

ATTACHMENT D

WATERSHED PROJECT PLANNING PROTOCOL SUMMARY STATUS

**Hurley Creek Watershed
Watershed Project Planning Protocol Status Summary
July 10, 2007**

Activity	Activity Status			
	Complete	Partially Complete	Remaining	Ongoing
PHASE I				
<u>Step 1. Identify Water Quality Concerns & Opportunities:</u>				
What is the pollutant? (DNR Integrated Report)	√			
If sediment/turbidity, run simple RUSLE model			√	
If bacteria, identify possible sources		√		√
If excess nutrients, run RUSLE, identify sources such as livestock, POTW			√	
If nitrates, identify drainage, land use, etc.			√	
If atrazine, identify land use, retention time, etc.			√	
What, specifically is being impacted by the pollutant? (DNR 305(b) report)		√		√
Is the water body on the impaired waters list? (DNR 303(d) list)	√			
Is the water body on Iowa's priority streams and lakes list? (DNR Non-point Source Plan)	√			
Is the water body a source of drinking water? (DNR water supply section)	√			
Is the water body a major recreation area?	√			
What is the designated use for the water body? (DNR anti-degradation standard may apply)	√			
Are there significant future plans for the watershed/water body?	√			
What monitoring data is available? (DNR water monitoring section, IOWATER, USGS, utilities).	√			
<u>Step 2. Determine Reasonable, Yet Meaningful, Water Quality Objectives:</u>				
Maintain/improve the integrity of the water body by preventing future degradation	√			
Reduce pollutant load to an acceptable level or to the allocation assigned in a TMDL			√	√
Measurably improve in-stream habitat conditions		√		
Measurably improve in-lake habitat conditions				
Meet/maintain the designated use for the water body	√			
Measurably improve recreational opportunities and economic benefits		√		
<u>Step 3. Inventory Resources:</u>				
PHYSICAL				
Identify land use, soils, slopes, and other RUSLE/RUSLE2 factors; Size of the watershed will determine the detail required (DNR Watershed Atlas)	√			
Smaller watersheds (generally < 25,000 acres) should receive a field-by-field assessment	√			
Larger watersheds (generally > 25,000 acres) should have an assessment designed by technical partners that meets the specific traits of the watershed	NA	NA	NA	NA
Load applicable resource data into GIS format	√			
Run the Sediment Delivery Model and/or SWAT model to determine priority areas and loading estimates			√	
Examine streams using "Stream Visual Assessment Protocol" (SVAP) or other models to determine priority areas; Size of the watershed will determine the detail required	√			
Determine topography using digital elevation model (DEM) or LIDAR			√	

Activity	Activity Status			
	Complete	Partially Complete	Remaining	Ongoing
Determine gully and stream bank/bed erosion potential (Erosion and Sediment Delivery Procedure) to determine priority areas and loading estimates; Size of the watershed will determine the detail required; assessment designed by the technical partners that meets the specific traits of the watershed	√			
Identify livestock operations (pasture and feedlot) and waste application methods to determine priority areas and loading estimates; assessment designed by the technical partners that meets the specific traits of the watershed	√			
Assess urban contributions (impervious cover, NPDES permits and outfalls, un-sewered communities, construction sites, etc.)			√	
Identify organized drainage district "watersheds" and outlets (DSC, county, Watershed Atlas)		√		
Identify other potential point and non-point issues, specific to each individual watershed (superfund sites, Brownfield sites, etc.)	√			
In urban watersheds, identify storm drain discharge points, associated intakes, and watersheds for each.		√		
In urban watersheds, identify potential pollutant sources that may be reaching the storm drain system.	√			
In urban watersheds, determine the percentage of impervious cover in each sub watershed.		√		
Identify all NPDES permits and compliance record of all point sources that may have an influence on the water body/watershed.			√	
SOCIAL				
Survey the landowners to determine what practices/cost-share rates are acceptable to landowners		√		
Survey the public to determine the level and extent of stakeholder interest and knowledge about watershed/water body issues		√		
Determine any local or statewide political assets or liabilities with a potential project	√			
Share survey results with the public to build a sense of community and purpose		√		
FINANCIAL				
Determine the level of potential financial commitment from local sources (landowners, residents, local interest groups, utilities, NGOs, counties, cities, etc.)		√		
Identify agency support for a watershed project agency funding matrix				√
Explore other sources of financial support for a watershed project (NGOs, foundations, in-kind contributions, etc.)		√		
Step 4. Analyze Resource Data:				
Verify loading estimates previously produced to assure accuracy		√		
Analysis of gathered data should support the initial concerns and objectives		√		
Determine priority parcels/landowners for participation		√		
Examine survey results for stakeholder and priority landowner understanding and willingness to participate			√	
Evaluate recent and future trends that may affect the project's success (CRP contract expiration or acreage limitations, CSP opportunities, new programs, etc.)				√
Determine priorities (geographic and issue) for a project, given the watershed/water body data collected	√			
Evaluate the influence NPDES permits may have on the water body			√	
Re-evaluate objectives in light of the gathered data to determine if they are feasible				√

Activity	Activity Status			
	Complete	Partially Complete	Remaining	Ongoing
PHASE II				
<u>Step 5. Formula Alternatives:</u>				
Ensure that proposed alternatives address identified objectives and concerns	√			√
Develop alternatives that are socially and politically acceptable	√			√
Develop alternatives that are financially and technically feasible	√			√
Include alternatives that are “program neutral” so that program rules do not constrain the search for innovative solutions		√		√
Consider and include regulatory alternatives where appropriate, as well as voluntary activities	√			√
Alternatives may include in-stream/in-lake components as well as conservation practices located in the watershed	√			
Each alternative should be summarized including costs, supporting data, and appropriate maps	√			
<u>Step 6. Evaluate Alternatives:</u>				
Evaluate feasibility based upon social, financial, technical, and political considerations	√			√
Evaluate the impacts of alternatives upon such things as wildlife habitat, threatened and endangered species, cultural resource sites, etc.		√		√
Evaluate the impact of alternatives upon other pollutant sources and groundwater (e.g. drop inlet terraces reduce sediment, but may exacerbate atrazine problems)			√	√
Inventory and analysis work (steps 3 and 4) needs to support the evaluation of alternatives				√
Evaluate alternatives by asking if a given component is essential to the success of the project, or just nice to have	√			√
Consider the popularity/acceptability of various BMPs within the watershed		√		√
Rank the effectiveness of various alternatives to determine which alternatives have the most merit	√			
<u>Step 7. Make Decisions and Complete the Planning Process:</u>				
Choose alternatives that are cost effective, but lowest cost does not always have to be the deciding factor		√		√
Review all of the alternatives and evaluate their value to the project		√		√
In many cases, the final decision may include a blend of alternatives		√		√
Decisions should be documented in an area-wide, or watershed project plan; This plan should support funding applications for one or more programs, but probably will have to be modified to meet specific program application criteria	√			√
PHASE III				
<u>Step 8. Develop an Effective Water Quality Project by Implementing the Plan:</u>				
Select appropriate alternatives that satisfy objectives to be included in the plan	√			√
Prioritize geographic areas or issues that will need to be addressed in order to satisfy objectives	√			√
Determine staffing requirements (skills, time needed, etc.)			√	
Determine local funding, leadership, in-kind contributions, etc. that are available		√		√
Solicit/select the combination of program and funding sources that are needed to maximize local contributions to achieve the project objectives		√		√
Develop an information and education component to keep all stakeholders up to date of project developments and progress		√		√

Activity	Activity Status			
	Complete	Partially Complete	Remaining	Ongoing
Determine how progress will be analyzed during the project and at the end of the project: monitoring, models, practices installed, park user days, etc.		√		√
Incorporate selected alternatives, staffing, funding, etc. into a final work plan		√		√
Develop and utilize visual tools to explain water quality problems and implementation plan to landowners and stakeholders	√			√
Continue to keep stakeholders, funding agencies, landowners, NGOs, and others informed				√
Step 9. Evaluate the Plan				
Periodically determine if the project is on the schedule set in the work plan		√		√
Periodically determine if the project is satisfying the priorities set out in the work plan		√		√
Determine the adjustments necessary to meet the schedule and priority objectives of the project (participation rate, accurate assumptions, technology changes, etc.)			√	√
Report progress to funding partners on a regular basis			√	√
Collect quantifiable evaluation data described in the work plan				√
Calculate evaluation measures on a regular basis (practices installed, load reductions, modeling, monitoring, park user days, etc.)			√	√
Complete evaluation at the end of the project to determine level of success – what aspects of the project worked well and not so well?			√	
Submit final report to funding organizations			√	

Hurley Creek Watershed – Creston, Iowa

Watershed Project Planning Protocol

Status Report (July 10, 2007)

Phase I – Identify Water Quality Concerns and Opportunities:

Some of the steps in Phase I have been addressed previously in the Organization and Research to Improve Lake McKinley & Associated Micro-Watershed Final Report (Improvement Report – Project No. CRSLN 05002) prepared by Barker Lemar Engineering Consultants (Barker Lemar). The questions that have not already been covered in the Improvement Report are either still currently under investigation or have yet to be addressed at this point in time.

Step 1 – Identify Water Quality Concerns and Opportunities

The local work group initiates the process the process and technical partners will help identify where data can be found related to the bulleted items below:

The majority of the following information can be found in a copy of the Watershed Development and Planning Assistance Grant Application that was submitted by the Union County Soil & Water Conservation District (SWCD).

➤ **What is the pollutant? (DNR Integrated Report)**

Water samples were collected for 2006. Samples were taken for E. coli, transparency, NO₂N, NO₃N, PO₄, Chloride, water temperature, and dissolved oxygen.

○ **If sediment/turbidity, run simple RUSLE model**

The RUSLE model has not been run for Hurley Creek. The Hurley Creek Watershed Committee (Committee) will work with strategic partners to accomplish this task.

○ **If bacteria, identify possible sources**

Livestock in the upper portion and middle section of the watershed may be contributing to the E. coli levels. A livestock sales barn (Creston Livestock Auction, Inc.) was also identified as a possible significant contributor to E. coli levels. The livestock sales barn received a grant for the development of a bio-retention basin that will help remove animal waste from the storm water leaving the property.

The Committee will continue to collect water samples and increase the number of samples for E. coli in suspected areas to identify potential additional sources.

The Committee should also test the E. coli to determine if it is from human or animal sources. Between Townline Street and Prairie Street there is an increase in E. coli levels that is not suspected to be caused by animals.

○ **If excess nutrients, run RUSLE, identify sources such as livestock, POTW**

The Committee will work with strategic partners to evaluate the water samples to measure nutrient levels.

- If nitrates, identify drainage, land use, etc.

The Committee will work with strategic partners to evaluate the water samples to measure nitrate levels.

- If atrazine, identify land use, retention time, etc.

The watershed assessment performed by Barker Lemar assessed the land use surrounding Hurley Creek.

The Committee will work with strategic partners to evaluate the water samples to measure atrazine levels and retention time.

- What specifically is being impacted by the pollutant? (DNR 305(b) report)

- Is the waterbody on the impaired waters list? (DNR 303(d) list)

Hurley Creek is not currently on the impaired waters list.

- Is the waterbody on Iowa's priority streams and lakes list? (DNR Nonpoint Source Plan)

Hurley Creek and Lake McKinley are not on Iowa's priority streams and lakes list.

- Is the waterbody a source of drinking water? (DNR water supply section)

Lake McKinley is not a source of drinking water.

- Is the waterbody a major recreation area?

Historically, McKinley Park and Lake McKinley were a community gathering point for outdoor activities including water recreation. The community wishes to restore Lake McKinley to again use the Lake for water recreation. This activity was identified as the highest priority by the community in the McKinley Park Master Improvement Plan.

- What is the designated use for the waterbody? (DNR anti-degradation standard may apply)

Lake McKinley is designated for Class A and B(LW) uses. However, currently, it is in a "not assessed" status.

- Is the waterbody a local priority, is there special significance to the local stakeholders, and are they motivated individually and collectively to improve the lake/stream water quality?

Local stakeholders have held several meetings to develop a vision for the future of the Park and Lake McKinley. Barker Lemar has drafted several plans and reports designed to improve the current condition of Lake McKinley and the surrounding watershed (McKinley Park Master Improvement Plan, Organization and Research to Improve Lake McKinley & Associated Micro-Watershed Final Report). Also, the Union County Soil and Water Conservation District has applied for several sources of funding to help finance the progress of the watershed improvement.

➤ Are there significant future plans for the watershed/waterbody?

The watershed assessment and clean-up is part of a larger effort to renovate McKinley Park and to restore Lake McKinley to a level that will support aquatic recreational activities.

➤ What monitoring data is available? (DNR water monitoring section, IOWATER, USGS, utilities)

Water quality data from 2004, 2006 has been collected by IOWATER volunteers.

Step 2 – Determine Reasonable, Yet Meaningful, Water Quality Objectives

The local work group determines their objectives for the watershed/waterbody considering the designated uses defined in Iowa's water quality standards. Technical assistance may be needed by the local work group. Objectives should be quantifiable in order to measure progress. Objectives may include the following:

All of the following objectives are motivating factors for the community to accomplish the watershed clean-up effort. The community is focused on the ultimate goal to restore/maintain the designated use for the Lake to support aquatic recreational use.

➤ Maintain/improve the integrity of the waterbody by preventing future degradation.

The City of Creston (City) has worked with the National Resource Conservation Service (NRCS) and other strategic partners on projects that improve and maintain the integrity of Hurley Creek and major tributaries.

➤ Reduce pollutant load to an acceptable level or to the allocation assigned in a TMDL.

➤ Measurably improve in-stream habitat conditions.

➤ Measurably improve in-lake habitat conditions.

The Committee is working with strategic partners to perform a biotic assessment of Lake McKinley.

A depth assessment was recently completed by the Iowa Department of Natural Resources (IDNR). The initial data from this assessment indicates that approximately 80% of the Lake is no more than 3 feet deep. The deepest part of the Lake is approximately 8 feet. These depths are not adequate to support and maintain fish.

The Committee will work with strategic partners to prevent additional sediment from entering into Lake and to develop a plan to increase the depth of the Lake to levels that will support and maintain fish.

➤ Meet/maintain the designated use for the water body.

The current designation for the Lake McKinley is “not assessed”. It is assume (due to water samples collected) that the Lake, if assessed, would not meet the requirements to meet the Class A and B(LW) uses it had previously been designated.

- Measurably improve recreational opportunities and economic benefits.

The Committee and the City will work to achieve the goal of improving and maintaining the Lake to allow aquatic recreational activities. This is the number one priority identified by the community in the McKinley Park Master Improvement Plan.

Step 3 – Inventory Resources (Physical, Social, Financial)

At this phase of the project the conceptual paper/idea has been approved by the technical partners for the watershed project. Technical assistance, personnel, and financial assistance may be provided by the technical partners to assist with the resource inventory. Future support will be determined during the implementation and evaluation phase. The technical partners will determine which of the following activities are necessary:

PHYSICAL

The physical factors of the inventory have been assessed and are currently being evaluated. Portions of Hurley Creek were examined using “Stream Visual Assessment Protocol” (SVAP) to determine priority areas. All point, nonpoint and urban contributors were made note of.

- Identify land use, soils, slopes, and other RUSLE/RUSLE2 factors; Size of the watershed will determine the detail required (DNR Watershed Atlas).

The Committee will work with strategic partners to necessary data inputs to develop a successful RUSLE/RUSLE2 model.

- Smaller watersheds (generally <25,000 acres) should receive a field-by-field assessment.

The Hurley Creek Watershed is approximately 2,211 acres. Barker Lemar performed an assessment of Hurley Creek using SVAP.

- Larger watersheds (generally >25,000 acres) should have an assessment designed by technical partners that meets the specific traits of the watershed.

Non applicable.

- Load applicable resource data into GIS format.

The data collected using SVAP is in a GIS format.

- Run the Sediment Delivery Model and/or SWAT model to determine priority areas and loading estimates.

The Committee will work with strategic partners to perform the Sediment Delivery Model and/or SWAT model.

- Examine streams using “Stream Visual Assessment Protocol” (SVAP) or other models to determine priority areas; Size of the watershed will determine the detail required.

Barker Lemar completed the examination of Hurley Creek using SVAP.

- Determine topography using digital elevation model (DEM) or LiDAR.

- Determine gully and stream bank/bed erosion potential (Erosion and Sediment Delivery Procedure) to determine priority areas and loading estimates; Size of the watershed will determine the detail required; assessment designed by the technical partners that meets the specific traits of the watershed.

Barker Lemar completed the examination of Hurley Creek using SVAP which also identified gully and stream bank/bed erosion potential that identified priority areas.

- Identify livestock operations (pasture and feedlot) and waste application methods to determine priority areas and loading estimates; assessment designed by the technical partners that meets the specific traits of the watershed.

There is a sale barn next to a tributary that flows directly into Hurley Creek near Spencer St. Storm water from this location is seen as a probable source of high E. Coli bacteria levels. Livestock pastures in the north and central sections of the watershed have also been identified as probable sources of E. coli.

- Assess urban contributors (impervious cover, NPDES permits and outfalls, un-sewered communities, constructions sites, etc.).

The Committee will work with strategic parterres to identify the amount of impervious cover within the Hurley Creek Watershed and evaluate NPDES permits.

- Identify organized drainage district “watersheds” and outlets (DSC, county, Watershed Atlas).

- Identify other potential point and nonpoint issues, specific to each individual watershed (superfund sites, Brownfield sites, etc.).

Barker Lemar completed an examination of Hurley Creek using SVAP. This examination identified potential point and non-point sources.

The Committee will work with strategic partners to identify potential superfund or Brownfield sites within the Watershed.

- In urban watersheds, identify storm drain discharge points, associated intakes, and watersheds for each.

Barker Lemar completed an examination of Hurley Creek using SVAP. This examination identified storm drain discharge points. Barker Lemar digitized available City storm sewer maps to show storm sewer intakes and outfalls within the Watershed.

The Committee will work with strategic partners to identify the local watershed for each storm drain intake.

- In urban watersheds, identify potential pollutant sources that may be reaching the storm drain system.

There is a sale barn next to a tributary that flows directly into Hurley Creek near Spencer St. Storm water from this location is seen as a probable source of high E. Coli bacteria levels.

- In urban watersheds, determine the percentage of impervious cover in each sub watershed.

The Committee will work with strategic partners to identify the percentage of impervious cover for each identified sub watershed within the Hurley Creek Watershed.

- Identify all NPDES permits and compliance record of all point sources that may have an influence on the water body/watershed.

The Committee will work with strategic partners to identify all NPDES permits and evaluate the compliance record for all point sources within the Watershed.

SOCIAL

The vision casting process performed for the McKinley Park Master Improvement Plan successful in building strong community awareness and purpose for accomplishing the number on priority of restoring Lake McKinley to a level that allows and support aquatic recreational activities.

- Survey the landowners to determine what practices/cost-share rates are acceptable to landowners.

The Committee will work to meet with and survey landowners to determine what practices/cost-share rates are acceptable.

- Survey the public to determine the level and extent of stakeholder interest and knowledge about watershed/waterbody issues.

The Committee held a public meeting to discuss the results of the Hurley Creek assessment. The people that attended this meeting had a strong interest in improving the watershed and had a good understanding as to what the needs of the Watershed are.

- Determine any local or statewide political assets or liabilities with a potential project.

Political leaders were invited to a driving tour of the Watershed and presented information pertaining to the communities desire to improve Lake McKinley.

The Committee will continue to work with local and statewide political partners to assist them in improving the Hurley Creek Watershed and to help them restore Lake McKinley to a level that will allow and support aquatic recreational use.

- Share survey results with the public to build a sense of community and purpose.

The Committee will continue to host public meetings to present and discuss project status and seek additional public involvement and support. The Committee will also continue to work with the media and strategic partners to promote the project.

FINANCIAL

- Determine the level of potential financial commitment from local sources (landowners, residents, local interest groups, utilities, NGOs, counties, cities, etc.).

The Committee will continue to work with strategic partners to help identify potential financial commitments from local sources.

- Identify agency support for a watershed project.

- Explore other sources of financial support for a watershed project (NGOs, foundations, in-kind contributions, etc.).

The Committee will continue to work with strategic partners to help identify potential financial commitments.

Step 4 – Analyze Resource Data

Technical partners will assist with the technical, personnel, and financial resources necessary to accomplish the data analysis.

This is the stage the project is at currently. Most of the data collection has been completed and analysis and evaluation are being done on those results.

- Verify loading estimates previously produced to assure accuracy.

The Committee will work with strategic partners to verify loading estimates once loading estimate figures have been developed.

- Analysis of gathered data should support the initial concerns and objectives.

Information collected during the SVAP performed by Barker Lemar and the water samples support the initial concerns of severe erosion, high E. coli levels, and high levels of storm water flow for the Watershed.

- Determine priority parcels/landowners for participation.

The Hurley Creek Watershed Improvement Plan developed by Barker Lemar provided recommendations of specific locations for improvement projects. The Committee will work with the City to identify the landowners surrounding these locations.

- Examine survey results for stakeholder and priority landowner understanding and willingness to participate.

The Committee will work to evaluate the willingness of stakeholders and landowners to participate in proposed Watershed improvement projects.

- Evaluate recent and future trends that may affect the project's success (CRP contract expiration or acreage limitations, CSP opportunities, new programs, etc.).

The Committee will work with strategic partners to continue to evaluate recent and future trends that may affect the project's success.

- Determine priorities (geographic and issue) for a project, given the watershed/waterbody data collected.

The Hurley Creek Watershed Improvement Plan developed by Barker Lemar provided priority recommendations for the improvement of Hurley Creek based on the findings of the completed Watershed assessment.

- Evaluate the influence NPDES permits may have on the water body.

The Committee will work with strategic partners to evaluate the influence NPDES permits may have on the Watershed.

- Reevaluate objectives in light of the gathered data to determine if they are feasible.

The Committee will continue to evaluate the objectives to determine if they are feasible.

Phase II: Step 5 – Formulate Alternatives

Alternatives are resource management options developed to solve the identified water resource problems. Seldom will one approach be sufficient. Rather a combination of multiple approaches, each with its advantages and disadvantages, must be considered.

- Ensure that proposed alternatives address identified objectives and concerns.

The Committee will work with strategic partners to evaluate the improvement recommendations presented in the Hurley Creek Watershed Improvement Plan.

- Develop alternatives that are socially and politically acceptable.

The Committee will work to ensure the improvement recommendations are socially and politically acceptable.

- Develop alternatives that are financially and technically feasible.

The improvement recommendations presented in the Hurley Creek Watershed Improvement Plan have been designed to be both technically and financially feasible.

- Include alternatives that are “program neutral” so that program rules do not constrain the search for innovative solutions.

The Committee will work with strategic partners to ensure that improvement recommendations are considered “program neutral”.

- Consider and include regulatory alternatives where appropriate, as well as voluntary activities.

The Hurley Creek Watershed Improvement Plan includes improvement recommendations that require both regulatory and voluntary action to achieve success.

- Alternatives may include in-stream/in-lake components as well as conservation practices located in the watershed.

The Committee will continue to work with strategic partners to evaluate the improvement recommendations to consider additional alternatives.

- Each alternative should be summarized including costs, supporting data, and appropriate maps.

The Hurley Creek Watershed Improvement Plan provides cost estimates, supporting data, and physical locations for each improvement recommendation activity.

Step 6 – Evaluate Alternatives

Alternatives are evaluated to determine how effective they are in meeting objectives, as well as how feasible they are to accomplish

The following are tasks the Committee will continue to consider and evaluate as necessary during the project. The Committee will work with strategic partners to assist in this process.

➤ Evaluate feasibility based upon social, financial, technical, and political considerations.

The improvement recommendations presented in the Hurley Creek Watershed Improvement Plan were developed with social, financial, technical, and political considerations.

➤ Evaluate the impacts of alternatives upon such things as wildlife habitat, threatened and endangered species, cultural resource sites, etc.

The Committee will work with strategic partners to evaluate the impacts of improvement recommendations will have on wildlife habitat, threatened and endangered species, and cultural resources.

➤ Evaluate the impact of alternatives upon other pollutant sources and groundwater (e.g., drop inlet terraces reduce sediment, but may exacerbate atrazine problems).

The Committee will work with strategic partners to evaluate the impacts of improvement recommendations will have on other pollutants sources and groundwater.

➤ Inventory and analysis work (steps 3 & 4) needs to support the evaluation of alternatives.

The Committee will work with strategic partners to confirm that the inventory and analysis work support the evaluation of alternatives.

➤ Evaluate alternatives by asking if a given component is essential to the success of the project, or just nice to have.

The Committee will continue to evaluate the necessity of each improvement recommendation.

➤ Consider the popularity/acceptability of various BMPs within the watershed.

The Committee will work with strategic partners to assess the popularity/acceptability of the BMPs identified in the Hurley Creek Watershed Improvement Plan.

➤ Rank the effectiveness of various alternatives to determine which alternatives have the most merit.

The Committee will work with strategic partners rank the effectiveness of the various improvement recommendations identified in the Hurley Creek Watershed Improvement Plan.

Step 7 – Make Decisions and Complete the Planning Process

Decision making should involve the local work group in consultation with stakeholders and the technical partners; In some cases, the decisions made at this level are actually recommendations to funding agencies/organizations

- Choose alternatives that are cost effective, but lowest cost does not always have to be the deciding factor.

The improvement recommendations identified in the Hurley Creek Watershed Improvement Plan were designed to be technically and financially feasible. The Committee will work with strategic partners to continue to evaluate the implementation strategies for the improvement recommendations.

- Review all of the alternatives and evaluate their value to that project.

The Committee will work with strategic partners to continue to review and evaluate improvement alternatives for the project.

- In many cases, the final decision may include a blend of alternatives.

The Committee will work with strategic partners to consider the most technically and financially sound alternative(s) for implementation.

- Decisions should be documented in an area-wide, or watershed project plan; This plan should support funding applications for one or more programs, but probably will have to be modified to meet specific program application criteria.

The Committee will continue to evaluate and update the Hurley Creek Watershed Improvement Plan, including improvement recommendations, timeline, and cost estimates.

Phase III - Step 8 – Develop an Effective Water Quality Project by Implementing the Plan

Watershed projects are meant to evoke change: change in management, change in attitude, and change in water quality. Develop a final implementation plan by selecting alternatives, prioritizing their implementation, and soliciting funding sources to carry out the plan. Development of the work plan will comprise the full application for a fundable project.

- Select appropriate alternatives that satisfy objectives to be included in the plan.

The Committee will work with strategic partners to select appropriate alternatives that successfully meet the objectives of the improvement recommendations identified in the Hurley Creek Watershed Improvement Plan.

- Prioritize geographic areas or issues that will need to be addressed in order to satisfy objectives.

The Hurley Creek Watershed Improvement Plan provides a priority (including timeline and cost estimates) for identified improvement recommendations.

- Determine staffing requirements (skills, time needed, etc.).

The Hurley Creek Watershed Improvement Plan provides cost estimates, which include labor and equipment expenses, for identified improvement recommendations. The Committee will work with strategic partners to define staffing requirements if necessary.

- Determine local funding, leadership, in-kind contributions, etc. that are available.

The Committee will work with strategic partners to identify local funding and additional leadership to help support the project.

- Solicit/select the combination of program and funding sources that are needed to maximize local contributions to achieve the project objectives.

The Committee will work with strategic partners to help identify funding sources that maximize local contributions to achieve project objectives.

- Develop an information and education component to keep all stakeholders up to date of project developments and progress.

The Committee will continue to hold public meetings and provide project related documents to interested parties to encourage and support project participation/communication.

- Determine how progress will be analyzed during the project and at the end of the project: monitoring, models, practices installed, park user days, etc.

The Committee will work with strategic partners to evaluate the project's results by evaluating water sample data, public use of Lake McKinley for aquatic recreational uses, and continued public interest and participation in maintaining the quality of Hurley Creek Watershed.

- Incorporate selected alternatives, staffing, funding, etc. into a final work plan.

The Hurley Creek Watershed Improvement Plan identified a work plan that provides timelines and cost estimates for identified improvement recommendations.

- Develop and utilize visual tools to explain water quality problems and implementation plan to landowners and stakeholders.

The Hurley Creek Watershed Improvement Plan (and the SVAP assessment results of Hurley Creek) provides visual tools to assist the Committee and strategic partners explain water quality problems as well as the improvement recommendations to landowners and stakeholders.

- Continue to keep stakeholders, funding agencies, landowners, NGOs, and others informed.

The Committee will continue to hold public meetings and provide project related documents to interested parties to encourage and support project participation/communication.

Step 9 – Evaluate the Plan

Measure the progress toward project objectives both during the project as well as at the end of the project and make necessary adjustments in order to achieve success.

- Periodically determine if the project is on the schedule set in the work plan.

The Committee will work with strategic partners to continue to evaluate the progress and successes of the project.

- Periodically determine if the project is satisfying the priorities set out in the work plan.

The Committee will work with strategic partners to continue to evaluate the status of implementation recommendations and the impacts the completion of each objective has on the Watershed.

- Determine the adjustments necessary to meet the schedule and priority objectives of the project (participation rate, accurate assumptions, technology changes, etc.).

The Committee will work with strategic partners to continue to evaluate the progress of the improvement recommendations and assess the strategies implemented to complete the objectives of the Hurley Creek Watershed Improvement Plan.

- Report progress to funding partners on a regular basis.

The Committee will work with strategic partners and funding partners to ensure project status is communicated on a regular basis.

- Collect quantifiable evaluation data described in the work plan.

The Committee will work with strategic partners to collect and evaluate water sample data to help measure project success.

- Calculate evaluation measures on a regular basis (practices installed, modeled or monitored load reductions, park user days, etc.).

The Committee will work with strategic partners to develop a schedule for individual improvement recommendation evaluation as well as overall Hurley Creek Watershed Improvement Plan evaluation.

- Complete evaluation at the end of the project to determine level of success – what aspects of the project worked well and not so well?

The Committee will work with strategic partners to identify methods to measure and evaluate overall project success. The Committee will also evaluate on a case by case basis the implementation recommendation strategy successes and obstacles.

- Submit final report to funding organizations.

The Committee will work to provide strategic partners and funding sources with a copy of the final report which will detail the results of the project.