

North Shore Land Use Issues: The Real Costs of Growth

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In the good old days, going “up north” meant a little fishing, a lot of silence and no one else in sight. Now, no matter which direction you head for the lake, the view is cluttered: new developments crowd the landscape and the crush of traffic presses all along the route.

The changing face of Minnesota’s lakeshores isn’t necessarily bad, but it is happening rapidly. Whether fast-paced land consumption on and near lakes is regarded as unsightly sprawl or economic growth, it has far-reaching effects. Communities that want to safeguard the vibrant lake country must plan wisely to preserve the social, historical, economic and environmental heritage of our lakes – now, before we lose what we love.

North Shore Development’s Competing Interests

Growing Population

Minnesota is now the fastest-growing state in the Midwest, adding more than 400,000 people in the last decade. Growth rates are highest in the Metro area, Cook County, and along a corridor from Olmsted County in the southeast to Lake of the Woods in the northwest.

Half of the state’s residents live in rural areas and cities of 2,500 or more outside of urban centers. The three counties lining the North Shore average a 6.6 percent annual growth rate.

With rapid growth comes conflicting perceptions about the nature and severity of development “pressure.”



North Shore’s famous landmark: Palisade Head.
Photo: Courtesy Minnesota Office of Tourism

Developers say their projects will attract jobs, people and opportunities; the resulting impact to the local environment may not be as easily measured as the increased tax base.

Planning “Smart” Growth

The real costs of growth aren’t always obvious. Sometimes it’s hard to see past the promise of new homes, jobs and tourist dollars. According to 1000 Friends of Minnesota, a smart-growth coalition, for every housing unit built a community spends another \$18,374 in services and supporting infrastructure (roads, storm and sanitary sewers, water supply and erosion control).

In addition, multiply each new resident by the average person’s annual water use (16,425 gallons), solid waste generated (over one ton), vehicle emissions (10,727 pounds per car), and the potential environmental impacts become overwhelming. Unknown are rapid development’s costs on wildlife habitat and natural resources, which no



amount of money can fully restore after they've been damaged or lost.

Construction Permits

One development "marker" is the number of MPCA construction stormwater permits issued (required for construction sites of five or more acres). Five years ago, North Shore counties issued 21 such permits; last year they issued 46.



Logging a new Cook County housing development access road near Sugar Loaf Cove. Photo : Courtesy Jesse Anderson

Visitors

The region's abundance of natural resources attracts two million visitors annually. The resulting economic impact is significant: related employment is up 15 percent as are gross receipts due to travel and tourism.

In 1996, gross sales at the North Shore's hotels, motels, resorts were \$89,056,641, a 28 percent increase over 1994 sales. Also in 1996, six North Shore State Park campsites hosted 1,044,235 visitors and overnight guests, a 3.5 percent increase over 1994 figures.

Wastewater projects

Communities along Lake Superior exemplify the cyclic dynamics of sprawl. Lake Superior's beauty

draws people to the North Shore, but more people produce more wastewater, which failing septic systems and inadequately sized wastewater plants can't manage. To accommodate wastewater needs, growing areas plan new wastewater projects with extra capacity.

Once completed, improved wastewater facilities and their connecting pipes could ironically take the lid off potential development. Owners might sell their small homes or cabins on septic system-sized lots (usually an acre or more) to developers who may subdivide the property, building multiple-bedroom homes on smaller parcel sizes once the municipal sewer system is available. Expanding neighborhoods attract new businesses, which attract job seekers as well as visitors. Then, resorts expand, sprawl takes over, and the "North Shore" quality of life is changed for visitors and residents alike.

Housing and Impervious Surfaces

As the North Shore attracts more visitors and new residents, the demand for housing and related services increases as well. Logging new building sites increases the likelihood of erosion and runoff from newly constructed impervious surfaces (parking lots, driveways, and roofs). Increasing the number of impervious surfaces reduces the amount of land available to absorb rainfall and snowmelt.

The result? Runoff often contains excess nutrients and pollutants affecting surface and ground water quality. Nature can't effectively manage these accelerated rates; runoff contributes to potential drinking water problems, fish advisories, flooding, and higher stream and lake-water temperatures. Higher temps threaten aquatic species and habitats. These, in turn, adversely affect recreational use and tourism on the North Shore.

Geologic Considerations

The North Shore's lakes, rivers, and streams are fragile ecosystems. The area's thin soils, exposed bedrock, and steep rock banks allow pollutants to quickly enter surface waters. Man-made disturbances on the land's surface, such as clearing vegetation for developments, can measurably affect



water quality. These "non-point source" pollutants (primarily nutrients and suspended sediment) degrade water quality by increasing algal growth and harming fisheries populations. The suspended sediments can suffocate fish eggs as well as other aquatic organisms the fish eat to survive.

Shallow soil and the impervious bedrock also make wastewater solutions both expensive and difficult. Unsewered communities with failing septic systems often can't afford either upgraded systems or the cost of wastewater infrastructure. More people in unsewered communities make for more pollutants flowing directly into ground and surface water.

Grand Superior Lodge Case Study

The North Shore's "face" has changed significantly over the past 80 years. Then, the 153 mile-shoreline stretched endlessly with birch and pine stands; now, the landscape is dotted with convenience stores, new housing, retail and tourist-oriented developments. Many Shore communities are struggling to accommodate the influx of residents, visitors and their accompanying resource demands.

Some North Shore planners are proactively implementing comprehensive land use plans ("smart growth") to balance resource protection and economic development. Others are more reactive, approving construction projects promising jobs and tax dollars, but are likely to create environmental pressures on the very natural resources people want to enjoy.

One particular ten-acre development northeast of Two Harbors provides an example of how quickly the North Shore's physical environment has changed, and how once-sleepy fishing and camping sites have evolved into major vacation destinations.

Star Harbor Resort

Norwegian immigrant Emil Edison first developed what is now known as the Grand Superior Lodge site near Two Harbors in 1910. He built a series of three-room 'vertical half-log' cabins (15 x 26 x 10 feet) to

house railroad executives overseeing the area's first rail line (they and their families preferred solid structures to tents during the construction season). Other families followed suit, building cabins for their own use as well as rental property. Edison's development, known as the Star Harbor Resort, holds the distinction of being Lake Superior's first cabin resort. The 24 cabins' maximum capacity was 128 people on the 10-acre site.



The remaining Star Harbor cabin, once a fish and boat house, is now called the "Beach House." Photo: Courtesy Suzanne Hanson

During the Depression's winter off-seasons, Civilian Conservation Corps camp managers stayed in the Star Harbor cabins. 'Lapped' siding was added to cabin exteriors about 1940.

The Star Harbor site evolved over the years, and changed hands three times by 1983. In 1990, when all but one of the cabins were being sold and removed from the 1200-foot site shoreline, the Minnesota Historical Society purchased one for its collection. Noted not only for its historical significance, the cabin's characteristics offered the Society a portable, 3-D artifact typical of the early century's split log construction. It is also a prime example of that era's resort industry. Currently, the Historical Society is storing the cabin in a warehouse.

Once the new log cabins were constructed, the Star Harbor Resort featured six four-season log cabins "perched on the water's edge." Maximum capacity for the 9.12-acre site: 40 people.



In 1999, the Star Harbor site became Grand Superior Lodge. A 25-room lodge opened in October 2000, adding rooms, suites, and condos to the existing cabin lake homes and one of Edison's original split log cabins. The resort can now accommodate 250 people on the 10.9-acre site.



*The Beach House surrounded by the resort's newer log cabins.
Photo: Courtesy Suzanne Hanson*

Much has changed along the North Shore since Emil Edison built his first Star Harbor Resort cabin 90 years ago. Many developers have followed in his footsteps, creating opportunities for more people to enjoy the lake and surrounding environment. And as these construction sites evolve, the land's carrying capacity must also adjust to accommodate them. Just how we can help nature make those adjustments is the critical task at hand.

Land Use Issues: Balancing New Construction and Environmental Pressures

The MPCA is an active partner with local individuals and organizations concerned with balancing environmental protection with economic growth. By collecting and sharing environmental data with interested parties, and creating opportunities to bring proactive land use planning tools and resources to planners, local leaders and decisionmakers, communities will ultimately make better-informed land use decisions.

New Water Monitoring Data

Due to the MPCA's limited existing water quantity and quality data on North Shore streams, managers are currently considering a three-year monitoring proposal to gather baseline water quality data from the Talmadge, Sucker and Poplar Rivers. All three are considered "vulnerable" due to their proximity to large-scale recreational uses; two are listed on the state's draft Total Maximum Daily Load list (impaired waters requiring further study). Once finalized, TMDL waters will likely have discharge restrictions placed upon them. As better data becomes available, better and more informed land use decisions can be made.

Additional Environmental Review Processes

Project proposers and related Responsible Governmental Units may be asked to complete an Environmental Assessment Worksheet to provide information about construction projects that may have the potential for significant environmental effects. Included are descriptions of current and recent past land use, compatibility of adjacent land uses, and potential conflicts with, or impacts to, environmental resources and animal habitats.

For example, the Duluth-North Shore Sanitary District (encompassing an area from the Duluth city limits to the Lake County border) was not required to produce an EAW. Agency staff requested one for two reasons: the area is environmentally sensitive (many trout stream crossings), and, the District may become part of a contiguous wastewater project from Duluth to Two Harbors. Issues the District faces include wastewater storage during peak usage and/or 'inflow and infiltration' events (when storms create flows exceeding the system's carrying capacity), and, auxiliary power sources during power interruptions.

New Development Tools

Recently funded by Minnesota's Lake Superior Coastal Program through the MPCA, Duluth Township residents will be the first North Shore community to incorporate Project NEMO (Nonpoint



Education for Municipal Officials) development planning tools in future land use decisions. Local decisionmakers will learn more about their watershed, how land use impacts local water quality, and how to implement proactive development measures while creating their community's comprehensive land use plan.

NEMO tools examine potential build-out scenarios, existing building codes and ordinances; assist community visioning; and help participants understand development's impacts on residents' lives, their township, and local natural resources. By planning for growth with water quality ramifications in mind, Duluth Township officials may set a new standard for other North Shore communities.

"The decisions North Shore communities make in the next 15 years will determine development patterns, environmental quality, and quality of life for the next century," says Suzanne Hanson, MPCA-Duluth Regional Manager.

State and Regional Smart Growth Goals

The state's goals, outlined in the Minnesota Statutes on Sustainable Development, outline the challenge: Maintain or enhance economic opportunity and community well-being while protecting and restoring the natural environment upon which people and communities depend. Also, communities must meet the needs of the present without compromising the ability of future generations to meet their own needs.

Promoting regional cooperation has become a cornerstone of MPCA's efforts to encourage a healthy discussion on growth. Methods include:

- Stimulating regional planning by linking state spending for local infrastructure (such as wastewater treatment) to regional cooperation;
- Encouraging the protection of lake, stream and ground-water quality by providing data to communities drafting comprehensive plans;

- Encouraging use of ordinances for local management of stormwater, wetlands, buffer zones and septic systems; and
- Involving citizens and stakeholders at all levels of decision-making.

Conclusion

Given the significant appeal of the North Shore's natural environment, it is no wonder that more people than ever before are making it their home or home away from home. As the Star Harbor Resort / Grand Superior Lodge case study points out, the influx can be significant: it is possible for the number of people inhabiting one piece of property to literally double over a relatively short period of time.

Even more significantly, it should be noted that this is not an isolated example. Between 1990 and 1995, 50 new lodging establishments were built along the Shore; many other complementary construction projects have followed since: wastewater plant upgrades and expansions, a new Gooseberry State Park Visitors Center, Highway 61 improvements, and "cabins" that rival "showcase" homes in urban subdivisions.

As development occurs, the question is not "When?" but "How?" It is up to the residents, planners and visionaries to craft a solution that will balance environmental protection with other competing interests. Whether it is called smart growth or something else, the ultimate plan must protect the abundance of natural resources that brought us here in the first place.