

# Langlade and Lincoln County Lake Protection Grant # 318-08 Progress Report



*“Shoreland Protection and Restoration thru Education  
and Technical Assistance”*

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## **I. Fund Shoreland Protection Specialist to implement grant projects**

Two individuals have worked as the Shoreland Protection Specialist (during separate periods of time) for Lincoln and Langlade Counties between September 1<sup>st</sup>, 2007 and December 31<sup>st</sup>, 2008. The first individual, who held the position throughout the previous grant award, left for a different employment opportunity on June 2<sup>nd</sup>, 2008. The Shoreland Protection Specialist position was vacant for just under one month while the position was advertised and candidates were interviewed. On June 25<sup>th</sup>, 2008 a new Shoreland Protection Specialist was hired to continue developing, coordinating, and implementing the projects outlined in the grant.

## **II. Provide technical assistance and education to property owners for the development of shoreland restoration plans**

One of the most important and rewarding duties of the Shoreland Protection Specialist is assisting waterfront property owners with shoreland restoration, and creating customized shoreland restoration plans. Although both counties have had shoreland restoration requirements in their ordinances for a number of years now, the restoration concept and process is still rather foreign to many property owners facing it for the first time. The breadth of knowledge and holistic approach needed to create and implement a successful shoreland restoration plan, is not something the average property owner is very familiar with. Although property owners are always welcome to create their own restoration plan or hire a landscaping company to create a plan, the vast majority of people choose to have the Shoreland Protection Specialist create them a personalized restoration plan.

Shoreland restoration is required anytime a zoning permit is needed for construction of a principal structure or addition to a principal structure within the shoreland setback. As a result, the number of shoreland restoration plans created each year is largely based on the amount of construction activity occurring along shorelands. As construction increases, so do the number of zoning permits, and ultimately required restorations. During years of moderate to low construction, the Shoreland Protection Specialist has more time to monitor past shoreland restoration plans to see if they were properly implemented.

Each shoreland restoration plan is customized to address the specific ecological needs of the shoreland buffer, as well as aesthetic and functional concerns the individual property owner may have. It is crucial to engage and involve the property owner throughout the entire planning process. The property owner must feel they have a vested interest in the restoration project and as a result, they will be more likely to implement the plan and follow it through to the end.

The Shoreland Protection Specialist works with each and every property owner throughout the entire restoration process, from planning to implementing as well as maintenance and follow up monitoring. There are a variety of

ecological factors that are assessed during an initial site visit including; current and future sunlight levels, soil type, moisture availability, composition of native species present, and invasive or exotic species that are either found on the property or nearby on adjacent lands. The property is then thoroughly photographed and the Shoreland Protection Specialist uses the photographs to visually depict the areas the property owner needs to concentrate their restoration efforts. Langlade County has found that property owners are much more receptive to photographs compared to diagrams or sketches on graph paper when it comes to restoration plans.

In addition to ecological factors, it is also necessary to understand and address social and economic considerations of the property owner including; whether the property owner is receptive to restoration, why they bought waterfront property and what they use it for, the amount of knowledge they have of plants and planting techniques, how much money they are willing to spend on their restoration project, unique uses for certain parts of the property, ideas and input from the family, recreational interests, and whether they are seasonal or permanent residents of the property.

Creating a relatively simplistic, cost efficient and ecologically sound shoreland restoration plan takes a considerable amount of upfront planning and knowledge on the part of the Shoreland Protection Specialist. The uniqueness of each waterfront property and property owner is reflected in a unique and individualized shoreland restoration plan. In addition to a customized restoration plan, the property owner is provided with a planting list of native species well suited to their property, descriptions and pictures of all the recommended trees and shrubs, as well as a list of local greenhouses and nurseries that sell native plants. For an example of a shoreland restoration plan please see **Appendix E**.

In Langlade County, the Shoreland Protection Specialist created 15 shoreland restoration plans between September 2007 and December 2008. In addition to shoreland restoration plans and permits, Langlade County also has Natural Shoreland Certification and Vegetation Protection Agreements (NSC's). Individuals that already have an intact shoreland buffer with adequate native vegetation on their property, are required to sign a NSC form. By signing the NSC, the owner agrees to leave their property in a natural state. These properties are photographed by the Shoreland Protection Specialist and kept on file for reference to determine if any alterations to the buffer occur in the future. There were a total of 26 NSC's that were assessed and recorded between September of 2007 and December of 2008.

Unlike Langlade County, Lincoln County does not have Natural Shoreline Certification. Instead, Lincoln County has a standard buffer affidavit that simply declares whether a required shoreland restoration will be Active or Passive. A passive restoration means the property is already in a natural state and the shoreland buffer must be preserved and maintained in a natural condition. As a result, declaration of a passive restoration in Lincoln County is comparable to Natural Shoreland Certification in Langlade County. There were only 5 properties that were classified a passive restoration in Lincoln County between September of 2007 and December of 2008. However, the number of active

restoration plans created by the Shoreland Protection Specialist was considerably higher. Between September of 2007 and December of 2008, the Shoreland Protection Specialist created 35 restoration plans for Lincoln County residents. Graphs summarizing the above data can be found in **Appendix A**.

### **III. Monitor shoreland restoration sites**

Monitoring efforts differed considerably between Lincoln and Langlade Counties based upon the specific needs and situation of each county. The Shoreland Protection Specialist monitored just over 100 properties in Lincoln County and 13 properties in Langlade County between September 2007 and December 2008. The disparity in numbers between each county is a result of a variety of factors.

Langlade County has had a shoreland protection specialist since shoreland restoration became a requirement, whereas 2007 was the first year Lincoln County had an employee exclusively designated to shoreland protection issues. As a result, Lincoln County had an extensive backlog of properties that had either never been monitored or needed follow up monitoring. There were also properties in Lincoln County, in which the Shoreland Protection Specialist had to determine whether the shoreland buffer was sufficient enough to allow for a passive restoration or whether an active restoration was required and a shoreland restoration plan needed to be created. The number of past restorations as well as new permits coming in throughout the summer, kept the Shoreland Protection Specialist almost exclusively centered around monitoring and creating new restoration plans in Lincoln County.

Although Langlade County has over 400 shoreland restorations that need periodic monitoring depending upon when they were implemented, this was not considered a priority in 2008. In 2006, the Shoreland Protection Specialist monitored and inspected the vast majority of restoration sites in Langlade County. Then, in the early part of 2007 Langlade County had used up all of the available funding from the previous Lake Protection Grant award. This left the Shoreland Protection Specialist's position vacant for the summer of 2007, and Langlade County was unable to perform the much needed maintenance at the shoreland restoration demonstration sites during this time. Consequently, a considerable amount of time was spent during the summer months of 2008 getting the shoreland restoration demonstration sites back in order and less time was available for monitoring efforts in Langlade County. With the demonstration sites cleaned up and becoming more self sufficient each year, it is the hope and intention to spend the vast majority of the 2009 summer in Langlade County monitoring past shoreland restoration projects.

#### **IV. Evaluate shoreland restoration application process to improve and streamline administration**

Evaluation of the shoreland restoration application process is an ongoing endeavor that will continually be assessed and analyzed. Although, there were no major adjustments or improvements to report at this time, efforts will be made to address this issue for the remainder of the 2009 grant cycle.

#### **V. Assist with revisions to the Shoreland Zoning Ordinances, Lake Classification Maps, and possibly revisions resulting from a revised NR115, Shoreland Protection Program**

There were no major revisions to Lincoln or Langlade County Shoreland Ordinances or Lake Classification Maps during this time period. We are awaiting revisions to NR 115, and will adjust county ordinances accordingly if needed.

#### **VI. Supplement previous shoreland protection work on the web pages**

Lincoln County does not currently have a webpage that specifically addresses shoreland restoration. Lincoln County instead, provides a link to the Langlade County shoreland restoration webpage. Although this link will continue to be provided, in the future Lincoln County would like to create their own webpage geared towards shoreland protection. Although this will likely not be completed by the end of this grant cycle, the process is underway to determine the technicalities and feasibility of such an endeavor.

The format and amount of information related to shoreland restoration is currently quite comprehensive on the Langlade County webpage. As time permits, providing supplemental information is always a consideration as new issues and concerns arise that can be further explained and addressed online.

#### **VII. Update and coordinate distribution of educational materials related to Shoreland Protection.**

Langlade County Land Records and Regulation has been sending out informational packets to new shoreland property owners within the county. This has been a joint effort between the WIDNR, Langlade County, and UW-Extension. These packets of information contain a number of publications from the above mentioned partners, and a sample informational packet is included with this progress report for your reference.

The Shoreland Protection Specialist is currently working with Lincoln County Planning and Zoning as well as Lincoln County Land Conservation Department to implement a similar educational mailing program to new shoreland property owners. In addition, the Shoreland Protection Specialist is in the process of developing a mass mailing to send to all of the property owners on High



Sensitivity waterbodies in Lincoln County. The emphasis of the mass mailing is to not only explain the importance of a shoreland buffer, but also encourage more voluntary shoreland restorations on High Sensitivity lakes and rivers. Copies of finished materials created and distributed in both counties will be provided in the final progress report at the end of the year.

#### **VIII. Continue General Shoreland Protection Information/education program, including a landscaping contractor's workshop**

The Shoreland Protection Specialist spent a large percentage of the winter months preparing for the 2008 Shoreland Landscaper's Seminar. The seminar was held on April 1<sup>st</sup>, 2008 at Treehaven in Tomahawk, Wisconsin. Treehaven is a natural resources, education, and conference facility which is owned and operated by the University of Wisconsin Stevens Point-College of Natural Resources. The educational seminar was designed to inform area landscaping contractors about the regulations of shoreland zoning, the importance of shoreland buffers, and the different methods used in shoreland restoration.

The Shoreland Protection Specialist was responsible for all aspects of the seminar from start to finish. Anyone that has ever hosted a workshop knows the amount of planning and preparation that goes into such an endeavor. The Shoreland Protection Specialist performed a number of duties including but not limited to; creating his own Power Point presentation on shoreland restoration, meeting with Treehaven officials to determine optimal room configurations, contacting prospective attendees, presenters and vendors, creating a brochure for the seminar to send to possible attendees, talking with all presenters to decide on the best possible date for the seminar, making sure all pertinent shoreland topics were covered and there wasn't any overlap, working with Treehaven officials on the menu for lunch, and creating an informational packet to hand out to attendees.

The informational packet the Shoreland Protection Specialist put together consisted of an agenda, contact information on all presenters, a "Shoreland Restoration; A Growing Solution" DVD, a copy of Forest Practices for Water Quality in Wisconsin, a brochure entitled "Langlade County Shoreland Café", (which is an introduction to what plants grow best along Wisconsin shorelands), a how-to manual on Rain Gardens from the UW-EX, a copy of both counties "Caring For Our Shores" publication, and many pertinent forms (such as a fill & grade permit) that most contractors will have to become knowledgeable with. Please reference the sample informational packet from the seminar that is included with this progress report.

All told approximately 80 contractors signed up for the seminar. However, the seminar was held on April 1<sup>st</sup>, and Mother Nature thought that it would be a funny April Fool's joke to have 12 inches of snow fall on the night before the seminar. This cut the attendance by half, since many of the contractors that do landscaping work in the summer months also plow snow in the winter months for supplemental income.

The seminar included a variety of professionals within the shoreland zoning field. Speakers included Gary Bartz of the Wisconsin Department of Natural Resources. He spoke on many of the regulatory practices of the DNR, and introduced the landscapers to some of the forms they would need to work with to get approval for certain projects. The emphasis of his talk (and in fact, the emphasis of the entire seminar) was on using “natural” products to restore riparian areas instead of the classic and hackneyed hard armoring such as rock rip rap. Examples of natural materials for restoration that were discussed include Coir bio-logs as well as trees, shrubs, and groundcover.

Stacy Dehne DATCP Engineer who has been involved in countless state funded cost share projects spoke on many different studies that she has been conducting on shoreland environments. She also spoke on different engineering practices that she has successfully (and sometimes unsuccessfully) used in restoring riparian areas. Her knowledge of engineering and how to use proper engineering in the riparian zone was extremely valuable.

Dan Miller and Becky Frisch, Lincoln and Langlade County Zoning Administrators respectively anchored the morning session. Mrs. Frisch’s presentation focused mostly on the areas where the ordinances of both counties overlapped, as it was the intention of both Zoning Administrators not to repeat the ordinances that were similar. She spent time describing what was permissible, what was allowable, and those gray areas where county personnel would have to come to the property to decide on the permissibility. Mr. Miller then spoke briefly on the Wisconsin’s proud history as a conservation leader and detailed the differences between both counties ordinance codes. He also spoke on Wisconsin’s Public Trust Doctrine.

Duane Haakenson, Langlade County Code Administrator focused his presentation on the different tried and true methods of shoreland restoration used at all of Langlade County’s four shoreland restoration demonstration sites. His before and after pictures of all of the demonstration sites proved useful to show how differing methods of restoration can be used to accomplish shoreland stabilization.

Matthew Wagner, Lincoln/Langlade County Shoreland Protection Specialist focused his presentation on not only why we restore, but what plants are best used in differing ecotypes. He also introduced the landscapers to the shoreland restoration website that Langlade County created and encouraged the landscapers to use the website in order to customize shoreland restoration plans for individuals living in northern Wisconsin’s riparian areas.

After the seminar was completed the Shoreland Protection Specialist sent out a follow-up survey to attendees. The goal of the survey was to identify the strengths, weaknesses, and overall impression of the landscaping contractor’s workshop from the perspective of those in the audience. Follow up surveys like this can be helpful to assist Langlade and Lincoln County with preparing and improving future seminars related to shoreland restoration. For the most part the feedback was positive with statements like “well structured”, “good guests”, and “surprisingly informative” among others. Negative comments focused around the poor driving conditions related to the snowstorm.



**IX. In cooperation with the County Lakes Associations, and others, develop additional educational/informational marketing strategies**

Education and outreach is a critical component in furthering participation and interest in shoreland restoration. In recent years there has been limited formal interaction and collaboration between the various lake associations in each county and their respective County governments. The Shoreland Protection Specialist is working to create a more cohesive network of people and organizations that have a vested interest in shoreland restoration and protection.

**X. In Langlade County, supplemental Plantings/Maintenance of Shoreland Demonstration Sites**

There are four shoreland restoration demonstration sites in Langlade County. As mentioned previously, during the 2007 summer, grant funding ran out and the demonstration restoration sites were left rather neglected. As a result, a considerable amount of time was spent managing the sites and doing general maintenance during the 2008 summer months. This includes things like; identifying and removing exotic or invasive species, watering during times of drought, pruning and trimming, transplanting species to different locations, dividing mature plants, collecting seeds, providing brochures on site, installing and removing signage in spring and fall, and interacting with the public. Since the demonstration sites are “showcases” for the public, it is of the outmost importance that they function both ecologically and aesthetically. Each of the restoration sites is at a different point in development, and management and maintenance issues varied among sites. The Shoreland Protection Specialist spent the majority of his time at the Langlade Ranger Station Site because it is the newest restoration site, and the Post Lake Dam site which is the most heavily used park in the county. In the upcoming summer months Langlade County would like to further publicize the shoreland restoration demonstration sites and offer the opportunity to give tours of the sites to a variety of audiences including lake associations, local schools, and other environmental organizations. The following is a brief summary of each site.

**Langlade Ranger Station-**

This demonstration site is the newest or youngest out of the four sites we have in Langlade County. Because of its youth, this site has yet to become fully established and self sustaining like the majority of our other demo sites. The two primary concerns with this site are losing native plants to drought and/or invasive species. Although native plants don't typically require much maintenance, they do need assistance from us (in the form of water), while their roots are developing and reaching down into the soil. This site is quite sandy which means the young shrubs and even some trees have not yet built the deep extensive network of roots needed to draw up water from deep within the soil. Two years

ago we lost a number of shrubs and trees from drought at this location and were forced to spend more money to purchase replacements. This year, the Shoreland Protection Specialist was diligent in his watering efforts and we were fortunate to not lose any major shrubs or trees despite the lack of rainfall throughout Langlade County.

Another common problem with relatively young restoration sites is that they are extremely vulnerable to colonization of invasive or exotic species. This was especially evident at the Ranger Station during the summer of 2008, when Common Tansy became a serious threat.

Common Tansy *Tanacetum vulgare* is a hardy perennial that can grow up to 6 feet tall and spreads by underground rhizomes as well as prolific seed production (up to 1,000 seeds per stem). It is recommended that a multi faceted approach be taken to combat the spread of Tansy. At the Ranger Station Demonstration Site we chose a combination of both mechanical and chemical means to tackle the infestation that had already begun overtaking the native forbs and shrubs by late June.

The first and foremost concern was preventing the existing plants from flowering and producing more seeds. By early July the infestation of tansy had grew, and many of the plants were already over 3 feet tall and beginning to produce seed heads. Tansy was so intertwined with the native plants that chemical application was not a feasible option. To prevent damage to existing native plants, the majority of Tansy plants were removed by hand. In other areas where Tansy had completely colonized into one dense homogeneous patch, a weed-whacker equipped with a metal blade was utilized.

A follow up inspection of the area 1 week later, revealed that many of the plants that had been cut with the weed whacker, were continuing to grow or re-sprout from the severed stems. Common Tansy is extremely resilient and will continue to develop even if there are just a few fibrous strands connecting the stem to the root ball. As a result, a second cutting was done to ensure that all of the stems were completely cut off and there were no connections to the root system. However, even when plants are entirely cut down, the resilience continues and multiple shoots are sent up from the cut area within a few weeks.

Throughout September new shoots that had sprung up from the cut stalks, were sprayed with a 2-4-D herbicide. It is thought that this method is highly effective during the fall when plants are sucking up nutrients and storing them for the winter ahead. Hopefully, the plants that were sprayed took in the chemical and pushed it down into the root system helping to kill the plants at the epicenter.

A few weeks after the last spraying the seed bed was prepared for re-seeding. Using a hand cultivator and rake, the soil surface was worked up, large root fragments were removed, and reseeded efforts began. Pictures of the Ranger Station Demonstration Site can be found in **Appendix B**.

### **Hwy 45 & County Rd. C-**

The restoration demonstration site located at Hwy 45 and County C continues to be a self sustaining restoration site that requires little maintenance. The only major management and maintenance issue faced this season was an aggressive infestation of Reed Canary Grass along the edge of the restoration area. Due to the close proximity to the East Branch of the Eau Claire River, the majority of the Reed Canary Grass was removed by hand. We first cut the grass down to a manageable size and then proceeded to break up and remove the sod. After the root systems were allowed to thoroughly dry out and removed, the area was prepared for reseeded. The locations where Reed Canary Grass had been removed were seeded heavily with an assortment of wildflowers and grasses which are listed in **Appendix D**.

### **Otter Lake Boat Landing-**

Otter Lake Boat Landing was created around the same time as the 45/C demonstration site, and is primarily self sustaining with not a lot of management or maintenance needed. Although there was some Common Tansy that had sprung up around the edges of the restoration, the thick native vegetation throughout the center of the restoration prevented the Tansy from spreading. Hand removal and a minimal amount of herbicide application was all that was needed to rid this location of Tansy.

Additional management activities involving this site included creating a small trail along the edge of the restoration and transplanting a few wildflower species to another restoration site. As the short path was cleared, special care was taken to dig up small bundles of native Cut-leaf Coneflower and Wild Bergamot. Both of these species had spread considerably in the Otter Lake restoration, and oppose to simply discarding them, we chose to transplant them at the Post Lake Dam restoration site.

### **Post Lake Dam-**

The Post Lake Dam Restoration Site continues to be the prized gem out of all the demonstration sites. Besides being our largest and most diverse restoration site, it is located at the most frequented park in Langlade County. Whether its fishermen, families picnicking, kayakers, or people just enjoying the scenery, there seems to always be individuals enjoying this restoration demonstration site. Since this is our most highly visited site, the Shoreland Protection Specialist and department staff frequently monitor and maintain this area throughout the summer. Pictures of the Post Lake Dam Restoration Demonstration Site can be found in **Appendix C**.

Despite the lack of rain throughout Langlade County this past summer, the plants at Post Lake Dam showed significantly fewer signs of stress compared to vegetation at other restoration demonstration sites. Since this area is quite well established and monitored heavily, invasive plants were quickly identified and dealt with throughout the summer. However, there were also some additional issues with aggressive native plants like staghorn sumac and woodland sunflower.

Staghorn sumac has the ability to spread via rootstock and sends out long runners and shoots often called clones. Last year must have been especially good for the Sumac because they sent out an army of clones. Our primary concern was that as the relatively small clones spread and grow (which can be 3 ft. in 1 year) they will inevitably shade out the plethora of wildflowers planted throughout the restoration. As a result, the young shoots that sprung up in some of our more sensitive wildflower areas were cut and a small amount of herbicide was applied to the end of the clippings to ensure they wouldn't sprout again. Unfortunately, unless we remove or kill the large parent plants entirely, we will likely be combating the issue of clones and new sprouts coming up in future years. Looking forward, careful consideration will be made when recommending Staghorn Sumac for future restorations making sure there is plenty of room for expansion and surrounding shrubs and trees that are planted near Sumac must be shade tolerant.

Another management issue that was addressed this summer was the removal of two large Amur Maples. Amur Maples are not a native maple to Wisconsin although they are frequently found planted in parks as ornamentals. The Amur Maples were removed during a collaborative work-day with department staff from Land Records and Regulation along with Langlade County Forestry and Parks Department. During this work-day, a number of tartarian honeysuckle shrubs, purple loosestrife, spotted knapweed, and common tansy plants were also removed. In addition to removing a small number of invasive plants, trees were pruned, seeds collected, and other general maintenance was performed. In place of the Amur maples, we will be planting two Red Oak trees this coming spring.

The diverse plethora of wildflower species present at this restoration site provides an ample supply of native seed for further restoration efforts. The Shoreland Protection Specialist created a list of native plants at the site and a reference calendar when each species would have viable seeds ready for collection. Throughout the summer and fall a wide variety of native seeds were harvested, labeled, and stored for future seeding efforts at other restoration sites. Collecting a portion of seeds from native plants that are already available at our restoration sites, not only reduces future costs associated with purchasing seeds, but also provides a source for greater biodiversity to be added at other locations throughout the county.

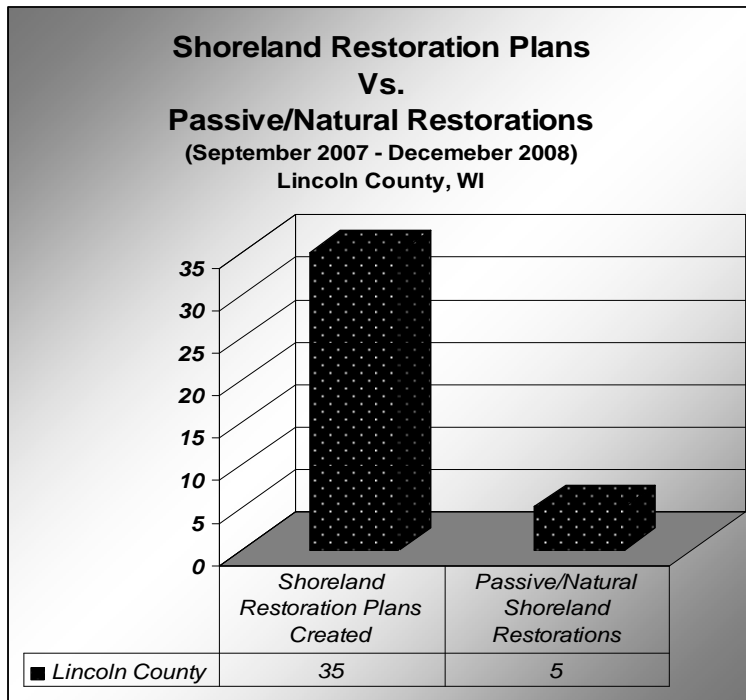
### **Supplemental Seeding**

Part of maintaining and enhancing the shoreland restoration demonstration sites involves supplemental plantings and/or seeding. Despite the lack of rain and dry conditions throughout much of the summer, watering efforts paid off, and we were fortunate to not lose any plants, shrubs, or trees to drought. Since we did not have to replace any of the original plantings, we focused on supplementing the sites by re-seeding. Re-seeding was especially important in the areas where non-native species like Tansy and Reed Canary Grass had been removed and bare soil was exposed.

We placed a seed order with Prairie Nursery for 20 additional species that either weren't present at our sites or were found in relatively small quantities. The overall goal of the re-seeding efforts is to enhance biodiversity as well as the aesthetic appeal of the demonstration sites. Three of the demonstration sites had supplemental re-seeding and a complete listing of the species seeded at each particular site can be found in **Appendix D**.

## Appendix A:

Comparison graphs depicting the number of shoreland restoration plans created in each county by the Shoreland Protection Specialist, as well as the number of declared natural shorelines or passive restorations.



## Appendix B:

### Common Tansy Eradication at Langlade Ranger Station (LRS) Shoreland Restoration Demonstration Site



Before



After



## Common Tansy Eradication at LRS Demo Site

Before



After





## A Few Hours of Hand Pulling Tansy



## LRS Demo Site Before and After

2006



2008





## LRS Demo Site Before and After

2006



2008

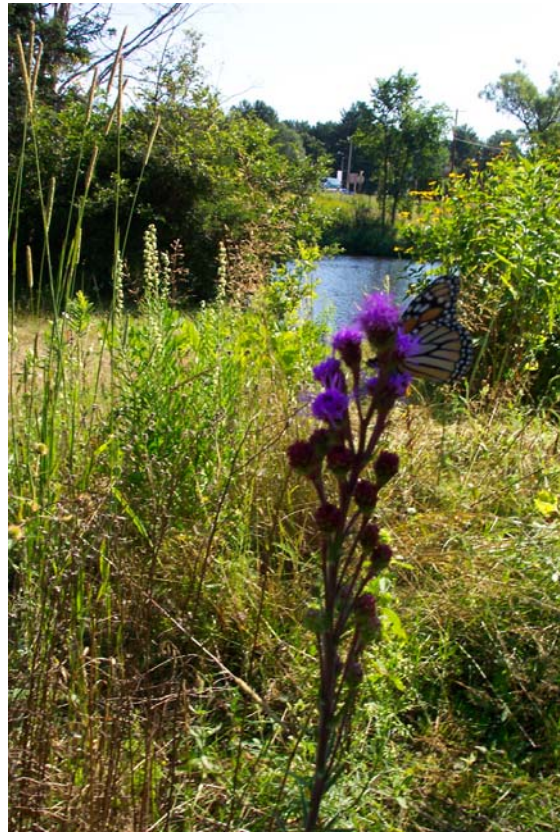


## Fall Colors at LRS Demo Site Just After First Freeze (October 2008)





## LRS Shoreland Restoration Demonstration Site August 2008



~A Monarch Butterfly enjoys a drink of nectar from a Rough Blazingstar at our shoreland restoration demonstration site along the Wolf River at the Langlade Ranger Station. ~

## Appendix C:

### Post Lake Dam Shoreland Restoration Demonstration Site

2005



2008





# Post Lake Dam Shoreland Restoration Demonstration Site

2005

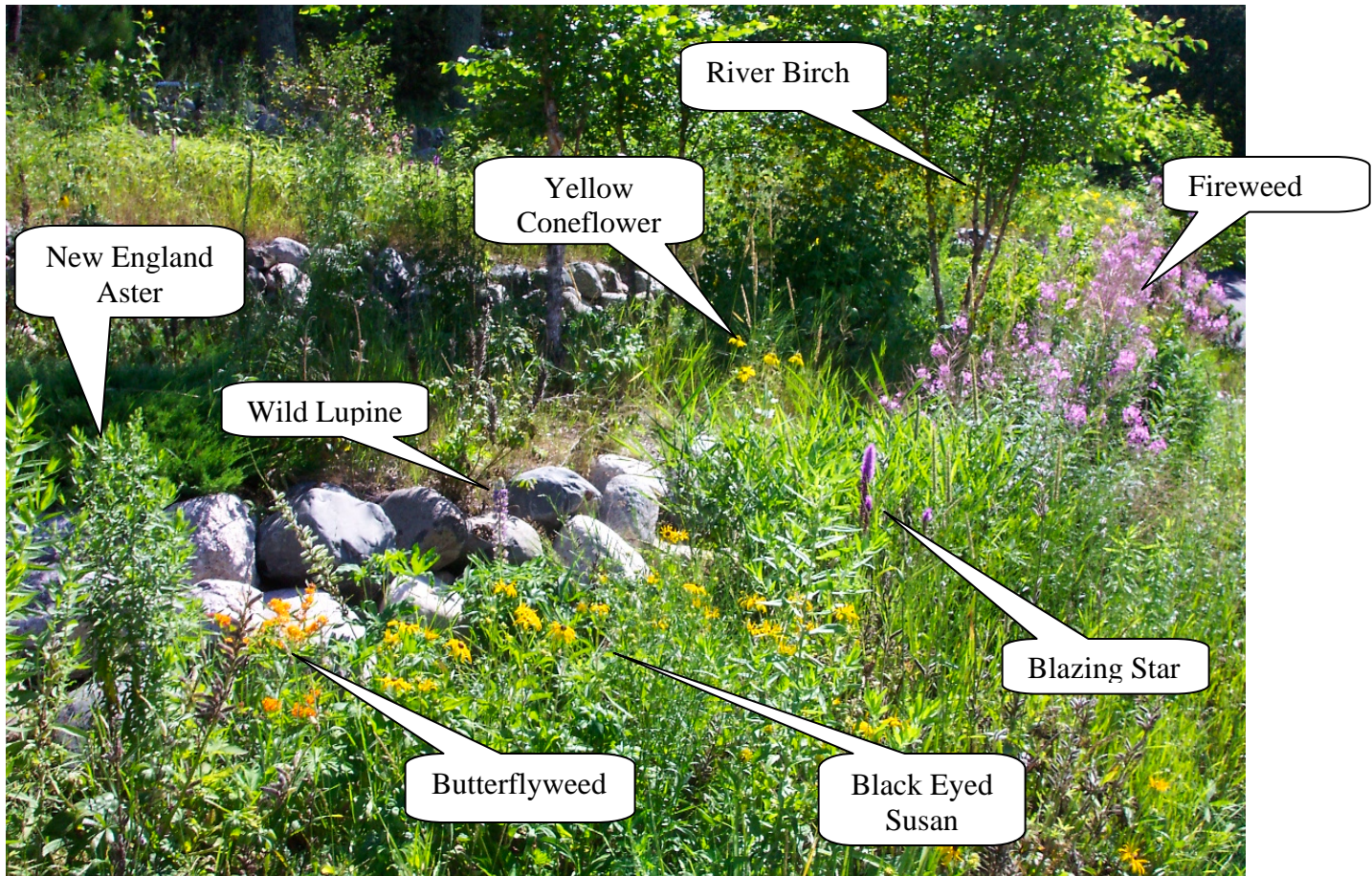


2008





## Wildflower Biodiversity at Post Lake Dam Lower Tier





Variation in Species Composition from Year to Year  
on Hillside that was Seeded in 2006  
2008



2007





## Painted Turtle Stretching His Legs in the Sun at Post Lake Dam Shoreland Restoration Demonstration Site





## Crowd Favorites at Post Lake Dam

Fall



New England Aster  
&  
Black Eyed Susan

Summer



Cup Plant

## Appendix D:

# Seeding List for Langlade County Shoreland Restoration Demonstration Sites

### Hwy 45 and Cty C

Cardinal Flower  
Monkey Flower  
Great Blue Lobelia  
Red Milkweed  
Joe Pye Weed  
Blue Vervain  
Lead Plant  
Wild Bergamot  
White False Indigo  
Ironweed  
New England Aster  
Cut-leaf Coneflower  
Prairie Blazing Star  
Purple Coneflower  
Blue False Indigo  
Canada Wild Rye  
Switch Grass

### Langlade Ranger Station & Post Lake Dam

Lance-leaf Coreopsis  
Yellow Coneflower  
Ohio Spiderwort  
Lead Plant  
White False Indigo  
Blue Vervain  
Showy Goldenrod  
Ironweed  
Sweet Black Eyed Susan  
Wild Bergamot  
Purple Coneflower  
Blue False Indigo  
Rattlesnake Master  
Cup Plant  
Dotted Mint  
Smooth Penstemon  
New England Aster  
Prairie Blazing Star

Appendix E:

# HEISE SHORELAND RESTORATION PLAN

(September 2008)



Created By: Ben Niffenegger  
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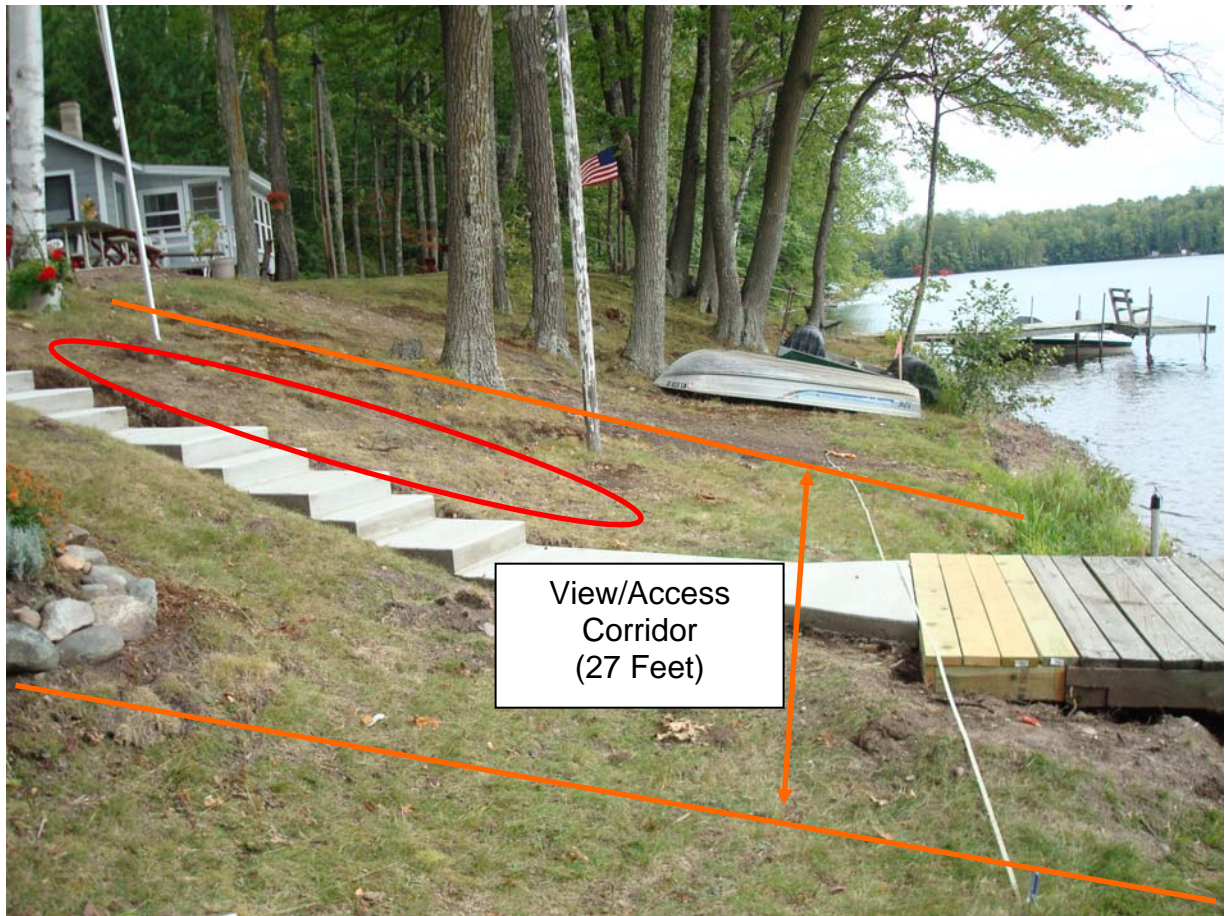
First, I just wanted to begin by reiterating a couple of things I discussed with Gene during the site visit. There are often many arrangements as well as shrub and tree species that will work on a particular site. What I have done is provided you with a list of possible species that I believe will be able to grow in the conditions on your property. If you don't like certain recommendations or have additional ideas that I have not included in the plan, feel free to contact me and we can make some agreed upon alterations to the plan. I want you to be pleased with the finished product so don't be afraid to voice your opinion and provide feedback.

Secondly, you are looking at about 2500 square feet of total buffer area that needs to be restored. Typical planting densities are 1 tree and 2 shrubs for every 100 square feet of area in need of restoration. If we were to use this standard for your property, we would be looking at around 50 shrubs and 25 trees. However, there are already a fair amount of mature trees within the vegetative buffer that I am willing to give you credit for. As a result, your restoration will include 10 trees and 46 shrubs. These trees and shrubs should be spread out fairly evenly throughout the buffer area which extends 50 feet from the Ordinary High Water Mark (OHWM). You are given a 27 foot wide view and access corridor as well as a 15 foot envelope around the house where you are not required to plant anything.

In response to your question regarding transplants: If you would like to transplant maples or oaks from adjacent portions of your property that is fine providing you are not taking the trees from an area within 100 feet of a lake or stream. Typically you want to transplant deciduous trees when they are dormant in the spring before the tree begins budding out, and/or in the fall when the leaves drop. Try to transplant on a cool wet day if possible and that will reduce stress to the vegetation and increase survival rates.

Lastly, the restoration plan I created for you focuses primarily on shrubs and trees because they provide immediate erosion control, wildlife habitat and tend to require less maintenance than wildflowers. If you would like ideas for native wildflower plantings or native grass species to include in your restoration, let me know.

## View and Access Corridor



You are allowed one view and access corridor with a width no larger than 30% of your total water frontage. In your particular case, you own about 90 feet, so your view and access corridor can be approximately 27 feet. The orange lines give you a rough visual of what Gene and I measured. Although technically you're not required to plant anything within this area, I would highly recommend planting some shrubs, wildflowers, or other ground cover along the stairs as indicated in red. This will not only help reduce possible erosion but also add some aesthetic beauty to the barren area. At a bare minimum, the circled area needs to be planted with grass and/or wildflower seed.

## AREA #1

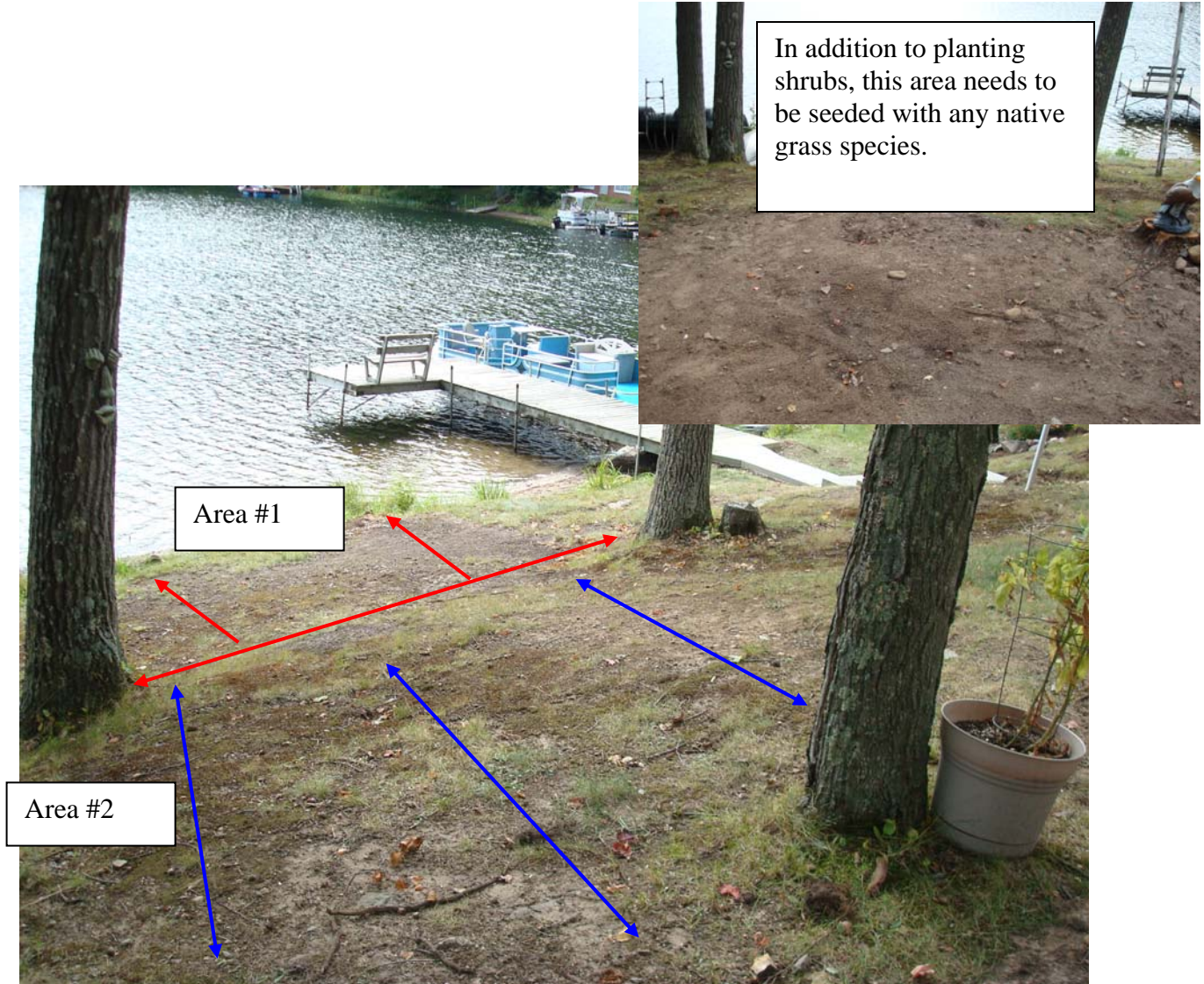


You can see the Ordinary High Water Mark (and erosion) quite clearly in this picture. What we want to try and do here is get some native vegetation established to help hold the soil in place and also absorb some of the wave impact that is eating away at your shoreline. To the right of the line, plant 24 shoreline species in any combination. There are a wide variety of shoreline plants that will grow in this area and some of the more aesthetically pleasing species are; Blue Flag Iris, Marsh Marigold, Sweet Flag, Meadowsweet and/or Sweet Gale. In addition, Sedges or Rush species would also provide valuable erosion control and wildlife habitat. I recommend Common Spike Rush and Creeping Spike Rush in addition to the showier species mentioned above.

To the left of the red line plant 10 shrubs and 2 trees that like to get their feet wet. In terms of shrubs, I recommend Swamp Rose, High Bush Cranberry, Winterberry, and/or Black Chokeberry. The best tree species to plant in an area like this is Swamp White Oak.



## AREA #2



This picture shows pretty clearly the direct path that precipitation and runoff takes on its way down into the lake. As a result, we want to hit Area#2 pretty hard with shrubs. Plant 15 shrubs and 2 trees in Area#2. Juneberry/Smooth Juneberry, Gray Dogwood, Snowberry, Low- Bush Honeysuckle, Mapleleaf Viburnum, and Downy Arrowood are all shade tolerant shrubs that should be able to handle the sandy soil with a little watering and mulch during the first year.

## AREA #3



Along the shore (between the blue line and the lake), plant 8 shrubs and 1 tree. Try 1 Swamp White Oak and a combination of High Bush Cranberry, Ninebark, and Winterberry. If you like the idea of planting Winterberry, I recommend asking the nursery/greenhouse for 1 male & 3 female shrubs in order to ensure pollination.

Above the blue line, on the more upland slope, plant an additional 8 shrubs and 2 trees of your choosing from the Area #3 list.



## AREA #4



This area is also within the 50 foot vegetative buffer zone and is another good spot to plant the remaining 5 shrubs and 3 trees. Shade tolerant species suitable for this area can be found on the Area #4 planting list.

# HEISE PLANTING LIST

## Area #1

### 24--Shoreline Plants

Blue Flag Iris-*Iris versicolor*  
Sweet Flag-*Acorus calamus*  
Marsh Marigold-*Caltha palustris*  
Sweet Gale *Myrica gale*  
Meadowsweet-*Spiraea alba*  
Common Spike Rush-*Eleocharis palustris*  
Creeping Spike Rush-*Juncus palustris*  
-Any Native Sedge-*Carex sp.*

### 10 Shrubs Along Shore

High Bush Cranberry-*Viburnum trilobum*  
Swamp Rose-*Rosa palustris*  
Winterberry-*Ilex verticillata*  
Black Chokeberry-*Aronia melanocarpa*

### 2 Trees Along Shore

Swamp White Oak *Quercus bicolor*

Total Number of Shrubs =46

Total Number of Trees =10

Total Number of Shoreline Plants = 24

Anticipated Date of Completion:  
~October 1<sup>st</sup>, 2010~

## Area #2

### 15 Shrubs

Juneberry-*Amelanchier arborea*  
Snowberry-*Symphoricarpos alba*  
Gray Dogwood- *Cornus racemosa*  
Bush Honeysuckle- *Diervilla lonicera*  
Mapleleaf Viburnum- *Viburnum acerfolium*  
Downy Arrowwood- *Viburnum rafinesquianum*

### 2 Trees

Sugar Maple-*Acer saccharum*  
Red Maple-*Acer rubrum*  
Red Oak-*Quercus rubra*  
Black Cherry-*Prunus serotina*  
Hackberry-*Celtis occidentalis*

## Area #3

### 8 Shrubs Along Shore

High Bush Cranberry-*Viburnum trilobum*  
Swamp Rose-*Rosa palustris*  
Ninebark-*Physocarpus opulifolius*  
Winterberry-*Ilex verticillata*  
Black Chokeberry-*Aronia melanocarpa*  
American Hazelnut-*Corylus Americana*

### 1 Tree Along Shore

Swamp White Oak-*Quercus Bicolor*

### 8 Shrubs (Upland)

Mapleleaf Viburnum-*Viburnum acerfolium*  
Juneberry-*Amelanchier arborea*  
Snowberry-*Symphoricarpos alba*  
Black Chokeberry-*Aronia melanocarpa*  
Bush Honeysuckle-*Diervilla lonicera*  
Gray Dogwood-*Cornus racemosa*

### 2 Trees (Upland)

Sugar Maple-*Acer sacharum*  
Red Maple- *Acer rubrum*  
Red Oak-*Quercus rubra*  
Black Cherry-*Prunus serotina*  
Hackberry-*Celtis occidentalis*

## Area #4

### 5 Shrubs

Juneberry-*Amelanchier arborea*  
Snowberry-*Symphoricarpos alba*  
Bush Honeysuckle- *Diervilla Lonicera*  
Gray Dogwood-*Cornus racemosa*  
Downy Arrowwood-*Viburnum rafinesquianum*  
Mapleleaf Viburnum-*Viburnum acerfolium*  
Elderberry-*Sambucus Canadensis*

### 3 Trees

Sugar Maple-*Acer saccharum*  
Red Maple-*Acer rubrum*  
Red Oak-*Quercus rubra*  
Black Cherry-*Prunus serotina*  
Hackberry-*Celtis occidentalis*



# The following is a listing of all the businesses that attended the 2008 Shoreland Landscaper's Seminar.

A Visions Landscaping  
620 2<sup>nd</sup> Avenue  
Antigo, WI 54409  
Telephone: 715-623-7353

Birchfield Nurseries Incorporated  
c/o Greg McGuire  
7799 HWY 8 West  
Rhineland, WI 54501  
Telephone: 715-282-5213

Bob's Backhoe  
c/o Bob Richards  
N10601 HWY H  
Tomahawk, WI 54487  
Telephone: 715-453-8518

Busy Bee Gardens Compost LLC  
c/o Carl Belohlavek  
780 Redfield Road  
Mosinee, WI 54455  
Telephone: 715-693-3755

Four Seasons Landscaping  
c/o Larry Schleis  
N11787 West Shore Drive  
Elcho, WI 54428  
Telephone: 715-275-3359

Gardens To Order  
c/o Graham Coulson  
1018 East Crocker Street  
Wausau, WI 54403  
Telephone: 715-212-6149

Green Lawn Underground Sprinklers  
c/o of Wally Skic  
N580 North Brandenburg Avenue  
Merrill, WI 54452  
Telephone: 715-539-1133 or toll free at 1-877-539-1133

Green Tree Reforestation and Landscaping  
c/o John Markwardt  
10858 County Road O  
Athens, WI 54411  
Telephone: 715-675-5635

Hanson's Garden Village  
c/o Brent Hanson  
2660 County G  
Rhineland, WI 54401  
Telephone: 715-365-2929

Living Color Landscapes  
c/o Steve Lowther  
1601 Grand Avenue  
Schofield, WI 54476  
Telephone: 715-571-1269

Majestic Farms Greenhouse and Landscaping  
c/o Brenda & Jack Koshollek  
6301 Townline Road  
Hatley, WI 54440  
Telephone: 715-446-3873

Northwoods Landscaping Incorporated  
c/o Gary Buchanan  
N9948 Cliff Road  
Tomahawk, WI 54487  
Telephone: 715-453-4888

Pineview Nursery  
c/o Ed Prohaska  
9218 Reed Road  
Rothschild, WI 54474  
Telephone: 715-359-3008

Spirit View Construction  
c/o of Bob McCabe  
N6005 County Road K  
Irma, WI 54442  
Telephone: 715-539-9897

Stibbe Excavating & Grading, Incorporated  
c/o Ken "K.C." Corley  
PO Box 351: 617 Wausau Road  
Antigo, WI 54409  
Telephone: 715-623-3914

Tree Solutions  
c/o Joel Eldridge  
N2890 Hill Road  
Antigo, WI 54409  
Telephone: 715-627-2286

Winger Concrete Products  
c/o Donald Moyle  
6857 HWY 51 South  
Hazelhurst, WI  
Telephone: 1-800-946-4377

Although the Langlade County Land Records and Regulations Department (LRRD) makes every attempt to ensure that the information contained in its databases is correct, it assumes no responsibility for inaccuracies or omissions in these data sets. Neither the LRRD nor any of its employees shall be held liable for any improper or incorrect use of the information described and/or contained herein and assumes no responsibility for anyone's uses of the information. The LRRD will not be held responsible for any consequence of the use or misuse of these data by any individual or organization. Changes may be periodically made to the information herein; these changes may or may not be incorporated in any new version of the publications.



We would like to thank everyone who came to the Shoreland Landscaper's Seminar on April 1<sup>st</sup>, 2008. Enclosed you will find a Certificate of Attendance. As stated in earlier correspondences, both Langlade County and Lincoln County will be keeping a listing of all those businesses that attended the seminar and make it available to the public. We would like to remind you that included in the packet of information given to you at the seminar is a listing of contact information for all of the presenters. Please feel free to contact any of the presenters with any questions that you may have.

We would appreciate it if you would take the time to fill out the enclosed questionnaire about the seminar. Langlade and Lincoln Counties are considering having additional seminars and/or workshops pertaining to shoreland zoning and shoreland restoration. By taking the time to fill out this questionnaire, we will be able to create new seminars and/or workshops that are more geared toward what professionals like you would like to learn about. Please return this questionnaire in the self addressed stamped envelope that is enclosed with this letter.

Thank you and best regards,

Matthew L. Wagner

Langlade/Lincoln County Shoreland Protection Specialist  
837 Clermont Street  
Antigo, WI 54409  
Telephone: 715-627-6206  
Fax: 715-627-6281  
Email: [landuse@co.langlade.wi.us](mailto:landuse@co.langlade.wi.us) or [mwagner@co.lincoln.wi.us](mailto:mwagner@co.lincoln.wi.us)

# Questionnaire:

## 2008 Shoreland Landscaper's Seminar

### Question #1:

Did you find the Shoreland Landscaper's Seminar to be a valuable educational tool when it comes to shoreland zoning, standards, and restoration?

☐ Yes ☐ No

Why or why not \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### Question #2:

How often do you think Langlade and Lincoln County Governments should hold seminars on the topic of shoreland zoning, standards, and restorations?

☐ One a year ☐ Twice a year ☐ Other \_\_\_\_\_

### Question #3:

Were you happy with the accommodations at Treehaven?

☐ Yes ☐ No

Comments: \_\_\_\_\_  
\_\_\_\_\_

### Question #4:

Would you consider going to seminars and/or workshops that were held in other locations? If "yes", where would you like them to be held?

☐ Yes ☐ No

Other possible location choices:

\_\_\_\_\_  
\_\_\_\_\_

### Question #5:

As it pertains to seminars that either Lincoln or Langlade County may hold in the future; what is the maximum distance that you would be willing to drive (one way) to attend a seminar?

Comments:

\_\_\_\_\_  
\_\_\_\_\_

Question #6:

If you were to attend another seminar hosted by Langlade and Lincoln Counties, what time of day, and what time of year works the best for you?

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Question #7:

Would you like Langlade and Lincoln County to hold seminars on other topics relating to shoreland health and regulations?

☐ Yes ☐ No

If yes, what topics would you like to have covered?

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Question #8:

Would you be interested in having a workshop, where all interested parties actually were out in the field with county staff performing a shoreland restoration or other activities (i.e. rain garden)?

☐ Yes ☐ No

If yes, what are you interested in seeing?

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Question #9:

With five being the highest and one being the lowest, please rank the value of the information gained from each speaker as it pertains to you and your company.

Langlade County Zoning Regulations: Becky Frisch	_____
Lincoln County Zoning Regulations: Dan Miller	_____
DNR Regulations & Permits: Gary Bartz	_____
Technical Standards: Stacy Dehne	_____
Shoreland Restoration: Matt Wagner	_____
Techniques used at restoration sites: Duane Haakenson	_____

Listed in order of appearance at the seminar

Comments: \_\_\_\_\_

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Question #10:

Do you think that the informational packet that you received at the seminar will be beneficial in the future?

☐ Yes ☐ No

Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Question #11:

Did you find the vendors that were at the seminar to be a valuable networking/educational tool?

☐ Yes ☐ No

Why or why not:

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Question #12:

Is there any part of the seminar that you would have liked to have had explained better?

Comments: \_\_\_\_\_

\_\_\_\_\_

Please feel free to fill in the rest of the area on this questionnaire with anything that you think would be pertinent regarding the seminar you attended or any possible seminars in the future.

[illegible]

