

News and information about Alaska Region Office of Science Applications and LCCs.

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Alaska Region Office of Science Applications



News & Resources
May 2015

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May Contezzzzzzzzzzt



*The days have become quite long now.
There is no more snow for us to ski or plow.
I cannot sleep and I am covered with Deet.
'Tis the season of the mosquito!*

Approximately how many pounds do Alaska's estimated 17 trillion mosquitoes weigh?

Hint: The weight of all insects in Alaska is somewhere between 340 million to 7 billion pounds.

[E-mail me your answer.](#) **The first correct(ish) answer wins an extraordinary prize!** **Devoid of monetary value.*

Previous Contest Results

It's a sad day in Whoville; despite valiant, perhaps wild, guesses there were no correct answers to our previous contest.

[Click here for a reminder of last month's contest.](#)

The frozen debris lobes in question are traveling at 0.0422 ft/day.

Western Alaska LCC

Enabling Regional-scale Water Temperature Monitoring and Analysis

While western Alaska boasts some of the most productive freshwater habitat in the world, there is a great deal of uncertainty about what the future of these habitats will look like in a changing climate. Owing to the lack of sufficient datasets, scientists and managers are unable to develop predictions about future stream conditions, or assess potential impacts of climate on fish and other important freshwater resources. In an effort to address these



challenges, the LCC focused its FY14-15 efforts on responding to the recommendations from the 2013 Alaska Stream and Lake Temperature Monitoring Workshop, which focused on enabling regional-scale monitoring and analysis.

A central component of the LCC's efforts is the development of voluntary monitoring networks. While many entities collect water temperature data for their own purposes, there is no coordinated effort to ensure that these data can be incorporated into a regional analysis. The LCC is supporting development of monitoring networks in the Bristol Bay and Kodiak regions (led by Bill Pyle at the Kodiak NWR), which will allow local data collectors to contribute their data to the regional effort. LCC funding initially supported the development of network Implementation Plans and is currently supporting network implementation, including support of a network coordinator for two years.

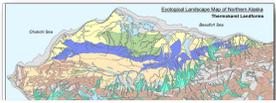
A second component of the LCC's freshwater focus is the development of minimum standards for stream temperature data collection. While public agencies already use a robust set of standards that ensure their data can be used in a regional analysis, many smaller entities lack the technical capacity to follow these protocols. A concise guide for collection of stream temperature data, including minimum data collection standards and a recommended protocol, is now available at the [Western Alaska LCC website](#). This is a key tool for smaller organizations that want to ensure that their data can help inform a regional-scale assessment.

Other components of the LCC's freshwater focus include the compilation of current and past water temperature monitoring sites into a geospatial database. This is a first step toward the ultimate goal of a system for easily compiling and synthesizing freshwater temperature data from across partners. The LCC's freshwater program is rounded out with several projects that investigate the potential impacts of temperature change on our most valued freshwater resources, including Sockeye and Chinook salmon. These include a feasibility project by Suresh Sethi and Brad Harris to investigate the relationship between remotely sensed temperatures and growth rates of juvenile Chinook. Information about all these projects can be found [here](#).



Arctic LCC

New Permafrost Map Now Available



Permafrost is critically important to ecosystem responses to climate change, but up to this point, permafrost characteristics of Alaska have been mapped at scales too coarse for landscape-level assessments or climate impact modeling and prediction. Arctic LCC supported production of a new, higher-resolution [map](#), based on [ecological subsections](#) of Northern Alaska, accompanied by a [database](#) of sites with measurements of soil stratigraphy, soil physical data, soil chemical data, soil radiocarbon dates, and vegetation cover.

Aleutian & Bering Sea Islands LCC

2014 Annual Report Available Now

North Pacific LCC

Berry Risk Mapping and Modeling of Native and Exotic Defoliators in Alaska



A new NPLCC Science-Management webinar showcasing an NPLCC-funded project in South Central Alaska is now available for viewing online. Nathan Lojweski, Forestry Manager for the Chugachmiut, presented information on an outbreak of Geometrid moths, potentially due to climate change, that decimated subsistence berry harvest. The project helped identify areas where berries would be most resilient and looked at strategies for protecting future crops.

[View the webinar](#)

[More on the project](#)

Northwest Boreal LCC

Ecological Transformation: Is It Time for a New Conservation Ethic?



ABSI directly supported several applied science projects in 2014. We successfully leveraged additional funds toward our other priorities, including the development of a Landscape Conservation Design for the ABSI region. We also completed a [Science and Operations Plan for FY2015-2016](#) that outlines our activities for the near-term future.

[Download our 2014 Annual Report here.](#)



Northwest Boreal LCC Acting Science Coordinator Dawn Magness organized, and Coordinator Amanda Robertson presented on ecological transformation at the [National Adaptation Forum](#). [Click here for more information on the session](#), Also presenting were Nicholas Fisichelli (NPS), Jennifer Hoffman (Adaptation/ Insight), John Morton (FWS), and Erika Rowland (Wildlife Conservation Society).

Upcoming Opportunities

Webinars:

[Current Coastal Change Projects and Priority Information Needs in Western Alaska](#)

Casey L. Brown, Corrie Knapp & Sarah F. Trainor; ACCAP, UAF

Wednesday June 10, 2015, 12-1pm AK

[Changing Extreme Streamflow Patterns in Boreal Forest Watersheds in Alaska](#)

Katrina E. Bennett; Los Alamos National Laboratory

Tuesday June 23, 2015, 10-11am AK

Funding Opportunities:

[RFP - National Fish and Wildlife Foundation's Alaska Fish and Wildlife Fund](#)

Pre-proposals due by June 11, 2015

[Grant Opportunity - NOAA: Coastal Ecosystem Resiliency Grants Program](#)

Closing date for applications is July 2, 2015.

[NOFA - NOAA: Regional Coastal Resilience Grants Program](#)

Closing date for applications is July 24, 2015.

The Bureau of Indian Affairs has \$1,750,000 for Tribal Youth Internships. This is for climate intentional work in tribal programs and research into climate change management needs. For more information visit: <http://tinyurl.com/pajn5by>
Tribal Resolution due July 22, 2015.

[RFP - North Pacific Research Board: Arctic Integrated Ecosystems Research Program.](#)

Pre-proposals due by July 31, 2015.

[RFP - Shared Beringian Heritage Program](#)

Proposals due September 14, 2015.

What's New in Alaska Region Science?

Crane P, Walsh P, Lewis C, & Wenburg J.K. (in press). *Origin and genetic diversity of lake trout in the Togiak National Wildlife Refuge, Alaska*. Journal of Fish and Wildlife Management. <http://dx.doi.org/10.3996/032014-JFWM-022>

Clark, S.C., Tanner, T.L., Sethi, S.A., Bentley, K.T. & Schindler, D.E. (in press). *Migration timing of adult Chinook salmon into the Togiak River (Alaska) watershed: Is there evidence for stock structure?* Transactions of the American Fisheries Society.

Lemons, P.R., Marshall, T.C., McCloskey, S.E., Sethi, S.A., Schmutz, J.A., & Sedinger, J.S. (2015) *A likelihood-based approach for assessment of extra-pair paternity and conspecific brood parasitism in natural populations*. Molecular Ecology Resources 15(1), 107-

116. <http://onlinelibrary.wiley.com/doi/10.1111/1755-0998.12287/pdf>

Olsen J.B., Lewis C.J., Massengill R.L., Dunker K.J., & J.K. Wenburg (2015). *An evaluation of target specificity and sensitivity of three qPCR assays for detecting environmental DNA from Northern Pike (Esox lucius)*. Conservation Genetics Resources. 7(1), 155-156.

Correction

Bryce Lake was the lead author of the article cited in last newsletter. The Citation should read:

Lake, B.C., Ciakoski, J. R., & **Bertram, M.R.** (2015) *Wolf (Canis lupus) Winter Density and Territory Size in a Low Biomass Moose (Alces alces) System*. Arctic Institute of North America. 68(2), 62-68
<http://dx.doi.org/10.14430/arctic4458>

We would like to feature your recent publications and/or datasets here!
If you have something you'd like to bring to a larger audience, please contact: brett_parks@fws.gov.

Partner News/ Publications

Haughian, S.R., & Burton, P.J. (2015). *Microhabitat associations of lichens, feathermosses, and vascular plants in a caribou winter range, and their implications for understory development*. Botany 93(4)
221-231. DOI: [10.1139/cjb-2014-0238](https://doi.org/10.1139/cjb-2014-0238)

Klassen, H.A., & Burton, P.J. (2015). *Climatic characterization of forest zones across administrative boundaries improves conservation planning*. Applied Vegetation Science 18(2)
343-356. DOI: [10.1111/avsc.12143](https://doi.org/10.1111/avsc.12143)

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