

Experience in spoken, written, and graphic communication methods & equipment

Scope of experience with communications techniques:

The preparation of complex and precise scientific documents has been critical to my work. The following examples describe some situations where I used my communications skills while working on complex, multi-year, labor-intensive, vaguely defined, or costly projects to effectively communicate and disseminate project information and results. I can likewise contribute the same abilities and energy to future work and communication of results:

I have documented ecological conditions, spatial and temporal patterns, and processes, interpreted developed scientifically-defensible interpretations, classifications, models, and maps, and communicated results in presentations, project documents, reviewed articles, and other formats.

I have developed my skills in communications including verbally, in writing, and in graphic media, and have used these to effectively document, interpret, and disseminate information to management, colleagues, students, and others and to influence the direction and outcome of projects on which I have participated.

Specific working experience:

In my current work with the **US Fish & Wildlife Service** writing, communication, and persuading others of my point has been critical in all steps.

This has included **project development communication** including external consultation and proposals, seasonal employee and volunteer recruitment and evaluation, crew fieldwork and post-field data processing training, work statements and contracting specifics for aviation and external specialist work, GIS analysis & mapping for flight planning; field navigation & site maps; and landscape classification, written and oral presentations on the project to FWS biologists and external organizations, and web documents, and other contemporary communications.

In my work for the **US Forest Service Rocky Mountain Research Station**, I frequently wrote and check project and methodological processing documents, data quality reports, and data documentation (metadata), communicated with internal and external parties to coordinate acquisition and dissemination of datasets and research results, and met with university students and colleagues to teach methodology and techniques of data processing.

As a botany field crew leader for the **Central Alaska Research and Monitoring Network (US-NPS)** in 2010, I communicated with my field crew regarding pre-trip and field tasks, with non-field personnel regarding logistics; supplies; and plans, and with other field crews regarding methodologies and ways to get around unusual problems encountered in the project.

I also communicated with a range of colleagues and outside parties to arrange helicopter, plane, and boat transport and scheduling; communications; and emergency information for my crew, as well as communications with University of Alaska Herbarium for plant identification and documentation assistance.

My final task was to prepare written reports to document project work, describing procedures, complications, findings, and other data for each of the extended wilderness field trips.

While working for the **USDA NRCS** I was involved in extensive communication with colleagues in- and outside the NRCS to develop protocols and concepts for the newly-started vegetation ecological investigations that accompanied soil investigations. This included broad literature review, communication with other vegetation ecologists familiar with the areas studied, and discussions related to joint investigations with university faculty. This work was challenging at times as it required me to relate fairly specific and detailed concepts that are familiar to myself and other botanists, but relatively unfamiliar to the mainly soil scientists of the NRCS.

I also made numerous research and project presentations relating my work to staff outside of my project and to outside audiences (e. g., university symposia). I also compiled an extensive scientific bibliography and library of background and other important research relating to the ecology, geology, soils, and hydrology of our research area (Yukon Charley National Preserve) for the benefit of fellow researchers and others.

At **Denali National Park** I was the vegetation ecologist for an environmental assessment of a proposed subsistence-related off-road vehicle use management plan.

I was responsible for the writing and editing of vegetation, wetlands, and environmental degradation sections of the EA in accordance with NEPA, NPS, and Denali guidelines. I also provided regular written and verbal communication to other EA team members to supply new data, give professional scientific opinion, review interpretations of my data, and facilitate shared writing responsibilities.

I also supplied regular and extensive written and verbal information to Park management, law enforcement and backcountry rangers, and public communications specialists and to NPS regional officials on ecological, environmental, and regulatory concerns related to my work and the EA process.

I have often had to respond to quickly changing, re-prioritized, or emerging needs to meet specific purposes that required me to assemble and disseminate complex information under short notice for a variety of audiences and uses. For example, at Denali I supplied data and interpretive explanation to law enforcement rangers on newly discovered illegal ORV use, provided status updates and new findings to Park management to keep them apprised of critical findings, and drafted public release documents for official Park record describing ORV use regulations and permitted areas; and at Glacier Bay I provided information to law enforcement on possible illegal fishing observations.

At **Glacier Bay National Park** I had to refine or recover field methodology and data on several projects from poorly documented information and long-gone employees to the best of my abilities to be able to 1) continue the fieldwork myself, 2) write project methodology protocols, and 3) adapt existing data to a format consistent with long-term data management, and was particularly appreciated by my supervisor in light of the long-term outlook of the research and inventory projects and changing seasonal staff. This reaffirmed my appreciation for thorough and concise documentation of research methodology and metadata, which I apply to my work so that any questions of methodology and data history can be answered in my absence.

At Denali and Glacier Bay I coordinated communication between field crew, pilots, and Park safety and enforcement officials to arrange logistically complex backcountry fieldwork for myself

and field crew members. This included regular preparation of fieldwork itineraries, aircraft flight plans and manifests, wilderness and backcountry research permits and clearances, and field crew schedules and work plans.

Additional experience and applied projects:

- I have had to balance the need to communicate effectively with external colleagues to foster collaboration and information exchange while protecting legally, culturally, or politically sensitive information or proprietary data. Examples are my work at Glacier Bay when conducting aerial surveys and identification of private and commercial fishing vessels and the boat-based surveys of fishing equipment registry and locations, and at Denali when planning politically sensitive Park ORV use management and monitoring protocols, regulatory actions, and monitoring sites.
- I have used a wide variety of written and verbal communication methods and have adapted to the need for accurate communication in creative and effective ways to make information more concise or easily understandable to the target audiences. This includes
 - 1) my “informational map brochures” in PDF format that I created on several occasions at Denali for other EA team members to successfully draw attention to and memorably illustrate critical findings and concerns that may have been lost in yet another email, and
 - 2) web and computer-based projects such as the DVD project summary of the ecological and landscape impact conditions relating to ORV use in Denali. This included maps, descriptive documents, photographs, project GIS data and metadata, and background materials cleanly organized with a hyperlinked interface that was designed to acquaint and educate non-specialists and colleagues with the project history, fieldwork, findings, and conclusions with a minimum of hassle or confusion and create a permanent document for future reference.
- My communication has resulted in significant outcomes, including:
 - 1) at Denali, I “argued my case” using scientific, legal, and empirical facts presented in a variety of ways to develop management guidelines for ORV use in sensitive areas,
 - 2) my documentation of landscape impacts and other evidence from illegal off-road vehicle use at Denali led to prosecution of the perpetrators,
 - 3) I provided descriptions of fish sightings, maps, and ecological site conditions in an area of my fieldwork to NPS ichthyologists who then surveyed the area to make the first confirmation of Arctic grayling on that river, and
 - 4) development and documentation of field research protocols and final project reports and presentations at Glacier Bay National Park that facilitated smooth transition to continued work on the projects after I had left.
- A significant part of my undergraduate university credit was earned in independent research and presentation, particularly as related to a year abroad in the former USSR, 1992-1993. Because of the difficulty of communications in the post-Soviet chaos of the early 1990s, it was impossible to fix a concrete study plan before my year began, despite previous visits and intensive pre-internet communications. To overcome this, my advisers and I prepared a series of written contracts in several subject areas for my year's study goals, defining topic, acceptable research and learning methodologies, and number of credits, and agreed that the final grades for the year's work would be based on the successful presentation of my work upon return to the US. A fundamental aspect of this was rapidly developing my Russian language skills upon

arrival so that I could work almost entirely in Russian. Using scientific fieldwork, literature research, interviews, and minimal class instruction in Russian, I completed a series of comprehensive and well-documented research projects, including my undergraduate thesis. I publicly presented these, and received good grades and compliments from my professors on the innovative nature and high quality of my work. I consider that year's work and the skills that it developed to have been the most important experience in my intellectual and scientific development.

- My graduate research further developed these international and multilingual communication skills (and added Ukrainian language in my doctoral study), in arranging project logistics, conducting fieldwork and literature and interview research, and presentation of results for my Canadian-Russian master's thesis research and Ukrainian doctoral research.
- Based on the quality of research and thesis writing, my master's degree thesis was personally commended as exemplary work by the Western Michigan University Graduate School's dean and was submitted by that office to the Midwestern Association of Graduate Schools for their Distinguished Thesis Award. My major adviser also complimented this work as showing great initiative and more similar to PhD level work than master's.
- I have published several scientific articles as first or joint author, which are listed on my resume. I am co-author on three papers currently in review (spring 2012) for professional journals.
- As a university teacher and assistant during my graduate studies, I became adept at communicating with a wide variety of students of varying abilities, needs, and tempos. I received favorable response from students for my ability to clarify difficult concepts by example in lectures and provide alternative explanations when students had difficulty grasping a concept, and the creative use of websites and handouts to explain and illustrate new ideas. I have been the primary or assistant instructor in lab and lecture sections of geography, environmental studies, and meteorology courses, and in 2000 and 2001 I was a guest lecturer at the Russian State Hydrometeorological University in biogeography and conservation summer field courses in northern Russia.
- I have been an invited reviewer, based on my expertise in the ecology and conservation of the former USSR and northern regions, of grant and research proposals, and reviewed and submitted written comment on World Heritage natural areas nominations for the IUCN submitted by the Ukrainian Government.
- I have successful experience in writing research grants from federal, private, and academic organizations and in reporting results to funding bodies.
- I have often presented papers to colleagues at scientific conferences, workshops, and meetings, and have made numerous general interest presentations (e. g., "The nature of Lake Baikal", "The geography of the Crimea").
- I have been trained in speaking style, tempo, and enunciation, and worked as a volunteer radio host and news reader on two stations for several years while a high school and undergraduate student.
- I regularly prepare technical documents such as project reports and updates, scientific articles and presentations, and communication with colleagues that include graphic elements such as charts, tables, graphs, maps, photographs, and illustrations with captions or other annotations along with text.

- From my personal interests, study, and application in my work, I am familiar with graphic design, layout, typography, and color theory, and their applications to print and web communications - a useful skill when producing clear, concise, logical, and accessible documents is a goal.
- I have produced numerous websites since the 1990s, including personal, commercial, academic, non-profit, and secured variants, and know HTML, CSS, Javascript, and other techniques to optimize text, graphic, and audio information dissemination on the Web with a minimum of platform- or browser-related glitches.
- I am familiar with many design and graphics programs including most Adobe (Photoshop, Acrobat, and Illustrator in particular), scanning and text-reader programs, HTML and web design, and color and typographic utilities, as well as the various GIS applications, and I have applied my abilities to reports, presentations, maps, teaching materials, artistic works, and organizational, commercial, and personal.
- I am an experienced scientific and creative photographer for over 30 years, and understand photographic materials and equipment, exposure, optics, and other technical aspects, and techniques and composition of close-up, landscape, and scientific photography, both digital and analog (film). This includes specific problems related to scientific work including aerial, time-lapse, repeat, low light, and other non-standard photographic problems and techniques, optics, photographic light, etc.

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