

## **M.L. 2014 Project Abstract**

For the Period Ending June 30, 2017

**PROJECT TITLE:** Southeast Minnesota Watershed Protection Plan

**PROJECT MANAGER:** Richard L. Biske

**AFFILIATION:** The Nature Conservancy

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**FUNDING SOURCE:** Environment and Natural Resources Trust Fund

**LEGAL CITATION:** M.L. 2014, Chp. 226, Sec. 2, Subd. 06e

**APPROPRIATION AMOUNT:** \$200,000

**AMOUNT SPENT:** \$150,624

**AMOUNT REMAINING:** \$49,376

### **Overall Project Outcomes and Results**

Despite extensive watershed planning in Minnesota, much of the efforts to date have focused on the restoration of impaired waters. Many watersheds in Minnesota have relatively healthy, unimpaired minor watersheds or sub-watersheds. These watersheds often have considerable private ownership with upland habitat, perennial vegetation or compatible land use that is resulting in clean, unimpaired waters. Yet, these landowners with existing habitat on their properties can be overlooked for conservation assistance for water quality purposes.

This project completed healthy watershed plans or Landscape Stewardship Plans (LSPs) for the Cannon and Zumbro Rivers in Southeastern Minnesota. The LSPs for the watersheds included several GIS analyses identifying ecosystem services of natural communities and priority habitat complexes within a watershed context. This information was used to prioritize Conservation Opportunity Areas (COAs) within each watershed. The plans identified a combined 589,396 priority acres out of 1,849,500 acres studied across 11 COAs encompassing minor watersheds. Four COAs were selected within the Cannon River covering 277,196 acres or roughly 30% of the watershed. Seven smaller COAs were identified within the Zumbro River watershed covering 312,200 acres or 34% of the watershed. These COAs provide guidance on protecting and restoring the most important watersheds and identified properties within them to meet multiple watershed conservation goals including water quality, upland and aquatic habitat and recreation.

The project resulted in 20 property-wide stewardship plans covering 3,000 acres listing a range of management practices for unique zones on each property. In addition to the stewardship plans 20 Conservation Action Plans (CAP) for 168 acres were developed. The CAPs can be used to apply for and implement state and federal cost-share programs for activities like prescribed fire, invasive species control and tree thinning for forest stand improvement.

The 2014 Clean Water Accountability Act and subsequent Nonpoint Funding Prioritization Plan directed state agencies to target restoration activities to those impaired waters that are closest to meeting Minnesota water quality standards and to protect those high - quality unimpaired waters at greatest risk of becoming impaired. The watershed planning approach utilized in this project prioritizes functional landscapes for healthy watershed protection as an important component to the Watershed Restoration and Protection Strategies and One Water One Plans developed by state and local partnerships. To date watershed planning has focused on the more costly aspect of restoring highly degraded waters, not those in need of protection to prevent impairment. By focusing limited technical and financial resources on intact functional landscapes and the clean waters they support, costly restoration can be avoided and ecosystem services can be maintained. This project provides an actionable plan for the

Cannon and Zumbro Rivers and a process for other watersheds to achieve the goals of the Clean Water Accountability Act and Nonpoint Funding Prioritization Plan.

### **Project Results Use and Dissemination**

Plans along with supplemental materials have been prepared to disseminate the most important content of the LSPs to relevant stakeholders and conservation planners. Landscape Stewardship Planning is being recognized as a valuable resource in watershed based plans in SE Minnesota, including the Cannon and Zumbro Watersheds. Both LSPs have been incorporated by reference into the corresponding Watershed Restoration and Protections Strategies (WRAPS) documents for the Cannon and Zumbro Watersheds. The Cannon River Watershed is now beginning the process of adopting a One Watershed One Plan (1W1P), and the technical committee has already been given a presentation on the LSP. The contributions of key partners and stakeholders in developing the plans will also increase their dissemination, as future partners recognize their own contributions and “buy in” to the process.

While the LSPs themselves are targeted at a more technical audience for use in conservation planning, the goals and themes of good stewardship of natural communities for watershed protection have been distributed to a general audience through landowner field days held in the Cannon River Watershed.



## Environment and Natural Resources Trust Fund (ENRTF) M.L. 2014 Work Plan

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**Date of Report:** 8/15/17 revised 12/14/17  
**Date of Next Status Update Report:** None  
**Date of Work Plan Approval:** June 4, 2014  
**Project Completion Date:** June 30, 2017  
**Does this submission include an amendment request?** No

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**PROJECT TITLE:** Southeast Minnesota Watershed Protection Plan

**Project Manager:** Richard Biske  
**Organization:** The Nature Conservancy  
**Mailing Address:** 1101 West River Parkway, Suite 200  
**City/State/Zip Code:** Minneapolis/MN/55415  
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**Location:** Rice, Dakota, Goodhue, Olmsted, Wabasha, Winona,

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<b>Total ENRTF Project Budget:</b>	<b>ENRTF Appropriation:</b>	<b>\$200,000</b>
	<b>Amount Spent:</b>	<b>\$150,624</b>
	<b>Balance:</b>	<b>\$49,376</b>

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**Legal Citation:** M.L. 2014, Chp. 226, Sec. 2, Subd. 06e

**Appropriation Language:**

\$200,000 the second year is from the trust fund to the commissioner of natural resources for an agreement with The Nature Conservancy to provide a framework and plans for the protection and stewardship of unimpaired waters in southeast Minnesota. The result will be a template for watershed protection in Minnesota. This appropriation is available until June 30, 2017, by which time the project must be completed and final products delivered.

## **I. PROJECT TITLE:** Southeast Minnesota Watershed Protection Plan

**II. PROJECT STATEMENT:** To date the majority of watershed conservation efforts are directed toward impaired waters. At a time when agricultural lands within the region are managed more intensively, the ecosystem services provided by the region's natural areas cannot be understated. Protection and proper stewardship of the region's natural areas is important for maintaining what is left of the region's unimpaired waters. It is much more cost-effective to protect habitat and water resources before they are degraded.

The Blufflands of Southeast Minnesota are home to more Species of Greatest Conservation Need than any other ecological subsection in Minnesota. The unique habitats like oak savannas and hickory forests, have been recognized for the wildlife habitat they provide. These same unique habitats when protected and managed responsibly, can maintain healthy rivers. Ecologically sensitive lands continue to be converted to rural residential housing and expanded agricultural production while many private lands are subject to poor management. Each of Southeast Minnesota's major rivers is impaired for turbidity and has suffered from significant flood events in recent years. The project will utilize existing datasets including the Minnesota Biological Survey, the Ecological Ranking Tool and Geologic Atlas to develop a watershed protection framework and tools necessary to keep healthy waters healthy. This project will use a process supported by the US Forest Service and will provide strategic direction for existing state and federal cost-share programs while increasing likelihood of new/additional federal cost-share from the USDA NRCS' Driftless Area Landscape Conservation Initiative.

## **III. PROJECT STATUS UPDATES:**

### **Project Status as of:** January 31, 2015

The new TNC SE Minnesota Conservation Coordinator, who will carry out most of this work plan has been brought on-board. The Watershed Partnerships for each watershed have been contacted, we will leverage their contacts to facilitate outreach to other key partners. The process of acquiring water quality data has been started for each watershed.

### **Project Status as of:** July 31, 2015

Most of the core spatial data have been gathered. Active River Analysis (ARA) is nearly complete for the Zumbro River Watershed and in progress for the Cannon River Watershed. Core partners in each watershed (PCA staff and watershed partnerships) have been engaged, and broader partner engagement is ongoing. The TNC SE MN Conservation Coordinator is engaged in the Cannon River WRAPS process to ensure the LSP strategies will be integrated into the WRAPS and future local water plans/1W1P.

Amendment Approved by the LCCMR 8-4-2015):

The Nature Conservancy respectfully requests to divide the program manager responsibilities into two positions effective January 1, 2015. In fall of 2014 the original program manager was promoted to a director level position. His old position was filled with a conservation coordinator level position. Thus, the responsibilities under the original program manager position were divided into two positions to accomplish this work plan, the program director and conservation coordinator. So, this is not a programmatic or budget change, the grant scope of work and budget remains the same.

### **Project Status as of:** January 31, 2016

Geospatial analysis of priority areas is complete in preliminary form, and meetings with stakeholders for feedback and input are ongoing. ARA for Zumbro River Watershed is being revised with better fitting elevation data. Cannon River Watershed ARA is nearly complete. Work on Cannon River Watershed LSP has been coordinated with the WRAPS process in order to include priorities developed into the local water planning process. Engagement with local partners is in progress to develop strategies for priority area protection and coordination.

**Amendment Request (01/31/2016): Amendment approved by LCCMR 2-10-2016**

The Nature Conservancy respectfully requests to move some of the activities proposed for Contract Landscape Ecologist to be performed by The Nature Conservancy's staff Ecologist effective February 1, 2016. At the time of the original work plan development TNC's ecologist was committed for research projects elsewhere and can now work on this project. So, this is not a programmatic or budget change, the grant scope of work and budget remains the same except for a shift of some contract funds to personnel.

**Project Status as of: July 31, 2016**

Draft Conservation Opportunity Areas (COAs) have been delineated for the Cannon River Watershed. Cannon River Active River Area is complete. An initial Zumbro River priority analysis, and is now being discussed with partners in order to delineate COAs for that watershed as well. Some language has been drafted for the reports. Sub-contracts are being developed to draft the final Landscape Stewardship Plan/Watershed Protection Plan. Contracts are also being developed to write additional site level plans for private lands within Conservation Opportunity Areas.

**Project Status as of: January 31, 2017**

Watershed plan drafts are in progress. Watershed overview and draft goals are in place for the Cannon Landscape Stewardship Plan (LSP). Work on those sections is in progress on the Zumbro. Draft Conservation Opportunity Areas (COAs) for both watersheds have been chosen, and are being shared with partners for review. Steering committees for each watershed to review and provide additional input for LSPs are close to final. Four stewardship plans have been finished for landowners in the West Indian Creek watershed, one of the COAs for the Zumbro River. Additionally, a consultant forester is under contract and making progress getting commitments from other landowners in the Cannon and Zumbro watersheds for the remaining stewardship plans. Field work for one plan is completed, and two other landowners have committed to having a plan prepared. Additionally, there are 12 other landowners with identified plan needs that will be contacted by the end of February. The Nature Conservancy's Southeast Minnesota Conservation Coordinator is now working with watershed partnership groups to schedule landowner workshops in both watersheds.

**Amendment Request (04/28/2017):**

The Nature Conservancy respectfully requests to contract for assistance organizing public workshops and field days as described in Activity 2, Outcome 3. The Nature Conservancy will contract with the Cannon River Watershed Partnership and Zumbro Watershed Partnership the first and second project partners identified in Section VII of the proposal. So, this is not a programmatic or budget change, the grant scope of work and budget remain the same except for a shift of personnel funds to contract.

In addition to the above amendment, due to increased cost for technical assistance to landowners, we request an increase in the contract amount to Consulting Forester/Steward Activity 2, Outcome 1 & 2. This too is not a programmatic change; the grant scope of work and budget remains the same except for a shift of personnel funds to contract.

**Amendment Approved: [05/08/2017]**

**Amendment Request (01/16/2018)**

The Nature Conservancy respectfully requests an amendment to shift funds from personnel to Professional/Technical/Service Contracts. The contracted Landscape Ecologist was able to provide extra services, specifically the creation of companion documents to each Landscape Stewardship Plan, to help spread awareness of both plans and their goals and strategies, as well as a "lessons learned" document to provide guidance for additional LSP development in future watersheds. These extra services increased the cost, which we failed to adjust in our LCCMR project budget at the time.

**Project Status as of: July 31, 2017**

The project is now complete. Landscape Stewardship Plans (LSP) have been completed for both the Cannon and Zumbro River Watersheds. The Landscape Stewardship Plans benefit from several GIS analyses performed by TNC staff, as well as St. Mary's University of Winona Geospatial Services (GSS), including Active River Area Analyses, protection priority complex identification, and an analysis of ecosystem services provided by natural lands with the Blufflands subsection. Within each LSP are Conservation Opportunity Area plans that do a more spatially precise analysis to identify specific features for protection and the most important parcels for action. Additionally, accompanying documents for each LSP have been completed, including a one-page tri-fold brochure describing the plans and their contents, and a long 6 page executive summary document that provides a more in-depth introduction to the plans, their goals, and their contents. These accompanying documents will greatly aid plan distribution, providing short summaries that will be made available to local water planning staff and stakeholders, as well as other relevant local conservation planners and decision makers. A review document of the Landscape Stewardship Planning process in SE Minnesota was also produced to capture some lessons learned from doing this collaborative, watershed based protection planning.

Implementation of these LSPs began with the Phase Two activities of this grant. TNC contracted with a consulting forester to prepare 20 site-level private stewardship plans for landowners in priority areas in the Cannon and Zumbro River Watersheds, and 20 more detailed Conservation Action Plans (CAPs). These were completed in June of 2017. Through a partnership with the Cannon River Watershed Partnership (CRWP), three landowner field days were also held within three different COAs within the Cannon River Watershed. These field days featured examples of several different stewardship practices of beneficial perennial plant communities on properties owned for a range of purposes, from recreation and natural community restoration to a working farm producing pasture-raised beef cattle.

In lieu of the 3 planned landowner field days, Conservancy staff made a decision to prioritize several public events held in the Zumbro Watershed over the past two years that have provided opportunities to highlight the practices and priorities called out in the LSPs. TNC staff has given presentations relating to good private land stewardship at the 2016 and 2017 Wabasha County Forestry Day. Additionally, the Southeast Landscape Committee of the Minnesota Forest Resources Council organized a site tour of several land management practices that benefit natural communities in places critical to water quality. While these presentations were not organized as a part of this project, TNC was involved in their execution, and they resulted in landowner discussions about good land stewardship.

**Overall Project Outcomes and Results:**

Despite extensive watershed planning in Minnesota, much of the efforts to date have focused on the restoration of impaired waters. Many watersheds in Minnesota have relatively healthy, unimpaired minor watersheds or sub-watersheds. These watersheds often have considerable private ownership with upland habitat, perennial vegetation or compatible land use that is resulting in clean, unimpaired waters. Yet, these landowners with existing habitat on their properties can be overlooked for conservation assistance for water quality purposes.

This project completed healthy watershed plans or Landscape Stewardship Plans (LSPs) for the Cannon and Zumbro Rivers in Southeastern Minnesota. The LSPs for the watersheds included several GIS analyses identifying ecosystem services of natural communities and priority habitat complexes within a watershed context. This information was used to prioritize Conservation Opportunity Areas (COAs) within each watershed. Four COAs were selected within the Cannon River covering 277,196 acres or roughly 30% of the watershed. Seven smaller COAs were identified within the Zumbro River watershed covering 312,200 acres or 34% of the watershed.

The project resulted in 20 property-wide stewardship plans covering 3,000 acres listing a range of management practices for unique zones on each property. In addition to the stewardship plans 20 Conservation Action Plans (CAP) for 168 acres were developed. The CAPs can be used to apply for and implement state and federal cost-share programs for activities like prescribed fire, invasive species control and tree thinning for forest stand improvement.

This watershed planning approach prioritizing functional landscapes for healthy watersheds protection is an important component to the Watershed Restoration and Protection Strategies and One Water One Plans developed by state and local partners. By focusing limited technical and financial resources on intact functional landscapes and the clean waters they support costly restoration can be avoided and ecosystem services can be maintained.

#### **IV. PROJECT ACTIVITIES AND OUTCOMES:**

**ACTIVITY 1:** Landscape Stewardship Plans (Lower Mississippi River Tributaries including Cannon and Zumbro Rivers)

**Description:**

Complete landscape stewardship plans for each watershed with detailed ecological assessments and protection strategies for high biodiversity sub-basins and associated habitats. Landscape Stewardship Plans (LSPs) have been recognized and supported by the US Forest Service and MN Forest Resources Council (MFRC) in the Root River, Camp Ripley and Whitewater River watersheds. LSPs serving as watershed protection plans will be developed for the Cannon and Zumbro watersheds. LSPs developed will inform MPCA's Watershed Restoration and Protection (WRaP) strategy and local water plans as the protection component. WRaPs are intended to identify watershed protection strategies for unimpaired waters in addition to restoration and source reduction strategies for impaired waters. To date protection strategies for unimpaired waters are often lacking in watershed plans.

Landscape Stewardship Plans will provide a framework for the long-term stewardship and protection of priority sub-watersheds. The landscape stewardship approach is predicated on the likelihood that different stakeholders will be satisfied by common solutions. This approach follows five general principles in developing and applying these solutions:

- Invest in priority areas – be strategic.
- Build a collaborative network – create ownership in the process and leverage resources.
- Appeal to self-interest – understand stakeholder motivations and needs.
- Manage for results – align actions with objectives and evaluate outcomes.
- Encourage flexibility at all levels – be adaptive; every situation is unique.

**Activities:**

**Stakeholder Engagement – The Nature Conservancy Staff**

The Nature Conservancy's Southeast Minnesota Conservation Coordinator will meet individually and collectively with stakeholders in the project areas. Primary stakeholders include: Minnesota Pollution Control Agency, Soil and Water Conservation Districts, Department of Natural Resources Forestry, Ecological and Water Resources and Fisheries, Watershed Partnerships, citizen groups, user groups, non-government conservation groups and individual watershed landowners. TNC staff will conduct an Active River Area analysis and a contract plan writer will conduct some of the watershed analysis using Geographic Information System (GIS) mapping. Resource prioritization and attribute weighting will be done with the influence of the above mentioned stakeholders to prioritize areas and strategies. Conservancy staff will facilitate discussions related to analysis and prioritization, ensuring stakeholder input is recognized. Conservancy staff will ensure input, analysis and products are compatible with complementary efforts and plans including Watershed Restoration and Protection Plans, 1 Water 1 Plan or Local Water Plans. Each minor watershed (approximately 10,000 to 15,000 acres in size) within the large major watershed will be ranked for protection and restoration.

**Landscape Stewardship Plan –TNC Ecologist**

A contracted plan writer will conduct watershed analysis that includes several datasets, including, but not limited to:



## Environment and Natural Resources Trust Fund (ENRTF)

### M.L. 2014 Work Plan

GIS Products	Land Ownership	Aquatic Attributes	Terrestrial Attribute
Active River Area analysis	State Land	Index of Biotic Integrity (IBI)	land cover/use
LiDAR derived terrain analysis	Parcel Size	Trends in Nitrogen, Phosphorous, Bacteria	Existing Conservation Practices
Environmental Benefits Index (EBI)	Conservation Easements	Trends in Turbidity and Suspended Solids	Native Plant Communities
	Existing Stewardship Plans	Natural Heritage Data Element Occurrence (fish and mussels)	Natural Heritage Data Element Occurrence
		Hydrology (where available)	
		Spring Shed Maps	
		Karst Features	
		Vulnerable Groundwater Zones	

#### Ecological Assessment and Sub-basin Protection Plan – The Nature Conservancy Staff

Priority sub-basins within the larger watersheds will be ranked in order based on relative watershed health. Priority watersheds will be described in greater detail in this section. Each of the watershed attributes listed above will be described in greater detail, quantified and function/interconnectedness described for each minor watershed. The sub-basin assessments and protection plans will include parcel specific conservation activities as a means of estimating conservation needs and costs associated with outreach, technical assistance and implementation.

#### Summary Budget Information for Activity 1:

ENRTF Budget: \$ 161,000  
Amount Spent: \$ 119,654 revised  
final based on  
final fringe  
benefits  
Balance: \$ 41,346 revised  
final based on  
final fringe  
benefits

#### Activity Completion Date: June 30, 2016

Outcome	Completion Date	Budget
1. Engage stakeholders: Zumbro and Cannon River Watershed Partnerships will be contacted for a summary of existing data, plans and activities. DNR Fisheries, Eco Waters and Forestry will be contacted for GIS data and MPCA will be contacted for summarized water resources data. Each agency and partner will be asked for relevant data and expert opinion. Additional partners, including SWCDs, active landowners, NRCS and others will be sought for input on the plan activities and input on review	January 2015	\$ 15,000
2. Landscape Stewardship/Watershed Protection Plans for Cannon and Zumbro Watersheds:	January 2016	\$ 100,000



<i>Stewardship plans will include watersheds ranked from protection to restoration and a description of watershed function.</i>		
<i>3. Ecological Assessment and Sub-basin Protection Plan: Detailed plans for priority sub-basins including recommended protection and management activities based on aquatic and terrestrial assessments.</i>		\$46,000

**Project Status as of:** January 31, 2015

1. Some of the data for each watershed has been collected, however more will be collected in the next month. Existing watershed and county water plans and reports have been collected for use in the Landscape Stewardship Plan. More partner engagement will be required in the next month.

**Project Status as of:** July 31, 2015

2. The majority portion of necessary data for each watershed has been collected. ARA analysis is nearly complete for the Zumbro River and in progress for the Cannon River Watersheds. Primary partner engagement has been completed, with each watershed partnership being included in early process planning, and PCA staff involved in provided data and discussions of analysis. The TNC Southeast MN Conservation Coordinator is also engaged in the Cannon River WRAPS process, ensuring that the Landscape Stewardship Plan will integrate well with the WRAPS document and future local water plans/1W1P (1 Watershed 1 Plan). The Southeast MN Conservation Coordinator has reviewed the most relevant plans to incorporate previous planning work into the LSPs as well. Ongoing engagement efforts to a broader suite of desired participants is in progress, and should be very active in the next month.

**Project Status as of:** January 31, 2016

3. Priority conservation area mapping for Cannon River Watershed is complete in preliminary form, with the results being discussed with local stakeholders and partners for feedback. Local partners are being engaged to develop strategies for identified priority areas. The Zumbro River ARA is currently being revised using a new elevation dataset to address some data flaws in the original analysis. The Cannon River ARA analysis is nearly complete, with riparian zones delineated, leaving wetflat areas to be designated according to connected stream order. Data organization for the Zumbro river priority mapping has begun and, that analysis will begin in earnest in the next few months, in order to be ready for use when the Zumbro Watershed begins its WRAPS process this year.

**Project Status as of:** July 31, 2016

4. Draft COAs have been designated for the Cannon River Watershed. Several meetings have occurred with key partners and reception has been positive, with one county discussing including the final plan into its County water plan. Meetings regarding COAs and the resources they contain have generated discussion on potential for future collaborative projects and programs. The Cannon River Active River Area is also now complete. Some report language has been drafted, though a sub-contractor will be hired for full plan composition. The Zumbro River priority analysis has preliminary results that are being discussed with partners in order to use them to delineate COAs in that watershed. This is occurring simultaneously with the WRAPS process in that watershed.

**Project Status as of:** January 31, 2017

5. Cannon River: A first draft of the main Landscape Stewardship Plan (LSP) has been completed by the contractor drafting the report. It is being reviewed by TNC staff, and will be sent to partners for review in the next two weeks. Four Conservation Opportunity Areas (COA) have been identified in the Cannon River Watershed, representing over 277,000 acres (total watershed area is 940,540 acres). See below for a description of Conservation Opportunity Areas.

Zumbro River: The first draft of the Landscape Stewardship Plan is currently in progress. Completion is expected by early March. Eight Conservation Opportunity Areas have been identified, representing nearly 300,000 acres (total watershed area is 900,000 acres).

These represent areas where the watershed remains healthiest. More specifically, where natural communities and other perennial vegetation are most prevalent, connected, and occur on the most critical areas for water quality protection, including riparian areas, steep and erodible slopes, and wetlands. The selection process also weighted catchments based on water quality, giving preference to areas protecting waters that are 1) above impairment but near the threshold, 2) below impairment but near the threshold, or 3) in very good condition. These priority areas will be targeted for protection and landowner outreach activities, as well as the focus of increased partner coordination.

Most or all of the COAs in each watershed will have smaller, individual protection strategies developed. This will be informed by a parcel-level analysis of conservation value to habitat and water quality of both protection and restoration currently being developed by a Nature Conservancy scientist. This will be used to identify the 10 to 20 most important parcels in each COA for outreach.

GIS analysis will estimate the value of ecosystem services currently being provided by the natural communities of the karst regions of the watersheds. This valuation will help demonstrate the necessity of protecting the ecological functions that are currently in place that help protect water quality in the region.

#### **Final Report Summary:**

6. The Landscape Stewardship Plans for both the Cannon and Zumbro River Watersheds are complete. They contain watershed wide strategies for natural community protection, as well as spatial analyses that identify the areas where those natural communities are in place in key positions within the watersheds. These priority areas represent places where conservation efforts will benefit multiple ecological and conservation interests, and appeal to a variety of environmental stakeholders, providing opportunities for collaboration and efficient use of resources.

Several GIS analyses were performed that informed the development of the LSPs. Some, such as the above mentioned priority complex identification process, are central to the plan and are heavily represented within the text. Others, such as the analysis of ecosystem services of natural communities performed by St. Mary's University Geospatial Services (GSS), are mentioned more briefly in the plan, but were instrumental in adding scientific input into our goals and the prioritization of our strategies.

In addition to the watershed wide strategies outlined in the main body of the LSPs, each also contain more detailed analyses and plans of some or all of the identified priority areas (called Conservation Opportunity Areas, or COAs). In the Cannon River Watershed, priority areas were more concentrated in four areas, and each COA received a detailed COA plan. In the Zumbro Watershed, complexes of conservation targets were more spread out, causing several (7) smaller COAs to be identified. Three COA plans were prepared, with some COAs being grouped together to get better coverage.

In the Cannon River Watershed, four COAs were identified, totaling 277,196 acres, roughly 30% of the watershed. The largest of the four was the 98,306 acre Lakes/Headwaters region, which covers several minor watersheds in the headwaters of the Cannon river, as well as the upper reaches of two direct tributaries to the Cannon River. This area is distinct in having a high concentration of lakes. The smallest COA in the Cannon LSP is the 51,053 acre Big Woods COA, which includes Nerstrand Big Woods State Park, subwatersheds of Prairie Creek where intact riparian areas provide connected natural areas around the state park, and other important areas for biodiversity such as River Bend Nature Center near Fairbault.

In the Zumbro River Watershed, seven COAs were identified totaling 312,200 acres, or 34% of the total watershed, ranging in size from 19,462 acres to 61,463 acres. The largest is the Zumbro Falls COA, which includes and Lake Zumbro, as well as the confluences of both the Middle and North Forks of the Zumbro River with the main stem. The smallest is Rice Lake COA, which covers a small subwatershed surrounding Rice Lake on the western edge of the watershed, and represents an opportunity for headwaters protection and restoration around an important lake.

These COAs will help direct TNC's habitat protection and restoration funds in the two watersheds, providing our target areas for an ongoing program of protection, restoration, and enhancement funded by the outdoor heritage funds. The detailed plans prepared for the COAs included identification of the most important parcels within each, and these parcel lists can help local SWCDs and state agencies direct their outreach efforts for private landowner cost share programs to the most important tracts.

In describing Landscape Stewardship Planning, we identified five criteria which will help drive their success:

- Invest in priority areas – be strategic.
- Build a collaborative network – create ownership in the process and leverage resources.
- Appeal to self-interest – understand stakeholder motivations and needs.
- Manage for results – align actions with objectives and evaluate outcomes.
- Encourage flexibility at all levels – be adaptive; every situation is unique.

These plans accomplish those goals. The priority areas identified in the GIS analyses mentioned above will help us focus our resources where they are most needed, and can pay the most dividends. The selection of those areas was done collaboratively, by seeking out and receiving feedback from key partners such as multiple divisions of MN DNR, local Soil and Water Conservation Districts, watershed partnerships, and Minnesota Pollution Control Agency, to name a few. The collaborative network, with a stake in the identified priority areas, will help ensure implementation, as the priority areas are places where multiple stakeholder's self-interests intersect.

The specific numeric goals listed in the plans will allow us to manage for results, as we will be measuring our success against real targets that will work towards the plans ultimate goals. However, they leave room for the flexibility in implementation that will let us be adaptive as we respond to changing threats or opportunities.

Several companion documents were also prepared to complement the LSPs. These include two summary documents of different lengths- one two-sided single page brochure that provide a broad overview of the plans to be widely distributed to local conservation partners and planners, and a more detailed four page summary to be used as an introductory handout to stakeholders interested in helping implement the plans or use them in their own internal planning documents. Additionally, we produced a document that reviews the Landscape Stewardship Planning process, and includes reflections on best practices and lessons learned from these early efforts at applying the Landscape Stewardship framework to conservation planning in Minnesota.

## **Activity 2: Private Land Restoration/Protection**

**Budget: \$ 39,000**

Private Land Stewardship: Consulting Foresters with Guidance from TNC Staff

Private land stewardship plans will be completed for priority properties identified in LSPs where necessary. However, emphasis will be placed on developing conservation practice plans with technical assistance directed to priority lands aligning stewardship needs with existing cost-share programs and leveraging new cost-share funds for accelerated conservation practice implementation. If more conservation practice plans are needed,

fewer Forest Stewardship Plans will be developed, including tributaries to the Lower Mississippi River in Minnesota where Landscape Stewardship Plans have been completed. Site level plans include a description of the property focusing on natural features and an identification of conservation needs/opportunities. Specific activities to address conservation needs/opportunities are described along with the means to accomplish the work; either through an existing program, private contractor or local resource group.

Field Days or Workshops will be hosted in at least 3 of the priority watersheds. Private land habitat stewardship activities will be highlighted along with important stewardship plan elements. These events will be an opportunity for landowners to meet local resource staff available, agency and private, and learn first-hand activities they can conduct on their property.

Habitat/Watershed Protection: TNC Staff facilitating Stakeholder Implementation Team

Plans will guide implementation of conservation activities in priority watersheds using Clean Water Funds and federal cost-share programs. New watershed protection tools will be developed to protect critical upland and groundwater recharge zones identified by LSPs. Specific activities identified in private land stewardship plans will provide guidance to agency and conservation stakeholders when modifying technical assistance programs and seeking implementation funds, particularly BWSR Clean Water Funds for practice and implementation, the Reinvest in Minnesota Easement Program and land acquisition.

**Summary Budget Information for Activity 2:**

**ENRTF Budget:** \$ 39,000  
**Amount Spent:** \$ 30,970 revised  
 final based on  
 final fringe  
 benefits  
**Balance:** \$ 8,030 revised  
 final based on  
 final fringe  
 benefits

**Activity Completion Date: June 30, 2017**

Outcome	Completion Date	Budget
1. 20 Site level comprehensive stewardship plans (2,000 acres of private land)	June 2017	\$ 25,000
2. 20 Conservation activity plans and associated cost-share (200 acres of practices)	June 2017	\$ 8,000
3. 6 workshops/field days	June 2017	\$ 6,000

**Project Status as of: January 31, 2015**

1. An example comprehensive stewardship plan has been developed, reviewed by area partners and will be used for stewardship plans.

**Project Status as of: July 31, 2015**

2. No further progress has been made. Effort on this activity will begin in earnest once LSPs have been developed enough to identify priority parcels

**Project Status as of: January 31, 2016**

3. In January, a member of TNC's field staff began reaching out to landowners in the West Indian Creek sub-watershed of the Zumbro River to write management plans and present options for better land stewardship. This early landowner outreach will continue through March.

**Project Status as of: July 31, 2016**

4. Four landowners within the West Indian Creek Conservation Opportunity Area were contacted by the TNC staffer and stewardship plans are nearly completed. Contracts for a sub-contractor to begin landowner outreach and plan writing are nearly developed to begin in fall 2017 to reach out to priority landowners within COAs.

**Project Status as of: January 31, 2017**

5. Stewardship plans have been completed for four landowners within the West Indian Creek watershed, all of which are within a draft Conservation Opportunity Area (COA) of the Zumbro Watershed. Additionally, a consultant forester is under contract to prepare 20 stewardship and conservation activity plans for landowners in priority areas of the two watersheds. He has field work completed for three plans covering 340 acres, with 12 other interested landowners waiting. A second consultant forester may be brought on to help finish additional plans based on landowner interest and available funding.

**Final Report Summary:**

6. Comprehensive land stewardship plans have been completed for landowners in identified priority areas within the Cannon and Zumbro River Watersheds, as well as Conservation Action Plans that describe projects at a detail sufficient for securing cost share resources. The 20 stewardship plans cover just over 3,000 acres, with individual plans covering a minimum of 25 acres and a maximum of 971 acres (average: 150 acres). The Conservation Action Plans apply to specific projects that total 168 acres, with a minimum of 1 acre and a maximum project size of 27 acres (average 8.4 acres). The most common project prescription was for invasive species control, with several thinning and prescribed fire projects also receiving plans. These plans will qualify landowners to apply for cost share programs from DNR Division of Forestry. Additional cost share assistance could be sought from NRCS programs like EQIP, local assistance from counties with designated Cooperative Weed Management Areas, or other programs administered by locals Soil and Water Conservation Districts.

Three landowner field days were held during June, through a partnership with the Cannon River Watershed Partnership (CRWP) that presented several different land management strategies and practices on key parcels within the watershed for water quality and biodiversity. The lands that were displayed included a range of ownership goals and land uses from recreation/natural community restoration to a working farm with a large rotational grazing system in place.

There have been several landowner events in the Zumbro watershed recently, that provided similar content to what would have been accomplished through the originally intended Zumbro Watershed field days. TNC staff have given presentations on the importance of good land stewardship and resources available to landowners at the last two Wabasha Forestry Day events (in 2016 and 2017), which were well attended. Additionally, The Southeast Landscape Committee of the Minnesota Forest Resources Council (MFRC) organized a tour of several land stewardship practices in 2016. While these events were not organized through this project, TNC staff were involved in all of them.

## **V. DISSEMINATION:**

**Description:** Copies of Landscape Stewardship/Watershed Protection Plans will be provided to each stakeholder within the respective watersheds, including, but not limited to: watershed organizations, Soil and Water Conservation Districts (SWCD), Board of Water and Soil Resources, Minnesota Pollution Control Agency, MN DNR Divisions and NGOs operating in the watershed. TNC's Project Manager will also provide updates and final results via presentations to watershed boards and regional partnerships.

Site level comprehensive stewardship and conservation activity plans will be provided to the landowners and land managers of each site. Site plans will also be provided to the relevant program staff including SWCDs,

Natural Resources Conservation Service and DNR Forestry. Private Forest Management (PFM) Plans approved by a DNR Forester will be entered into the DNR's PFM module that tracks landowner outreach and conservation needs.

**Project Status as of:** January 31, 2015

1. No final report or material for dissemination has been developed.

**Project Status as of:** July 31, 2015

2. TNC Southeast MN Conservation Coordinator introduced the effort to Cannon River Watershed stakeholders at the WRAPS kick-off meeting on 9 June 2015.

**Project Status as of:** January 31, 2016

3. Significant time has been invested coordinating the Landscape Stewardship Plan preparation with the Cannon River WRAPS process making sure that it can be easily incorporated into local water planning. This effort should also benefit adoption of the Zumbro plan, as similar staff will begin working on that plan this year.

**Project Status as of:** July 31, 2016

4. TNC priority analysis was used in the Cannon River WRAPS report, and similar coordination efforts are ongoing for the Zumbro River watershed, which is in the process of developing its WRAPS report currently.

**Project Status as of:** January 31, 2017

5. Preparations are being made to finalize plans for publication and distribution of the final plan, as well as several companion documents, including brochures describing priority areas and suitable protection strategies as well as a guide to watershed protection planning to share the lessons learned and best practices of the process with other interested entities.

The Landscape Stewardship Plans (LSPs) have also been referenced as strategies for protection in the Watershed Restoration and Protection Strategies (WRAPS) documents for each watershed. The WRAPS, produced by the Minnesota Pollution Control Agency, is meant to outline strategies for both restoration and protections for each major watershed in the state that could result in meeting numerical water quality objectives. The LSPs are referenced for their value in prioritizing and directing protection efforts that will help maintain the natural communities in each watershed that are most impactful in protecting water quality. Because protection is focused on preventing degradation, as opposed to reversing it, its impacts are harder to quantify, and so are often given less emphasis in the WRAPS document. The LSPs are useful companion documents to the WRAPS, because they represent a science based strategy for maximizing the impact of protection work for water quality. The GIS analysis being conducted by Saint Mary's Geospatial Services will help further quantify what that impact is.

**Final Report Summary:** July 31, 2017

6. Plans have been fully completed, along with supplemental materials that have been prepared for the purpose of disseminating the most important content of the LSPs to relevant stakeholders and conservation planners. Landscape Stewardship Planning is being recognized as a valuable resource in watershed based plans in SE Minnesota, including the Cannon and Zumbro Watersheds. Both LSPs have been incorporated by reference into the corresponding Watershed Restoration and Protections Strategies (WRAPS) documents for the Cannon and Zumbro Watersheds. The Cannon River Watershed is now beginning the process of adopting a One Watershed One Plan (1W1P), and the technical committee

has already been given a presentation on the LSP. The contributions of key partners and stakeholders in developing the plans will also increase their dissemination, as future partners recognize their own contributions and “buy in” to the process.

While the LSPs themselves are targeted at a more technical audience for use in conservation planning, the goals and themes of good stewardship of natural communities for watershed protection have been distributed to a general audience through landowner field days held in the Cannon River Watershed in June, as described for Activity 2.

## VI. PROJECT BUDGET SUMMARY:

### A. ENRTF Budget Overview:

Budget Category	\$ Amount	Explanation
Personnel:	92,000	TNC Program Director: approximately \$4,000.00, .04 FTE on Activity 1 and approximately .01 FTE on Activity 2 to assist with final plan development and editing, contracts management, and other as necessary. Conservation Coordinator: approximately \$58,000.00, .55 FTE annually for coordination, plan elements. TNC Regional GIS Specialist: Active River Area Analysis. Approximately \$9,000.00, .05 FTE annually Ecologist: Will conduct healthy watershed analysis using GIS data and biological data to determine criteria for healthy watersheds and necessary natural features to maintain aquatic health. .25 FTE approximately \$21,000, 70% for salary and 30% for benefits.
Professional/Technical/Service Contracts:	108,000	2 Watershed plans, up to 20 site level plans Site level plans will meet Forest Stewardship Plan requirements of the MN DNR Division of Forestry and approved by a DNR Forester. Each plan will include an assessment of the entire property broken down by forest stand or habitat type. Specific management recommendations with schedule and applicable cost-share program will be included. Additionally, 20 conservation practice plans will be written making specific conservation activities eligible for state or federal cost-share. Note, if the need for more conservation practice plans is identified, more conservation practice plans will be developed and fewer forest stewardship plans will be developed. Public Workshop and Field Day support will be contracted.
<b>TOTAL ENRTF BUDGET: \$200,000</b>		

Explanation of Use of Classified Staff: N/A

Explanation of Capital Expenditures Greater Than \$5,000: NA

**Number of Full-time Equivalents (FTE) Directly Funded with this ENRTF Appropriation: 1.5**

**Number of Full-time Equivalents (FTE) Estimated to Be Funded through Contracts with this ENRTF Appropriation: 2.0**

**B. Other Funds:**

Source of Funds	\$ Amount Proposed	\$ Amount Spent	Use of Other Funds
<b>Non-state</b>			
	\$44,000	\$32,850 approximate unrecovered indirect	TNC staff for analysis that goes into plan Unrecoverable indirect.
	141,000	\$23,307. USFS grant is 16% spent and half way through award period	US Forest Service Grant for use implementing watershed protection plans/Landscape Stewardship Plans in SE Minnesota
<b>State</b>			
	\$0	\$	
<b>TOTAL OTHER FUNDS:</b>	<b>\$44,000</b>	<b>\$ 56,157</b>	

**VII. PROJECT STRATEGY:**

**A. Project Partners:**

Project Partners Not Receiving Funds:

- Minnesota Pollution Control Agency
- Goodhue Soil and Water Conservation District
- Board of Water and Soil Resources
- MN DNR Divisions of Forestry and Ecological and Water Resources
- Wabasha Soil and Water Conservation District

Project Partners Receiving Funds:

- Contract Plan Writer TBD: \$73,000 for production of the watershed protection plan.
- Consulting Forester: \$28,000 for site level conservation plans
- Cannon River Watershed Partnership: \$2,000 for assistance organizing landowner workshop logistics
- Zumbro Watershed Partnership: \$2,000 for assistance organizing landowner workshop logistics

**B. Project Impact and Long-term Strategy:**

The project will provide guidance on assessing healthy watersheds within Southeast Minnesota and the attributes that contribute to healthy watersheds including clean water and stable flows. Strategies for maintaining clean water, healthy flows and aquatic habitat through land management will be identified and described in a way that can be integrated with existing programs with state and local agencies. Understanding what makes healthy watersheds healthy and conditions contribute to healthy waters is a significant step in watershed management in Minnesota. To date, much of the watershed assessment, planning and



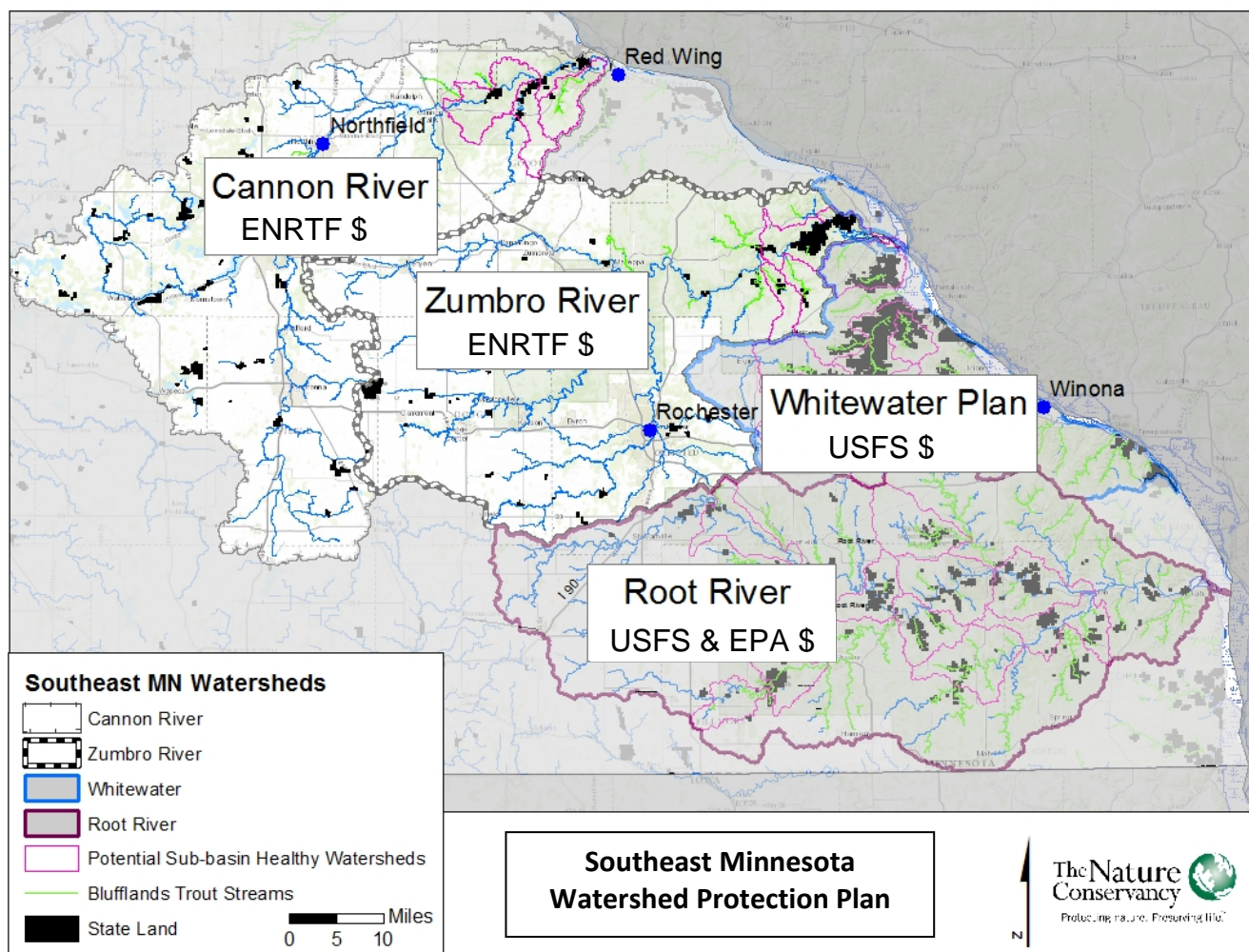
implementation work that is done has focused on impaired or degraded waters. It is important to prevent healthy lakes, rivers and streams from becoming degraded in the first place. This project will develop a process for keeping healthy waters healthy for the Cannon and Zumbro Rivers while providing a framework for other watersheds to replicate.

**C. Spending History:**

Funding Source	M.L. 2008 or FY09	M.L. 2009 or FY10	M.L. 2010 or FY11	M.L. 2011 or FY12-13	M.L. 2013 or FY14
US Forest Service				\$40,000	
US Forest Service				\$30,000	

**VIII. ACQUISITION/RESTORATION LIST: NA**

**IX. VISUAL ELEMENT or MAP(S):**



**X. ACQUISITION/RESTORATION REQUIREMENTS WORKSHEET: NA**

**XI. RESEARCH ADDENDUM: NA**

**XII. REPORTING REQUIREMENTS:**

**Periodic work plan status update reports will be submitted no later than January 31, 2015, July 31, 2015, January 31, 2016, July 31, 2016, January 31, 2017. A final report and associated products will be submitted between June 30 and August 15, 2017.**

<b>Environment and Natural Resources Trust Fund</b>											
<b>M.L. 2014 Project Budget</b>											
<b>Project Title:</b> Southeast Minnesota Watershed Protection Plan											
<b>Legal Citation:</b> M.L. 2014, Chp. 226, Sec. 2, Subd. 06e											
<b>Project Manager:</b> Richard Biske											
<b>Organization:</b> The Nature Conservancy											
<b>M.L. 2014 ENRTF Appropriation:</b> \$ 200,000											
<b>Project Length and Completion Date:</b> 3 Years, June 30, 2017											
<b>Date of Report:</b> 1/16/2018											
	Revised Activity 1 Budget 4-28- 2017	Revised Activity 1 budget 1/16/18	Amount Spent	Activity 1 Balance	Revised Activity 2 Budget 4-28- 2017	Revised Activity 2 Budget 1/16/18	Amount Spent	Activity 2 Balance	Revised TOTAL BUDGET 4-28- 2017	Revised TOTAL BUDGET 1/16/18	TOTAL BALANCE
<b>BUDGET ITEM</b>											
<b>Personnel (Wages and Benefits)</b> <b>TNC Project Manager</b> TNC Project Manager will: 1) Administer contracts associated with the project, 2) Provide final edits and oversight of the watershed plan documents. .05 FTE total approximately \$4,000.00 <b>Conservation Coordinator (1/1/15):</b> 1) coordinate the development of Landscape Stewardship Plans with Ecological Assessments 2) Coordinate site based stewardship plans, 3) Organize and lead field days, educational events and landowner outreach activities .55 FTE/yr, 70% for salary and 30% for benefits for grant funded position. approximately \$58,000.00 <b>TNC Regional GIS Specialist</b> will: 1) Conduct Active River Area Analysis and associated GIS products .05 FTE/yr, 70% for salary and 30% for benefits for grant funded position Approximately \$9,000.00  Ecologist: Will conduct healthy watershed analysis using GIS data and biological data to determine criteria for healthy watersheds and necessary natural features to maintain aquatic health. .25 FTE approximately \$21,000, 70% for salary and 30% for benefits.	\$85,000.00	\$83,120.00	\$41,774	\$41,345.98	\$7,000	\$7,000	\$970	\$6,030	\$92,000	\$90,120	\$47,376
<b>Professional/Technical/Service Contracts</b>										\$0	
<b>Landscape Ecologist,</b> Contractor has not been identified. An RFP will be distributed and bids will be reviewed based on qualifications and price. Contractor is responsible for production for review by partners, plan writing, editing and plan forming and production	\$76,000	\$77,880	\$77,880	\$0					\$76,000	\$77,880	\$0
<b>Consulting Forester/Steward:</b> Contractor has not been identified. An RFP will be distributed and bids will be reviewed based on qualifications and price. There may be multiple contractors selected depending on interest and geographic scope. Consulting foresters will be asked to conduct property assessments, meet with landowners to discuss management history and landowner goals, develop stand/habitat type prescriptions, write specific conservation activity to address conservation needs/opportunities and produce final plans for the landowner and relevant agency.					\$28,000	\$28,000	\$28,000	\$0	\$28,000	\$28,000	\$0
<b>Watershed Partnership (04/28/2017):</b> Public Workshops and Field Days					\$4,000	\$4,000	\$2,000	\$2,000	\$4,000	\$4,000	\$2,000
<b>COLUMN TOTAL</b>	<b>\$161,000</b>	<b>\$161,000</b>	<b>\$119,654</b>	<b>\$41,346</b>	<b>\$39,000</b>	<b>\$39,000</b>	<b>\$30,970</b>	<b>\$8,030</b>	<b>\$200,000</b>	<b>\$200,000</b>	<b>\$49,376</b>