

Local chamber takes over historic art fair

(Submitted by the Muskegon Lakeshore Chamber of Commerce)

Working in partnership with the Community Foundation for Muskegon County and Muskegon Festival Group, the Muskegon Lakeshore Chamber of Commerce has reorganized and invigorated the successful arts and crafts fair previously associated with the Muskegon Summer Celebration.

The event will be newly named, *Lakeshore Arts Festival*, as the vision is to offer visitors a unique blend of arts, crafts, music, food and fun along the lakeshore in historic downtown Muskegon. The event is happening July 5 and 6, 2013 in conjunction with the new music festival taking place at Heritage Landing.

Views of Great Lakes water level data available

(Submitted by National Oceanic and Atmospheric Administration - NOAA)

The new NOAA Great Lakes Water Level Dashboard offers interactive displays of any combination of historical, current and projected water levels for all of the North American Great Lakes. Environmental researchers, educators, and students, and Great lakes region residents are among those who can use this online tool to quickly access desired slices of water level data.

The dashboard is designed to show the ups and downs of the world's largest freshwater system. It draws from both experimental and operational data sets and forecasts from a variety of regional sources. Among its other benefits, the dashboard allows users to gain a perspective on the relative magnitude of seasonal, year-to-year and decade-to-decade water level changes.

"The Great Lakes water levels fluctuate more year-to-year than the water levels of other major coasts in the United States. The dashboard is expected to help resource managers communicate to the public about how water management strategies will change in an uncertain climate future," said Marie Colton, Ph.D., NOAA's Great Lakes Environmental Research Laboratory (GLERL) director.

GLERL and the NOAA Cooperative Institute for Limnology and Ecosystems Research at the University of Michigan, both located in Ann Arbor, Michigan, developed the new tool with funding through the Great Lakes Restoration Initiative, administered by the U.S. Environmental Protection Agency.

The Great Lakes dashboard can help users gain insight into the relationship between recent water level dynamics and long-term forecasts, as well as the relationship between climate trends and climate variability in the Great Lakes region. The severe drop in water levels (particularly for lakes Erie, Michigan and Huron) in the late 1990s, the current low levels on lakes Michigan and Huron, long-term declines in ice cover, and recent shifts in the seasonal water budget and water level dynamics of some of the lakes, are just a few examples.

Through its interactive framework, the dashboard allows users to investigate historical trends, and to use them as a reference point for evaluating forecasts of future water level conditions.

"We drew upon some existing examples from the data visualization community to emphasize key features that would help tell the Great Lakes water levels story. We have included a scalable time axis, the option to display or hide time series information for each of the Great Lakes, and individual data sets and model output for each lake," said Drew Gronewold, Ph.D., GLERL hydrologist and lead researcher for the Great Lakes dashboard project. "This interactive approach helps users not only understand how the dynamics of Great Lakes water levels relate to water resource management decisions, but also how different sources of data and forecasts may affect perceptions of uncertainty and variability."

In addition to NOAA water level observations, researchers plan to expand the dashboard by adding in other agency water level forecasts (including the operational forecasts developed by the U.S. Army Corps of Engineers and Environment Canada) and water budget data such as precipitation, evaporation, and runoff.

The NOAA Great Lakes Operational Forecasting System provides the official daily and hourly water level fluctuations for those who need shorter time-scale data. GLERL also offers its own Great Lakes Coastal Forecasting System which displays air temperature, cloud cover, wind and wave data.

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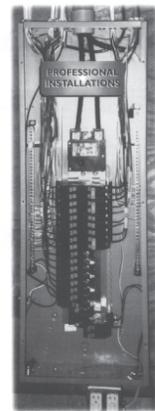
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