sales data for competitive properties in the market place, we determined the existing market values of land in an unimproved condition as well as in an improved condition. Though this description may not describe your lands exactly, your lands fell broadly under this category.

Class 3 lands, prior to the existence of the drainage system, had a value range of \$5,752 to \$6,574 per acre. These lands were mostly utilized for the production of row crops, although over saturation of the soil and surrounding lands did not allow for these lands to realize their full production potential. Now that the drainage system has been established, the land is able to utilize the system as an outlet to drainage tile systems and increased the production potential. As a result, the land value range has increased to \$7,806 to \$8,628 per acre.

The viewers have determined based on these values, along with allowances for private improvement costs, that Stevens County Ditch 18 provides for an increased market value/benefit to agricultural/cropland acres in Class 3 by the rate of \$1,204 per acre.

### Indirect Benefits – Class 4 (Mapped as Blue)

Class 4 lands are lands which have not had an increase in market value after the construction of the drainage system. However, they have been altered from their pre-settlement state in such a manner that they are now tilled and farmed. As a result, they burden the drainage system's capacity, thus increasing a sediment load and causing a need for increased maintenance. Taking into consideration the percentage of Class 4 acres in the watershed, regular ditch maintenance, and sediment loading, we determined the rate per acre that Stevens County Ditch 18 provides as an outlet or contribution benefit to these lands. Though this description may not describe your lands exactly, your lands fell broadly under this category. The viewers have determined the Class 4 outlet benefit rate to be \$494 per acre.

Example of how benefits were calculated for Class 2:

Market Value Before Project:	\$3,677
Market Value After Project:	\$7,354
Increase in Market Value:	\$3,677
Less Private Improvement Costs:	\$850
Net Benefits:	\$2,827

### Road Benefits

The viewers have determined outlet as well as reduced maintenance cost benefits for all State, County, and Township roads located within the boundary of Stevens County Ditch 18 at a rate of \$277 per acre.

### Residential Land Benefits

Outlet benefits were applied to residential lands within the watershed of Stevens County Ditch 18. The outlet benefit was calculated based on runoff burden to the drainage system and use of the drainage system as an outlet. The viewers have determined the outlet benefits for rural residential lands at the rate of \$60 per acre.

### Non-benefiting Acres

Based on current land use and regulatory restrictions, permanent program restrictions (i.e. RIM or CREP) or other permanent restriction and restoration to pre-settlement landscape conditions, we determined some areas to be non-benefited from the drainage system and restricted from taking future benefit from the drainage system. For example, we determined that lands restored to pre-settlement conditions and permanently restricted from future modification would not drain in any altered manner such that the drainage system would be burdened by the land other than such burden as nature would have provided. Further, for example, nonconverted wetlands that are so restricted from conversion by regulation that conversion is unlikely, were not determined to benefit from the system.

At the completion of our examination, we did sum up the total benefits and damages for Stevens County Ditch 18. We found that the total benefits are \$11,775,363.99 and total damages are \$199,282.64. (See Exhibit A – Amendment 2 for tabular report of benefits and damages.)

We further examined and determined benefits for each classification within all sub catchments in the CD 18 system. These benefit numbers were used to establish the benefits that existed in the drainage system in its as constructed condition. These numbers were also used to calculate the benefit increase due to the planned improvement to the drainage system. Consideration of the increased hydraulics to each sub catchment was used to apply benefits to each tract of land represented as a line in the “Exhibit A” portion of the viewers’ report. We the viewers also carefully considered the benefits to all lands within the drainage system due to improvements to the drainage system as a whole. These improvements include but are not limited to: improvements to the mains, establishments of impoundment areas, and implementation of control structures within the drainage system.

We recommend that the Stevens County Drainage Authority hold a final hearing on the report and confirm the benefits and damages for Stevens County Ditch 18.

Dated this 26<sup>th</sup> day of November, 2018.

Respectfully submitted,

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Bryan Murphy

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Shantel Hecht

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Larry Murphy