**Smithsonian Environmental Research Initiatives in Alaska**

with Kachemak Bay NERR and Partners on the Southern Kenai Peninsula

July 25, 2019 12:45 PM to 3:00 PM

**~ SITE VISIT GOAL ~**

During this 2.5-hr field site visit, Kachemak Bay NERR staff and their collaborators will share expertise on watershed and estuarine ecological systems on the ground, and how environmental research and monitoring has been informed by and integrated into community engagement processes. Participants will interact with a diverse group of local research and education professionals making valuable connections for moving local and regional conservation science projects and watershed resilience strategies forward.

**~ OBJECTIVES~**

Participants will…

* Understand ecological, economic, and societal benefits of Kenai Lowlands watersheds
* Review local research and monitoring activities with experts who benefit from Smithsonian investments
* Identify existing conservation and engagement activities and how they intersect with Smithsonian Initiatives

**Takeaways:**

How KBNERR is engaging the community around Smithsonian supported topics

How Decision Makers and Stakeholders are using this information

What additional resources or lines of inquiry should be pursued

**~ PROCESS AGENDA~**

**Headwaters** Stariski Creek Meadows

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| **Time** | **ACTIVITIES and OBJECTIVES** | **Personnel**  |
| **12:45-3:00**12:45-1:00 Orientation Break into groups**Meadow** **1:00-1:30** **Station 1****1:35-2:00****Station 2**Transit to Bridge2:00-2:15**2:15-2:45****Station 3/4****Bridge**2:45-3:00Group Debrief | Vehicles: 9 people Mark SUV: Mark, Dana, AnalyssaJacob Truck: Jacob, CooweKHLT Vehicle: John, Donna, Courtney, MarieEquipment: JacobDrone: JacobPhotos: AnalyssaObjectives: * Learn about ecological functions that support ecosystem services in headwater streams
* Connect research with community engagement and decision making

Orientation: CooweStation 1: Dennis WhighamTransitionStation 2: Mark RainsTransitionStation 3: Coowe Walker2 parts to Bridge Site Discussion: CooweDebrief and thank SI for Conservation Commons/WLSs | Staff:Coowe WalkerJacob Argueta Dana NelsonPartners:Dennis Whigham Mark Rains Courtney DodgeMarie McCartyStudents:Analyssa HernandezGuests: Donna Aderhold, John Mouw  |

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| 12:45 Intro15 min | **Coowe Walker** Welcome to Land Trust Property, history of place with Marie. Outline goals and objectives, Describe the rotation and timingSplit group into 2 (while standing on road)Core Concepts: * Salmon systems are connected from headwaters to estuaries through key landscape support elements, we will be looking at peat wetlands and groundwater functions at this site.
* Variety of entry points for community engagement and decision making based on stakeholder perspectives

**Team Intro**  |  |
| Station 1 10 min walk, 25 min activity(PE: 10 min uneven hummocky and wet marsh ground walk) | **Dennis Whigham**, Courtney, Marie, DanaPlant Diversity Climate change effects – shifting plant communities Plant traditional Uses Orchid, Fungi relationships Homer Wilderness Leaders Field work with orchids - (Courtney) Plant Identification  | MaterialsOrchid Specimen illustrationLaminated illustration |
| Transition Phrases | Now you are going to Mark/Coowe where you will add to the story of supporting the nearby salmon stream. You just came from Mark/Coowe and we are going to build on that with this discussion on plant communities. | Dennis |
| Station 2 1:355 min walk, 30 min activity(PE: 10 min uneven hummocky and wet marsh ground walk) | **Mark Rains,** Coowe, AnalyssaMark-groundwater studies* Temperature differences between stream and peatland soil water (temp loggers)
* Importance of peatlands in moderating stream temps-insulating blanket, lag times, etc.
* Big picture of groundwater resources- where is the water coming from, how much is there, how we’re trying to understand it and develop tools for sharing.
* Examples of ways groundwater is potentially at risk, such as gravel mining (gravel in pocket)

Coowe-Conservation efforts* peatland core (with Jacobs help)
* depth of peatland, volumes of peat in the region
* work with partners: state, CIRI, borough to develop peatland-salmon carbon project
 | MaterialsLaminated illustrationRussian soil corerGravelThermometer |
| **2:00**10-15 min | **Drive to Bridge Site**  |  |

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| Station 3 2:10 pm 45 min activity(PE: Roadside observation) | **Coowe Walker**Coowe-overview of site-whole group* one table looking at 1) potential for loss of connectivity- private property, parcelization (Coowe) and 2) landscape support for streams landscape elements, alders, and riparian grasses (Dennis), 3) stream inverts, talk about connecting with Tyonek students (Dana)
* other table- baby salmon (Jacob), talk about Fish Need Land Too partnership, importance of showing people baby fish in the field, work with NPFA and Young Fishermen’s Association (Marie)

Activities: Invertebrate identificationSalmon capture, identification  | Materials**Baby Fish**Laminated Illustrations: Prey species Property Before/After photosSubdivision PlatsTable CanopyPhotarium x2Invert D netHand scopesBucket x2BubblerMesh holding container for fishAquarium net x2Waders (Jacob, Coowe, Dana, SI film person (W size 8 shoe))Electro-fisherDip netGloves |
| 2:45 pm  | **Debrief - Coowe**Close with thanking the Smithsonian for investment and we look forward to continuing efforts in research and community engagement through the new Working Lands and Seascapes Initiative. There will be Fishermen Fieldtrips, Art and Science collaborations and Citizen Science with Alder seedbanks. |  |