INTRO: This is Superior Science News. Today's program explores development on the shoreline of Lake Superior.

NAT SOUND: waves

Millions of people are drawn to Lake Superior each year to catch a glimpse of its natural beauty. Many in the Northland work to preserve the region's natural resources. But development along the shoreline has been a growing threat to water quality and lands surrounding the lake, according to Ben Van Tassel of the Arrowhead Regional Development Commission.

"Basically, we've always heard that the ridgeline's going to get over-developed, and someone needs to stop it. So, we wanted to take a look at where exactly the development is occurring and if it can be seen from the road. We figured out a lot of areas where you can, but there are a lot of areas where you can't."

Conservation Site Designer Randall Arendt believes new developments around the lake need to take a different approach.

"We need to set both a minimum and a maximum lot size so that the development does not consume the entire parcel of land with nothing more than a house, lots and streets. If all we wanted was lawns and cul de sacs everywhere, we wouldn't have comprehensive plans that talk about preserving farmland or woodland habitat or the forest resource for sustainable yield. So, we just need to make conservation design easy to do and quick, and conventional development difficult to do and very time consuming."

Arendt says many local governments already have comprehensive plans designed to protect the land and the lake. He says developers need to follow their lead.

"It's not rocket science. It's not that difficult to change, and they will tell the developer, 'You've got to design your developments differently. You'll still do the same number of homes. You'll make more money because you'll build less street. You'll push less dirt with less invasive site grading. You'll sell the lots faster because people like to live in park-like settings. They like to live in areas with open space and trails. So, you'll sell the homes faster and get a premium price.' But, still, if the developer has never done it before, you're asking him to change his way of business fairly substantially and that can be a struggle."

Van Tassel says conservation design is the best way to handle developments around the lake.
"Not necessarily preventing it, but trying to steer it so there's not a steady stream of houses every 200 feet along the entire shore, but trying to group it in areas where it makes sense -- maybe where there already is existing infrastructure with sewer or, like with cities there, connecting with their infrastructures."

Clinton Little is a GIS specialist for the Minnesota DNR's Lake Superior Coastal Program. He says connecting with existing infrastructures will reduce the negative impacts of developments in and around the lake.

"We have increases in impervious surfaces from that and, with that, runoff. That's probably something that every community is faced with -- dealing with their storm water runoff issues. And some of the climate models that we're looking at for the future are pointing towards high rainfalls, so having areas that are impacted by the quick washes of water that come down after a big rainfall that these local communities need to deal with."

Little says one way people can minimize their impact on the lake is to control where their storm water is going.

"Whether that's building rain gardens or small retaining ponds, where your sump-pump water goes, where the water from your rain gutters go. People are using rain barrels. Those are real popular now to hold rain in and then use that to water your garden. Anything you can do to hold the water on your property a little bit longer helps everything downstream."

Minnesota Land Trust Conservation Director Kris Larson says local governments, agencies, and communities need to work together to preserve the lands on which they live.

"People love their land, and they want to see it protected. Almost everybody we work with around the state of Minnesota – the main common theme amongst all of them is they love their land. They want to see it protected. So part of it is just a personal satisfaction that they feel like they've done the right thing for their kids and future generations."

Larson says the shoreline around Lake Superior is not just a local resource.

"It is a state, national and international resource in many ways and understanding how people are getting out to experience and enjoy that is important, whether it's the trails, the drive, other resources ...and, then, figuring out how we can accommodate development given all of those--and sometimes competing--interests."

For Superior Science News, I'm Marie Zhuikov.

OUTCUE: (waves) This is a production of Minnesota Sea Grant and KUWS radio.
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