

2010 Project Abstract

For the Period Ending June 30, 2012

PROJECT TITLE: Integrated, Operational Bird Conservation Plan for Minnesota
PROJECT MANAGER: Lee A. Pfannmuller
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FUNDING SOURCE: Environment and Natural Resources Trust Fund
LEGAL CITATION: M.L. 2010, Chp. 362, Sec. 2, Subd. 3d

APPROPRIATION AMOUNT: \$151,000

Overall Project Outcome and Results

Many national, regional, and state conservation plans broadly address Minnesota birds, but a consolidated and focused state conservation agenda does not exist. The goal of this initiative was to develop a clear operational plan for Minnesota conservation organizations and resource agencies that builds on existing plans, establishes priorities to guide conservation actions, and identifies conservation targets. Plans were prepared for Minnesota's four ecological provinces: the Tallgrass Aspen Parklands, the Laurentian Mixed-Forest, the Eastern Broadleaf Forest and the Prairie Parkland. The bird composition of each province is sufficiently distinct to warrant a different approach and different priorities. Three tasks were implemented in each province:

- First Task: Delineated a pool of priority species and selected a subset of conservation target species.
- Second Task: Decided where, among the suite of Minnesota's 48 Important Bird Areas (IBAs), it is most important to work to protect and manage these species.
- Third Task: Developed a toolbox of conservation actions to insure these species maintain viable populations on the priority IBAs, as well as throughout Minnesota.

Titled *An Implementation Blueprint for Minnesota Bird Conservation*, the operational plan's components include: 1) *Implementation Blueprints for Bird Conservation* in each ecological province, which identify clear priorities to guide conservation actions; 2) conservation accounts for 78 priority species; 3) detailed *Conservation Blueprints* for nine target species; 4) a database compiling critical information on 434 Minnesota birds; 5) a publication that highlights twelve of Minnesota's stewardship species (species that have $\geq 5\%$ of their global population in the state and $\geq 5\%$ of their North American breeding range in the state); and 6) management plans for three of Minnesota's priority Important Bird Areas (Goose Lake Swamp IBA, the Twin Cities Mississippi River IBA, and the Vermillion Bottoms-Cannon River IBA).

Project Results Use and Dissemination

- The *Conservation Blueprints* were used in the development of Audubon's recently completed *Guide to Urban Bird Conservation* (Spring 2012): <http://mn.audubon.org/twin-cities-bird-conservation>.
- A booklet, *Stewardship Birds of Minnesota: Our Global Responsibility* was published in June 2012 (http://mn.audubon.org/sites/default/files/documents/11-18-12_web_stewardship-brochure.pdf).
- Findings were presented at nine workshops and eleven additional statewide and regional meetings.
- The *Common Tern Minnesota Conservation Blueprint* was used at a Structured Decision Making meeting to inform future Common Tern management at the Rice Lake National Wildlife refuge.
- Audubon is exploring ways to make all project data available to resource managers in a GIS format; in the interim *Conservation Blueprints* for the nine conservation targets and *Implementation Blueprints* for each ecological province will be available on the Audubon Minnesota website (<http://mn.audubon.org>).
- Information is helping update Minnesota's Comprehensive Wildlife Conservation Strategy.

**Environment and Natural Resources Trust Fund (ENRTF)
2010 Work Program Final Report**

Date of Report: November 26, 2012

Final Report

Date of Work Program Approval: June 9, 2010

Project Completion Date: June 30, 2012

I. PROJECT TITLE: Integrated, Operational Bird Conservation Plan for Minnesota

Project Manager: Lee A. Pfannmuller
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Web Site Address: <http://mn.audubon.org/>

Location: Statewide

Total ENRTF Project Budget:	ENRTF Appropriation:	\$ 151,000.00
	Minus Amount Spent (thru 6-30-2012):	\$ 150,983.68
	Equals Balance:	\$ 16.32

Legal Citation: M.L. 2010, Chp. 362, Sec. 2, Subd. 3d

Appropriation Language:

\$151,000 is from the trust fund to the commissioner of natural resources for an agreement with Audubon Minnesota to develop an integrated bird conservation plan targeting priority species and providing a framework for implementing coordinated, focused, and effective bird conservation throughout Minnesota.

II. and III. FINAL PROJECT SUMMARY

Many national, regional, and state conservation plans broadly address Minnesota birds, but a consolidated and focused state conservation agenda does not exist. The goal of this initiative was to develop a clear operational plan for Minnesota conservation organizations and resource agencies that builds on existing plans, establishes priorities to guide conservation actions, and identifies conservation targets. Plans were prepared for Minnesota's four ecological provinces: the Tallgrass Aspen Parklands, the Laurentian Mixed-Forest, the Eastern Broadleaf Forest and the Prairie Parkland. The bird composition of each province is sufficiently distinct to warrant a different approach and different priorities. Three tasks were implemented in each province:

- First Task: Delineated a pool of priority species and selected a subset of conservation target species.
- Second Task: Decided where, among the suite of Minnesota's 48 Important Bird Areas (IBAs), it is most important to work to protect and manage these species.
- Third Task: Developed a toolbox of conservation actions to insure these species maintain viable populations on the priority IBAs, as well as throughout Minnesota.

Titled *An Implementation Blueprint for Minnesota Bird Conservation*, the components of the operational plan include: 1) *Implementation Blueprints for Bird Conservation* for each ecological province, which

identify clear priorities to guide conservation actions; 2) conservation accounts for 78 priority species; 3) detailed *Conservation Blueprints* for nine target species; 4) a database compiling critical information on 434 Minnesota birds; 5) a publication that highlights twelve of Minnesota's stewardship species (species that have $\geq 5\%$ of their global population in the state and $\geq 5\%$ of their North American breeding range in the state); and 6) management plans for three of Minnesota's priority Important Bird Areas (Goose Lake Swamp IBA, the Twin Cities Mississippi River IBA, and the Vermillion Bottoms-Cannon River IBA).

Amendment Request (5/10/11)

This amendment is being requested to clarify that the principal investigator, Lee Pfanmuller, is employed as a 100% FTE by National Audubon and that the fringe benefit rate is included in the salaries, as originally outlined in the LCCMR Proposal for the project. Also noted is a change in the administrative support personnel, from Jenny Vitale to Susan Swanson.

Amendment Approved: May 13, 2011

IV. OUTLINE OF PROJECT RESULTS:

RESULT/ACTIVITY 1: A draft Minnesota Bird Conservation Plan identifying prioritized bird species for conservation and practical conservation strategies for each species.

Description: Work will begin by identifying, reviewing and evaluating a wide array of long-range and strategic plans that address the conservation of Minnesota birds and their habitats. The effort will include a review of national plans under the umbrella of the North American Bird Conservation Initiative (such as the U.S. Shorebird Conservation Plan and the North American Landbird Conservation Plan); relevant regional plans under the umbrella of the Partners In Flight (PIF) Initiative (such as the PIF Bird Conservation Plans for the Northern Tallgrass Prairie and the Boreal Hardwood Transition); and regional joint venture plans designed to implement elements of the North American Bird Conservation Plan (such as the Upper Mississippi River and Great Lakes Region Joint Venture Implementation Plan). Numerous state conservation and management plans also will be reviewed (such as Tomorrow's Habitat for the Wild and Rare and Minnesota's Statewide Conservation and Preservation Plan) as well as state plans for priority habitats and landscapes (such as the Minnesota Forest Resources Council's regional landscape plans and The Nature Conservancy's Landscape Action Plans). In addition, there are national plans for individual species that occur in Minnesota (such as the King Rail and Cerulean Warbler) and numerous other plans and reports that directly or indirectly address the conservation of Minnesota birds and their habitats (such as recent reports addressing birds and climate change).

Most of these plans do an excellent job of compiling resource information and assessing the status of birds and their habitats, assessing current and potential future threats, and establishing very broad programmatic goals for conservation and management. But it is challenging to determine which, among the multitude of species discussed in each plan, are really the highest priority for action and which are most likely to benefit from immediate conservation efforts.

The objective of this first year of work is to synthesize and integrate bird species and bird habitat priorities from these existing plans and to develop a draft list of priority bird species at the state level and for each of Minnesota's ecological subsections. The emphasis is not to repeat work that has already been done, resulting in large lists of priority species for habitats throughout the state. Instead, the goal is to develop a short, manageable list of species that are most likely to benefit from local and statewide conservation efforts in the next 5-10 years.

Known conservation and management practices for each bird on this initial list of priority species will be synthesized and used to identify draft conservation actions at the statewide level and for each ecological

subsection. Together the information will be combined to develop the first draft of the operational plan for Minnesota bird conservation.

A group of technical advisors will be established to help provide guidance throughout the duration of the project. We will consider selecting representatives from groups such as Audubon Minnesota, the Minnesota Department of Natural Resources, the U.S. Fish and Wildlife Service, the University of Minnesota, the Nature Conservancy, the U.S. Forest Service, the National Park Service, Hawk Ridge Bird Observatory, the Minnesota Ornithologists Union, affiliate members of Bird Conservation Minnesota, and local Audubon Chapters.

Summary Budget Information for Result/Activity 1: ENRTF Budget: \$68,466.00
Amount Spent (thru 12-11-2011): \$67,219.68
Balance: \$ 1,246.32

Deliverable/Outcome	Completion Date	Budget
1. Compile and evaluate existing bird conservation efforts	October 15, 2010	\$19,696.00
2. Develop a draft bird species priority list (statewide and by subsection)	December 15, 2010	\$11,268.00
3. Compile and synthesize habitat needs and best management practices	March 30, 2011	\$19,651.00
4. Identify draft conservation actions to implement at the statewide level and for each ecological subsection	April 30, 2011	\$ 5,764.00
5. Prepare a draft operational plan	July 1, 2011	\$12,087.00

Result Completion Date: July 1, 2011

Final Report Summary: June 30, 2012

- Compiled and evaluated existing bird conservation efforts

Scores of national, regional and state bird and habitat conservation plans that address Minnesota bird species and Minnesota landscapes were reviewed. A particular emphasis was placed on bird conservation documents developed by the North American Bird Conservation Initiative. The latter includes national and regional conservation plans for waterfowl (North American Waterfowl plans), waterbirds (North American Waterbird plans), shorebirds (U.S. Shorebird Conservation plans) and landbirds (Partners in Flight plans). Among some of the other documents reviewed were individual species conservation plans, Joint Venture plans, Minnesota Forest Resources Council landscape plans, the Minnesota Statewide Conservation and Preservation Plan, Minnesota's Comprehensive Wildlife Conservation Strategy (*Tomorrow's Habitat for the Wild and Rare*), A Fifty Year Vision: Conservation for Minnesota's Future, bird monitoring reports from the Superior and Chippewa National Forests, Minnesota's Long-Range Duck Plan, Minnesota's Aquatic Management Area Plan, Minnesota's Wildlife Management Area Plan, plans prepared by the Minnesota Nature Conservancy, and bird conservation plans from a select number of other states.

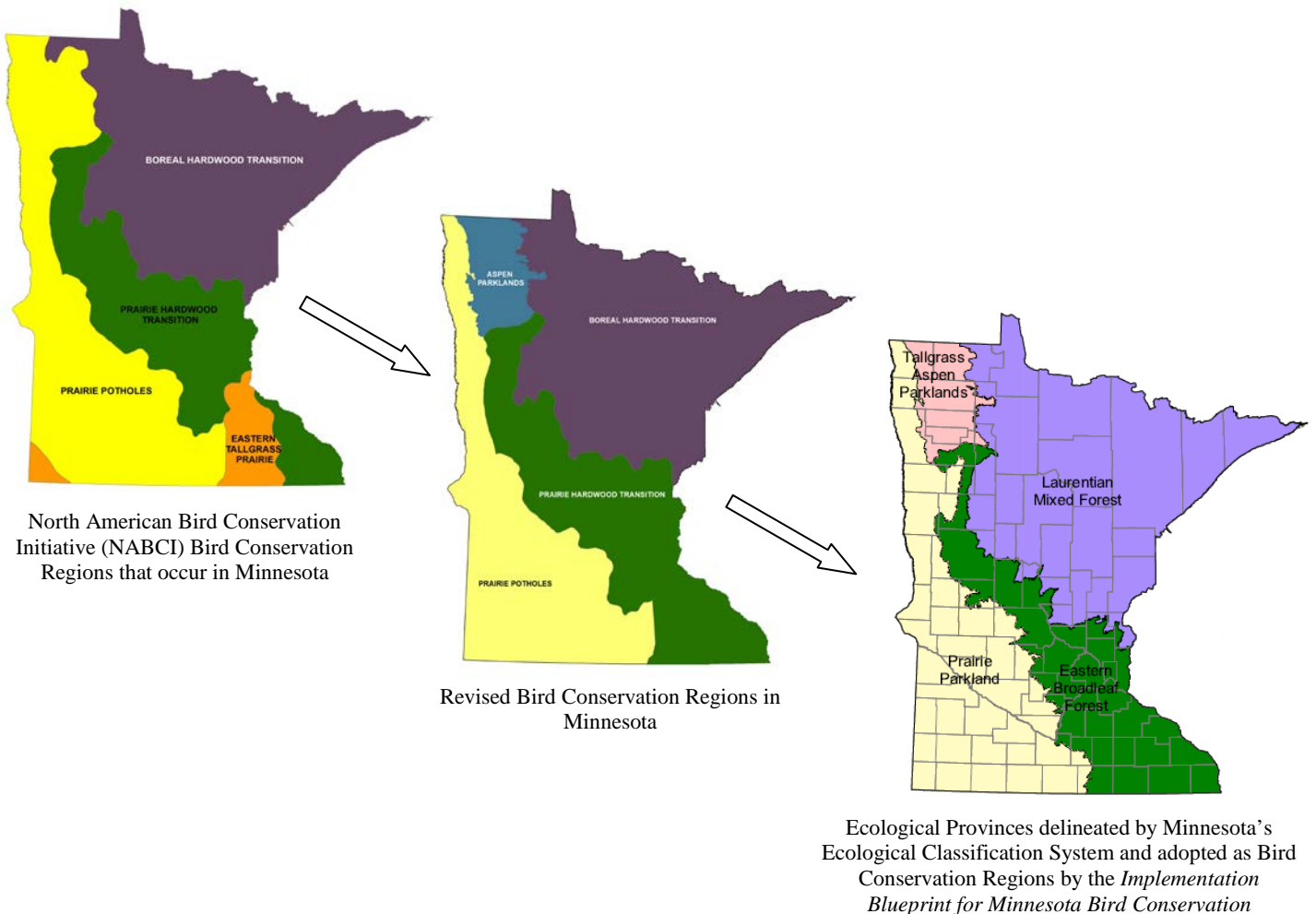
- Developed a database that summarizes critical information on each Minnesota bird species

Relevant data from all the reviewed plans were compiled into an extensive database on Minnesota birds that occur in the state regularly (314 species), casually (42 species) and accidentally (78 species). Over 400 fields of data summarize information on such traits as distribution, life history, population

size, population trends, vulnerability to climate change, and status at the global, federal and state levels (not all fields are appropriate for each species). An additional document details the metadata for each field. Nothing similar to this has been compiled in Minnesota or elsewhere in the Great Lakes region. The database is available upon request and already has been provided to several resource agency personnel.

- Delineated four Bird Conservation Regions in Minnesota

Following analysis of the birds present in each of the four Bird Conservation Regions (BCRs) delineated by the North American Bird Conservation Initiative (see figure below left), the regions were revised slightly for the purposes of Minnesota’s Bird Conservation Plan (below, center). Specifically, the Tallgrass Aspen Parklands was separated from the Prairie Pothole Region because of its unique habitat and combination of bird species. The portion of the Eastern Tallgrass Prairie Bird Conservation Region located in southwestern Minnesota was combined with the Prairie Pothole Region and the portion of the Eastern Tallgrass Prairie Bird Conservation Region located in southeastern Minnesota was combined with the Prairie Hardwood Transition Region. The resulting Bird Conservation Region boundaries were reasonably similar to the four province boundaries of Minnesota’s Ecological Classification System (below right), allowing reasonable extension of the NABCI data for the BCRs to the provinces. Because Minnesota’s Ecological Classification System boundaries have become a standard reference for land managers throughout the state, this project adopts those boundaries.



- Identified bird priorities in each Bird Conservation Region

Following consultation with several key technical advisors, including personnel associated with the University of Minnesota, the U.S. Fish and Wildlife Service, and Hawk Ridge Bird Observatory, the database was used to develop a preliminary list of priority birds for each bird conservation region. Our original work plan proposed identifying priorities for each ecological subsection but the broad distribution of birds made identification of priorities by Bird Conservation Region (i.e. ecological province) more reasonable.

The preliminary list was presented to the Audubon Board and an interagency prairie team (USFWS, MNDNR, BWSR, TNC, MDA) in late December 2010 and late January 2011. Based on initial feedback a second approach was designed to delineate species priorities. The first approach relied heavily on identifying species that are present in manageable numbers in Minnesota and that were identified as priorities by the North American Bird Conservation Initiative (NABCI); the second approach relied more heavily on identifying species present in manageable numbers, with declining Minnesota populations, and dependent on habitats that are vulnerable in Minnesota. The advantage of the first approach is that it relies on data compiled by a team of experts for each NABCI Bird Conservation Region; the advantage of the second approach is that it incorporates more data specific to the species' population in Minnesota.

After the second prioritization approach was implemented, the results of the two approaches were compared and collectively used to identify three levels of priority birds in each of Minnesota's four Bird Conservation Regions: Highest Priority, High Priority, and Moderate Priority. Because a list of all bird species present in each ecological subsection was developed early during the project, these priorities can easily be stepped down to each ECS subsection.

- Prepared comprehensive species accounts for Level One (Highest) and Level Two (High) Priority Species that include habitat requirements and best management practices

Once the preliminary list of priority species was developed for each Bird Conservation Region, information on the habitat requirements and best management practices for all of the Highest and High Level Priority species in each region (66 species in total) was compiled into a species account; accounts for 12 additional Moderate Priority species were also prepared. Each account averages 4-10 pages in length and includes information on the species' population size, status classifications, distribution, migration status, habitat requirements, climate change vulnerability, best management practices, conservation recommendations, and monitoring needs.

- Identified Minnesota Stewardship Species

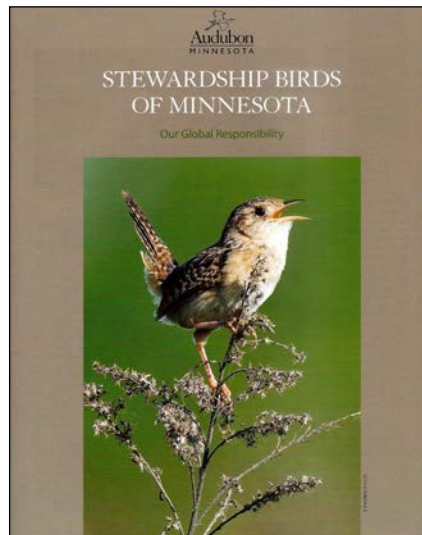
As part of the overall *Implementation Blueprint*, Audubon identified Minnesota Stewardship Species. The term 'stewardship' is applied to species that reach their greatest abundance in a particular biome, resulting in the biome having a unique responsibility for ensuring the species long-term survival and sustainability. For example, the Greater Prairie Chicken is a stewardship species in North America's Tallgrass Prairie Biome. The same concept can be applied at the state level. We delineated two criteria for identifying Minnesota's Stewardship Species: 1) $\geq 5\%$ of the species' North American breeding range occurs in Minnesota; and 2) $\geq 5\%$ of the species' global population occurs in Minnesota. Twelve species, listed in the following table, met these criteria.

Preliminary List of the Top Seven Minnesota Stewardship Species

Species	>5% of Global Population in MN	≥5% of Breeding Range in MN
Golden-winged Warbler	42%	12%
Sedge Wren	33%	14 %
American White Pelican	18%	1%*
Bobolink	13%	9%
Trumpeter Swan	12%	11%
Black-billed Cuckoo	10%	10%
American Woodcock	10%	6%
Rose-breasted Grosbeak	6%	10%
Chestnut-sided Warbler	6%	6%
Veery	6%	6%
Baltimore Oriole	5%	8%
Nashville Warbler	5%	5%

* Despite the low percentage of its total breeding range that occurs in Minnesota, the American White Pelican was included in the list of Stewardship Species because such a significant percentage of its global population occurs here. As a colonial species the pelican's population has a clumped North American distribution.

To further highlight the significance of these stewardship species, we prepared a 28 page booklet that brings attention to our global responsibility for these birds and provides information on each species distribution, description, habitat, threats/status and conservation. A total of 750 copies were printed for distribution at Audubon events and to Audubon Chapters, resources agencies and the general public. It also is available on the Audubon Minnesota website: http://mn.audubon.org/sites/default/files/documents/11-18-12_web_stewardship-brochure.pdf.



- Prepared draft *Conservation Blueprints* (i.e. operational plans) for each Bird Conservation Region

The draft plan included the following components:

1. List of Highest, High and Moderate Priority birds in each region/ecological province.
2. Identification of priority habitats to focus conservation actions on.
3. Identification of Stewardship Species that should be primary targets in each region.

4. Assessment of the monitoring efforts currently underway for the highest priority species and recommendations for future monitoring.
5. Identification of habitat protection and restoration goals in each region; when available, specific acreage goals in Minnesota are provided.
6. Identification of habitat management considerations for the highest priority species.

RESULT/ACTIVITY 2: Public review and revisions of draft plan to produce the final operational plan

Description: In order to solicit and incorporate even broader input into the draft Operational Bird Conservation Plan, a series of six workshops will be held throughout the state in the late summer and fall of 2011. We anticipate the general locations will be in the northeast, northwest, southeast and southwest regions of the state as well as two in central Minnesota (including one in the metropolitan area). The focus will be to solicit targeted input from known agency and university professionals, conservation groups and citizen scientists. Specifically, we will discuss how to narrow the number of priority species and how to select a menu of potential conservation and management measures that are reasonable for implementation at the local level and can result in measureable conservation outcomes. The involvement of local conservation groups, Audubon chapters, and citizen scientists will be particularly important as they are seen as the principal audience for the plan.

Following completion of the workshops, suggestions will be evaluated and, as appropriate, incorporated into a final plan that incorporates a toolbox of conservation actions. A press release will announce its' completion that can be used in other organization's newsletters and various media outlets. Copies of the final plan will be provided to participants, including the Department of Natural Resources, U.S. Fish and Wildlife Service, National Park Service, U.S. Forest Service, The Nature Conservancy and each Audubon Chapter. Presentations on the plan's outcomes will be made to Audubon chapters and other statewide and local conservation organizations as funds allow. We will also examine dissemination methods to other potentially interested parties such as consulting forester associations, Soil and Water Conservation Districts, Natural Resource Conservation Districts, Minnesota Naturalists, Nature Center personnel, Prairie Enthusiasts, etc. The plan will also be available on Minnesota Audubon's web page.

Summary Budget Information for Result/Activity 2: ENRTF Budget: \$44,638.00
Amount Spent: \$46,059.80
Balance: - \$ 1,421.80

Deliverable/Outcome	Completion Date	Budget
1. Conduct 6 workshops statewide for plan review and input	October 15, 2011	\$22,126.00
2. Finalize toolbox of conservation actions to implement at the statewide level and for each ecological subsection	November 30, 2011	\$ 9,124.00
2. Prepare final state operational plan	December 30, 2011	\$ 6,081.00
3. Disseminate final plan	January 30, 2012	\$ 7,307.00

Result Completion Date: January 30, 2012

Final Report Summary: June 30, 2012

- Held Statewide Workshops for plan review and input

Nine workshops were held from September 2011 through December 2011 and reached over 250 individuals from the Minnesota Department of Natural Resources (Office of Budget and Management Services, Parks and Trails, Forestry, Fish and Wildlife, and Ecological and Water Resources), the U.S. Fish and Wildlife Service (Regional Office, National Wildlife Refuges, Wetland Districts), the National Park Service, the Nature Conservancy, the University of Minnesota, the U.S. Forest Service, conservation organizations, tribes, and county park districts. The workshops were as follows:

- September 28: Workshop with biologists working on High Conservation Value Forests in the Laurentian Mixed Forest Region and Eastern Deciduous Forest Region, St. Paul
- November 1: Workshop on the Laurentian Mixed Forest Region, Duluth
- November 7: Workshop on the Prairie Parkland Region, New Ulm
- November 14: Workshop on the Eastern Broadleaf Forest Region, Brainerd
- November 16: Workshop on the Eastern Broadleaf Forest Region, St. Paul
- November 17: Statewide Workshop, St. Paul
- November 21: Workshop on the Laurentian Mixed Forest Region, Grand Rapids
- November 28: Workshop focused on the Prairie Parkland Region and Tallgrass Aspen Parkland Region, Bemidji
- December 2: Statewide Workshop, Minneapolis

In addition to these workshops, eleven additional presentations were given to solicit further input, including: to the National Fish and Wildlife Foundation, regional staff of the National Audubon Society, to a statewide gathering of private land managers and to participants to the Department of Natural Resources Fish, Wildlife and Ecological Resources Roundtable.

- Finalized toolbox of bird conservation actions

1. **Selected Target Conservation Species to further focus conservation work:** After identifying a list of Highest, High and Moderate Priority species for each of the four Bird Conservation Regions, the list of priorities was further downsized by identifying Target Conservation Species from among the list of species priorities. Target Conservation Species were selected for the most important key habitats in each of the four regions (as identified by the *Comprehensive Wildlife Conservation Strategy for Minnesota: Tomorrow's Habitat for the Wild and Rare*, 2006). Six criteria (level of priority, ecological significance, management significance, cost effectiveness and feasibility of managing, sensitivity to climate change, and percent of the species global breeding range in Minnesota) were used to help identify the most appropriate target species. Target Conservation Species selected for each Bird Conservation Region are listed in the table on the following page. Those that are highlighted in blue also were delineated as Highest Priority Species in the respective region.

Target Conservation Species selected for each Minnesota Bird Conservation Region
 (Species highlighted in blue were identified as the Highest Priority in each respective region)

Tallgrass Aspen Parkland	Prairie Parkland	Eastern Broadleaf Forest	Laurentian Mixed Forest
Sharp-tailed Grouse	Blue-winged Teal	Forster's Tern	Common Goldeneye
Upland Sandpiper	Upland Sandpiper	Eastern Whip-poor-will	Hooded Merganser
Franklin's Gull	Black Tern	Red-headed Woodpecker	Red-breasted Merganser
	Grasshopper Sparrow	Louisiana Waterthrush	Common Loon
		Prothonotary Warbler	Northern Goshawk
		Cerulean Warbler	Common Tern
		Eastern Meadowlark	Belted Kingfisher
		Yellow-headed Blackbird	Olive-sided Flycatcher
			Connecticut Warbler

2. **Prepared Conservation Blueprints for Nine Target Conservation Species:** The comprehensive species accounts that were developed for 78 species (Result #1) were further expanded into a more detailed *Conservation Blueprint* for nine of the ten Target Conservation Species that were also identified as the Highest Priority in each respective region (i.e. the species highlight in blue in the above table). A plan was not prepared for the Blue-winged Teal since it is the focus of significant conservation work by resource agencies. Each *Blueprint* combines all the background information included in the species accounts with specific conservation recommendations including a population goal, population objective and specific conservation actions.



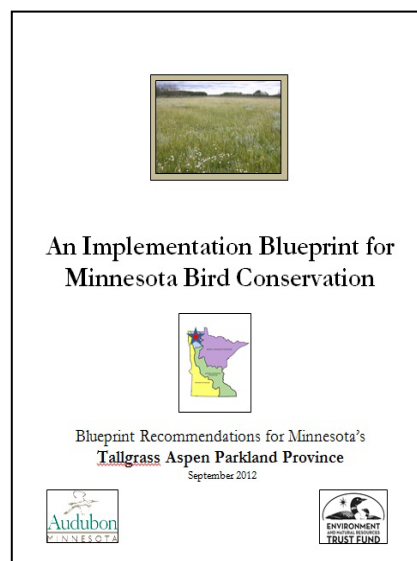
3. **Identified Important Bird Areas that are a Priority for Bird Conservation Actions**
 An analysis of the priority Important Bird Areas (IBAs) in each province that support target conservation species and other priority species was conducted. The list was developed through a two-step process. The first step analyzed all existing IBAs using a matrix of criteria that included an assessment of the following:

- ✓ Urgency/Opportunity for conservation at each IBA
- ✓ Ability to acquire funding
- ✓ Whether the IBA fits with priorities of other conservation organizations
- ✓ Species priority on the IBA
- ✓ International Bird Life Ranking of species on the IBA
- ✓ Audubon Minnesota capacity
- ✓ Threats

Second, a more thorough analysis was conducted, based on the information currently available, of the presence and relative abundance of priority species in each IBA. Information from both analyses was used to help delineate the priority IBAs in each region.

4. **Revised and finalized *Conservation Blueprints* for Each Bird Conservation Region:** As mentioned under Result #1, *Conservation Blueprints* were prepared for each of Minnesota's four Bird Conservation Regions that include additional conservation tools, such as the identification of habitat protection and restoration acreage goals in each region. The drafts were further modified to include all of the following elements:

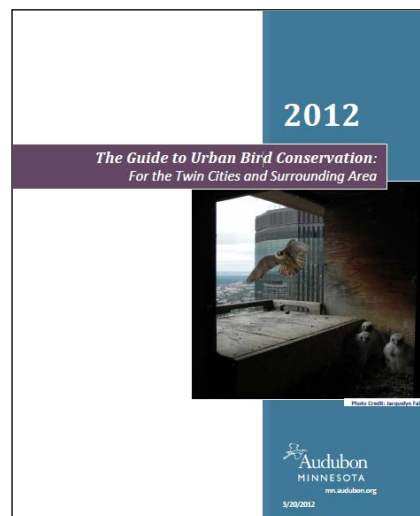
1. A brief ecological description of the region.
2. A summary of the primary characteristics of the region's bird community.
3. A brief discussion of management issues and opportunities.
4. A List of Highest, High and Moderate Priority birds in each region.
5. Identification of conservation target breeding species in each region and population goals and objectives for each.
6. Identification of Stewardship Species that should be primary targets in each region.
7. Assessment of the monitoring efforts currently underway for the highest priority species and recommendations for future monitoring.
8. Identification of key habitats in each region and the habitat associations of the highest priority species and target conservation species.
9. Recommendations for habitat protection and restoration in each region; when available, specific acreage goals are provided.
10. Identification of habitat management considerations for the highest priority species.
11. Identification of the priority Important Bird Areas in each region to focus conservation work.



- Prepared Final Plan

The final *Implementation Blueprint for Minnesota Bird Conservation* includes the following elements:

- a. Executive Summary for the entire *Blueprint*
- b. *Implementation Blueprints* for each of Minnesota's four Bird Conservation Regions (described in detail above):
 - ✓ Tallgrass Aspen Parklands
 - ✓ Prairie Parkland
 - ✓ Eastern Broadleaf Forest
 - ✓ Laurentian Mixed Forest
- c. Audubon's recently completed *Guide to Urban Bird Conservation*, which is embedded in the *Implementation Blueprint for the Eastern Broadleaf Forest Province*. Funded by the U.S. Fish and Wildlife Service, Audubon Minnesota worked with stakeholders to develop a bird plan for the seven county metropolitan region. Developed during the same time frame as the *Implementation Blueprint*, time was spent ensuring that its' approach closely mirrors that being developed for the statewide plan and includes the same priority species. It is available on Audubon Minnesota's website at: http://mn.audubon.org/sites/default/files/documents/gubc_03-19-12_pdf.pdf



- d. *Conservation Blueprints* for nine target conservation species (Upland Sandpiper, Common Tern, Black Tern, Franklin's Gull, Red-headed Woodpecker, Cerulean Warbler, Grasshopper Sparrow, Eastern Meadowlark, and Yellow-headed Blackbird).
 - e. Species accounts for 69 additional priority species.
 - f. A 28 page booklet on 12 Minnesota Stewardship species.
 - g. An excel spreadsheet summarizing life history and population data on 434 Minnesota bird species.
- Disseminated final plan

Feedback from our fall 2011 workshops led us to re-evaluate our original proposal to place all of the plan documents on the web. Managers voiced their excitement about having access to the conservation tools developed for targeted species. Nevertheless, they advised that text documents, even if they are available on the web, may not be consulted if they have to remember to search for the information each time they work on a parcel of land. They noted that GIS tools are now their primary means of accessing natural resource data and for developing and tracking the implementation of land

management plans. If Audubon could provide the information in a GIS format, it would be significantly easier for them to access and incorporate into their management activities.

As a result of this feedback, project staff met with Robert Maki, DNR Director of the Bureau of Management Information Services, and Tim Loesch, DNR GIS Coordinator, on January 11 to discuss and explore how to convert the plan documents into a GIS format that could be accessed by resource managers and professionals throughout the state via the DNR Data Deli. Because this task will require additional resources, we have developed a project proposal and are now exploring opportunities and funding for implementation. In the interim, we are using dollars available from a different funding source to prototype the concept in central Iowa.

We will, however, still post primary elements of the plan on the Audubon website. Once all elements are on the web, conservation organizations and resource agencies will be notified of their availability. The following table summarizes their distribution:

Implementation Blueprint for Minnesota Bird Conservation	Plans for Dissemination
Executive Summary	<ul style="list-style-type: none"> On the Web at www.mn.audubon.org in December 2012
Conservation Blueprints for each Ecological Province	<ul style="list-style-type: none"> On the Web at www.mn.audubon.org in December 2012
Guide to Urban Bird Conservation	<ul style="list-style-type: none"> Available at: http://mn.audubon.org/twin-cities-bird-conservation
Conservation Blueprints for 9 Target Conservation Species	<ul style="list-style-type: none"> On the Web at www.mn.audubon.org by February 2013
Species accounts for an additional 69 species	<ul style="list-style-type: none"> Currently exploring options for making the information available in a GIS format
Booklet on 12 Stewardship Species	<ul style="list-style-type: none"> Available at: http://mn.audubon.org/sites/default/files/documents/11-18-12_web_stewardship-brochure.pdf; hard copies available on request
Excel spreadsheet on all 434 Minnesota species	<ul style="list-style-type: none"> Available on request; examining options to make available in a GIS format

- Outcomes of the plan also have been used to assist the University of Minnesota Metropolitan Design Center’s work to restore portions of the Mississippi River Corridor, have been presented at the DNR Roundtable for Ecological Resources and during a webinar for all Audubon staff within the Mississippi Flyway, and were summarized in the March 2012 newsletter for Forest Stewardship professionals in Minnesota. The Common Tern Conservation Plan was used at a Structured Decision Making meeting in April to inform future Common Tern management at the Rice Lake National Wildlife refuge.

RESULT/ACTIVITY 3: Delineate and implement bird conservation actions

Description: This result has two primary outcomes. The first is to tailor the conservation priorities identified in the Operational Plan to specific conservation agendas for individual Audubon chapters. The focus will be on actions that chapters can reasonably implement in the coming 5-10 years by working

with their members and by partnering with other local conservation interests. Where feasible, emphasis will be placed on identifying conservation priorities in Important Bird Areas that are in the vicinity of chapter locations and that provide habitat for priority species.

The second outcome is to utilize the new operational plan to guide further delineation and management of Audubon Minnesota’s Important Bird Areas. Important Bird Areas (IBA) are sites that provide essential habitat for one or more breeding, wintering and/or migrant bird species in Minnesota. The IBA Program is designed to be proactive, voluntary, participatory, and science-based and it works to identify, monitor and conserve the most essential bird habitats in the state. To date, 35 IBA sites have been officially delineated in Minnesota.

One concrete conservation outcome of this work program is to insure that these IBA sites actually do provide essential habitat for the priority species that are identified in the new operational plan. As a result, we will conduct a gap analysis of the existing IBAs to determine if they include breeding and migratory habitat for the priority species identified in the plan. Then, management plans that incorporate the conservation actions identified for each species will be developed for three IBAs located in different regions of the state. This will include workshops with private and public landowners within each IBA to solicit their input and support for specific conservation actions.

Summary Budget Information for Result/Activity 3: ENRTF Budget: \$37,896.00
Amount Spent: \$37,704.20
Balance: \$ 191.80

Deliverable/Outcome	Completion Date	Budget
At the Statewide Level:		
1. Conduct a gap analysis of existing IBAs to assess if they effectively address breeding and migratory habitat for the priority species identified in the plan	March 30, 2012	\$14,918.00
At the Local Level:		
1. Identify implementation actions for Audubon chapters	April 30, 2012	\$ 7,123.00
2. Develop three IBA management plans in different regions of the state that incorporate the plan’s conservation actions	June 30, 2012	\$15,855.00

Result Completion Date: June 30, 2012

Final Report Summary: June 30, 2012

- Conducted Gap Analysis of IBAs and Priority Species

Bird lists were compiled for all 48 of Minnesota’s Important Bird Areas that were delineated as of June 2012 (note: six additional IBAs were nominated and finalized in October 2012 and were not included in this analysis). Existing lists that were available for many of the IBAs were augmented with additional sources of information when they were available, such as data from the Breeding Bird Atlas, data from Scientific and Natural Areas and State Parks that are located within IBAs, and data from the County Biological Survey, Minnesota Ornithologists Union and National Wildlife Refuges.

Each source of data was entered separately into an excel database and then a single bird list was compiled from all the original data. The compiled lists were used to assess whether the suite of existing IBAs adequately protect the breeding and migratory habitat of Minnesota’s priority birds, particularly its 10 Target Conservation species.

The analysis revealed that all of the highest, high and moderate priority species in each of Minnesota's four Bird Conservation Regions are represented on at least one IBA, usually multiple IBAs. Of the total 104 priority species only four are found on fewer than 10 IBAs:

- Spruce Grouse: 7 Important Bird Areas
- Boreal Owl: 9 Important Bird Areas
- Bell's Vireo: 8 Important Bird Areas
- Chestnut-collared Longspur: 2 Important Bird Areas (these are the only two sites where the Longspur is known to breed)

Minnesota's ten target conservation species are represented on IBAs as follows:

Target Conservation Species	Number of IBAs where species is documented to occur	Number of IBAs where species is known to breed*
Blue-winged Teal	44	13
Upland Sandpiper	29	6
Franklin's Gull	32	5
Black Tern	42	13
Common Tern	29	5
Red-headed Woodpecker	36	11
Cerulean Warbler	19	8
Connecticut Warbler	35	5
Grasshopper Sparrow	34	8
Yellow-headed Blackbird	41	11

* The total number of IBAs where each of these species breed is likely higher; we have only reported those sites where breeding has been documented.

Minnesota's suite of 48 designated Important Bird Areas adequately represents the priority and target conservation species delineated by the Implementation Blueprint for Minnesota Bird Conservation.

There are two primary challenges: 1) to ensure that those sites that support known breeding populations are adequately managed to sustain those populations; and 2) to inventory other sites where the species has been documented to assess if they support breeding populations.

At the time that the work on this project was completed there were no Important Bird Areas designated in southwest Minnesota, south of the Minnesota River Valley. The Blue-winged Teal, Upland Sandpiper, Franklin's Gull, Black Tern, Red-headed Woodpecker, Grasshopper Sparrow and Yellow-headed Blackbird are all species that are likely to be present on IBAs in this region. Geographical representation in this region is important (note: the six new IBAs delineated in late October 2012 included two in the southwest region).

- Identified Implementation Actions for Audubon Chapters

Implementation actions were identified in two primary manners for local Audubon Chapters:

1. First, the Conservation Blueprints for the nine Target Conservation Species each include an implementation plan. The implementation plan identifies responsible parties for each action. Audubon Minnesota and Audubon Chapters are listed as the responsible parties for many of the inventory and assessment actions. For example, the Implementation Plan for the Black Tern identifies two inventory and assessment actions where the chapters can participate:
 - a. Assess the status of Black Terns on Important Bird Areas where they have been reported nesting in the past (11 sites are identified).
 - b. Conduct a one-time assessment of the remaining IBAs where Black Terns have been reported during the breeding season to assess their breeding status (24 additional sites are identified).
2. Second, a small toolbox of actions was prepared for each Audubon Chapter based on its geographical location. Actions focused on:
 - a. Identifying the Important Bird Areas that were closest to each Chapter.
 - b. Recommending an IBA for each chapter to “adopt” for focused conservation activities.
 - c. Identifying the Bird Conservation Region that each chapter is located within.
 - d. Identifying the Target Conservation Species that occur in each Chapter’s region.
 - e. Identifying which Target Conservation Species are present on each IBA in their region and their known breeding status on each IBA. The goal is to verify known breeding locations and confirm the breeding status on sites where the species has been casually observed.
 - f. Identifying Breeding Bird Survey routes that were close to each chapter and delineating which are in need of new qualified surveyors that chapters may adopt.

- Developed three IBA management plans in different regions of the state that incorporate the plan’s conservation actions

Management plans were prepared for the three IBAs listed below and will be posted on the Audubon Minnesota web page in January 2013. The original workplan stated that Audubon would conduct workshops to solicit input on each management plan. Although the plans reflect input that has been gathered through other stakeholder venues, time did not allow us to organize and conduct separate workshops before completion of the project period. As the office proceeds to implement each plan additional input will be sought. Indeed, it will be critical to solicit the input and cooperation of each public and private landowner within the IBAs for successful project implementation.

1. Goose Lake Swamp IBA in northwest Minnesota.
2. Mississippi River - Twin Cities IBA in east-central Minnesota.
3. Vermillion Bottoms – Lower Cannon River IBA in southeast Minnesota.

- Began efforts to implement two of the IBA Management Plans

1. Goose Lake Swamp IBA in northwest Minnesota

With funding secured from the U.S. Fish and Wildlife Service, through the Prairie Pothole Joint Venture, and in cooperation with the Minnesota Department of Natural Resources, Audubon Minnesota initiated a baseline assessment of migrant shorebirds, waterfowl and breeding birds

on the Goose Lake Swamp IBA during the 2012 field season. Field work will be conducted during the 2013 field season as well. Data will be used to help inform and guide habitat protection and restoration efforts on the IBA.

2. Vermillion Bottoms – Lower Cannon River IBA in southeast Minnesota

Private funds were secured to establish a new Audubon field position, the Red Wing Community Conservation Specialist. The position’s primary responsibility will be to work with local conservation organizations, agencies, and citizen stakeholders to implement the Vermillion Bottoms-Lower Cannon River IBA management plan. The new hire for the position will begin work January 2, 2013.

V. TOTAL TRUST FUND PROJECT BUDGET

Personnel: **\$ 145,510.00**

- Lee Pfannmuller, Project Manager; 100% FTE
(est. \$131,789, includes 36% fringe benefits)
- Mark Martell, Audubon Director of Bird Conservation; 7%FTE;
provides technical assistance and develops 3 IBA management
plans; (est. \$10,088, includes 36% fringe benefits)
- Bonita Jenne, 5% FTE; provides editing assistance and graphic
design; (est. \$2,508, includes 36% fringe benefits)
- Susan Swanson, provides administrative support
(est. \$1,125, includes 12% fringe benefits)

Travel: **\$ 3,410.00**

- In-state Mileage (est. \$2,805):
 - ✓ 6 workshops averaging 300 miles each @ \$.055/mi (\$990)
 - ✓ Miscellaneous travel for meetings and consultations averaging
100 miles/month x 24 months x \$0.55/mi (\$1320)
 - ✓ 3 IBA planning sessions of 300 miles each @\$0.55/mi (\$495)
- Lodging and Meals (est. \$605)
 - ✓ Estimate of 5 overnight lodging stays at @\$90/night and meals
for 5 days at @\$31/day

Additional Budget Items: **\$ 2,080.00**

- Publication Access Fee (\$80: \$40 annual charge for library
privileges at UM to conduct research on priority species)
- Printing and Mailing (\$2,000: \$300 to print and distribute draft
copies of plan; \$1,500 to print and distribute final copies of plan;
\$200 to print and distribute 3 IBA plans)

TOTAL ENRTF PROJECT BUDGET: **\$ 151,000.00**

Explanation of Capital Expenditures Greater Than \$3,500: Not applicable

VI. PROJECT STRATEGY:

A. Project Partners: Lee Pfannmuller will be hired as the Project Manager responsible for overall project implementation and plan development. Mark Martell, Audubon's Director of Bird Conservation, will provide assistance by guiding the preparation of the IBA management plans in cooperation with local Audubon Chapters. Technical guidance will be provided by: the U.S. Fish & Wildlife Service; the DNR Nongame Wildlife Program, the Minnesota County Biological Survey, the University of Minnesota, the Minnesota Nature Conservancy, the U.S. Forest Service, the National Park Service, Hawk Ridge Bird Observatory, the affiliate members of Bird Conservation Minnesota, other members of Audubon Minnesota and local Audubon Chapters.

B. Project Impact and Long-term Strategy: Development of the conservation plan will be completed with this funding request. The plan will serve as a catalyst for state and local partners, including Audubon, to implement conservation actions outlined in the plan that may initiate additional funding requests.

C. Other Funds Proposed to be Spent during the Project Period: Not applicable

D. Spending History: No funds will be spent on this project prior to July 1, 2010.

VII. DISSEMINATION: A variety of avenues have already been used to disseminate the final *Implementation Blueprint for Minnesota Bird Conservation*, from numerous presentations to distribution of the *Stewardship Birds of Minnesota* booklet to distribution of the database on Minnesota birds. The plan will also be available on the Minnesota Audubon web page at <http://mn.audubon.org>. The final IBA management plans will be distributed to major landowners within each IBA and will be posted on the Audubon web page. Audubon is also investigating opportunities to make the data available in a GIS format to increase its utility to land managers.

VIII. REPORTING REQUIREMENTS: Periodic work program progress reports will be submitted not later than December 30, 2010; June 30, 2011; and December 30, 2011. A final work program report and associated products will be submitted between June 30 and August 1, 2011 as requested by the LCCMR.

IX. RESEARCH PROJECTS: Not applicable

Attachment A: Final Budget Detail for 2010 Project #145-E2											
Project Title: An Integrated Operational Bird Conservation Plan for Minnesota											
Project Manager Name: Lee A. Pfannmuller											
Trust Fund Appropriation: \$151,000											
2010 Trust Fund Budget	Result 1 Budget:	Amount Spent as of 6/30/12	Balance 6/30/12	Result 2 Budget:	Amount Spent as of 6/30/12	Balance 6/30/12	Result 3 Budget:	Amount Spent as of 6/30/12	Balance 6/30/12	TOTAL BUDGET	TOTAL BALANCE
	Prepare a draft Minnesota Bird Conservation Plan			Review and finalize operational plan.			Delineate and implement bird conservation actions				
BUDGET ITEM											
PERSONNEL: wages and benefits <i>(List individual names, amount budgeted and %FTE; add rows as needed)</i>	\$67,466.00	\$67,219.68	\$246.32	\$41,360.00	\$41,727.81	-\$367.81	\$36,684.00	\$35,840.94	\$843.06	\$145,510.00	\$721.57
Lee A. Pfannmuller (100%FTE): Project Manager; est. \$131,789 (includes 36% fringe benefits)											
Mark Martell (7%FTE): Audubon Director of Bird Conservation provides technical assistance and develops 3 IBA plans; est. \$10,088, including 36% fringe benefits											
Bonita Jenne (5%FTE): provides publication editing & graphic design; est \$2,508, including 36% fringe benefits											
Sue Swanson (2%FTE): provides administrative support; est. \$1,125, including 12% fringe benefits											
Printing & Mailing: \$300 (est.) to print and mail draft conservation plan (result 1); \$1,500 (est.) to print and mail final plan (result 2); \$200 (est.) to print and mail 3 IBA plans (result 3).	\$300.00		\$300.00	\$1,500.00	\$2,949.68	-\$1,449.68	\$200.00	\$179.60	\$20.40	\$2,000.00	-\$1,129.28
Travel expenses in Minnesota:	\$660.00		\$660.00	\$1,738.00	\$1,382.31	\$355.69	\$1,012.00	\$1,683.66	-\$671.66	\$3,410.00	\$344.03
1. Mileage: 6 workshops averaging 300 mi each @ \$0.55/mile (total est. \$990; result 2); plus other travel for meetings and consultation averaging 100 mi/month for 24 mths (total est. \$1320; \$660 result 1; \$385 result 2; \$275 result 3); plus 3 IBA planning sessions averaging 300 mi each (total est. \$495; result 3); est total: \$2,805											
2. Lodging and Meals: estimate of 5 overnight lodging stays @ \$90/night and meals for 5 days at @\$31/day (total est. \$630; \$380 result2; \$250 result 3)											
Other: Publication Access Fee: \$40 annual charge for library privileges at UM to conduct research on priority species	\$40.00		\$40.00	\$40.00		\$40.00	\$0.00		\$0.00	\$80.00	\$80.00
COLUMN TOTAL	\$68,466.00	\$67,219.68	\$1,246.32	\$44,638.00	\$46,059.80	-\$1,421.80	\$37,896.00	\$37,704.20	\$191.80	\$151,000.00	\$16.32