

Green Meadow Project Team

Regular Meeting

June 26, 2014

A meeting of the Green Meadow Project Team was held on Thursday, June 26, 2014, at the Wild Rice Watershed District (WRWD) Office. Project Team Members in attendance included: Duane Erickson, WRWD Manager; Mike Christiansen, WRWD Manager; Curt Johannsen, WRWD Manager; Emily Siira, Department of Natural Resources; Mark Christianson, Soil and Water Conservation District; 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 Director; Henry Van Offelen, Department of Natural Resources; Jerry Bents, Houston Engineering; Kevin Ruud, WRWD Administrator; Tom Knakmuhs, Norman County Highway Department Engineer; Rob Bayden, Wildlife Manager, and Tara Jensen, WRWD Bookkeeper. Project Team members who were absent included: Shawnn Balstad, Natural Resources Conservation Service; Tara Mercil, Minnesota Pollution Control Agency; Larry Puchalski, US Army Corps of Engineers, and Diane Ista, Landowner.

Fritz began the meeting by reviewing the Project Team goals and summarizing the objectives and agenda for this meeting. He also reminded those in attendance of the expectations, ground rules, and roles and responsibilities of the Project Team process.

Fritz continued by presenting strategy elimination which determined primary, secondary, and eliminated strategies for consideration. Secondary strategies are those which would require voluntary participation, making them difficult for the Watershed to enforce. The two strategies that were carried forward for primary consideration were gated impoundments and ungated impoundments. Siira pointed out that the color coding and final designation of a portion of the spreadsheet was incorrect. The following Flood Damage Reduction Alternatives were highlighted yellow with a final designation of secondary:

- Restored or created wetlands (functioning as impoundments)
- Drainage (to lower surface water and groundwater levels, which increases infiltration and temporary storage in the upper soil horizons)
- Culvert Sizing (to increase temporary storage by widespread metering of runoff close to its source)
- Setting back existing levees (to increased floodplain storage)
- Overtopping Levees (to utilize diked floodplain storage capacity when critically needed)

Fritz asked the Project Team members to take time following the meeting to read the primary and secondary rationale developed for each of the strategies listed and let the additional resources team know if there are any areas of question.

Next, Fritz summarized the alternative analysis that was completed for the Green Meadow Subwatershed. He explained how the early, middle, and late water areas of the Spring Creek Subwatershed determine the best locations to place strategies dependent on results desired at downstream locations. The analysis showed that the ideal location for strategy placement would be in the middle water areas of the subwatershed to help meet the peak discharge and runoff volume reduction goals that were set previously during the process. The middle stage is located entirely below the existing Green Meadow Dam.

Administrator Ruud continued the meeting by updating the Project Team regarding decisions made by the Wild Rice Watershed Board of Managers. He asked the Board for permission to contact potential landowners to let them know that the Project Team might consider placing a project on their land. All landowners contacted were willing to look at scenarios and are open to discussion at this time. Fritz explained that this is the first time that this process has encountered a situation where specific locations had to be considered for continuation. It was decided to let the Board decide how they wanted to proceed. It was determined that it would be in the best interest of the process to contact potential landowners prior to publicizing the sites that were determined. Although this caused a lengthy delay between meetings, it was hopeful that this would identify any initial objections to strategies being considered.

Next, Engineer Bents summarized the Wild Rice Watershed District Distributed Detention Plan. The chosen strategies were compared to this plan. In determining an ideal location for a potential project, the additional resources team reviewed the early, middle, and late stages for the subwatershed, along with the Red River Basin as a whole. This determined a more specific location that would be ideal for consideration that would benefit both areas. Based on this information, the following four options were developed.

1. Option 1 - Distributed Detention Plan
 - a. 5,480 acre feet of on channel gated storage below the existing Green Meadow Dam
 - b. 1,820 acre feet of gated storage at current Green Meadow Dam site
2. Option 2 (extending Dam Northward)
 - a. 3,100 acre feet of on channel gated storage below the existing Green Meadow Dam
 - b. Extending the existing Green Meadow Dam site north 1 mile resulting in 2,300 acre feet of gated storage at the current Green Meadow Dam site
3. Option 3 (Including two sites in Upper Green Meadow Subwatershed)
 - a. 3,050 acre feet of on channel gated storage below the existing Green Meadow Dam
 - b. 1,820 acre feet of gated storage at the current Green Meadow Dam site
 - c. 315 acre feet of gated storage at "UGM Site 1" aka: Klask Site
 - d. 1,375 acre feet of gated storage at "UGM Site 2"
4. Option 4 (Including two sites in Upper Green Meadow Subwatershed)
 - a. 4,300 acre feet of on channel gates storage below the existing Green Meadow Dam
 - b. 1,820 acre feet of gated storage at the current Green Meadow Dam site
 - c. 315 acre feet of gated storage at "UGM Site 1" aka: Klask Site

d. 130 acre feet of gated storage at “UGM Site 2” aka: Johnson Site

Engineer Bents highlighted how each of the options had the potential of meeting the goals and objectives set forth by the Project Team earlier in the process. He also showed how each of the options had similar effects on reductions to the peak discharge and runoff volume.

Commissioner Bommersbach asked the additional resources team how the sites in the Upper Green Meadow subwatershed were chosen. Engineer Bents stated that Mark Christianson brought forward the Johnson site and Stewart Klask brought forward his own site for consideration. The other site was chosen at random dependent on its location within the subwatershed. Commissioner Bommersbach next asked if these are willing landowners. Administrator Ruud replied that the Johnson and Klask sites bring willing landowners to the table. All other landowners that he has contacted are willing to discuss the possibility of using their land for a project. Engineer Bents stated that other sites were considered but eliminated due to limited volume or layout issues.

Manager Erickson asked if these options would solve flooding issues in the early area. Engineer Bents responded that by holding the water in the middle water areas, other efforts such as increasing culvert size could be implemented upstream.

After a brief recess, Van Offelen continued the meeting by addressing the additional alternatives and options that need to be evaluated including environmental and permitting issues, costs, technical feasibility and social acceptability. He stated that Engineer Bents could run rough cost analysis for the sites considered and Administrator Ruud is working to inform those who would be affected and the social acceptability of the process as a whole. Next Van Offelen highlighted how the ease or difficulty of permitting can be determined in a fairly quick manner. This would show if there are known concerns to the permitting process. Finally an onsite analysis would have to be completed.

Siira felt that viewing an option for off channel storage would be ideal in addition to those already presented. Vilmo wanted to see more options that included extending the current Green Meadow Dam to the north. Vilmo also asked what funding is available for the projects. Fritz replied that the funding sources would be determined by the Watershed, but the State of Minnesota has historically been supportive of flood damage reduction projects in our area. There are many funding options including the Red River Watershed Management Board, the Minnesota Flood Damage Reduction Work Group, State of Minnesota, and possible agency partners dependent on what the final project is.

Manager Christensen asked if the existing Green Meadow Dam would be rebuilt if it is extended to the north. Engineer Bents stated that all options currently include changes to the current dam to allow for gated storage. Manager Johannsen added that he would like to see a scenario where the Green Meadow Dam is left alone.

Chisholm asked if culverts upstream would be sized accordingly once the process is completed. Engineer Bents replied that additional storage in the middle stages will allow increased conveyance above, allowing storage in the middle. This would result in no negative affect to those below.

Vilmo asked Siira if she was implying earlier that on-channel storage would not be a possibility. Siira responded that it could be done, but other enhancements to the channel would likely be required to ensure that the habitats are not severely impacted. Engineer Bents suggested that a possible restoration of the channel downstream could be considered. Siira said that would be an option that could be considered, however she would like to see an alternative without negative impact to the watercourse first.

Manager Johannsen suggested that the additional resources team bring options back to the next meeting with more information and have the Project Team rank the options according to the favored and least favored strategies to impose. It was also recommended to look at using the site below the dam during spring events, allowing it to still be farmed in years where excessive moisture is not present.

Siira suggested eliminating options 1 and 2 due to lack of control upstream. All project team members were in agreement or neutral to the decision to eliminate option 1. After some discussion it was also determined that all Project Team members were also in agreement or neutral to the decision to eliminate option 2.

The Project Team decided that they would like to see the following options developed for consideration at the next meeting:

5. Option 5
 - a. Extend existing Green Meadow Dam site 1 mile north, similar to "Option 2"
 - b. Eliminate storage site below the existing dam
 - c. Keep both storage options in Upper Green Meadow Subwatershed, similar to "Option 3"
6. Option 6
 - a. Extend existing Green Meadow Dam site 1 mile north, similar to "Option 2"
 - b. Move storage site below existing dam off channel
 - c. Keep both storage options in Upper Green Meadow Subwatershed, similar to "Option 3"
7. Option 7
 - a. No change to current Green Meadow Dam
 - b. Have one retention site below existing Green Meadow Dam

Engineer Bents recommended developing Option 7 as a basis for cost comparison. This would give the Project Team an idea of what a base price to just do one storage site would be. Rough cost analysis will be completed on each of the options left for consideration prior to the next Project Team meeting

It was determined that the Project Team would look at an August meeting to review information gathered regarding the new options and cost analysis of each option. Van Offelen added that a site visit will likely occur prior to the next meeting with all Project Team members invited to attend if they choose to do so.