

# Reducing spring flood impacts for wellbeing of communities of the North

*U.S.-Russia Peer-to-Peer Dialogue, US Embassy, Moscow*

Quarterly report: January – March 2016



*Mayors Semeyon Yadreev and Jon Korta at river entrance to Galena (ul). Several P2P team members and two Russian visitors at the WWII memorial to Soviet and US pilots in Lend-Lease (lr)*



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## Reducing Spring Flood Impacts for Wellbeing of Communities of the North

Covering activities from January 1 to March 31, 2016

### *Performance Summary:*

This project seeks to reduce negative impacts of annual breakup floods in rural communities in Alaska, US and Sakha Republic, Russia through dialogue among stakeholders. A bilateral and interdisciplinary team — consisting of US and Russian social and geoscientists, students, emergency managers, and community leaders — traveled together, visiting a flood-ravaged rural village and its urban neighbor in Sakha Republic, Russia and Alaska, USA. We reported on the first phase of the project, visiting the City of Yakutsk and village of Edeytsy, last quarter. This quarter was the second phase, when the team reassembled for visits to the City of Fairbanks and the village of Galena (travel support for Russians was from non-P2P sources at UAF and from the Fairbanks community).



*Most of our P2P team at the entrance to Galena: Sakha Russians, Russian Russians Athabascan Americans, Russian American, American Americans. Students, scientists, mayors.*

These activities were scheduled to coincide with two important events. One was Arctic Science Summit Week (ASSW), an annual international event that fortuitously took place in Fairbanks this year. The other was the annual Spring Carnival and Potlatch in Galena, which provided us with an opportunity to meet a large and diverse group of community members: children, teenagers, Elders, parents, and community leaders.

We convened a session entitled *Natural Hazards and Risk Management in the Arctic* at the [ASSW conference](#) (schedule appended). The well-attended all-day session was a mixture of about 20 presentations was a stimulating mixture of submitted and invited papers, with the morning devoted to a variety of hazards and the afternoon devoted to the Galena and Edeytsy floods. There can be little doubt that this was the first time that the mayor of a town in Siberia and an official from the Alaska Department of Homeland Security gave presentations in the same session and on the same topic, not to mention an Athabascan First Chief as well. This was also our first opportunity to involve State of Alaska officials and a prominent NGO, the Red Cross, in the Peer-to-Peer dialogue.



*Team member Nikita Tananaev (right), RAS hydrologist, explains flood mitigation techniques used on the Lena River to Mayor Karl Kassel (left background) of Fairbanks North Star Borough.*

Another important meeting was at the Fairbanks North Star Borough (FNSB) offices with Mayor

Karl Kassel, Fairbanks Mayor John Eberhardt, and representatives from the FNSB emergency preparedness and community planning teams. Our Peer-to-Peer group introduced our project and learned about the Borough's flood preparedness and recovery strategies as well as its involvement in the May 2013 Galena disaster. As our project has progressed, the impact of these floods on Indigenous Peoples has emerged as a primary issue. We are fortunate to have two Athabascan leaders in on our team, one emerging and one an Elder and Chief, and so we were able to spend an hour presenting and discussing the flood problem at the annual [Tanana Chiefs Conference \(TCC\) convention](#) as part of their *Climate Change and Emergency Preparedness* session. TCC has



*Mayor Yadreev (2<sup>nd</sup> from right) presents gifts from Edeytsy to President Joseph (center) of Tanana Chiefs Conference. Russian P2P PI Gavrilova is at right. Team members Kontar on left, Plumb and Hildebrand in background,*

become very proactive about the breakup flood issue.

We also toured the [Cold Climate Housing Research Center](#), a place that fascinated the Mayor of Edeytsy. This is an NGO that explores low-cost solutions to energy efficiency, applicable in a rural setting. The Center also played a large role in the recovery of Galena, much of which required construction of stilts to elevate houses above floods. The [Chena River Lakes Flood Control Project](#) illustrated a very expensive (about \$200,000,000) engineering solution to the flood problem undertaken by the US Army Corps of Engineers after the disastrous Fairbanks flood of 1967. Our Russian hydrologist came away with a US ACE cap, which he wore proudly for the rest of the trip.

We visited the Fairbanks Forecast Center of the National Weather Service (NWS), led by meteorologist and hydrologist Ed Plumb, whose time and travel for the project has been generously provided by US NWS/NOAA. A community town hall meeting at a Fairbanks assisted-living center, arranged by the Fairbanks-Yakutsk Sister City group, was unexpectedly productive. Elderly people (though other, younger town people came too) have long, rich memories of flood disasters, welcome visits by people who – in their experience – are unusual, and are not afraid to speak up in discussions. This was important to our Russian mayor, because like Native Alaskans, Indigenous Peoples in Siberia place great value on respect for Elders.



*The only transportation between Fairbanks and Galena.*



Mayor Yadreev meets with two Athabascan Elders in Galena.

We all then journeyed to Galena, 270 miles west of Fairbanks at almost \$1/mile round-trip. This is illuminating in itself, as the same amount of money would get a person to Los Angeles from Fairbanks or from Yakutsk to Moscow. Also, Galena relies on oil shipped in by barge or airplane. In contrast, Edeytsy has road access, natural gas piped to houses, and cattle husbandry. Edeytsy has the same devastating flood problem but otherwise it is more sustainable and more able to be self-reliant. Again we visited an assisted-care facility, this one for Athabascan Elders. A highlight was meeting 90-year-old Angela Huntington, mother of 14 children (she would be designated a Hero Mother in Edeytsy) and wife of prominent tribal leader and author Sidney Huntington, who died last year shortly after his 100<sup>th</sup> birthday. The most “serious” part of the Galena visit was presentations in the town hall following a traditional potlatch where our team presented our project. In this case we emphasized through our Russian mayor and Russian hydrologist what Edeytsy and Sakha Republic look like and the flood challenges they face. It’s safe to say that no one in Galena, except members of our team, knew much about Sakha Republic before this.

But the really human exchange was the outdoor contests of the carnival. Our student from Arkhangelsk won an ice-chipping contest, digging through 1 m of Yukon River ice in 30 minutes. He might have won the 5-mile “fat-tire” bike race over snow had the chain of his borrowed bike not fallen off. The American PI was first and last in his age class on the same course, but not last overall. Every participant got a prize. Our Russian student gave his prize to the mayor, as taking an axe back to Russia by airplane might be problematic, or at least heavy. The evening concluded with an exchange of traditional gifts between Sakha (Yakut) and Athabascan people.



Start of fat-tire bike race, Pavel Ryzhov 2<sup>nd</sup> from left.

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We concluded with a farewell dinner hosted by members of the Fairbanks-Yakutsk Sister City group. Quite clearly, this dialogue as re-inspired them.

### *Program Accomplishments:*

Without doubt, we achieved exactly what we set out to do. Some of the accomplishments were expected, others were not:

- We have indeed achieved a bilateral dialog among peer stakeholders in the flood problem.
- Milestones of visiting flood sites and relevant institutions in both countries have been met. Surveys of residents have been conducted as planned.

- We also succeeded, to an unexpected degree, in engaging local officials in both Sakha Republic and Alaska.
- Abstracts describing results are being published and will become presentations at the UArctic Congress at St. Petersburg State University, September 12-16, 2016 (see attached).
- A number of journal articles are in preparation.
- We have identified important similarities and differences in our two countries' approach to the spring breakup flood problem. Owing to their greater experience, the approach in Russia is more proactive and involves coordination across all levels of government.
- An unexpected consequence was an enhanced dialog between Athabascan and Sakha (Yakut) Indigenous Peoples, and between non-indigenous and Athabascan Americans. Some of the non-indigenous members of the team would say they learned as much about Indigenous People's issues as they did about floods.
- Visits by the team to assisted-living facilities were unexpectedly fruitful.
- This project and the dialogue it introduced may encourage better coordination and research on risk mitigation techniques on the US side, and more use of satellite remote sensing data for monitoring on the Russian side.
- We had good press coverage in both countries. Gavrilyeva, Savvinova, and Filippova gave an extensive interview about the trip to Alaska and experience to overcome the consequences of floods in Galena. It was published in the newspaper NEFU "Our University" (number 7 (173) on April 8, 2016). Kontar was interviewed in Galena for Alaska Public Media. The interview was heard widely on public radio stations in Alaska and portions were published in an article in Alaska Dispatch News.
- It has also motivated a proposal for development of an international Arctic natural hazards center at North-Eastern Federal University, Yakutsk.
- Two memorable quotes by team members: "We went to Yakutsk and discovered that the people there look like us!".....Athabascan team member speaking at the Tanana Chiefs Conference convention, Fairbanks. "This trip has changed my view of America completely.".....mayor of Edeytsy.



*The mayor's house in Galena. As in Edeytsy, stilts are one answer to the flood problem.*



*Mayor Korta (r) helps Mayor Yadreev (l) present a traditional Sakha gift to First Chief Jenny Pelkola.*

*Strengths and Weaknesses:*

- The inclusive, cross-discipline, cross-societal role approach has been exceptionally fruitful.
- Likewise use of meetings already arranged for related purposes broadened our connections and outreach: Water and Climate Change Working Group of the Northern Forum in Yakutsk, Arctic Science Summit Week in Fairbanks, Climate Change and Emergency Preparedness session of the Tanana Chiefs Conference in Fairbanks, and the Galena Spring Carnival.
- Obtaining US visas in Moscow for our Russian team members went smoothly, thanks to help from P2P program management and the kind attention of the Global Civilian Research and Development Foundation.
- A challenge was finding support for travel by Russians outside the project budget. Our team agreed from the start that visits should be reciprocal to establish equality. Russian members had some funding, but were hampered by the drastic change in currency exchange rate. Nevertheless, the team was completely successful in reassembling itself, thanks to the generosity of program managers at UAF in connection with ASSW, and of US team members and UAF faculty in Fairbanks who opened their homes to provide lodging and food for Russian members. A difficult situation turned into enhancement of mutual understanding.



Team member Christina Edwin, who grew up in Galena, joins other young Athabascans in a traditional dance at the Galena potlatch.

*Looking Ahead:*

- Team members continue their exchange via email and Skype and are analyzing data, writing articles for scientific journals, and reports for local use.
- The key results of the exchange will be highlighted in the upcoming Cambridge University Press monograph entitled *Global Change and Future Earth: The Geodetic and Geophysical Perspective*. The book will be released by the end of October 2016.
- Team members are also preparing their presentations for the UArctic's Arctic Congress, which will take place in St. Petersburg during September 12-16, 2016.
- On April 13, team members Kontar and Plumb gave a presentation on the project's results to date, at the monthly [American Water Resources Association lecture series](#), well-attended by federal and university scientists, graduate students, and regional emergency managers.

*Supporting material:*

1. Reducing Spring Flood Impacts for Wellbeing of Communities of the North project agenda, March 11-21, 2016
2. Slides presented during the meeting with Karl Kassel, FNSB Mayor
3. ASSW 2016 Natural Hazards and Risk Management in the Arctic meeting agenda
4. Session description and teams submitted abstracts to the UArctic Arctic Congress
5. Media items