



Washington County Council of Governments Rain Gauges and Shellfish Closure Outreach

“The economic impact of a five day closure during the summer per person would probably be 500 to 700 dollars. Of course the local economy losses could be affected also. The inland flood events are as important to monitor and tend to create longer lasting closures. As our summer progresses our rain gauges will be a great asset in reducing the size of our closures during to peak of the clamming season.”



PARTNERS

Towns of Beals, Columbia Falls, Cutler, Harrington, Jonesboro, Jonesport, Lubec, Milbridge, Pembroke, Perry, Steuben and Tresscott (UT), Maine Department of Marine Resources, and U Maine Machias GIS Service Center

PROJECT DESCRIPTION (completed June 2017)

The Maine Coastal Program and the Washington County Council of Governments (WCCOG) are partners in a program to install up to 10 new Weather Stations (rain gauges) in coastal towns. Rain gauges provide real-time rainfall data through Internet service provided at the host site. The data pinpoints those areas affected by non-point source pollution and helps shellfish managers more effectively manage resources.

A lot of rain in a relatively short period of time can transport non-point source pollution through storm water runoff, negatively affecting the health of bivalve shellfish. During a heavy rainfall event of two inches (2") or more of rain in 24 hours or less, it may be necessary for the Department of Marine Resources (DMR) to enact emergency closures of shellfish harvesting areas.

DMR staff members utilize weather-reporting stations online in order to determine rainfall amounts. DMR also has a pollution reporting hotline and automated website that rain gauge monitoring volunteers use to report rainfall totals. Better data helps the DMR more effectively administer the shellfish sanitation program, provide access to safer shellfish resources, and minimize economic loss due to unnecessary closures.



COASTAL COMMUNITY GRANTS: Water Quality and Land Use

APPROACH

While most Maine counties have enough coastal online gauges, Washington County lacks adequate coverage in some areas. The Department of Marine Resources prioritized locations with high shellfish resource but little to no rain gauge coverage. The new gauges add coverage where there is none and redundancy in the event of equipment failure. Eleven rain gauges were located with permission on public and private sites in Steuben, Milbridge, Harrington, Columbia Falls, Jonesboro, Jonesport, Machiasport, Pembroke, Lubec, Edmunds, and Pleasant Point.

Maine DMR staff set up the gauges and town Shellfish Committees are responsible for physical maintenance and reporting any outages to the DMR. The data is available to the DMR for emergency flood closures and the public via Weather Underground (wunderground.com).

As part of the rain gauges project, the WCCOG updated their website section on *Clams, Economic Vitality and Land Use* (wccog.net/clams-economy) to share rain gauge data with communities. Updates included the addition of 2013-2015 landings data, revised shellfish maps, a new section on the variety of shellfish area closure rules and the kinds of data used to make those determinations, and a description of the online rain gauge program with links to sites in Washington County on Weather Underground.

RESULTS

Lewis Pinkham, Milbridge Town Manager, noted four storms forecasted in the area for over 2 inches of rain that did not actually occur. Pinkham said that, without the gauges, the DMR would previously have closed the flats, based only on the forecast, for about four days for each storm.

NEXT STEPS AND OPPORTUNITIES

The WCCOG is working with the University of Maine GIS Service Center and Laboratory to create more accessible, up-to-date online shellfish mapping data in the future.



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LESSONS LEARNED

Communities are very eager to support low cost, low maintenance infrastructure that supports the local natural resources economy. However, many shellfish harvesters do not have the equipment (internet, personal devices) or past experience for accessing, let alone monitoring or tracking online weather station data.

APPLICABILITY FOR OTHER MUNICIPALITIES

Other municipalities who did not participate can still access public data on private rain gauges in their communities. As time goes on and these new gauges demonstrate their ability to limit unnecessary closures, other communities may choose to install their own gauges in strategic locations.

RECOMMENDATIONS

To create a greater sense of ownership, shellfish harvesters could be engaged in the actual installation of the gauges, and training sessions in using the data could be conducted at local libraries. Perhaps each shellfish committee could purchase one iPad for greatest utilization of the data through WunderStation.

For more information

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See <http://www.wccog.net/rain-gauges.htm> and
<http://www.wccog.net/clams-economy.htm>

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