

NKN Proposal to: USGS Proposal #1
Project title: Schitsu'umsh Relationships with Their Dynamic Landscapes:
 Identifying, Managing and Applying Indigenous Knowledge and Praxis
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A Collaborative Project by Schitsu'umsh (Coeur d’Alene Tribe of Idaho) and the University of Idaho

A. Introduction: The following proposal describes a multi-stage, collaborative, pilot project between the Schitsu'umsh (Coeur d'Alene Tribe of Idaho) and the University of Idaho. Proposed for the period of August 2014 to August 2015, this project will focus on identifying Indigenous knowledge and praxis (practice) of the Schitsu'umsh people as it relates to their dynamic landscape, and seeks to translate that knowledge and praxis into appropriate nomenclatures and metadata schema for its management and application in addressing issues associated with climate change.

The Schitsu'umsh are an Indigenous people, with an enrollment of 2,394 members (Coeur d'Alene Tribal Enrollment Department May 2014), located on the Coeur d'Alene Reservation of Idaho, of 345,000 acres, with cultural and historical extensions onto "ceded lands" off the Reservation, of approximately five million aboriginal acres of north-central Idaho and eastern Washington (Coeur d'Alene Tribe Home Page: <http://www.cdatribe-nsn.gov/Default.aspx>).

The products of this work can be modified, expanded, and used as a replicable model for the Coeur d'Alene Tribe and by other tribal and non-tribal communities throughout the United States as they address the social and environmental effects of climate change.

Project deliverables are intended to directly benefit the Coeur d'Alene Indian community, provide transferable and scalable best-practice resources and procedures for tribal, state, federal and non-profit agencies and educational institutions, and offer a model for agency-institution-tribal collaborations.

B. Deliverables – "Giving Back"¹:

1. Best Practices for the Research on and Public Distribution of Schitsu'umsh Data, Metadata and Knowledge. Produce a concise document of best practices for tribal/governmental agency collaborative ethnographic and scientific research leading to data, metadata and knowledge sharing. See G. First Stage – Ethnographic Inventory and Best Practices.

2. *Sqigwts* Knowledge and Praxis Inventory. Produce a document that articulates Schitsu'umsh knowledge and praxis associated with the plant, *sqigwts* (also known as "water potato" – *Sagittaria latifolia*), within its full scientific biological and ecological contexts, and Schitsu'umsh cultural context. This articulation will provide a foundation for understanding Indigenous knowledge and praxis relative to interactions with a dynamic environment. See G. First Stage – Ethnographic Inventory

3. *Sqigwts* Translation and Integration. Produce a document that effectively translates and integrates Schitsu'umsh knowledge and praxis associated with *sqigwts* into the shared nomenclature, such as TEK (Traditional Ecological Knowledge) and TK/IK (Traditional Knowledge/Indigenous Knowledge),² and appropriate metadata standards (e.g., FGDC, Federal Geographic Data Committee, and ISO, International Organization for Standardization)³ metadata schemas, used by academic, scientific and

¹ "Giving back" refers to the primary Schitsu'umsh "teaching" of sharing and assisting others and in particular, those in need. In the context of "deliverables," it is that which the Schitsu'umsh seek to contribute to this project, to benefit others. See Appendix 1 – Framing the Project.

² See Berkes, Colding and Folke 2000, Tang and Gavin 2010, and Usher 2000.

³ See Federal Geographic Data Committee, 1998, and United States Department of Commerce. National Oceanic and Atmospheric Administration. National Coastal Data Development Center, 2012.

governmental agencies. To achieve this integration, a small-scale pilot project designed to demonstrate that a system can be put in place that meets federal data and metadata management guidelines as well as Schitsu'umsh concerns of privacy, sensitivity, and sharing will be developed. The University of Idaho staff at the Northwest Knowledge Network (NKN) will work with other project team members and Schitsu'umsh representatives to leverage NKN infrastructure to provide metadata support, secure data storage (e.g., including offsite backup), as well as limited access to sensitive data and public access to those data and metadata that Schitsu'umsh determine can be made publicly available.

To translate and integrate what is often unique and idiosyncratic into a shared language facilitates the legitimization of Indigenous knowledge as complementary to and of equal value with scientific knowledge. To translate and integrate the Indigenous into a shared language facilitates the safe archiving of such knowledge and praxis in a repository for application in research and educational initiatives addressing issues associated with climate change. It would be a significant Indigenous and scientific accomplishment if the Indigenous can be successfully translated into, and integrated and housed with FGDC/ISO digital metadata schema. See H. Second Stage – Translate and Integrate.

4. Utility and Applicability of the Indigenous. Produce a document that illustrates the utility, value and applicability of Schitsu'umsh knowledge and praxis, when translated into TEKs, and FGDC/ISO metadata, and applied to a real-world initiative. Entitled "Tribal Garden," this document will provide a description of how to integrate Indigenous and scientific best-practices in manner that can result in horticultural and/or agricultural plants (such as grains, fruits and vegetables) being sustainable in the context of climate change occurring on the Palouse, and throughout Pacific Northwest region and the United States. This is a key deliverable for Schitsu'umsh participation. See I. Third Stage – Utility of the Indigenous.

5. Educational. Based upon the research developed in this project, produce a document that makes recommendations on how to design educational outreach curriculum, with appropriate Indigenous content and pedagogical considerations relating to climate change. The curriculum could be used by the Tribe, the NWCSC, and area colleges and universities. See J. Fourth Stage – Curriculum Recommendations.

C. Co-PIs: Bobbie White (Tribal Natural Resources Education Specialist), Leanne Campbell (Tribal Curator), Rodney Frey (University Ethnographer) and Jeremy Kenyon (University Research Librarian)

D. Possible Funding Sources: Department of Interior Geological Survey, National Climate Change and Wildlife Science Center, and Northwest Climate Science Center. Funding approved July 11, 2014.

E. Duration: August 2014 – August 2015. This is a one-year, multi-stage project. While the First Stage is a prerequisite for the research that would be entailed in the Second and Third Stages, once completed during the first three months of the project, by November 2014, the Second Stage would be initiated at that time and completed by April of 2015, with the Third and Fourth Stages initiated in January of 2015, all culminating with Deliverables in August of 2015.

F. Background – Pitse' and Plow: As an Indigenous people, linked to a specific place since time immemorial (Coeur d'Alene Lake and its river basin), the Schitsu'umsh have an intimate kinship-based relationship with their landscape (Frey 2001:10, 172-73). That relationship is predicated on a particular configuration of knowledge and praxis. Their Indigenous knowledge can offer insights and best practices into how to effectively engage a dynamic landscape in a manner beneficial to interrelated human, animal and plant communities.

Their Indigenous relationship with the land is exemplified in how the Schitsu'umsh have interacted with plants (Frey 2001: 155-64, 172-76). In the instance of *sqha'wlutqhwe'* – “camas,” *Camassia quamash* – there is a strong reciprocal relation between “kinsmen” (Frey 2001:6, 154-55, 172). For the human, there is a responsibility for acquiring a vast level of knowledge, including a keen awareness of the seasonal cycles and unique weather patterns that effect location and timing of the digging, as well as the obligation for acts of prayer and respect during and after the digging. Before the *pitse'* (digging stick) pierces and loosens the earth around the camas tuber, a prayer to *Amotqn* (the Creator) and the *sqha'wlutqhwe'* is given, asking “permission” to gather the tubers. A small gift of tobacco might also be offered. Only that amount of camas needed by the family would be dug, never more. For its part, the *sqha'wlutqhwe'* responds with its own “gift” of nutrition, feeding the body and the spirit of humans. Camas, when annually dug in this Indigenous manner, responds by producing larger tubers when compared to camas left in the “wild,” void of human interaction. Once dug and prepared, the human also has the responsibility of sharing the camas with those in need, and not hoarding it for self-gain.

When fur traders and trappers first settled at Spokane House in 1810 (down river from Spokane Falls, Washington), the Schitsu'umsh observed them planting and digging potatoes. By the time Father DeSmet began his Jesuit mission among the Schitsu'umsh in 1842, the Schitsu'umsh had transferred their camas knowledge and techniques to this newly introduced plant and were annually digging potatoes (Frey 2001:59-61, 73-75).

The Schitsu'umsh continued to be adaptive innovators, applying traditional knowledge to new opportunities, and by the late 1890s they were among the most successful, self-sufficient farmers on the Palouse. They continued their transhumance digging bitterroot, camas and “water potato,” hunting deer, fishing lake trout and gathering huckleberries, while also engaging in sedentary farming, using state-of-the-art plows and other farm implements, applying their Indigenous camas knowledge to cultivate wheat, oats, peas and hay. While their success in farming came to an abrupt but temporary halt when the federal government imposed the Allotment Act on Coeur d'Alene lands during the years 1906-09, the Schitsu'umsh have continued to apply their traditional knowledge and praxis to camas, water potato, huckleberries and lake trout.⁴ The Schitsu'umsh are the oldest, continuous “farmers” of the Palouse, knowing how to successfully adapt, with changing technologies, to an ever-dynamic climate. With their *pitse'* and plow in hand, the Schitsu'umsh can offer insights that can benefit others.

⁴ The Allotment Act of 1887, also known as the Dawes Act, limited individual Schitsu'umsh land ownership to 160 acres, often not on the best farmland, and selling much of the rest of the Reservation for non-Indian land ownership by lottery (Frey 2001:93-96).

G. First Stage – Ethnographic Inventory and Best Practices Procedures (Time Line: August – November):

1. Collaborative Team. Establish a collaborative relationship between designated members of the Northwest Climate Science Center and specific Coeur d'Alene department(s) and program(s), acknowledged and authorized by the Coeur d'Alene Tribal Council. This working team of Coeur d'Alene and University of Idaho members will conduct, interpret and write-up the planned research and provide the deliverables. The team could be comprised of individuals who have previous working relationships with each other, understanding Schitsu'umsh/Coeur d'Alene cultural, ecological, legal and political structures and procedural nuances, and can expedite this project in a timely and appropriate fashion. This partnership, built upon transparent communications and mutual trust, is a necessary preliminary step upon which this project would be based. This team was established on May 19, 2014, made up of Quannah Matheson, Director of Cultural Resources, Coeur d'Alene Tribe; Tiffany Allgood, Coordinator, Environmental Programs Office, Coeur d'Alene Tribe; Rodney Frey, Professor of ethnography, University of Idaho. Joining this team were Leanne Campbell, Cultural Resources, and Jeremy Kenyon, Metadata Research Librarian, University of Idaho. Additional members from the Coeur d'Alene Tribe and the University of Idaho will be added as specific research tasks necessitate.

2. Permit and Ethics. Apply for a Coeur d'Alene Research Permit and establish a “cultural property rights” agreement regarding the disposition of any Tribal knowledge accessed and any “deliverables” developed. This would be an agreement reviewed and approved by the General Counsels of the both the University of Idaho and Coeur d'Alene Tribe. These procedures and agreements will help safeguard the informed consent of the Coeur d'Alene Tribe and its members, and identify potential risks and benefits to the Tribe and individual members. This agreement will include a thorough Tribal review process for assessing information inventories designated for public dissemination. This could include tribal Elders reviewing any culturally sensitive information. The Coeur d'Alene Tribe is to be assured upfront that no information derived from project's research would be publically disseminated without first Tribal approval. An application to the University of Idaho's *Institutional Review Board* for assurance for “human subject safeguards” will also be completed, as all research involving human subjects must go through this board. The project was reviewed and approved by the Coeur d'Alene Cultural Committee on May 21, 2014, and by the Coeur d'Alene Tribal Council on July 17, 2014.

3. Inventory. This pilot project, through an Indigenous-informed ethnographic research design (Frey 2001:269-292; 2014:1-94), will identify and articulate the relevant Schitsu'umsh knowledge⁵ and praxis⁶ associated with one biological species/*Amotqn-K'u'Insutn* gift.⁷ The Coeur d'Alene Cultural Committee

⁵ “Knowledge” in this context refers to Indigenous ways of knowing, i.e., the perennial teachings (*mi'yep*) handed down from time immemorial and embedded in an engagement with the oral traditions and the landscape, such as language, narratives, songs, dances, aesthetic expressions, kinship and subsistence activities, geospatial/temporal landscape configurations, etc. This knowledge cannot be isolated from its behavioral act, only understood in association with the acts of brining it forth, in its praxis.

⁶ “Praxis” refers to the ways of doing that bring forth in behavioral action Indigenous knowledge, such as in the multifaceted actions associated with camas digging, within its human, botanical, geospatial/temporal, and spirit contexts.

⁷ “*Amotqn* and *K'u'Insutn*” refer to the Schitsu'umsh terms for Creator, and their “gifts” refers to the understanding that each plant, animal, bird, and fish species is ultimately created and embedded in the land as a “gift” from the Creator. These are “gifts” to be used wisely and shared with those need (Frey 2001:109-11).

selected the particular plant for this study, *sqigwts*, also known as “water potato,” *Sagittaria latifolia* (Frey 2001:6, 11, 20-21, 155-59; see Appendix 2 – An Introduction to *Sqigwts*). As part of this study and final report, *sqigwts* will be placed within three interrelated contexts: scientific-based ecology, legal-based Tribal judicial authority,⁸ and cultural-based Schitsu'umsh.



Flowering *sqigwts* and cleaning its tubers, Lake Coeur d'Alene.
Photos: Frey 1998, 1997.

This inventory articulation would be done from the cultural perspective of the Schitsu'umsh, i.e., their *mi'yep* knowledge and praxis in relationship with the land.⁹ These teachings would be framed using *Snchitsu'umshtsn* terminology (the Coeur d'Alene language), and expressive of the perspective shared by Tribal elders. See Appendix 1 – Framing the Project. This would also entail NW Climate Science Center

collaboration with the Coeur d'Alene Tribe's cultural and language programs, legal counsel, and appropriate natural resource program(s). Reiterating Coeur d'Alene Tribal “reserved rights” would reaffirm the legal and judicial authority of Schitsu'umsh cultural and ecological engagement with and responsibility for their land, a critical acknowledgement if this project is to serve as a model for other Tribal and federal government-to-government collaborations. As part of this stage, an inventory will be made of all Tribally-gathered scientific data relating to *sqigwts*, such as botanical, ecological, environmental and hydrological research data.

As reflected in Deliverable #1, it would be during this stage that a document would be produced outlining ethnographic and scientific best-practice procedures regarding how federal agency staff can engage tribal communities when conducting research and creating data repositories. The concise outline will include recommendations on how to secure tribal collaboration and approval of projects, how to engage in collaborative research design and appropriate ethnographic field methods, how to interpret, analyze and present the results of ethnographic research, and how to store ethnographic and scientific data and metadata in an accessible repository. Suggestions will also be offered on how to avoid ethical, legal and research miss-steps in the design and execution of collaborative research. While there is an extensive literature on how to generally conduct successful tribal collaborative research, this

⁸ “Legal” is in reference to Coeur d'Alene jurisdiction, based upon executive order/treaty rights, federal trust responsibilities and government-to-government negotiations, which help secure access to and the preservation and perpetuation of Coeur d'Alene lands and waters (Frey 2001:88-89).

⁹ *Mi'yep* refers to “teachings from all things,” since time immemorial, ultimately derived from *Amotqn*, the Creator, and conveyed in the actions of the First Peoples, such as Coyote and Crane. This is the body of knowledge essential to Schitsu'umsh cultural practices and how they relate with their landscape (Frey 2001:182-88).

Deliverable will be focused on collaborative projects revolving around the science of climate change, and will be aligned with comparable literature on research addressing this issue.

This inventory stage would culminate with a Tribal review to determine the authenticity and appropriateness of the cultural-based inventory that would be intended to be shared publically. The



University of Idaho students presenting a bag of *sqigwts* to Lucy Finley and other elders, at the Tribal Senior Center.

Photos: Frey 2007, 1998

review seeks to insure Schitsu'umsh/Coer d'Alene cultural property rights. Some of this inventoried knowledge and praxis might be judged only to be used internally, within Tribal departments and programs, and not shared publically. For example, the Tribe might be reluctant to share information on particular locations of sensitive cultural activity, fearing once publically revealed, trespassing and vandalism might occur. Or certain spiritual activity might be judged too sensitive for public sharing.

Nevertheless, as a result of collaborative research, this document will provide a meaningful description of Schitsu'umsh knowledge and praxis associated with *sqigwts*, Deliverable #2.

H. Second Stage – Translate and Integrate (Time Line: November - April): Integrate *mi'yep* teachings/praxis associated with *sqigwts* with scientific knowledge, so that each epistemology is legitimized as complementary and of equal value and application, so that it can be subsequently housed in an accessible repository. Each way of knowing needs to be validated in the eyes of others, e.g., Tribal cultural representatives, Tribally employed scientists, and local, state and federal agency representatives. To facilitate this integration, this stage of the project would explore if and how Schitsu'umsh *mi'yep* and praxis might be translated into such accessible and publically shared nomenclatures and schemata as TEK, TK/IK, and FGDC/ISO digitized metadata. Such a translation and integration would only be attempted if it were assured that the meaning and integrity of the Schitsu'umsh *mi'yep* were not diluted or undermined in the process.

As the goal of this stage is to store translated Indigenous knowledge and praxis in a data and metadata repository, this locally created repository will serve as a model for how Indigenous knowledge and praxis data and metadata can be successfully stored and rendered accessible to governmental and scientific communities. While differentiating between data stored only for Tribal access and data stored for public access, it is a repository that would remain under the jurisdiction of the Coeur d'Alene Tribe.

Acknowledged is the challenge in attempting to integrate the Cartesian Dualistic and Aristotelian Material Reductionist epistemological and ontological principles upon which much of FGDC/ISO-based

metadata geospatial and temporal schema are predicated,¹⁰ with the Relationality, Holistic and Spiritual-based epistemological and ontological principles upon which Indigenous knowledge and praxis are predicated.¹¹ One asserts a world of quantifiable, material phenomena, to be viewed independently, as if behind a plate-glass window (i.e., value-free, independent variables from which generalizations can be hypothesized), all within a world of dynamic, interrelated physical elements – a world of objects. The other asserts a world of transitory interactions of those participating, including human, plant, animal, spiritual beings (i.e., no plate-glass window; no value-free generalizations asserted), a world of interrelated events, objects imbued with spirit in the process of becoming – a world of events. Acknowledged is the challenge of attempting to render something animate and ephemeral into a digitized data schema, of digitizing the indigenous or perhaps of indigenizing the digital?

“Integration” and “translation” are processes that can be conceptualized and operationalized in varied and innovative ways, with the goal of accommodating an Indigenous epistemology and praxis. One approach to be explored would entail creating specialized profiles or extensions of ISO, defining new semantics for these extensions. ISO metadata is designed to be validly customized for specific needs and purposes – creating metadata for an indigenous repository would constitute such a need. Creating extensions or profiles would provide the cultural context of natural phenomenon (e.g. a plant) interoperable, transferable and portable, and in a way that aligns with the current metadata practices of the USGS Climate Science Centers and, their repository, ScienceBase. Another approach to be explored is that of “compartmentalized integration,” adhering to multiple ways of knowing and praxis (Frey 2014:105-26). This latter approach is similar to what is termed “Multiple Evidence Base (MEB) Approach,” which advocates multiple knowledge systems, as discussed in “Guidelines for Considering Traditional Knowledge In Climate Change Initiatives” (2014:19 and 38). This document will provide a meaningful translation and integration of the Schitsu'umsh knowledge and praxis associated with *sqigwts* into TEK and TK/IK nomenclatures and a local repository, with the desire to do likewise with FGDC/ISO digitized metadata, Deliverable #3.

I. Third Stage – Utility and Applicability of the Indigenous (Time Line: January - August): Based upon integrated Schitsu'umsh *mi'yep* and scientific knowledge, and using the appropriate translated TEK/IK and FGDC/ISO metadata nomenclatures, this project will illustrate the utility and applicability of the Indigenous in the design of a hypothetical “Tribal Garden,” Deliverable #4. Created in a collaborative manner with staff from various Tribal and university departments, programs and agencies, the Garden would showcase how it could: 1. Produce enough sustainable and nutritious food to share with needy

¹⁰ Consider, “A metadata record is a file of information, usually presented as an XML document, which captures the basic characteristics of a data or information resource. It represents the *who, what, when, where, why* and *how* of the resource. Geospatial metadata commonly document geographic digital data such as Geographic Information System (GIS) files, geospatial databases, and earth imagery but can also be used to document geospatial resources including data catalogs, mapping applications, data models and related websites. Metadata records include core library catalog elements such as Title, Abstract, and Publication Data; geographic elements such as Geographic Extent and Projection Information; and database elements such as Attribute Label Definitions and Attribute Domain Values.” From FGDC Geospatial Metadata site, <http://www.fgdc.gov/metadata>, visited 25 May 2014.

¹¹ See Frey and the Schitsu'umsh 2001, for an Indigenous description, and see Frey and a Host of Elders 2014:26-41, and Berkes 2012:276-83 for a discussion of some of the issues contrasting the Indigenous and scientific.

families in the community, including the possible restoration of native plants for consumption; 2. Offer youth educational opportunities for acquiring traditional knowledge and praxis from Tribal elders; 3. Serve as a model for other tribal and non-tribal communities seeking to integrate Indigenous and scientific best practices to successfully adapt horticultural and agricultural techniques for cultivating grains, fruits and vegetables, and 4. Help secure for future generations of Schitsu'umsh the perpetuation of the single biologically and culturally significant species identified in this project, all within the context of climate change occurring on the Palouse, and throughout the Pacific Northwest region and the United States. With their particular *pitse'* and plow history and expertise, the Schitsu'umsh are in a unique position to "give back" to their own future generations, as well as to other communities.

Acknowledged is the challenge in establishing viable communication and collaboration structures and procedures among the varied partners. Can administrators and staff personnel, representing various Tribal and academic (and by extension, federal, state and local) programs and agencies, as well as reflective of various managerial and communication styles and epistemological perspectives, effectively communicate and collaborate, while addressing shared goals? Can we move from an asymmetrical *consultant* to a symmetrical *collaborative* relationship? Acknowledged is the challenge of demonstrating the utility of the "since time immemorial" at a time of contemporary worldwide crisis. We will explore the "compartmentalized integrative" model as a possible means to address these challenges (Frey 2014:105-26).

J. Fourth Stage – Curriculum Recommendations (Time Line: January - August): Based upon the research developed in this project, recommendations will be made on how to develop educational outreach curriculum, with appropriate Indigenous content and pedagogical considerations relating to climate change. Recommendations will be designed for educational programming use by the Coeur d'Alene Tribe to inform their youth and students, by the general public as well as by governmental agency administrators and managers, and by the University of Idaho and other institutions of higher education (e.g., Lewis-Clark State College and North Idaho College). Issues associated with climate change need to be meaningfully disseminated throughout our communities if informed public responses and policy actions are to occur, and if we are to prepare our children for the future.

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L. Appendix 1 – Framing the Project: This proposal began with a conversation during a lunch meeting held at the Coeur d'Alene Casino on May 1, 2014. The introductory words of Alfred Nomee (Director, Natural Resources Department) and Quannah Matheson (Director, Cultural Resources) set the stage for this project, as these two individuals articulate the outlines of Schitsu'umsh knowledge and praxis in relationship with the land. It is their perspective, to be supplemented by subsequent interviews with tribal elders and consultants, which will anchor and frame this pilot project. Key themes from the luncheon conversation are underlined, with added summary comments in (parenthesis).

- Humans are "out of balance" with land and water, taking too much and not giving back. (And as a result, not enough water to share, not enough air to breath, not enough foods to eat).
- The "natural resources," the animal, plant and fish of this land and water (the animal and plant peoples) are placed on this land by the Creator (as *Amotqn's - K'u'lnsutn's* "gifts").
- "Since time immemorial" the Schitsu'umsh have had an intimate connection and kinship with this "land" and lake, without which there can be no Schitsu'umsh. (Lake Coeur d'Alene is the birthplace and continual "home" of the people).
- As humans engage with and relate to the land and water, it is the Schitsu'umsh way to take responsibility and in our actions, to "give back," have exchanges with, be in balance, be in "reciprocity" with the land. (The gifts from the Creator are not gifts possessed, but gifts to be shared with others and especially those in need).
- What is "inside," the internal, our thoughts, the spirit, manifests themselves in the overt and physical world. (Hence the importance of prayer, of the spiritual ways, as the key to the physical well-being of people and of the land and water).
- "Pay attention" to the land and its seasons, and be deliberate in one's action, relying on our oral traditions, our culture, which expresses and maintains our responsibility as "stewards" of this land and water. All the acts of "reciprocity," "kinship," "spiritual ways" are inseparably linked with and expressed in our oral traditions, in our culture. (Thus any project will need to be framed within the context of the Schitsu'umsh ways, its culture and language).
- Adhere to our "seventh generation" responsibility – in the acts of doing, we need to pass on the teachings (*mi'yep*). We have an essential educational role and responsibility, i.e., need to preserve, protect and perpetuate the gifts of this land and water, which are from the Creator, for our grandkids, and their grandkids.

M. Appendix 2 – An Introduction to *Sqigwts*

Sqigwts Ha'chsetq'it

Water Potato Day

October 2011



and muskrat and porcupine are known eat the tubers

- During very scarce winters people would raid the muskrat nests and steal their water potatoes

Harvesting and Preparation

The tubers can be detached from the ground in various ways: with the feet, a pitchfork, or a stick, and usually then float to the surface. Ripe tubers can be collected in the fall and are often found floating freely. These tubers can be eaten raw or cooked. The taste is similar to potatoes and chestnuts, and they can be prepared in the same fashions: roasting, frying, boiling, and so on. They can also be sliced and dried to prepare a flour.



Get To Know Your Water Potato

- Common Names: Wapato, Arrowleaf, Indian Potato, Duck Potato, Arrowhead
- Scientific Name: *Sagittaria latifolia* is a wetland plant with arrow-shaped leaves rising above the water
- The underground stem (rhizome) produces tubers (potatoes) ranging in size from a marble to about half the size of a person's fist
- Ducks and many other waterfowl eat the seeds



Water Potato Lore

The Coeur d'Alene language term for the month of October, sch'edp, tells us that "darkness approaches." At this late time in the year of seasonal gathering, Coeur d'Alene families returned to the lake to take the last foods, the water potatoes or sqigwts. We learn from anecdotes collected in 1904 that the root diggers used at this time, the pitse', were probably of the wide and curved kind, for digging in the soft mud of the marshy areas around the lake. The pitse' were made of the wood from service trees, syringa, or haw. Points were hardened by charring in the fire, and elk antlers were attached for handles. Woven bags for carrying the sqigwts only came into fashion after woven baskets had gone out of use.



Today school children, their families, caregivers, teachers, and guests are gladly invited to take part in the activities at Heyburn State Park, organized by the Coeur d'Alene Tribe's Department of Natural Resources. Tribal employees and their invited friends share in the opportunity to appreciate the knowledge, practices, and homeland of the tribe's ancestors, while engaging in the bracing fun of gathering food from the store that Nature granted the Coeur d'Alene People.



Woman using a pitse' or "root digger"

Margaret Stensgar told us that "the water potatoes were dug at Chatkolet, Hayden Lake, and near Harrison. Irene Lowley remembers her qine' digging for sqigwts near her cabin on Benawah Lake." She also remembers that "it was not, in her family, an activity that her grandma wanted the younger children doing, because of the difficulty and potential danger of the soft mud, cold, and icy water."



Flowering Water Potato

Outside of its importance as a traditional subsistence resource the water potato also offers great value as food and cover for aquatic animal life. The seed and tubers are readily consumed by waterfowl, songbirds, wading birds, muskrats and beaver. The emergent foliage of this species provides cover to the same animals in addition to fish and aquatic insects. During the growing season notable amounts of nutrients and metals are extracted from the water by the water potato. Stirring up of the sediments and erosion is reduced greatly by healthy stands of water potato. (USDA-NRCS) 2002.



USDA-NRCS, Plant Fact Sheet, (2011, October 11). Retrieved from
< <http://plant-materials.nrcs.usda.gov/> >

Ecological Value of the Water Potato Plant



North American Beaver (*Castor canadensis*)





Muskrat (*Ondatra zibethicus*)

October 2011

Come and Celebrate Water Potato Day!
Join us in learning about the traditional foods and harvesting practices of the Coeur d'Alene Tribe

Open to the public everyday 9am – 3pm October 26th 27th, and 28th
Cottonwood Creek, Heyburn State Park
For more information contact: 686-0131



Information courtesy of the
Coeur d'Alene Tribe/
Natural Resources Department
401 Anne Antelope Ave.
Plummer, ID 83851
Phone: (208) 686-5302

www.cdatribe-nsn.gov

N. Appendix 3 – ATNI Resolution, “Traditional Knowledge and Climate Change” (The Coeur d’Alene Tribe is an active member.)



2011 Annual Conference Tulalip, Washington

RESOLUTION #11 - 77

"TRADITIONAL KNOWLEDGE AND CLIMATE CHANGE"

PREAMBLE

We the members of the Affiliated Tribes of Northwest Indians of the United States, invoking the divine blessing of the Creator upon our efforts and purposes, in order to preserve for ourselves and our descendants rights secured under Indian Treaties, Executive Orders, and benefits to which we are entitled under the laws and constitution of the United States and several states, to enlighten the public toward a better understanding of the Indian people, to preserve Indian cultural values, and otherwise to promote the welfare of the Indian people, do hereby establish and submit the following resolution:

WHEREAS, the Affiliated Tribes of Northwest Indians (“ATNI”) are representatives of, and advocates for national, regional and specific tribal concerns; and

WHEREAS, the ATNI is a regional organization comprised of American Indians/Alaska Natives and tribes in the states of Washington, Idaho, Oregon, Montana, Nevada, Northern California and Alaska; and

WHEREAS, the health, safety, welfare, education, economic and employment opportunity, and preservation of cultural and natural resources are primary goals and objectives of the ATNI; and

WHEREAS, climate change is a threat to American Indian culture, resources, and wellbeing; and

WHEREAS, American Indians are entrusted by our ancestors with traditional ecological knowledge that has been an accumulation of centuries of knowledge , practice, and belief, evolving by adaptive processes and handed down through generations by cultural transmission; and

WHEREAS; American Indians are the first impacted by global climate change for the rest of humanity; and today climate change is drastically affecting indigenous peoples' hunting, fishing, gathering, economic infrastructure, reservation locations, usual and accustom areas and natural resources; and

WHEREAS, primary impacts on American Indians are prolonged droughts or excessive rainfall causing floods, extreme weather shifts brought on by warming, diminishing and disappearing sources of fresh water, changes in habitat for wildlife, and marine resources, that impact cultural and treaty reserved rights, federal/tribal agreement rights, threatens the sustainability for our communities and impacts on first food sources; and

WHEREAS, Native rights are place-based rights, based on historical, legally recognized and longtime occupation of Indigenous territories. Indigenous nations are in a unique venerable position in regards to climate change. Their land base provides few opportunities to relocate or expand or cope with changing climate. Treaty rights and reserved rights are fixed to specific parcels of land, so that it is unclear what tribal rights to resources might shift away from their reserved lands; and

WHEREAS, climate change shifts and disrupts plant and animal habitats, and in doing so forces cultures to adapt to these conditions, or risk elimination. Species adapt to rising temperatures by shifting their ranges farther north or to higher elevations. Many species driven entirely out of their habitats and feeding areas may face extinction. Other invasive species are migrating into new areas and are competing with or displacing native and culturally important species. Shifting conditions may also directly threaten species, such as in the “dead zone” on the U.S. Pacific Northwest coast, where fish and crabs are being starved of oxygen by wild swings in ocean upwelling of phytoplankton. The Midwest American Indians are facing the migration of their wildlife, as their moose have left their traditional and reservation territory as a result of the impact of climate change on the habitat. Furthermore, treaty-guaranteed rights to hunt, fish and gather may be rendered moot by these changes, or may adapt by transferring harvesting rights, for example, from salmon to tuna; and

WHEREAS, the United States has affirmed the United Nations Declaration on the Rights of Indigenous Peoples and American Indians can also use diplomatic rights associated with government-to-government relationships. Indigenous NGO demands have historically made recommendations at each conference of the UN Framework Convention on Climate Change (UNFCCC); and

WHEREAS, the United States has affirmed American Indian sovereignty and jurisdiction over our cultural identity and heritage. American Indians should implement their sovereign standing to promote federal actions to prevent, mitigate and adapt to climate change; and

WHEREAS, the current Administration has taken strides that support Tribal measures to cope with climate change, including, but not limited to, the November 5, 2009, Executive Memo directing agency heads to submit a detailed plan of actions that agencies will take to implement the policies; Executive Order 13175 - Consultation and Coordination With Indian Tribal Governments; and Department of Interior Secretarial Order 3289 - Addressing the Impacts of Climate Change on America's Water, Land, and Other Natural and Cultural Resource; and

WHEREAS; American Indians are sovereign nations and because of this incorporate traditional ecological knowledge, legal, political and western science in their governance decision making and with this experience we are prepared to be co-managers in addressing adaptation and mitigation policy and laws impacting trust resources and this capacity will provide direction for agencies, change laws and policy to recognize tribal rights to shifting species and resources. Furthermore, American Indians have the capacity to be co-managers in any government climate planning, or mitigation or adaptation measures that affect tribal resources, lands or wellbeing.

NOW, THEREFORE BE IT RESOLVED, that the ATNI does hereby call upon the United States, its agencies, scientists and all relevant organizations involved in planning for and implementing actions to address climate change to recognize that the Tribes are sovereign nations, with their own governments, customary laws, courts, and other forms of decision making that should be recognized and respected; and

BE IT FURTHER RESOLVED, that the ATNI calls upon the United States, its agencies, scientists and all relevant organizations to bring the Tribes into the processes to address climate change that impinge upon Tribal rights and interests from the very start, and at all levels; and

BE IT FURTHER RESOLVED, that the ATNI requests that the United States, its agencies, scientists and all relevant organizations recognize and respect Tribal traditions, ordinances and expectations regarding access to and respectful use of their traditional ecological knowledge, based on mutual respect for other's traditions, and principles and rights contained in the United Nations Declaration on the Rights of Indigenous Peoples, such as the right to free, prior and informed consent, the treaties and other constructive agreements; and


BE IT FURTHER RESOLVED, that the ATNI requests that the United States, its agencies, scientists and all relevant organizations recognize, build and enhance Tribal capacity to lead on climate change issues; to provide adequate and proportional funding for Tribal climate change adaptation and mitigation; to provide for emergency funding for dangerous climate-related impacts such as severe coastal erosion and flooding; to substantially increase funding to address ecosystem-based approaches for maintaining Tribal access to First Foods, species at risk,

critical habitat and culturally important places; to ensure continuity in policy and governance related to Tribal rights and interests in climate change adaptation and mitigation; and to increase general awareness of Tribal impacts, perspectives, actions, rights and interests; and

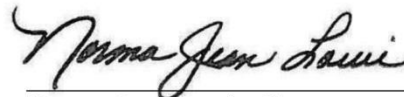
BE IT FURTHER RESOLVED, that the ATNI urges the United States government agencies, taskforces, and partner organizations comply with and implement the November 5, 2009, Executive Memo, Executive Order 13175 and Secretarial Order 3289, and partner with American Indians as sovereign nations as co-decision makers all policy, regulations and laws related to climate change on or off each nation's respected reservations, ceded lands and usual and accustomed areas.

CERTIFICATION

The foregoing resolution was adopted at the 2011 Annual Conference of the Affiliated Tribes of Northwest Indians, held at the Tulalip Resort Casino in Tulalip, Washington, on September 19-22, 2011, with a quorum present.



Fawn Sharp, President



Norma Jean Louie, Secretary

O. Appendix 5 – Resolution

**NATURAL RESOURCE DEPARTMENT
ENVIRONMENTAL PROGRAMS OFFICE
UNIVERSITY OF IDAHO
SQIGWTS CLIMATE CHANGE PROPOSAL**

CDA RESOLUTION 114 (2014)

WHEREAS, the Coeur d'Alene Tribal Council has been empowered to act for and on behalf of the Coeur d'Alene Tribe pursuant to the revised Constitution and Bylaws, adopted by the Coeur d'Alene Tribe by referendum November 10, 1984, and approved by the Secretary of the Interior, Bureau of Indian Affairs, December 21, 1984; and

WHEREAS, the Coeur d'Alene Tribal Council has a responsibility for the Health, Welfare, and Economic Development of the Tribe and its members; and

WHEREAS, the University of Idaho has approximately \$9,600 of funding for the Coeur d'Alene Tribe for a collaborative climate change project; and

WHEREAS, the Coeur d'Alene Tribe's Culture Committee recommended focusing the work on the sqigwts (water potato) and the Tribe's Natural Resource Committee concurred; and

WHEREAS, the Coeur d'Alene Tribe's Environmental Programs Office's role is to provide coordination and facilitation as needed for the collaborative project; and

NOW, THEREFORE, BE IT RESOLVED, That the Coeur d'Alene Tribal Council hereby approves the University of Idaho's proposal for a collaborative project on climate change impacts to the sqigwts with the Coeur d'Alene Tribe over a one-year project period; and

BE IT FURTHER RESOLVED, That no information derived from this project will be disseminated outside of the Tribe without the prior approval of the Coeur d'Alene Tribal Council; and

BE IT FURTHER RESOLVED, That the Coeur d'Alene Tribal Council Chairman or his designee is authorized to sign any documents and enter into the agreements necessary to implement this project.

CERTIFICATION

The foregoing resolution was adopted at a meeting of the Coeur d'Alene Tribal Council held at the Tribal Administrative Building, 850 A Street, Plummer, Idaho, on July 17, 2014, with the required quorum present by a vote of 6 FOR 0 AGAINST 0 ABSTAIN 0 OUT



**CHIEF J. ALLAN, CHAIRMAN
COEUR D'ALENE TRIBAL COUNCIL**



**DON E. SCZENSKI, SEC/TREASURER
COEUR D'ALENE TRIBAL COUNCIL**

P. Appendix 6 – Budget

Item	#	Amount	Total
Honorarium for Tribal Interviews	24	100	\$2,400
Tribal Staff and Program Support		7,200	\$7,200
Overhead (amended 26 August)		1,800	\$1,800
Collaborative compensation for their involvement in and commitment to this project, Works with ethnographer in Stages 1, 3 and 4			
University Ethnographer ¹² (Course Buyout and Summer Stipend; amended 26 August)	7,800		\$7,800
Performs Stage 1 – Inventory and Best Practices, especially interviews and best practices; Works with UI staff in stage 2, especially domain expertise for integration; Works with tribal partners in Stages 3 and 4.			
NKN Service Center Staff (Metadata Specialist, Applications Developer, Service Manager)	140hrs	14,000	\$14,000
Participates in Stage 1, Best Practices document, and especially 2, metadata integration and repository development.			
Phone		200	\$200
Travel (40 trips at 120 miles)	4800	0.55	\$2,640
Per Diem	48	10.5	\$504
Meeting Expenses	6	50	\$300
			\$36,844

¹² The “Best Practices” document will be prepared by the University Ethnographer, Rodney Frey, in collaboration with University Reference Librarian, Jeremy Kenyon. Hours for Rodney to do this work are incorporated into \$9,600 figure. Funding to cover Jeremy are covered elsewhere.