



## Frequently Asked Questions Related to Ditch Drainage

- **Can portions of ditches be altered to increase capacity?**

In order to increase the capacity of a ditch from a 2 year design flow to a 5 year design flow for example an improvement would be required. The viewers' consideration of the capacity of the ditch based on the engineer's evaluation of both design and as-built capacity given the current capacity demand of the drainage system in this area. To achieve a 5-year design flow, the channel capacity would have to be improved beyond design and as-built capacity. "Improvement" means the enlarging, extending, straightening, or deepening of an established and constructed drainage system. A petition is required to improve a drainage system. A petition must be signed by: (1) at least 26 percent of the owners of the property affected by the proposed improvement; (2) at least 26 percent of the owners of property that the proposed improvement passes over; (3) the owners of at least 26 percent of the property area affected by the proposed improvement; or (4) the owners of at least 26 percent of the property area that the proposed improvement passes over. The cost of the improvement is paid for by assessments to properties determined to be benefitted by the improvement.

- **With accelerated flow, how can we get back to capacities needed to accept the amounts of water?**

To achieve capacity required to efficiently convey the current capacity demand, the channel capacity would have to be improved beyond design and as-built capacity. "Improvement" means the enlarging, extending, straightening, or deepening of an established and constructed drainage system. A petition is required to improve a drainage system. A petition must be signed by: (1) at least 26 percent of the owners of the property affected by the proposed improvement; (2) at least 26 percent of the owners of property that the proposed improvement passes over; (3) the owners of at least 26 percent of the property area affected by the proposed improvement; or (4) the owners of at least 26 percent of the property area that the proposed improvement passes over. The cost of the improvement is paid for by assessments to properties determined to be benefitted by the improvement.

- **Will the ditch systems ever be returned to design capacity?**

Any repair design will return the ditch to its as-constructed capacity. This could also be considered the design capacity. However, due to changes within the watershed of the ditch (i.e. improved and accelerated private drainage), this restoration will not restore the level of drainage efficiency contemplated by the original construction. The viewers accounted for the efficiency change by assigning indirect benefits to properties accelerating drainage and the delivery of sediment to the ditch and also creating additional capacity requirements in the ditch. An improvement to the drainage system would be necessary to realize the improved efficiency to accommodate accelerated drainage within the system.

- **There are concerns with capacity downstream of the ditch.**

It was not within the scope of the redetermination of benefits project to address flooding issues, only to determine the original and current ditch capacities.

- **What is the explanation of initial peak versus double peak?**

The ditch system initially conveys flow from the direct watershed bordering the ditch through connected drain tile and side inlet ditches. This causes the first peak. After some time water flowing from the upper reaches of the watershed makes its way through the system and causes the second peak.

- **Can bonding be stretched out over a length of time to limit annual cost for repairs?**

Assessments for major drainage work are recorded as liens against the benefitted property. The lien consists of the principle value of the assessment plus any interest over the duration of the lien. The lien is payable to the treasurer of the county in 20 or less equal annual installments as determined by the drainage authority. The first installment of the principal is due on or before November 1 after the drainage lien statement is recorded, and each subsequent installment is due on or before November 1 of each year afterwards until the principal is paid. The drainage authority may direct vary the timing of payment of principle and interest by order. For assessments less than \$500, the drainage authority may direct payment in one or two installments. The drainage authority may borrow money to pay the cost of major drainage work by issuing bonds. The bonds must be repaid, with interest within 23 years of their issuance.

- **Tiling and accelerated drainage from areas away from ditch send too much water and are assessed too little.**

The amount of increased runoff is what was used to determine the amount of accelerated drainage benefit. To find the value modeling was used to determine the cost to construct the drainage system “without” the accelerated drainage and “with” the accelerated drainage condition. The next step was to determine the cost to construct a channel to accommodate the accelerated drainage condition. For example is the ditch was determined to have an accelerated drainage that reduced the channel capacity from a 5 year channel capacity to a 2 year channel capacity. The difference between these two estimates reflects the cost to restore the 5 year channel capacity and is what the Viewers have used to determine the benefit to the areas responsible for accelerated drainage.

- **The Municipality receives greater benefits for road and pond than reflected. Benefits should be higher.**

Benefits to the municipalities are based on calculating the accelerated drainage rate for the number of acres that are contributing runoff to the drainage system. Road and ponds are included and attribute to the same benefit rate.

- **Who will make decisions on repairs and will they begin downstream or upstream?**

The drainage authority will seek and accept the recommendation of the repair engineer regarding the means and methods of repair. Typically, drainage repairs begin at the bottom end of a system and work their way upstream. The drainage authority, working with its engineer and inspector will make all decisions regarding repair.

- **How can the ditch perform if we are not allowed to change it?**

Making the proposed repairs will increase the performance of the ditch. Changes are possible if landowners wish to go through the improvement process.

- **Sediment loading- Area 1 and Area 2 are both contributing?**

Contributing sediment loading occurs through all portions of the ditch but at different rates. The accelerated drainage benefit can be used on a redetermination of benefits when the original drainage system having been designed to drain only a limited portion of the watershed is experiencing an undue burden as a result of the alterations that have accelerated (increased) flows to the drainage system. The added property is assessed if determined to have increased maintenance costs or requires increased drainage system capacity because the natural drainage patterns have been altered. The guidance provided in the Minnesota Public Drainage Manual is that an accelerated drainage charge is only applied to areas that have not received any other type of Benefit.

- **Why are direct benefits highest to lands most affected by water? Shouldn't these receive damages?**

Direct benefits are the benefits to properties attributable to the construction of the drainage system. The amount of benefit was determined based on the property value in the unimproved condition (without the ditch) vs. the estimated market value in its fully improved condition (ditch in full repair).

- **Are there grant funds available to help pay for repairs?**

There may be grant funds available for assistance if they are in conjunction with the current TMDL.

- **CRP/ US Fish and Wildlife land is out of viewers report- Why? Are they brought in if they option out of their contract in the future?**

CRP would be classified as agricultural land and be included for benefits. Land not included for benefits are non converted wetlands; enclosed basins; woodlots and lakes that remain in a natural condition and have not been altered to cause increased maintenance costs to the drainage system. Properties owned by the State of Minnesota and/or the US Fish and Wildlife Service were not included because these properties remain in a natural condition and would not result in a changed condition increasing flows downstream or increase sediment delivery to the drainage system. These properties will continue to remain in a conservation land practice (non-agricultural status).

- **Was tile drainage taken into account for benefitted area? Should more area receive direct benefits spanning farther from the ditch?**

The viewers premise was that all agricultural lands are drained to some extent whether it is with tile drainage and/or surface drainage improvements. If tile drainage is present that extends beyond the current direct benefitting area and these properties are identified at the public hearing adjustments can be made by the drainage authority to added them to the direct benefitting area.

The viewers determine benefits to all property within the watershed of the ditch, whether the property is benefitted immediately from the ditch or the ditch can become an outlet for drainage, makes an outlet more accessible, or otherwise directly benefits the property. The benefits may be based on: an increase in the current market value of property as a result of constructing the ditch; an increase in the potential for agricultural production as a result of constructing the ditch; or an increased value of the property as a result of a potential different land use.

The viewers may also assess benefits to property that is responsible for increased sedimentation in downstream areas of the watershed or property that is responsible for increased drainage system maintenance or increased drainage system capacity because the natural drainage on the property has been altered or modified to accelerate the drainage of water from the property.

Under these standards, the viewers have substantial discretion in determining benefit. In the current redetermination of benefits, the viewers gave consideration to the elevation of land above the ditch and whether that land could drain to a reasonable outlet with or without the ditch. Such properties, though not directly benefitted by construction of the ditch, do accelerate drainage and sediment delivery to the ditch and do create capacity requirements in the ditch. Benefits were determined to such properties on that basis.

- **Why are side slopes not being altered to a lesser angle?**

The term "repair," means to restore all or a part of a drainage system as nearly as practicable to the same condition as originally constructed and subsequently improved, including resloping of ditches and leveling of waste banks if necessary to prevent further deterioration, realignment to original construction if necessary to restore the effectiveness of the drainage system, and routine operations that may be required to remove obstructions and maintain the efficiency of the drainage system. Side slopes may be flattened as part of this repair, but only where necessary to stabilize the ditch and prevent deterioration. We are unaware, at this time, of any portion of the ditch where this is necessary.

- **What would need to be provided to show that values are incorrect in areas along the ditch system; e.g. flood photos, frequency, elevations?**

Items such as those listed may be beneficial to the drainage authority in making any final adjustments to the benefits at the final hearing. It should be noted that any information provided by land owners would not alter ditch design capacities. Capacities are based on physical characteristics of the ditch system. The design capacities determined for the redetermination of benefits considered the system as a whole and were not parcel by parcel specific. Some portions of the ditch may experience flooding more than others due to being in low lying areas such as previously drained wetlands. Elevations along the ditch system were obtained during the survey.

- **If land is in CRP, wetland restoration, and tree plantings, how can adjustments be made to reflect current land practice instead of cropping benefit?**

Typically, if land is in CRP it is considered in an agricultural practice. CRP remains to be a short term lease agreement with the property returned to normal crop practices at the end of the CRP contract. If the property has been placed in a permanent conservation easement, and if the landowner can provide proof that the easement has been recorded, adjustments could be made at the final hearing to change those acres to non-agricultural status or remove them all together from the benefitting area.

- **Areas along ditch take additional water due to accelerated drainage. The benefits should not be so high.**

Direct benefits are the benefits to properties attributable to the construction of the drainage system. The amount of benefit was determined based on the property value in the unimproved condition (without the ditch) vs. the estimated market value in its fully improved condition (ditch in full repair). The fully improved condition north of Interstate I 94 was determined to have a 2 year capacity and south of I 94 has a 5 year capacity. Benefits to property in all cases are less than 25% of present land value when considering the highest benefitting rate for the 5-year channel design.