

Floodplain and Shoreland Management

Notes

Wisconsin Supreme Court Distinguishes Between Area and Use Variances: Standard Changes for Area Variances

by Lynn Markham

This article summarizes two recent Wisconsin Supreme Court decisions regarding zoning variances, *State ex rel. Ziervogel v. Washington County Board of Adjustment*, 2004 WI 23 (filed March 19, 2004) and *State v. Waushara County Board of Adjustment*, 2004 WI 56 (filed May 18, 2004) and focuses on:

- 1) Distinguishing between area variances and use variances.
- 2) Redefining the meaning of "unnecessary hardship" for area variances.
- 3) Reviewing the three tests for deciding variance requests in light of the new Supreme Court decisions.

Distinguishing between area variances and use variances.

Before these cases were decided by the Wisconsin Supreme Court, it was doubtful that zoning boards of adjustment in Wisconsin had the authority to grant use variances. See *State ex rel. Markdale v. Board of Appeals*, 27 Wis. 2d 154 (1965). Now, the Supreme Court has determined that boards of adjustment do have the authority to issue use variances, though they can be problematic for reasons described in a note at the end of this article.

The *Ziervogel* decision defines the two types of variances as follows:

- Area variances "provide an increment of relief (normally small) from a physical dimensional restriction such as a building height, setback, and so forth." *Ziervogel*, ¶ 23.
- Use variances "permit a landowner to put property to an otherwise prohibited use." *Ziervogel*, ¶ 21.

However, it may not always be easy to determine if an applicant is seeking an area variance or a use variance. It is arguable that a large deviation from a dimensional standard, or multiple deviations from several dimensional standards on the same lot, may constitute a use variance instead of an area variance. For example, allowing significantly reduced setbacks could have the same effect as changing the zoning from one residential zoning district that requires significant setbacks and open space to a second residential zoning district that has minimal setbacks and open space.

Based on the majority opinions in the *Waushara County* and *Ziervogel* cases, it appears that, in order to draw the line between area variances and use variances, boards of adjustment should consider the degree of the deviation from each dimensional standard for which a variance is sought, to determine if the requested



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NR 118 for the Lower St. Croix Riverway Approved

Proposed changes to chapter NR 118 of the Wisconsin Administrative Code for the Lower St. Croix Scenic Riverway have been approved by the Wisconsin Natural Resources Board and by the Legislature. NR 118 establishes standards that local governments must meet when adopting and enforcing

zoning ordinances within the Lower St. Croix Scenic Riverway. The Natural Resources Board approved the revised rule on May 26th approved further modifications needed for technical clarifications and to respond to legislative concerns at their August 11th meeting.



- St. Croix River

The effective date of the new rule will be November 1st, so municipalities will need to be working to incorporate the new provisions into their riverway zoning ordinances. Key provisions of the rule provide clarity and consistency for local governments to implement riverway standards, and new mitigation measures for protection and improvement of scenic character and water quality.

Floodplain and Shoreland Management Notes

"Floodplain and Shoreland Management Notes" is published by the WDNR, Bureau of Watershed Management. Its purpose is to inform local zoning officials and others concerned about state and federal floodplain management, flood insurance, shoreland and wetland management, and dam safety issues. Comments or contributions are welcome.

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Substantial Damage Update

This month marks the two-year anniversary of a lengthy discussion in this newsletter about substantial damage provisions and what that means for local zoning administrators.

Based on the Wisconsin DNR's' experience working with communities during and after the 2001 Mississippi River flooding, we tried to summarize the requirements and challenges everyone faces in responding to a flood disaster. One requirement that frequently gets overlooked is inspecting damaged structures in floodplain areas to determine if the structure has been substantially damaged; in other words, will the total costs to restore the structure to its pre-damaged condition equal or exceed 50 percent of the structure's current equalized assessed value?

Minimum state and federal regulations require that substantially damaged structures be brought into compliance with current zoning standards. Both also require that the local permit official perform these inspections, provide the reports to state and federal authorities, and ensure that the substantially damaged structures are brought into compliance.

Unlike routine structural repairs, modifications and additions, the costs to repair structures damaged by events other than flooding are not cumulative. If a flood caused 40 percent damage to a structure in 2001 and a tornado caused 30 percent damage to the same structure in 2004, the structure is not considered substantially damaged and can be repaired without being brought into compliance with current floodplain regulations.

However, unlike routine work where only structural components and the labor associated with those components must be counted against the 50 percent cumulative lifetime limit, all costs to restore a flood damaged floodplain structure to its pre-damaged condition must be counted. This would include floor coverings, cabinetry, windows and doors, drywall, insulation, and all other items that wouldn't typically be considered structural components. As with routine work, local fair market values for the materials and labor must be used.

In 2001, both the Department and FEMA sent letters to local officials informing them of the substantial damage requirements in state and federal regulations and in their local zoning code. These requirements are found in the nonconforming section of your ordinance - where the substantial damage language is found - and in the administration section, which spells out the obligations for issuing permits for all floodplain development, including repairs to damaged structures. While most officials understand the importance of these inspections, a number of issues - boiled down to the essentials - kept popping up in conversations about this issue, i.e: **not enough staff- not enough expertise - not enough training - not enough support.**



-Surveying the damage

Continued on Page 17 . . .

Jefferson County Reduces Flood Damages with Mitigation Grant

Flooding has plagued Blackhawk Island in Jefferson County. Black Hawk Island, which is actually a peninsula, has Mud Lake to the north, the Rock River on the south and Lake Koshkonong at the end. When water levels are high, the three bodies of water swell and merge into one, covering the low-lying areas and flooding many of the 75 homes on the island.

Jefferson County utilized FEMA's Hazard Mitigation Grant Program (HMGP) to help residents on Blackhawk Island. The HMGP makes funds available for mitigation measures aimed at reducing costs associated with damage caused by severe weather events. The State administers the program, but the local communities are responsible for identifying and implementing projects.

There are several types of projects funded through the HMGP and Jefferson County developed a Floodplain Hazard Mitigation Plan, that indicated acquisition and demolition as the best option for voluntary participation. Since 1995, Jefferson County has acquired 35 structures with assistance from FEMA, Wisconsin Emergency Management, Wisconsin Department

of Natural Resources (WDNR) and the Wisconsin Department of Commerce.

Project Grows with New Flooding Events

The Jefferson County Emergency Management Office identified, as part of the Flood Mitigation Project, Blackhawk Island Road as the area with the most severe flooding. In 1995, the initial phase of the buyout began and several homes were acquired.



- Homeowner using a kayak to navigate Blackhawk Island Road.

Today the buyout continues on Blackhawk Island Road and in three nearby areas. The National Flood Insurance Program

has been helpful in identifying areas with Repetitive Loss structures.

The County's main concern is the health and safety of its residents, including the accessibility for local emergency crews. Jan Brom, the first resident who volunteered to participate in the project, described the clean up as "horrendous". When the floodwaters subsided, the burden of the clean up, including removal of snakes, bugs and frogs deposited inside her home from the river water, was just too great. "There was just no place for the water to go," she said.

Spring had always been the most depressing season for her because she would drive through town and see her friends growing beautiful tulips and green grass. Returning to her home, surrounded by water, she would think about the muddy mess that was left behind.

Savings Realized as Project Expands

An HMGP requirement is a 75% federal - 25% local cost split for each project. The State of Wisconsin funds 12.5% of the 25% local match. Some counties are apprehensive about applying for the program because of this requirement, but Jefferson County pursued various funding sources including a Lake Protection Grant from the WDNR and Community Development Block Grant from the Wisconsin Department of Commerce. The Federal portion of the HMGP has totaled more than \$1.5 million.

During the HMGP application process, a cost to benefit ratio must be considered. During the May 2004 flooding, many of the 35 structures Jefferson County acquired would have been damaged. If the properties were not mitigated, it is estimated that the repair expense for the homeowners would have totaled \$406,000 (based on an average value of \$58,000 per structure and a projected 20% damage based on floodwater levels). These are only the structural costs.

The emergency costs from first response (making sure residents were safe and the cost of emergency equipment) are extensive during a disaster. The Health Department, local emergency response and the American Red Cross send staff and use their

resources to assist residents whose home are uninhabitable due to floodwaters. Since the project has spanned over nine years, the overall savings have well exceeded the cost of the acquisition.

Through program cooperation, the stress on local, state and federal funds is lessened as they work towards a similar goal of protecting property and lives. Donna Haugom, a part of the Emergency Management team working on the project reflected, "It is great to know that we helped not only the homeowners, but the environment as well." She feels a sense of accomplishment knowing that the homeowners will have a safer, healthier existence because of the program.

For more information on mitigation in Wisconsin, please contact Roxanne Gray, State Hazard Mitigation Officer, at 608-242-3211 or at roxanne.gray@dma.state.wi.us.

For more information about Wisconsin's Division of Emergency Management, go to <http://emergencymanagement.wi.gov>.

- Acquired home scheduled for demolition, submerged in May 2004 flooding.



Next Round of Flood Control Grants Slated

With the floods of 2004 still sloshing around in our memories, it's time to think about flood mitigation opportunities that may have been put on the back burner.

The Department is pleased to announce that the third round of grant applications for the *Municipal Flood Control Grant Program* will be mailed out to all Wisconsin communities on November 15, 2004.

This program is targeted toward cities, villages, towns, and metropolitan sewerage districts, as defined in s. 281.665(1)(b), Wis. Stats. The primary purpose of this program is to help local governments minimize flooding and flood-related damages by acquiring property and removing structures to create permanent open space areas in the floodplain which increase flood storage capacity, lower flood elevations downstream of the project site, allow infiltration of floodwaters and create valuable wildlife habitat. Other eligible activities include floodproofing structures, creating open-space flood storage areas, constructing flood control structures and restoring the flood-carrying capacity and natural and beneficial functions of watercourses.

Projects eligible under this program shall minimize harm to existing beneficial functions of water bodies and wetlands, maintain natural aquatic and riparian environments, use stormwater detention and retention structures and natural storage to the greatest extent possible and provide opportunities for public access to water bodies and to the floodplain.

The Department has \$4,000,000 available for Municipal Flood Control projects in this third round of grant applications. A maximum of \$800,000 is allowed per applicant (applicant defined as one city, etc). **The Department will fund 70% of total eligible cost for eligible grant projects.** To be considered for funding, applications must be completed and **postmarked no later than April 15, 2005.**

Grant awards will be issued for a two-year grant period: January 1, 2006 - December 31, 2007.

Please access the following DNR webpage to obtain application material for this grant: <http://www.dnr.state.wi.us/org/caer/cfa/Ef/flood/grants.html>. If computer access is difficult or unavailable, or if questions arise, please contact the appropriate DNR staff person listed below.

South Central Region

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Southeast Region

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E-mail: Susan.Kocken@dnr.state.wi.us

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Mail Applications to:

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Updated Guidebook for Local Officials

Ensuring that local officials have the knowledge and tools necessary to enforce the requirements of chapters NR 115 and NR 116 of the Wisconsin Administrative Code has always been a goal of the DNR. To meet that goal, the Department has been updating the 1987 publication *Floodplain-Shoreland Management: Guide for Local Officials*.

The purpose of the updated document will be to provide both local elected and zoning officials with current information and tools for enforcing their local floodplain, shoreland and shoreland-wetland zoning ordinances. References to the applicable sections of the Wisconsin Administrative Code and Wisconsin State Statutes will be included. References to the applicable federal codes will be included in

the sections on floodplain management.

The updated Guidebook will have several appendices including a list of contacts for further or related information, a brief list of related publications and definitions of commonly used terms. The appendices will also include a flow chart for general permit review and a model floodplain zoning ordinance.

The final document is anticipated to be ready before the end of 2004 in both paper and electronic formats. The Department is also working with UW Stevens Point's Center for Land Use Education to offer training in conjunction with the release of the updated Guidebook

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Model Ordinance Update

The model floodplain zoning ordinance was updated in September 2004 to reflect several recent administrative code changes and concerns voiced by local zoning administrators over the language used regarding substantial damage assessments. These changes have been incorporated into the electronic version of the model ordinance on the DNR webpage - <http://dnr.wi.gov/org/water/wm/dsfm/flood/title.htm>.

In April 2004, changes to the nonconforming language in section NR 116.15(1)(c) were finalized. The new language excludes from the 50 percent cumulative lifetime cap the costs to elevate a nonconforming building or a building with a nonconforming use to the flood protection elevation (RFE+2).

While the costs to elevate are now

excluded, several criteria in the federal floodplain regulations are still applicable. The lower level of an elevated structure cannot be completely enclosed so as to preclude the unobstructed passage of flood waters. Also, the modified structure cannot cause more than a one-hundredth of a foot increase in the existing regional flood elevation. Before an applicant could receive a permit to elevate a structure, a registered professional engineer must certify that the modified structure will meet both of the above requirements. Because of these restrictions, it may be more expedient to elevate on engineered posts or piers, rather than continuous wall foundations which are more prone to structural failure due to ice jams, debris build up and other hazards associated with flooding.

Temporary Rules Adopted for Chapter 30

The summer of 2004 was too cool, too brief, and too confusing for many waterfront property owners, state habitat protection staff, and local governments. They were inundated by a tidal wave of headlines, rumors and legalese in the wake of legislative changes to Wisconsin's system for reviewing and permitting projects along lakes and rivers.

What happened this summer? Well ...

DNR adopts temporary administrative rules to carry out the Jobs Creation Act (2003 Wisconsin Act 118.) A legislative committee suspends pier rules and several others. DNR holds public hearings on permanent rules. Agency revises the temporary rules to the legislative committee's satisfaction. Public hearings are set for this fall for permanent pier rules. Adoption of permanent rules on tap for 2005.

The surge of words, actions and dates left everyone wondering just what had happened and what they needed to do to fulfill their responsibilities and protect valuable public resources. This article attempts to calm the storm and make for smoother sailing in coming months.

How is the permitting system different

from what we're used to? Projects now fit into one of three tiers for permitting and environmental review, where previously, the majority of projects all required an individual permit application and comprehensive DNR review in which the average applicant

received his or her answer in 47 days in 2003.

The first tier: Exemptions to the permitting process but projects must meet specifications. Under the new law, 18 activities are exempt from a permit and DNR review unless the activity is proposed for a sensitive water, as defined in NR 1. To be exempt, however, the activity must meet specifications for its design, location and construction, and in some cases, the work can't be done during certain times, such as during musky spawning season.

The second tier: More general permits and shorter review. Applicants fill out a more general permit and DNR is required to issue a decision within 30 days. The Jobs Creation Act established general permits for various activities, and DNR's temporary rules actually create those general permits, allowing for the shorter, 30-day review.

The third tier: Individual permits and more comprehensive review. Many activities, including many proposed for sensitive waters and complex, potentially environmentally damaging projects, will continue to require the applicant to fill out an individual permit and receive a comprehensive DNR review.

What DNR administrative rules are in effect now, and how long will they be in effect?

Seven revised temporary rules adopted by the Natural Resources Board August 16th are now in effect to help the agency carry out the new law. Also in effect are four temporary rules originally adopted by the board in April that were not suspended by the Joint Committee for the Review of Administrative Rules. The temporary pier rules, Chapter NR 326, the board adopted in April remains suspended. DNR is now working with a group of waterfront property owners, anglers, Realtors, marine operators, and other stakeholders to develop proposed permanent rules governing piers and to bring those proposals to public hearing in October.

The rules are found at: <http://www.dnr.wi.gov/org/water/fhp/waterway/emergencyrules.shtml> The rule numbers, the topics they govern, their effective dates and their expiration dates are featured in the chart at the end of this article. Note, however, that these temporary, or "emergency" rules, may be extended upon legislative approval, as some already have been, and as others may be.

What should I tell people who ask me if their planned project is exempt from permitting? Give them the DNR's Waterfront Property web page business card (ask your local Water Management Specialist if you need additional cards). Filling out an exemption determination request form is the easiest



- Public hearings are scheduled in November on pier rules

and safest way for property owners to understand how their waterfront plans are affected by the revised emergency rules and whether they're eligible for an exemption. Upon receiving a request form, DNR has 15 days to determine whether the project is exempt from permitting under the new law. The forms can be obtained at DNR service centers or found on DNR's Web site <http://www.dnr.wi.gov/org/water/fhp/waterway/permits/exemptionrequest.pdf>

Generally, the temporary rules now in effect exempt riprap replacement, riprap repair and 16 other waterfront activities from DNR environmental review unless those activities are planned for sensitive waters but requires those activities be designed, built and located to meet specifications. The revised Chapter NR 1 spells out the categories of sensitive waters where DNR permits of some kind - whether individual permits or the just developed general permits - are needed.

What's going on to get permanent rules in place and when can we expect them?

Proposed permanent rules have gone to public hearing for all but the proposed permanent rules for piers, and public hearings for those rules are set for October. DNR's plan is to return to the Natural Resources Board early in 2005 to seek approval of the permanent rules so they can be sent to lawmakers for their review. Habitat protection folks hope to get proposed permanent rules in place before the 2005 construction season is in full swing.

How do the new rules affect local governments? The new law and rules don't specifically require local governments to do anything. Local and state staff will still advise people of the potential need for each other's approvals. A quick way for local staff to answer questions is by distributing the DNR's Waterfront Property web page business card which can be obtained from your local Water Management Specialist. The increased specifics in the new state rule should increase opportunities for consolidation of local and state standards or decision processes. To see how these permit partnerships can work, see <http://www.dnr.state.wi.us/org/water/fhp/waterway/partnerships/index.shtml> or call Mary Ellen Vollbrecht (608-264-8554) or Liesa Lehmann (608-266-2997) at DNR.

One key change that local officials managing floodplain zoning need to be aware of is that it's no longer safe to assume that projects authorized under state general permits comply with local floodplain ordinances. The 30-day presumptive approval deadline for the general permits does not allow time for state engineering review. Instead, the general permit application and permit documents clearly advise applicants of their obligation to ensure they are not increasing the regional flood through application for local permits. Where local governments need technical assistance in conducting these reviews, DNR engineers are available to help with training or review of individual projects.

Emergency Rules Timetable-Updated September 16, 2004

Rule	Effective date	Expiration date
NR 1: Natural Resources Board Policy and Waters Designations	August 24, 2004	January 20, 2005
NR 300: Fees, Timelines & Procedures	April 19, 2004	November 15, 2004
NR 310: Fees, Timelines & Procedures	August 24, 2004	January 20, 2005
NR 320: Bridges & Culverts	August 24, 2004	January 20, 2005
NR 323: Fish & Wildlife Habitat Structures	April 19, 2004	November 15, 2004
NR 325: Boathouses	April 19, 2004	November 15, 2004
NR 326: Piers	April 19, 2004	Suspended June 24, 2004
NR 328: Shore Erosion Control Structures	August 24, 2004	January 20, 2005
NR 329: Miscellaneous Structures	August 24, 2004	January 20, 2005
NR 341: Grading	May 19, 2004	December 15, 2004
NR 343: Ponds and Other Artificial Waters	August 24, 2004	January 20, 2005
NR 345: Dredging	August 24, 2004	January 20, 2005

*Hearings on permanent rule NR 326, developed with a stakeholder group, will be held in October.

Review Continues on Shoreland Management Program

On August 24, the NR 115 Advisory Committee met to review the second draft of proposed changes to Chapter NR 115, Wisconsin Administrative Code.

The Advisory Committee first met in November of 2002 and developed the initial concepts that were taken to listening sessions held in November and December of 2003. Based on the comments received at listening sessions and the Advisory Committee's initial concepts, Department staff drafted proposed changes to ch. NR 115, Wis. Admin. Code.

The Advisory Committee met this May and June to review the first draft of changes and in August to review a second draft of changes. Discussion at these meetings has focused on a

Some key provisions in the second draft include:

- Maintaining existing shoreland-wetland zoning standards
- Introducing standards for keyhole development
- Basing minimum lot sizes requirements on distance to ordinary high-water mark, rather than current sewer/unsewered distinction
- Allowing property owners to decide if they want one or multiple viewing and access corridors, of which the total width may not exceed 30% of the lot's frontage
- Clarifying how standards apply to condominiums and other multi-unit development

Based on comments from the August meeting, Department staff are preparing a third draft for the Advisory Committee meeting on October 26. A final Advisory Committee has been scheduled for November 16, if needed.

The Department expects to go to the Natural Resources Board for permission for public hearings in January of 2005, and to hold the public hearings in the Spring of 2005. Plans currently call for eight public hearings in locations around the state.

Information on changes to ch. NR 115, including Advisory Committee meetings, is available at: www.dnr.wi.gov/org/water/wm/dsfm/shore/news.htm



- Development on Lake Wisconsin in Sauk County.

wide range of issues, including regulation of nonconforming structures, minimum lot sizes and buffer regulations.

Lake Study Says to "Leave the Dead"

by John Bates

As a sign that sanity can exist amidst apparent chaos, many people hang little plaques above their disarrayed desks that say things like, "A messy desk is a sign of productivity," or "Clutter is a sign of a creative genius." Whether that's true for office desks is debatable, but a team of researchers from the UW-Madison Trout Lake Station is working to prove a comparable analogy in nature - that "messy" lake shorelines with downed trees all along their rims are nature's sign of productivity and creative genius.

Their research is triggered by the realization that human development along northern lakeshores is rapidly stripping away the dead trees and other natural debris that had been common to lake ecosystems since the last glaciers departed 10,000 years ago. Scientists have long thought that woody shoreline habitat was critically important to aquatic food chains, but exactly how important to specific organisms has never been demonstrated.

With the clock ticking as more and more shorelines are developed, the UW researchers are trying to accurately determine how fallen tree trunks and branches, or "coarse woody habitat," affect insect, frog, and fish populations. To do so, they've been given the unique scientific opportunity to manipulate the entire shorelines of two undeveloped lakes in the Northern Highland State Forest north of Minocqua.

What makes the study even more unusual is that one of the lakes, Camp

Lake, is naturally divided into two separate basins, while the other lake, Little Rock Lake, is hour-glass-shaped and has been separated at its narrowest point by two heavy curtains. Thus, researchers are able to manipulate the shoreline of one basin on each lake while leaving the other one natural for use as a reference, or control, for the experiment.

Three of the researchers, Greg Sass, Anna Sugden-Newberry, and Matt Helmus gave me a boat tour of both lakes in mid-June to demonstrate what whole-lake manipulations look like. We began in Little Rock Lake, where researchers had installed an impermeable barrier nearly two decades ago to separate the two basins. While similar in its natural state in most ways to Camp Lake, Little Rock historically had a high density of downed trees along its shoreline. In 2002, the researchers removed trees from the north basin leaving only the trees that were too buried in the sediments to be moved.

Little Rock's south basin, however, was left alone, where its high number of naturally downed trees give it a wild appearance, a look that many shoreline owners might consider "messy" or "chaotic."

Data collected in the north basin has shown dramatic changes in the basin's fish populations and their behaviors. The biggest change has occurred in the population of yellow perch. Perch numbers have dropped to nearly zero,

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- Shoreline cleared for construction Lake Redstone, WI

... Continued from Page 11

because yellow perch usually deposit their sticky eggs over submergent vegetation or submerged brush and branches in shallow water. Bass predation upon them has also increased due to the lack of woody habitat for the perch to use as a refuge. Thus, the absence of toppled trees in the water appears to have the potential to severely reduce perch populations.

The largemouth bass population has also suffered as the yellow perch have declined. They've had to switch from eating yellow perch, a favorite prey item, to eating more of a terrestrial diet. Rather than looking out into the water for their supper, they now look up to the surface in hopes of finding insects or frogs or snakes on the surface of the water. Stomach analysis has shown that the bass are even eating rodents swimming along the shore. The net result: the growth rate

of largemouth bass has significantly declined, and their long-term reproductive success may be at risk.

Camp Lake, only a mile west, provided the researchers with the opposite opportunity for

manipulation. Camp Lake historically had a very low number of naturally downed trees along its shoreline. In March, 2004, trees were hauled in and placed on the shoreline ice of its south basin. Each tree was placed about 10 meters apart all the way around the 40-acre basin. When the winter ice melted, the trees, which included an array of species and sizes and shapes, sank into the water. The north basin, which is connected to the south basin by a tiny channel, was left in its

natural state - a "clean" shoreline with very few downed trees.

In the south basin, the impacts were immediate. As we motored along, Sass pointed to the many trees lying in the water along the shoreline: "Next to every new log that we put in the water, there's now a largemouth bass nest, and sometimes two. And if you look in the branches of the trees in the water, there's a mass of toad eggs in nearly every one."

Sass swims the shoreline every week with snorkeling and Scuba gear to count and mark the largemouth bass nests. Several years of prior baseline research by Sass and others had shown that fish seldom moved between the basins. So while connected, the basins acted as if they were two separate lakes. But now the fish were migrating through the channel and into the south basin to nest, presumably because of the better habitat provided by the downed trees. In contrast, very few bass now nest in the north basin.

Helmus explains that the woody habitat provides a substrate for plants like algae and aquatic insects to latch onto for use as a home and for food. The tangle of branches further acts as a protective refuge for insects and small fish. "These trees are where the action is," says Helmus. "The little fish hide inside, but every once in a while get chased out, and then a predator will have a meal. The trees create refuge areas, and become hot spots for aquatic life."

Most anglers already know this. To find fish, one usually has to find structure, some kind of architecture in the water like aquatic plants or downed trees that provide cover and food. "In shallow lakes, open water has nutrients



- Largemouth bass
in woody debris

and plankton, but typically little refuge," says Sass. "Most of the predator-prey relationships are focused on the edge of refuges in these lakes."

We watch as a loon pops up and dives again and again near our boat, actively fishing. Loons sometimes use floating woody habitat along shorelines as a platform for building their nests, and they certainly know to fish around the wood. So do great blue herons, mergansers, kingfishers, otters and other fish-eaters and insect-eaters. Turtles line up to bask on the logs. Dragonflies and damselflies perch on the branches.

Yet, dead and downed wood still gets a bad rap. We talk about getting rid of the "dead wood" in an organization. We think of death as the end of being of value or service, but it turns out that even in death, a tree has a life of its own. While everyone sees the same shorelines, not everyone understands them.

"Coarse woody habitat is a natural occurrence," says Sugden-Newberry. "It's part of being in the Northwoods. If you move up here and have lakeshore property, you have to treat it differently and look at it differently than city property. Just because trees are in the water, doesn't mean they are debris or going to waste. They're a living community."

So, it turns out cleanliness is not next to Godliness, at least along lakeshores. "One learns a landscape finally not by knowing the name or identity of everything in it, but by perceiving the relationships in it," wrote Barry Lopez. Sass believes that if people knew the effects of the changes they were making along their

shorelines, many people would manage their property differently. "Wood is critical to spawning success for many fishes," Sass says. "It's an interaction that has gone undisturbed for thousands of years."

"We need to look with an ecological lens," adds Sugden-Newberry. "We don't see that what we do on land affects aquatic life." Shoreline owners not only reduce coarse woody habitat by removing fallen trees, but also by thinning and removing trees and shrubs from along the shoreline to improve their view of the water, thus greatly reducing the amount of wood that can ultimately fall into the lake. An earlier study on northern lakes estimated that it would take 200 years to replace the downed trees that have been removed from nearly all developed shorelines. Another study in Ontario aged trees that had accumulated in a lake and found the average age of logs was 443 years. Some logs had been in the water for as long as 1,000 years, demonstrating that trees will provide extremely long-term habitat in our lakes if we simply leave them alone.

"It's frustrating," laments Sugden-Newberry. "We can change our shorelines quickly, but it takes a very long time for them to recover. And that's hard to manage."

For more information on the studies conducted by the UW Trout Lake Station, see their Web site at <http://limnology.wisc.edu>



- Turtles sunbathing on woody debris

Who's Who in the DSFSM Section

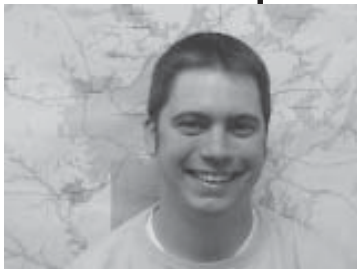
The Department's Dam Safety-Floodplain-Shoreland Management Section is pleased to announce that three new staff members have joined our team.



David O'Malley arrived last fall as a transfer from the Department's Facilities and Land Bureau where he prepared master plans for department properties, including parks, forests and state natural areas. Dave had recently completed the Dells of the Wisconsin River State Natural Area plan and the Mirror Lake/Dell Creek State Wildlife Area plan. Previously Dave worked as a planner in the old Water Resources Management Bureau and in the Solid Waste Program in Rhinelander.



Miriam Gradie Anderson started with the program in February of this year. She has extensive experience in floodplain management and planning, having previously worked for the Commonwealth of Massachusetts and St. Charles County, Missouri. Miriam was working for St. Charles County during the Midwest floods of 1993, so her experience in that event will prove valuable to the Department.



Also joining the staff is **Chris Olds**, a floodplain engineer working on many of the remapping projects the department is involved with currently. Chris was a student employee while working on his bachelors degree at the UW and is now with us full-time as a project employee.

We are also bidding farewell to two staff members. Rusty Nereng, our regional Water Management Engineer for Waukesha and Walworth counties will be moving to the Minneapolis area the end of October. Rusty has worked for the department for the last three years and did a fantastic job assisting local community officials and property owners with a variety of floodplain, dam safety and water permitting projects. Rusty's wife has accepted a new opportunity with the 3M Corporation. We wish them both the best of luck.

Alan Lulloff, our section's lead floodplain/GIS engineer, is retiring in December after 32 years with the department, most of which was spent in the floodplain engineering program. Alan has been an invaluable resource over the years, taking the lead on preparing the plans for the FEMA map modernization program, leading the Winnebago County demonstration project, serving as the chair for the Mapping and Engineering Standards Committee of the Association of State Floodplain Managers (ASFPM) and mentoring younger engineers in the fine art of Hydrology and Hydraulics. He will be sorely missed and irreplaceable.

Alan has already begun work with ASFPM as its Special Projects Manager, a position he will be transitioning to full time after he retires from the department.

Best wishes in the future, Alan.

variance would permit wholesale deviation from the way in which land in the [specific] zone is used. *Ziervogel*, ¶ 23. A proactive county seeking to consistently differentiate between area variances and use variances could adopt an ordinance provision similar to the following:

Unless the board of adjustment finds that a property cannot be used for any permitted purpose, area variances shall not be granted that allow for greater than a ___% (or ___ foot) deviation in the area, setback, height or density requirements specified in the ordinance.

Redefining the meaning of unnecessary hardship for area variances. To qualify for either an area or a use variance, the applicant must still demonstrate that their property meets each of the following three requirements:

- Unique property limitations
- No harm to public interests
- Unnecessary hardship

In the *Ziervogel* and *Waushara* decisions, the Supreme Court redefines unnecessary hardship when applied to area variances as:

"whether compliance with the strict letter of the restrictions governing area, setbacks, frontage, height, bulk or density would unreasonably prevent the owner from using the property for a permitted purpose or would render conformity with such restrictions unnecessarily burdensome." *Snyder v. County Zoning Board of Adjustment*, 1976, 74 Wis. 2d at 475 (quot-

ing 2 Rathkopf, *The Law of Zoning & Planning*, § 45-28, 3d ed. 1972)

In addition, the Court's majority opinions in *Ziervogel* and *Waushara County* clearly state that a board of adjustment should focus on the purposes of the zoning law at issue. "Unnecessarily burdensome" may be interpreted in different ways depending on the purpose of the zoning law from which a variance is being sought. For example, the purpose of dimensional zoning requirements vary widely from a neighborhood scale purpose of *promoting uniformity of development* to a much farther-reaching purpose of *protecting water quality, fish and wildlife habitat and natural scenic beauty for all navigable waters in Wisconsin*. As a result of the increased focus on the purpose of the zoning restriction, zoning staff and boards of adjustment have a greater responsibility to explain and clarify the purposes behind dimensional zoning requirements.

So what does "unnecessarily burdensome" mean in practice? The *Ziervogel* and *Waushara County* decisions both discussed variance requests to expand nonconforming structures that did not meet the shoreland setback, yet neither decided whether the variance should be granted under the "unnecessarily burdensome" standard. However, the 1976 *Snyder* decision that also used the term "unnecessarily burdensome" does provide guidance. In *Snyder*, a porch had been built that did not

comply with the sideyard setback of a shoreland lot. The question was whether a variance should be granted for the porch because living without it would be "unnecessarily burdensome." The board of adjustment denied the variance and the Wisconsin Supreme Court affirmed its decision stating that the "difficulty or hardship relied upon for granting the variance" for the porch was either "self-created or no more than personal inconvenience." *Snyder v. Waukesha County Zoning Board of Adjustment*, 74 Wis. 2d at 479 (1976).

Reviewing the three tests for deciding variance requests in light of the new Supreme Court decisions. While the "unnecessary hardship" standard for area variances has changed, the other variance standards have remained the same. To qualify for a variance, the applicant must demonstrate that their property meets each of the following three requirements.

1) Unique property limitations
Unique physical limitations of the property such as steep slopes or wetlands that are not generally shared by other properties must prevent compliance with ordinance requirements. The circumstances of an applicant (growing family, need for a larger garage, etc.) are not a factor in deciding variances. Nearby ordinance violations, prior variances or lack of objections from neighbors do not provide a basis for granting a variance. Property limitations that prevent ordinance compliance and are common to a number of properties should be addressed by amending the ordinance.

2) No Harm to Public Interests
A variance may not be granted which results in harm to public interests. In applying this test, the zoning board must consider the impacts of the proposal and the cumulative impacts of similar projects on the interests of the neighbors, the entire community and the general public. These interests are listed as objectives in the purpose statement of an ordinance and may include:

- Public health, safety and welfare
- Water quality
- Fish and wildlife habitat
- Natural scenic beauty
- Minimization of property damages
- Provision of efficient public facilities and utilities
- Achievement of eventual compliance for nonconforming uses, structures and lots
- Any other public interest issues

3) Unnecessary hardship
An applicant may not claim unnecessary hardship because of conditions which are self-imposed or created by a prior owner (for example, excavating a pond on a vacant lot and then arguing that there is no suitable location for a home). Courts have also determined that economic or financial hardship does not justify a variance. When determining whether unnecessary hardship exists, the property as a whole is considered rather than a portion of the parcel. The property owner bears the burden of proving unnecessary hardship.

- For an area variance, unnecessary hardship exists when compliance would unreasonably prevent the owner from using the property for a permitted purpose (leaving the property owner without any use that is without any use that is permitted for the property) or would render the conformity with such restrictions unnecessarily burdensome. The board of adjustment must consider the purpose of the zoning restriction, the zoning restriction's effect on the property, and the short-term, long-term and cumulative effects of a variance on the neighborhood. The standard reflects the new *Ziervogel* and *Waushara County* decisions.
- For a use variance, unnecessary hardship exists only if the property owner shows that they would have no reasonable use of the property without a variance.



- Antigo, Wisconsin
Spring 2004

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We recognize that we need to address all these issues and provide the tools that local permit officials need to do their jobs. What follows is a progress report on what has happened in recent years and what challenges still remain.

Not enough staff

The biggest issue we face. Fortunately, substantial damage inspections are not part of our daily workload and don't add a lot of hours to the total staff time commitment. But when a disaster strikes, the inspections need to be done. Of course, local staff are usually busy with other disaster response activities and it becomes a challenge to free up personnel to do the inspections.

To address this issue, we are exploring the concept of using mutual-aid pacts (similar to fire response plans) to handle the workload. The states of

Continued on Page 18 . . .

Application forms and decision forms for zoning variances are available on the Center for Land Use Education's website at <http://www.uwsp.edu/cnr/landcenter/zoningboards.html>

For further information go to the UW-Stevens Point Center for Land Use Education's web site: <http://www.uwsp.edu/cnr/landcenter/tracker/summer2004/variances.html>

This article was reviewed for form and content by: Becky Roberts from the Center for Land Use Education; Linda Meyer from the Wisconsin Department of Natural Resources; Philip Peterson from the Wisconsin Department of Justice; and Daniel Olson from the Wisconsin League of Municipalities. Any errors, mistakes and omissions remain the responsibility of the author.

Illinois and Ohio have organized groups of active and retired building inspection officials by region and these officials (and the governing bodies they work for) have agreed to send their staff to flood-stricken communities to do the damage inspections.

To get these mutual-aid pacts off the ground, we'll need the support of all levels of government - town, city/village, county, state and federal. To that end, the department will host a "Flood Response Conference" next year to focus on this issue and other challenges we face in responding to disasters in floodplain areas. The federal government has committed staff to this effort and the department will be participating. We look forward to working with other government officials in this important undertaking.

One important issue will be the challenges that county government faces in fulfilling their obligations. Wisconsin counties have adopted floodplain zoning ordinance and agreed to meet the requirements of the National Flood Insurance Program, which includes performing substantial damage inspections. However, the counties do not issue building permits or perform follow-up inspections. The lack of staff and expertise to perform the necessary work will need to be resolved.

Not enough expertise

Starting November 1, 2004, the department will have a FEMA disaster assistance employee assigned to our central office for the foreseeable future to specifically work on this and other disaster-related issues. His name is Mike Klitzke and he's a Wisconsin boy (Madison). Mike is a retired local government official (DPW director), a registered engineer and a

Residential Substantial Damage Estimator (RSDE) guru. RSDE is a piece of FEMA software that makes it a lot easier to do damage inspections. Once the field inspection is done, the inspector enters the data into the database and the RSDE program automatically calculates the damage percentage and whether the structure is substantially damaged. It also standardizes the data entry process, eliminating much of the repetition and time needed to produce the reports.

Some of you may have met Mike already, since he or one of you may have met Mike already, since he toured many of the flood-damaged communities this summer, meeting with local officials and property owners and leading three RSDE training workshops we hosted in July and August. Mike will be an excellent resource for all of us and he will be a featured speaker at the 2005 Flood Response Conference.

In addition to Mike, other FEMA and DNR staff will be available to answer questions, provide training, assist with damage inspections and direct resources to assist communities when the next major disaster hits Wisconsin.

Not enough training

We will be scheduling additional RSDE and substantial damage inspection workshops in 2005 to ensure that all permit officials who are interested in training have the opportunity to get the training. The goal is to do at least one in each DNR region, possibly more if the demand is there. This is in addition to the Flood Response Conference that will feature extensive training on substantial damage inspection. Depending on workload, staff may also be able to do individual training if there is a demonstrated need.

Not enough support

Our goal is to build a network of capable and committed staff who can respond to disaster-stricken communities with the tools and training needed to get the job done. This won't happen overnight, but we are moving in the right direction. As development eats up flood storage and conveyance areas and unpredictable weather patterns cause more flash flooding, the types of severe flooding Wisconsin has experienced in recent years will only get worse. By working together, Wisconsin communities can address substantial damage issues in a consistent and cohesive fashion, lessening the burden on each individual community and creating a partnership that will benefit all of us.

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Additional changes to NR 116 were later finalized which provided that the construction of a deck that does not exceed 200 square feet and is adjacent to the exterior wall of a principal structure is not an extension, modification or addition. This language was written to complement a past change to the Wisconsin Statutes which allows open-sided structures in shoreland setback zones which do not exceed 200 square feet in size.

These changes were crafted to give local communities more flexibility in regulating floodplain development and are permissive rather than mandatory. Communities may elect to be more restrictive and not allow structures to be elevated or decks added to legal nonconforming buildings.

Other minor changes made to the nonconforming section include s. 6.1(2)(a), which clarifies that ordinary maintenance repairs do not include any costs associated with the repair of damaged structures, s. 6.1(2)(e)1,

which clarifies the definition of substantial damage; and s. 6.1(2)(e)2, which updates a FEMA Code of Federal Regulations reference.

The other major change was the language added to address concerns raised about authority and direction to perform substantial damage assessments after a natural disaster occurs in a floodplain area. All of the changes are in the administration section.

S. 7.1(1)(bm) specifically authorizes the zoning administrator - or their designee - to inspect all damaged floodplain structures and perform a substantial damage assessment to determine if substantial damage to the structure has occurred. S. 7.1(1)(c)4 requires that all records related to substantial damage assessments be maintained by the zoning administrator. S. 7.1(1)(d)3 requires that copies of all records related to substantial damage assessments be submitted to the DNR Regional Office.

A clean copy of the new model and an annotated version which includes explanations of the changes can be found on our webpage. More information about changes to the original July 2003 version can be found in the Fall 2003 FPSL Notes.

The first set of letters concerning the updates was sent to 35 Mississippi River communities that received a presidential disaster declaration as a result of the 2001 flood. Additional letters will be sent to communities declared in 2004, early next year.

For further information, please contact your DNR Regional Office or call David O'Malley (David.O'Malley@dnr.wi.gov), Miriam G. Anderson (Miriam.Anderson@dnr.wi.gov), or Gary Heinrichs (Gary.Heinrichs@dnr.wi.gov) in the Central Office.

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