

Green Meadow Project Team

Regular Meeting

March 28, 2014

A meeting of the Green Meadow Project Team was held on Friday, March 28, 2014, at the Wild Rice Watershed District (WRWD) Office. Project Team Members in attendance included: Duane Erickson, WRWD Manager; Mike Christiansen, WRWD Manager; Shawnn Balstad, Natural Resources Conservation Service; Emily Siira, Department of Natural Resources; Tara Mercil, Minnesota Pollution Control Agency; Mark Christianson, Soil and Water Conservation District; Larry Puchalski, US Army Corps of Engineers; Steve Bommersbach, Norman County Commissioner; Dave Vilmo, Landowner; Mark Chisholm, Landowner; Brett Arne, Board of Water and Soil Resources. Others in attendance included: Chuck Fritz, International Water Institute; Henry Van Offelen, Department of Natural Resources; Jerry Bents, Houston Engineering; Kevin Ruud, WRWD Administrator; Tom Knakmuhs, Norman County Highway Department Engineer; and Tara Jensen, WRWD Bookkeeper. Project Team members who were absent included: Curt Johannsen, WRWD Manager; and Diane Ista, Landowner.

Fritz began the meeting at 9:00 am by reviewing the agenda, goals, role and responsibilities, and the outcome of the last Project Team meeting. It was also discussed that at this time, if all Project Team members cannot agree upon a decision, a majority decision, along with a minority opinion will be offered to the Wild Rice Watershed Board for consideration to ensure that all opinions are heard.

The Project Team began by reviewing Natural Resource objective number three. At the previous meeting it was decided to table this objective. Fritz presented the Project Team with a new objective statement for consideration:

- Restore a wetland and grassland complex of at least 40 acres within the high priority area of Green Meadow Subwatershed for wetland and grassland restoration.

Chisholm stated that his concern with wetland restoration is that it will support blackbird habitats, which is unfavorable for farmers who grow sunflowers. He felt that he could not support any wetland or grassland restoration within the Green Meadow subwatershed for this reason. Manager Christensen asked if wetland restoration was necessary as part of this process. Commissioner Bommersbach stated that he felt that water retention was necessary in order to move forward with the process. Fritz answered both questions by saying that in order to meet goal 1, objective 1: *Reduce peak flows by 10-15% and flood volumes by 40-45% from the Green Meadow Subwatershed area*, some sort of retention would almost certainly be required. Chisholm added that he feels that currently there are enough natural resource areas in the subwatershed area. Balstad express disagreement with Chisholm's opinion and asked how much farmland is too much? Fritz brought project team members back to focusing on the natural resource goals and objectives, reminding Chisholm that at the last meeting he said that he could live with a small acreage of restoration. Mercil added that in her opinion, water retention must be looked at in order to meet the goals that have been set by the Project Team. Vilmo asked if the wetland restoration area would have to hold water all year or if it could be drained down by July. Fritz again turned to Chisholm and clarified that he cannot agree to any wetland restoration in the area. Chisholm again stated that is correct as it will bring blackbirds to the area. Balstad reminded the project team

that all programs are voluntary. The NRCS partners with the DNR to support programs. Restorations are not always impoundments, sometimes they can be met by ceasing tillage and restoring acres to grassland. Fritz suggested that the Project Team moves forward with looking at strategies and alternatives for elimination, returning to this discussion later in the meeting. Mercil asked if it would be possible to eliminate the acres stated, and change the goal to restore a wetland and grassland complex within the high priority area of Green Meadow Subwatershed for wetland and grassland restoration. She also reminded the Project Team members that all programs are voluntary, therefore the Project Team or Watershed cannot enforce them, rather encourage landowners to participate. Van Offelen added that no matter what this group decides, the goal does exist and agencies are working towards it. If it is not agreeable to all Project Team members, maybe look at an alternative that is, however other organizations are currently working towards wetland and grassland restoration. Bommersbach asked if elimination of this objective would affect the potential for funding sources. Fritz replied that it likely would affect funding sources available.

Prior to moving the discussion forward, Balstad asked for clarification on when a minority report would be developed. Fritz replied that he would like to see if this objective works itself out when specific strategies are viewed. Balstad asked if a minority report would be developed if all members cannot agree at that point. Fritz stated that would be a correct time to look at completing such report.

The project team next viewed the returned map assignments from the previous meeting. Fritz asked each person who completed the task to inform the others on the reasoning behind their decision. Vilmo began by reviewing his map, showing five areas where he felt that temporary storage and water retention could take place to decrease peaks of spring runoff and large summer rain events in the Upper Green Meadow Subwatershed. These sites would be considered impoundment strategies. Vilmo stated that at one of the sites, Stewart Klask, the landowner, is willing to meet with the Watershed regarding selling his land to the Watershed for a potential project. Fritz asked Project Team members if they had any questions regarding Vilmo's map. Chisholm stated that in his opinion, the problems in the Upper Green Meadow Subwatershed are caused by a ditching permit that was issued in the 1970's. Vilmo asked Engineer Bents if these suggestions could meet the goals for the Subwatershed. Engineer Bents replied that he would have to do analysis to determine the answer to his question. Engineer Puchalski asked if this land would permanently be removed from production. Fritz stated that would have to be determined in the details, the answer could be yes or no.

Chisholm informed the Project Team of his strategies next, stating that he views the elimination of a ditch in Strand Township would solve the majority of the issues in the Upper Green Meadow Subwatershed. Fritz asked if this alternative could be viewed as a diversion. Administrator Ruud added that it could be viewed as either a diversion or the restoration of a prior condition. Chisholm continued by informing the Project Team that the permit was issued in 1974, according to a copy of the original which he brought along. Fritz asked Chisholm if he had further solutions to offer. Chisholm replied by stating that he felt this strategy would solve enough of the current problems in the subwatershed. Fritz asked Chisholm if this alternative would make current flooding conditions in other parts of the Wild Rice Watershed better or worse. Chisholm stated that it would likely make the conditions worse elsewhere, but it would relieve the situation in the subwatershed. Fritz reminded the Project Team that as a part of

the goals that were set at the previous meeting, it was agreed that they would not make flooding worse for others. The completion of this alternative would violate such goals. Administrator Ruud added that in a previous conversation with Chisholm, he did offer the strategy of holding water in Section 4 of Strand Township. Chisholm agreed stating that he felt that diking it up and holding water in that Section of land would be a viable strategy as well. Fritz asked Chisholm if he felt this could be classified as an impoundment. Chisholm agreed that it would be an impoundment.

Manager Erickson next presented his strategies to the Project Team. He felt that impoundment sites above the Green Meadow Dam, along with tiling and trickle tubes to ensure impoundments sites are dry when not being used would be ideal. Fritz asked if it would be possible to view this strategy, along with implementing blackbird control as part of the project. Chisholm replied that his opinion is that this strategy would not be viable.

The next Project Team member to display their strategies was Balstad with the NRCS. She stated that many of their current programs would fit the current needs of the Green Meadow Subwatershed. She added that some examples of current programs are wetland and grassland restoration, cropland bmp's, and forest restoration. She added that all of their programs are voluntary, therefore it is difficult to develop a location on a map to place them. Currently the NRCS also partners with the FSA for the Conservation Reserve Program (CRP) which stops tillage and restores the hydrology of the land. She did inform the Project Team that they are able to offer technical assistance if a customer in one of the selected areas wants to come in and look at available programs. Fritz clarified that Balstad's strategies focus on existing programs, which are voluntary. Balstad agreed that would be her recommendation. Fritz added that it might be good to offer recommendation that the board supports voluntary conservation programs as part of their decision. Balstad again agreed that would be her recommendation. Fritz asked Project Team members for their comments and thoughts. Hearing none, Fritz turned to Chisholm and asked if he could support voluntary programs. Chisholm replied that he can live with a holding area in Section 4 of Strand Township if it is drained all the way down. Fritz again asked if he can support others participating in voluntary programs, to which Chisholm responded that he is unable to comment. Balstad reminded the Project Team, that as discussed previously, flood reduction goals cannot be tied to voluntary programs.

Mercil presented the suggestions from the MPCA next. She began by stating that they do not deal with implementation, rather assessment of waters. Turbidity is a big concern in the subwatershed, along with flow. She suggested looking at Dam restoration, upper wetland restoration, mid-watershed impoundment locations, culvert sizing, and setback levees. Engineer Bents added that in viewing Mercil's map it can be determined that more focus was placed on strategies in the mid-watershed, not necessarily just the upper subwatershed as seen in the previous recommendations. Manager Erickson added that he liked the suggestion of culvert sizing. Fritz clarified that culvert sizing would need to be a systematic process.

Next, the SWCD strategies were presented by Christianson. He stated that they tried to find sites with a landowner that would be likely to participate in an upper subwatershed impoundment. In their

research they found Wendell Johnson might be willing and open to talk about an impoundment site on his property. Christianson added that they felt there were many sites that would be good for potential impoundments in the upper subwatershed, however finding a landowner that is willing to discuss the possibility is the difficult part in the process. Vilmo felt that having a willing landowner was key to the process of finding solutions. Fritz asked Chisholm how he felt about the SWCD strategy. Chisholm asked if this impoundment would have the ability to take very much water off the subwatershed.

Engineer Knakmuhs with the Norman County Highway Department spoke on behalf of Project Team Member, Commissioner Bommersbach. The county has addressed all current areas of road damage and were unable to come up with areas on the map that they felt could be improved by addressing something specific. He asked that whatever was done did not create damage to the current road conditions. Engineer Knakmuhs also felt that road armoring would be a viable strategy moving forward. Fritz asked if it was possible to hold water behind county roads. Engineer Knakmuhs replied that it is a possibility so long as it is not detrimental to the condition of the roads.

Next, the perspectives of the DNR were presented by Siira. She felt that a focus on voluntary programs, wetland restoration, setback levees, channel restoration, and midwatershed off channel impoundments were all viable strategies. Siira also added that landowners cannot be forced to comply; rather she felt education of available programs was key. She added that their objective is for impoundments to be located off the channel, so that the impact to wildlife habitat is minimal. She did feel that a channel restoration, along with re-meandering it could slow down velocities and reduce erosion. Along with the previous strategies, Siira added that she felt that looking at the Green Meadow Dam was a given strategy.

Administrator Ruud presented Watershed goals that were developed by himself and Manager Christensen prior to the meeting. They discussed the possibility for impoundment sites below the Green Meadow Dam, along with the potential to use the land currently owned by Klask. They stated that they have not talked to landowners yet, however in the lower subwatershed there are not many landowners on the north side of the channel.

Arne concluded the discussion by stating that BWSR feels that support and promotion voluntary programs are ideal in this process.

Commissioner Bommersbach added that the Project Team cannot dictate what landowners need to do. He has heard that much of the process is based on voluntary participation, therefore the key is finding landowners who are willing to participate.

Fritz continued the meeting by handing out Technical Paper (TP) 11 range of alternatives, along with USACE Points of Concurrence #2 – alternatives elimination, which was used when the additional resources team reviewed TP11 prior to the meeting. He added that as part of the permitting process, the Project Team will need to document why certain alternatives were eliminated.

Fritz began by reviewing group 1 – “Reduce Flood Volume” of TP11. Based on the reasoning stated, the additional resources team determined that the following subcategories could be eliminated as primary alternatives, kept for secondary consideration:

- Wetlands, providing infiltration and evapotranspiration
- Cropland BMP's, increase infiltration and evapotranspiration
- Conversion to Grassland, e.g., CRP and RIM to increase infiltration and evapotranspiration
- Conversion to Forest, forested areas generally have the lowest runoff coefficients, due to high interception and evapotranspiration

based on points of concurrence items 1, 2, and 6. The primary reason for eliminating these as primary alternatives was item 6 – Logistics. These alternatives will require voluntary participation using existing programs (WRP, RIM, CRP, ...) and will be considered as secondary alternatives to be implemented on a voluntary basis by others (SWCD, NRCS, etc.).

Siira stated that she felt it was necessary to consider the previous alternatives. Fritz responded by clarifying that the Project Team can offer their strategy to the Board, but state that they also feel that some of these should be considered. Mercil asked if it would be stated that the Project Team supports the implementation of these programs. Fritz stated that the additional resources team was simply looking at the fact that this Project Team and the Watershed does not have the ability to implement these strategies. Engineer Bents clarified by adding these could be considered as secondary strategies, but were not viable as a primary strategy since they are voluntary programs. All Project Team members were either in favor of or neutral to the decision to eliminate the previous alternatives as primary strategies, keeping them as secondary alternatives.

All Project Team members were either in favor of or neutral to the decision to eliminate alternative to Reduce Flood Volume the following as a primary alternative:

- Other Beneficial Uses of Stored Water, domestic, industrial, streamflow, augment,...

based on points of concurrence items 1, 2, 3, and 4. The primary reasoning is item 3 – Technical Feasibility. This will be considered a secondary alternative with other primary strategies (i.e., impoundments,...) because implementation would be dependent on the operation of other facilities (flood control portions of the impoundment – i.e. level of drawdown).

All Project Team members were in favor of or neutral to the decision to eliminate the following alternatives to Increase Conveyance Capacity from consideration based on the reasoning stated:

- Channelization (increasing the flow capacity of existing channels or flowages) based on point of concurrence item 2 – Position in the Watershed. This alternative will not meet the identified goals/objectives and has the potential to exasperate the problem of downstream flooding through a decrease of floodplain storage, acceleration of flow, and a corresponding increase in local peak flood flows on the channelized stream
- Drainage (creating new or improved conveyance capacity) based on point of concurrence item 2 – Position in the Watershed. This alternative will not meet the identified goals/objectives and

has the potential to exasperate the problem of downstream flooding through a decrease of floodplain storage, acceleration of flow, and a corresponding increase in local peak flood flows.

- Diversion (of flood waters around a current damage area) based on point of concurrence items 2, 3, 4, and 6. The primary reasoning is item 3 – Technical Feasibility. It will be impractical to divert flows around the damage area identified in the problem statement that included portions of the Green Meadow Subwatershed, Marsh River Watershed, and Red River Basin.
- Setting Back existing levees (to increase conveyance capacity) the point of concurrence items used to make this decision were not noted on the spreadsheet handed out. However according to conversation, the decision was based upon the reasoning that the setting back of existing levees cannot be done strictly to increase conveyance capacity, rather it must be done to increase temporary storage, which is under a different section of TP11.

All Project Team members were either in favor of or neutral to the decision to eliminate the following alternative to Increase Conveyance Capacity as a primary alternative, keeping it for secondary consideration, based on the reasoning stated:

- Increase Roadway Crossing Capacity (increase conveyance potential) based on point of concurrence items 2, 3, and 6. The primary reasoning is item 2 – Position in the Watershed. This alternative will not meet identified goals/objectives and would reduce floodplain storage and increase downstream peak flows. This alternative will not meet the identified goals/objectives and would reduce floodplain storage and increase downstream peak flows. This alternative will only be considered for further analysis where and if it's localized impacts could off-set by other primary strategies.

All Project Team members were in favor of or neutral to the decision to carry forward the following alternatives to Increase Temporary Flood Storage for further analysis due to their potential to meet the identified needs, goals and objectives, along with any additional reasoning stated:

- Gated Impoundments (longer-term detention of water in excess of downstream channel capacity)
- Ungated Impoundments (shorter term detention of water in excess of downstream channel capacity)
- Restored or Created Wetlands (functioning as impoundments)
- Culvert Sizing (to increase temporary storage by widespread metering of runoff close to its source)
- Setting Back Existing Levees (to increased floodplain storage) based on the additional reasoning that restoring a portion of the lost floodplain storage could benefit downstream areas by helping to attenuate flood peaks.
- Overtopping Levees (to utilize diked floodplain storage capacity when critically needed) based on the additional reasoning that it will better utilize portions of the lost floodplain storage to attenuate flood peaks and benefit downstream areas.

All Project Team members were either in favor of or neutral to the decision to eliminate the following alternative to Increase Temporary Flood Storage as a primary alternative, keeping it for secondary consideration, based on the reasoning stated:

- Drainage (to lower surface water and groundwater levels, which increases infiltration and temporary storage in the upper soil horizons based on point of concurrence items 1, 2, 4, and 6. The primary reasoning is item 6 – Technical Feasibility. This alternative will require widespread voluntary participation by many landowners and require unreasonably complex operation to meet the goals and objectives. However, this secondary alternative will be considered for implementation where feasible on a voluntary basis.

Siira returned to the questions surrounding wetland restoration. Fritz stated that the Project Team can offer a range of alternatives and also state that they support the marketing of voluntary programs. He added that doing wetland restoration solely to provide infiltration and evapotranspiration, as stated under “Reduce Flood Volume” would not help the Project Team meet its goals, however it is still possible to state that the Project Team supports the marketing of such programs. Fritz reminded the Project Team that they need to look at the reasoning that each alternative is being suggested. Whatever is done needs to focus on the two goals that were set previously by the Project Team. He added that voluntary programs are difficult to enforce, however we can offer our support and recommendation to market them. Siira noted that channel restoration is not listed on the TP 11 range of alternatives, noting his was a strategy that was offered through the map assignment. She asked why the project team is not considering it as a strategy? Mercil continues that impoundment wetlands and naturally functioning wetlands are very different. Engineer Bents asked Project Team members to wait to see what the engineering comes back as – there is a possibility if setback levees are determined to be 25 feet, 50 feet, or 100 feet they could provide the potential for wetland restoration within them. Balstad added that federal programs cannot be used to mitigate land. Administrator Ruud clarified the land would have the acquired, not mitigated. Engineer Bents suggested that the Natural Resources objectives be revisited at the next meeting after some engineering work can be done to determine potential locations. Van Offelen offered that he would develop a spreadsheet differentiating between primary and secondary alternatives before the next meeting as several Project Team members expressed confusion regarding the color coding of the map along with the term eliminate.

Continuing on the TP 11 handout, all Project Team members were in favor of or neutral to the decision to eliminate the following alternatives to Increase Conveyance Capacity from consideration based on the reasoning stated:

- Urban Levees (community protection) due to the fact that it does not address an identified need, goal, or objective.
- Farmstead Levees (rural property protection) due to the fact that it does not address an identified need, goal, or objective.
- Agricultural Levees (agricultural property protection) based on point of concurrence items 2, 2, and 6. Primary reasoning is item 2 – Position in the watershed. This alternative will not meet the identified need, goal, or objective and it will reduce floodplain storage and increases in downstream peak flows.

- Evacuation of the Floodplain (removing flood prone property) based on point of concurrence items 1, 4, and 6. Primary reasoning is item 6 – Willingness to Pay and Cost. This alternative was eliminated due to the expected high costs of floodproofing the identified damage areas
- Floodproofing (raising property and flood resistant materials) based on point of concurrence items 1, 4, and 6. Primary reasoning is item 4 – Willingness to Pay and Cost. This alternative was eliminated due to the high costs of floodproofing the identified damage areas.
- Warning and Emergency Response (notification processes) due to the fact that it does not address and identified need, goal, or objective.

Fritz asked Project Team members to now go through and do two things: analyze how good the alternatives meet goals, and propose things. The additional resources team will meet to refine, clean up, and present strategies. Once that is completed, the Project Team will be able to address NRE goals easier. Engineer Bents will be able to determine how much area needs to be obtained to meet specific goals. In order to do this it will be necessary to evaluate site specific location. Every effort to protect the innocent will be taken when doing this, but it will be necessary to state what results would occur if projects were placed in certain areas. Initial locations that will be viewed with be those with landowners who are currently expressing their interest to talk – Klask and Johnson, as well as any improvements that can be made to the current the Green Meadow Dam.

Prior to adjourning the meeting, Fritz once again asked Chisholm if he would reconsider the wetland objective from the beginning of the meeting. Chisholm stated that he would not be willing to revisit, as he does not want it included. Administrator Ruud asked Chisholm if he would be objective to his neighbor voluntarily entering into a program. Chisholm replied that he could not stop his neighbor from entering into voluntary programs. Fritz asked Chisholm with the program being voluntary, would he not be in favor of the goal. Chisholm again responded that he would not be in favor of the goal to create more wetlands. Fritz informed the Project Team that the objective would continue to be tabled until the next meeting and adjourned the meeting.