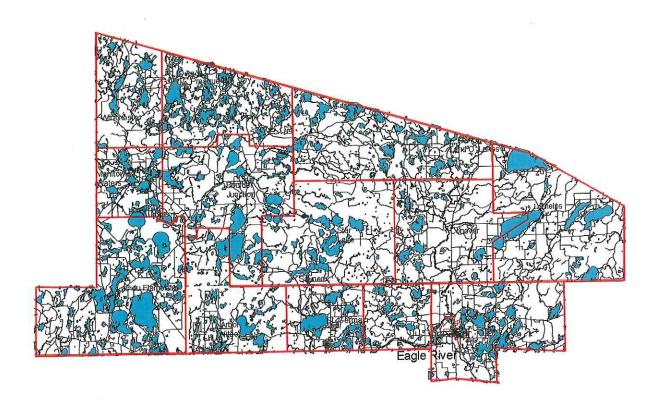
VILAS COUNTY, WI LAND & WATER CONSERVATION DEPARTMENT AQUATIC INVASIVE SPECIES PARTNERSHIP PLAN WNDR Grant ALPT-001-05



PREPARED BY
VILAS COUNTY AQUATIC INVASIVE
SPECIES PARTNERSHIP
Ted Ritter, AIS Project Coordinator

Approved by Vilas County Land & Water Conservation Committee, July 26, 2006

AKNOWLEDGEMENTS

The Vilas County Land and Water Conservation Department thanks the county wide AIS Partnership for its swift and strong support of the initiative to minimize the impact of non-native aquatic invasive species in and around Vilas County. Implementation of some elements of the long term plan for this crusade began even before the plan was formalized. The following plan attempts to capture the public enthusiasm demonstrated during the first year of the program and provide a guide for long term efficiency, effectiveness and sustainability of this grassroots program. Participants in the planning process include:

Vilas County Land and Water Conservation Committee:
Charles Ahlborn, Chairman, Supervisor District #5
Gene Ciszek, Supervisor, District #9
Leon Kukanich, Supervisor, District #18
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Partnership Planning Team:

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Marty Ketterer, Chairman, Cloverland Town Lakes Committee
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Jerry Parker, N & S Twin Lakes Association and Phelps Area Lakes Partnership
Gail Gilson-Pierce, River Alliance of Wisconsin
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Norm Wetzel, Lac du Flambeau Town Lakes Committee

Vilas County AIS Action Team members Vilas County Town Lakes Committee members

EXECUTIVE SUMMARY

The spread of aquatic invasive species (AIS) across Wisconsin began impacting lakes in and around Vilas County as early as 1990, but significantly more so in approximately 2001. Eurasian water-milfoil (Myriophyllum spicatum) and Curly-leaf pondweed (Potamogeton crispus), two non-native invasive plants capable of seriously degrading the quality of lakes, began spreading primarily into the eastern end of the County. Their advance corresponded with the general south to north state wide disbursement of AIS during the previous decade.

Eurasian water-milfoil had become well established by 2004 in lakes in the Deerskin River watershed, most of which comprise the lower portion of the popular Eagle River Chain of Lakes. Scattered infestations had also been confirmed further west in the County. Expensive, but often only marginally effective management efforts were being attempted by lake organizations on some of the infested lakes.

Zebra mussels (Dreissena polymorpha), an animal on the list of extremely harmful aquatic invasive species, had not yet reached Vilas County, but were well established in Lake Metonga near Crandon in Forest County, only 30 miles from the Vilas County border. Yet another animal species known as Spiny-water fleas (Bythotrephes cederstroemi) had invaded the Gile Flowage north of Mercer in adjacent Iron County.

As public awareness of these invaders began to increase, the concern for the impact they would have on local lakes prompted growing demands of the limited staff of the Vilas County Land and Water Conservation Department and the Rhinelander office of the Wisconsin Department of Natural Resources. With over 1,300 lakes in Vilas County, an organized approach was obviously needed to stop the spread of AIS.

The Vilas County Board of Supervisors authorized the Land and Water Conservation Committee to pursue a WDNR AIS cost share grant for the purpose of creating a temporary (three year) employee position to coordinate AIS activities throughout Vilas County. Funding for the project was awarded in the fall of 2004 and the position was filled effective December 1.

The project required creation of a broad based partnership of concerned people representing a wide variety of resources and interests. The partners were to draft and implement a strategic plan for combating AIS in Vilas County.

GLOSSARY OF ACRONYMS

AIS Aquatic Invasive Species

CBCW Clean Boats, Clean Waters

CC County Coordinator

CLMN Citizen Lake Monitoring Network

CLP Curly-leaf pondweed

CWMAs Cooperative Weed Management Areas

EWM Eurasian water-milfoil

LWCC Land & Water Conservation Committee (County supervisors)

LWCD Land & Water Conservation Department (County staff)

PATs Partnership Action Teams

TLCs Town Lakes Committees

UNDERC University of Notre Dame Environmental Research Center

UW University of Wisconsin

UWEX University of Wisconsin Extension

VC Vilas County

WAL Wisconsin Association of Lakes

WCA Wisconsin Counties Association

WDNR Wisconsin Department of Natural Resources

WLWCA Wisconsin Land & Water Conservation Association

WRA Wisconsin Realtors Association / Wisconsin Rivers Alliance

WTA Wisconsin Towns Association

INTRODUCTION

Invasions of non-native aquatic life forms have been occurring across Wisconsin at a steadily increasing rate for the past two decades. The phenomenon is not unknown to the lake rich region of northern Wisconsin. Rusty Crayfish (Orconectes rusticus), a crustacean indigenous to the Ohio River Valley, but not to Wisconsin, have been in some Vilas County lakes since as early as 1960. Rusty Crayfish are a serious problem, but the introduction of invaders from Europe, Asia and Africa is the primary cause of alarm.

The introduction of exotic aquatic plants and animals in the U.S. has not been by malicious intent. Most of them first appeared in the Great Lakes and/or the St. Lawrence Seaway. Water in which these species naturally occur in foreign ports is taken on as ballast in cargo ships destined to the U.S. Discharge of the ballast water at destination introduces them to an environment lacking he elements that would control their populations in their natural settings. There are countless species spread internationally in this manner, but only the most adaptive survive and begin claiming foreign water bodies as their new homes. Recreational boating activities serve as the primary vector for further spread from the American Great Lakes into inland lakes.

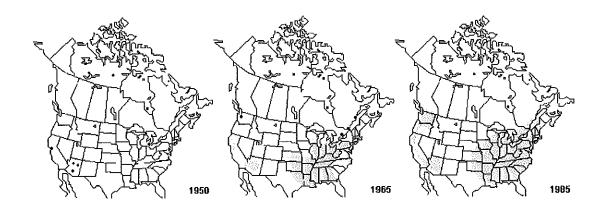
Aquatic invasive species (AIS) come in the form of both plants and animals. Each species has unique characteristics, yet they share common traits. Eradication of established infestations is nearly always impossible and control measures are expensive and often controversial. In some cases, Rusty crayfish being one example, there are no known effective control methods.

Zebra mussels, Eastern European creatures about the size of a human thumbnail and weighing less than an ounce, were first discovered in Wisconsin's Racine Harbor in 1990 after having spread to parts of all five Great Lakes between 1988 and 1990. They are highly adaptable to environmental surroundings and typically reproduce in huge numbers. A few adults can quickly become a colony of millions matted together causing all sorts of unwanted changes to an infested water body. Zebra mussels have been spreading north and west across Wisconsin, but have not quite reached Vilas County. As of the close of 2005, the nearest known infestation was in Lake Metonga in Forest County, about 30 miles from the Vilas County border.

The spiny water flea, a freshwater zooplankton native to northern Europe and the Caspian Sea, was discovered in the Gile Flowage in Iron County, adjacent to the northwest border of Vilas County, in 2003. This was the first confirmed inland lake infestation of this species in Wisconsin. Spiny water fleas are predatory, consuming many types of naturally occurring zooplankton. Like other exotic invasive species, they have the ability to reproduce rapidly. While the consequences of this are still only theoretical, it is believed that spiny water fleas will reduce the availability of smaller zooplankton for juvenile fish to consume, resulting in negative impacts on fish growth and survivorship. Their nearby presence is of great concern to Vilas County.

Eurasian water-milfoil (EWM) is the invasive aquatic plant of greatest concern in Wisconsin. It is indigenous to areas of Europe, Asia and North Africa. EWM is an extremely adaptable plant capable of thriving in a variety of environmental conditions. It spreads easily and grows rapidly, typically forming dense surface canopies that shade out native vegetation, reduce dissolved oxygen levels, alter water chemistry, diminish fish habitat and create navigational obstructions. Decaying EWM biomass at the end of a growing season releases nitrogen and promotes phosphorous re-cycling which can result in algae blooms.

It is not clear exactly how and when EWM was introduced to North America. It seems to have arrived at several locations in the 1940s. From its initial points of introduction, it spread quickly as depicted in the following graphics:

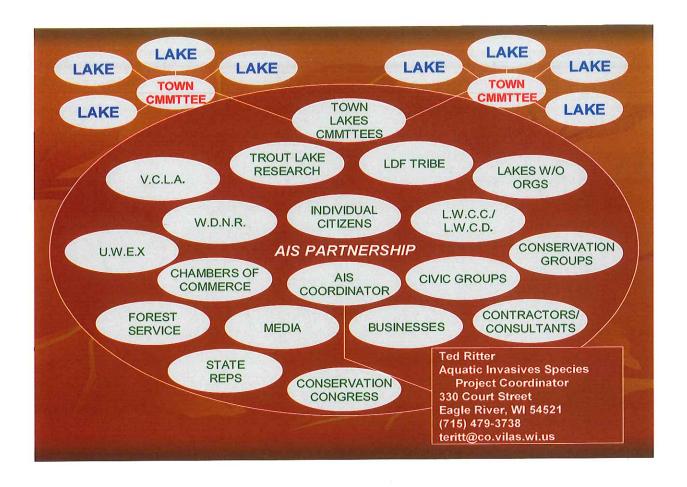


EWM first arrived in southern Wisconsin in the 1960's. It spread to lakes and waterways in the northern half of the state during the 1980's. The first confirmed infestation in Vilas County was in Big Sand Lake in 1990, although it had apparently been thriving in that lake for several years prior to its official discovery. The list of infested Vilas lakes grew to 17 by 2004 and to 19 during 2005, including the ten lakes of the popular Eagle River Chain of Lakes. Attempts to manage the EWM infestations in Vilas County have ranged from aggressive and extremely costly on some lakes to doing nothing at all on others. This inconsistent and disorganized response has fuelled the anxieties and fears of lakefront property owners and lake organizations who contend that the State is falling short of its responsibility to protect and preserve publicly owned surface waters.

AIS present a serious threat to the culture of Wisconsin's northern lake region. The high quality of Vilas County lakes in their north woods setting draws tourists and property buyers to the area. Tourism and land development represent the backbone of the local economy. Real estate values, particularly lakefront properties, have experienced rapid growth for 15 years or longer. While lakes are the common denominator to all aspects of Vilas County's economic worth, they are at the same time vulnerable to the perils of human activity. Improper shoreline development, exhaustive recreational usage and the siege of aquatic invasive species all have the potential of reducing the human appeal of lakes, thus reducing their overall economic value. Shoreline zoning ordinances are doing much to protect lakes. A variety of other laws to preserve water quality continues to evolve corresponding to changes in recreational trends. Efforts to date to stop the spread of AIS, however, have been inadequate.

Lakefront property owners, and the lake organizations they create, are often unable to effectively contend with AIS; spread of infestations is too swift, prevention efforts are too overwhelming, management of infestations is either too expensive or impossible at any cost. The frequency of pleas for help from the Vilas County Land and Water Conservation Department had risen to such a high level by 2004 that the County Board authorized the LWCC to expand its staff. Funding from a WDNR grant enabled the hiring of a limited term (three years) employee to coordinate a County wide response to the AIS threat. The position was filled effective December 1, 2004.

Efforts to assemble a Vilas County AIS Partnership began immediately. Volunteers representing a broad spectrum of interests and disciplines came forth to launch what would soon become a mushrooming grassroots movement. A flurry of activity ensued during 2005 including a media supported public awareness campaign, creation of town level lakes committees as standing units of town boards and establishment of AIS action teams to concentrate efforts on activities such as identifying and quantifying known infestations, establishing working relationships with research facilities to learn more about individual species, targeting specific groups such as chambers of commerce, fishing tournament organizers and marina operators to develop methods of increasing AIS awareness and drafting proposed state wide AIS ordinances. The following chart depicts the general make-up of the Vilas County AIS Partnership.



As the first year of the project came to an end and the blanket of ice and snow on area lakes provided a temporary reprieve from summer activities, the Partnership looked back at its accomplishments. Long term planning then became the emphasis in early 2006 in order to keep the future activities of the initiative focused on measurable objectives. A sub committee emerged from within the partnership to draft a strategic plan. A simple mission statement declaring the overall function of the Partnership was agreed to, followed by identification of objectives, each supported by specific action plans.

MISSION STATEMENT

The mission of the Vilas County AIS Partnership is to develop and implement a sustainable program for healthy, shared waterways in the County. This will be achieved through execution of five objectives.

OBJECTIVES

- 1. Prevent the infestation and dispersal of AIS through public education
- 2. Identify and manage AIS infestations and facilitate AIS studies
- 3. Encourage State Legislators to provide funding needed to manage existing infestations
- 4. Establish a county organizational structure to accomplish goals 1, 2 & 3.
- 5. Conduct comprehensive review and update of long term plan every two years

OBJECTIVE #1: To prevent the infestation and dispersal of AIS through public education.			
ACTION	WHO WILL EXECUTE ACTION	MEASUREMENT TOOLS	SUPPORT NEEDED TO ACCOMPLISH
Maintain high visibility of AIS issues through local media (6-12 area newspaper stories per year, 4-6 radio and/or television pieces per year)	LWCD, LWDD,CC, TLCs, State AIS Coordinato	Number and frequency of AIS public service announcements, newspaper articles, editorials, letters to editors, and radio/television airings of AIS related issues	Active involvement by local media
2. Implement programs for early detection of AIS infestations in accordance with CLMN guidelines in five or more lakes in every Vilas County town by the summer of 2007	CC will assist TLCs, local association s of lakes, VCLA, WDNR	Number of volunteers trained to conduct lake monitoring, number of lakes being monitored, number of hours spent monitoring, number of new infestations identified	Functioning TLCs or associations of local lakes, a sustained base of volunteers and/or paid coordinators
3. Create volunteer based watercraft inspection programs at high traffic public landings following the guidelines of the CBCW program at one or more landings in all Vilas County towns by the summer of 2007	UWEX, CC will assist TLCs, local association s of lakes, VCLA, LWCD	Number of volunteers trained to conduct watercraft inspections, number of public landings with inspection teams in place, number of boats inspected, number of invasive species detected	Functioning TLCs or associations of local lakes, State funding to provide financial support, a sustained base of volunteers and/or paid coordinators, local media, CBCW program
4. Promote participation in CLMN water clarity / water chemistry monitoring at two or more lakes in every Vilas County town by the summer of 2007	LWCC, CC will assist TLCs, local association s of lakes, VCLA, WDNR	Number of lakes participating in program and levels of monitoring being accomplished, number of people attending training workshops	Commitment by lake organizations, local media support, coordination of training workshops
5. Provide four or more AIS Partnership updates per year	CC and LWCC	Number and content of updates	Functioning e-mail system, local media
6. Develop and maintain broad based AIS communications network of 150 or more people	CC, LWCD	Number of people on e- mail broadcast list, number of e-mail broadcasts sent	Functioning e-mail system and access to contact lists
7. Serve as a point resource for AIS information and concerns	Local media, CC, TLCs and LWCD	Number of TLCs, frequency of presentations made or questions answered by either the CC or TLCs, web site activity	Local media, and access to e-mail and telephone systems

OBJECTIVE #1: To prevent the infestation and dispersal of AIS through public education. WHO WILL MEASUREMENT SUPPORT NEEDED ACTION EXECUTE TO ACCOMPLISH TOOLS **ACTION** 8. Accept at least four LWCD operating invitations per year to speak budget LWCC travel about AIS to non-VC Number of presentations authorizations. CC, LWCC given organizations of lakes, county access to supporting departments, regional/state equipment conferences, etc CC, LWCC. 9. Provide AIS talking points for Ongoing contact with use by town, county, and State WAL, Number of talking point recipients of needed elected officials, TLCs, lake WDNR. topics made available talking points organizations and others for UWEX, sharing AIS information Gov.'s Council A sustained base of 10. Oversee training of 150 or CC, TLCs, Number of volunteers volunteers, local UWEX. more new volunteers per year media, training trained **WDNR** for AIS programs workshops Incentive/awards CC, TLCs, programs, UWEX. Number of active involvement by 11. Sustain/increase base of VCLA. volunteers school and volunteer participants Local community service media programs 12. Identify two or more specific target groups per year (i.e. Cooperation and fishing tournament organizers, PATs, Number of target groups financial support of guides, bait dealers, etc.), and TLCs, and variety of methods **LWCC** developed target groups. assist each in developing methods for stopping the spread of invasive species 13. Assist WDNR in Supporting WDNR Number of new or CC, TLCs, maintaining State provided AIS staff and operating replacement sings signage at boat landings on WDNR erected per year budget infested lakes 14. Placement of five or more Grant funding, AIS informational signs per year operating budgets of (in addition to State placed TLCs, lake town committees Number of landings with signs) at public boat landings organizatio and lake signs ns, WDNR and/or private landings used by organizations, the public (i.e. resorts and WDNR coordination campgrounds).

OBJECTIVE #1: To prevent the infestation and dispersal of AIS through public education. WHO WILL SUPPORT NEEDED MEASUREMENT EXECUTE **ACTION** TO ACCOMPLISH **TOOLS ACTION** 15. Purchase and distribute 100 Number of copies LWCD operating copies of the 2005 Lac du CC, LWCC budget distributed Flambeau AID educational video 16. Conduct annual day-long Number of participants LWCD operating meetings to highlight and presentations at CC budget accomplishments of TLCs, annual meetings. PATs and individuals Technical support for 17. Develop and maintain VC Annual expansion of creation and AIS data base by no later than CC data base contents maintenance of web November 1, 2007 site 18. Disseminate AIS educational information to nonresidents through five or more PATs. Local operating new methods per year (i.e. TLCs, Number and variety of methods used for budgets and/or participation in events such as Chambers approved grant the Eagle River Cranberry of information funding, local media Commerce, dissemination. Festival and other local gatherings and printing of AIS **Businesses** messages on plastic retail bags and restaurant place mats). Membership with 19. Distribute articles from Stop Stop Aquatic Number of articles Aquatic Hitchhikers News via e-CC Hitchhikers and distributed mail broadcast functioning e-mail. Awareness of 20. Support the objectives of WNDR plan and the WDNR Comprehensive CC, TLCs, Frequency and extent of positive working Management Plan (AIS) supporting actions AIS PATs relationship with plan whenever and however executioners. appropriate 21. Support the activities of CC, TLCs, Positive working WDNR state wide AIS AIS PATs, Frequency and extent of relationship with WDNR, supporting actions Coordinator whenever and State Coordinator **UWEX** however appropriate Positive working 22. Coordinate County AIS Number of projects CC. TLCs. relationship by all implemented reflecting activities with those of local **LWCC** coordinated efforts parties Indian tribes Operating budget for office supplies. 23. Incorporate two or more educational CC, TLCs, Number of youth additional youth groups materials, local travel **LWCD** participating in programs annually in county-wide expense education programs reimbursement, and other expenses.

ACTION	WHO WILL EXECUTE ACTION	MEASUREMENT TOOLS	SUPPORT NEEDED TO ACCOMPLISH
24. Create and distribute 100 or more AIS information folders per year	CC, TLCs, VCLA	Number of folders assembled and distributed	County or Town operating budgets supported by grant funding where possible
25. Establish partnerships with and coordinate efforts with other invasive species organizations (aquatic & terrestrial)	CC, LWCD, LWCC, CWMAs, Local Indian Tribes	Number of organizations partnered with	Approval of LWCC

OBJECTIVE #2: To identify and manage AIS infestations and facilitate AIS studies.			
ACTION	WHO WILL EXECUTE ACTION	MEASUREMENT TOOLS	SUPPORT NEEDED TO ACCOMPLISH
1. Identify: Work with town boards, lake organizations, property owners, WDNR staff, tribal DNR staff and others to identify infested lakes and the level of infestations in those lakes	CC, TLCs, PATs, LWCD, WDNR	Number of lakes identified as infested and the degree of infestation in each case	Active Partnership participation throughout County
2. Manage: Maintain county data base with lake comprehensive management plans, lake plant management plans, lake inspection/monitoring plans, AIS infestation management plans, AIS grant history	CC with support from TLCs, lake organizations, PATs and LWCD	Content and frequency of data base expansion	LWCD operating budget and/or grant funding
3. Manage: Establish financial preparedness to enable rapid response to new infestations by five or more lake organizations/TLCs per year	TLCs	Number and size of financial reserves established	Commitments from lakefront property owners, town boards and the State
Manage: Identify treatment options	CC and PATs	Number of options identified and frequency of data base updates	LWCD operating budget and/or grant funding

OBJECTIVE #2: To identify and manage AIS infestations and facilitate AIS studies.				
ACTION	WHO WILL EXECUTE ACTION	MEASUREMENT TOOLS	SUPPORT NEEDED TO ACCOMPLISH	
5. Manage: Develop and maintain a cooperative and coordinated effort with tribal DNR agencies for lakes located within reservation boundaries	CC, TLCs, LWCC, WNDR, Tribal DNR	Number of infestations being managed cooperatively by tribal and non-tribal interests	Positive working relationship between all parties	
6. Manage: Maintain area contact lists for planning consultants, licensed management contractors, fishing tournament organizers, guides, bait dealers, etc.	CC, LWCC	Number and accuracy of contact lists	Continuation of CC position	
7. Manage: Track AIS infestations by watershed vs. political boundaries	CC and PATs	Accuracy of watershed infestation information	Identification of local watersheds	
8. Manage: Provide grant information and writing guidance to TLCs	CC and WDNR	Number of grants written and awarded, number of workshops and attendees	Grant funding	
Manage: Explore sources of planning, funding and management technique information	CC and PATs	Number of new sources considered annually	Active PATs	
10. Manage: Provide recommendations for AIS laws	CC, PATs, LWCC	Number and content of recommendations made	Active PATs, LWCC	
11. Study: Gather AIS species information from the UW (Trout Lake Station), UNDEC, WDNR and others and share the information publicly through AIS Partnership e-mail broadcasts, TLCs and special public information meetings	CC, PATs, LWCD	Number of contacts made and maintained, number of species learned about, LWCD AIS web site activity	Active PATs and cooperative research institutions, local media	
12. Study: Facilitate and/or participate in AIS research studies with educational and research institutions	CC and PATs	Number of studies undertaken or participated in	Active PATs and cooperative research institutions	
13. Study: Establish partnerships with and coordinate efforts with other invasive species organizations (aquatic & terrestrial)	CC, LWCD	Number of organizations partnered with	Approval of LWCC	

ACTION	WHO WILL EXECUTE ACTION	MEASUREMENT TOOLS	SUPPORT NEEDED TO ACCOMPLISH
Identify individuals from Vilas County and beyond who are suitable for undertaking this action	CC, LWCC, TLCs	Number of individuals found who are able and willing to become involved	
2. Encourage development of coalition of state wide organizations (i.e. WI Towns Assoc., WI Counties Assoc., WI Realtors Assoc., WI River Alliance, WI Assoc. of Lakes, WI Land & Water Conservation Assoc., LWCC, UWEX, WDNR) to prompt State legislative action regarding AIS funding and laws	LWCC, CC, TLCs, State Legislators, umbrella State groups	Formation of coalition, number of actions prompted by the coalition	Positive support by Vilas County LWCC, partner groups and media
3. Engage Vilas County lakefront property owners (including non-local Wisconsin residents) in a campaign to contact their Legislators and send a clear and unified state wide message from Vilas County property owners	CC, TLCs, LWCC, LWCD	Talking points at annual lake association presentations by LWCD staff	Statewide AIS coalition agenda to tier communication efforts with Legislators, Media support

OBJECTIVE #4: Establish a county organizational structure to accomplish objectives 1, 2 & 3			
ACTION	WHO WILL EXECUTE ACTION	MEASUREMENT TOOLS	SUPPORT NEEDED TO ACCOMPLISH
1. Create a full time, permanent position in VC to continue the work of the temporary, limited term VC AIS CC position.	LWCC and County Board with the support of the County AIS Partnership	Continuation of CC position	LWCC, Vilas County Board and/or grant funding

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ACTION	WHO WILL EXECUTE ACTION	MEASUREMENT TOOLS	SUPPORT NEEDED TO ACCOMPLISH
2. Encourage creation of LTCs	CC, LWCD and lake organizations	Number of TLCs, number of lakes represented by each TLC, degree of support obtained by each TLC from town boards	Support of Town Boards and local lake organizations
3. Establish county-wide PATs	CC, Lake organizations, town boards	Number of PATs created and nature and success of projects undertaken.	Positive response by public and town boards
4. Develop and maintain system for recording volunteer hours donated to fulfilling the objectives of the Partnership	CC, TLCs	Number of reports submitted by TLCs, lake organizations, PATs and others	Cooperation of participants

RECOMMENTATION REGARDING COUNTY COORDINATOR POSITION

Grant funding for the County Coordinator position will expire during the fourth quarter of 2007. Sustainability of Partnership momentum with or without a central coordinator was considered by the planning partners. While many of the action steps outlined in the above objectives will be accomplished by the broad spectrum of Partnership members, the need for ongoing coordination from a central point is evident. Continuation of the County Coordinator position is regarded as critical by the Partnership.

The pros and cons of the position remaining as a County employee versus being provided through another entity were discussed at length. Funding notwithstanding, the Partnership strongly recommends that the Coordinator position remain a function of the Vilas County Land & Water Conservation Department.

OBJECTIVE #5: Conduct comprehensive review and update of long term plan every two years			
ACTION	WHO WILL EXECUTE ACTION	MEASUREMENT TOOLS	SUPPORT NEEDED TO ACCOMPLISH
1. Meet with TLCs, PATs and Planning Partners to evaluate long range plan and adjust where appropriate	LWCC and full AIS Partnership	Number of partners contributing to the plan update process	Active involvement by AIS Partnership and LWCC

END