

Michael Wheeler
Planning and Building Department
County of Humboldt
3015 "H" Street
Eureka, CA 95501

July 24, 2019

Hello Michael Wheeler,

I appreciate your consideration and the potential opportunity to serve as a CHERT member. I am a geomorphologist with 24 years of work experience in watershed, hydrology, geomorphology, geology, and fisheries sciences. During this time, I developed a diverse set of scientific skills, knowledge, and experience while working as a geomorphologist with Ocean Associates Inc. (a NOAA Fisheries contractor), the Forest Hydrologist for the Bridger-Teton National Forest, a geomorphologist at a restoration consulting firm, Graham Matthews & Associates, an Associate Faculty member at College of the Redwoods, and a Conservative Associate for Pacific Rivers Council, along with multiple other resource management jobs. This diverse experience provided me numerous opportunities to coordinate with and bring together resources management staff from agencies, tribes, and the public to conserve and restore fish and wildlife populations and the diverse environments they inhabit. I have strong technical experience designing and implementing watershed and habitat restoration projects. I have participated on the Trinity River Channel Design Team designing mainstem rehabilitation projects including gravel augmentation. I also worked on resource extraction projects such as evaluating gravel mining on the Mad River and USFS timber harvest plans.

I am very energetic and passionate about working for the benefit of our watersheds and aquatic populations, and enjoy working in a team environment. I have developed strong and collaborative relationships with people across Northern California. If given the opportunity, I look forward working with the County, CHERT, the gravel miners, and the regulatory agencies.

Please contact me if you have questions or you need additional information.

Thank you for your time,

Wesley Smith

Wes Smith
PO Box 4485
Arcata, CA 95518

(707) 834-7897
floodkayaker@gmail.com

WESLEY T. SMITH

P.O. Box 4485, Arcata, CA 95518 (707) 834-7897 floodkayaker@gmail.com

Qualifications

- Twenty-four years of experience as a geomorphologist using scientific data and technical information to analyze the impacts of land management actions on riverine and hillslope processes, hydrology, and anadromous fish species/habitat and develop and implement restoration plans and projects.
- Extensive experience working and collaborating with Federal, State, Tribal, and private landowner entities in interdisciplinary teams, diverse working groups, and watershed and river restoration efforts.
- Technical expert in aquatic habitat restoration effectiveness monitoring and species recovery actions.
- Expertise in designing and modelling river restoration projects and riverine and hillslope processes.
- Technical expert in collecting and analyzing streamflow, turbidity, and sediment transport data.
- Expertise in sediment transport monitoring and modeling especially bedload transport
- Knowledge of the laws, executive orders, statutory and regulatory requirements, practices, and procedures governing species conservation and management.
- Knowledge in the development of gravel extraction plans and monitoring.
- Extensive knowledge and practice implementing the National Environmental Policy Act (NEPA) and Endangered Species Act (ESA) regulatory processes, documentation, and compliance requirements including the preparation of regulatory documents such as NEPA specialist reports, EAs, EISs, Federal notices and decision documents. biological assessments, letters of concurrence, biological opinions, recovery plans, and resource management plans.
- Participation and represent agency in permitting and regulatory compliance issues and negotiations.
- Extensive experience and strong skill sets in written, manipulation of text, tables and graphics and computer skills including document preparation, spreadsheets, database management, GIS, hydraulic modeling software, and computer programming software.
- Extensive experience in verbal communications, presenting scientific data. Written effective and persuasive speeches and presentations on controversial or complex topics to government leaders, public groups, and scientific colleagues.

EXPERIENCE

6/15/09 – Present **Geomorphologist** Ocean Assoc. Inc., 4007 N. Abington St., Arlington, VA. 22207
National Marine Fisheries Service (NMFS) Contractor, West Coast Region, California Coastal Office,
Northern California Office, Arcata, CA.

For close to ten years and eight contracts, I have provided support services to the National Marine Fisheries Service's (NOAA Fisheries) West Coast Region as a geomorphologist and hydrologist. I have conducted biological analyses and written regulatory documents during National Environmental Policy Act (NEPA) assessments and Endangered Species Act (ESA) and Magnuson-Stevens Fishery and Conservation and Management Act (MSA) consultations for listed species and their critical and essential habitats. I have written regulatory documents including ESA Section 7 consultation letters of concurrence, sections of biological opinions and incidental take permits, transmittal memos, and NEPA documents (environmental assessments) for projects such as stream restoration, highway reconstruction, timber harvest, gravel mining, and harbor dredging. I have represented NOAA Fisheries in permitting and regulatory compliance issues and negotiations with other Federal and State agencies and their applicants during project site visits, meetings, NEPA assessments, and ESA consultations.

I have built relationships and collaborated with Federal, State, and local government representatives, Tribes, and permit applicants including the Trinity River Restoration Program (TRRP), the Shasta-Trinity National Forest, Bureau of Land Management's Redding Field Office, private timber companies, and Hoopa Valley Tribe to build working relationships with stakeholders to further natural resource and fishery conservation, recovery, and management goals. Work with stakeholders to use various grants programs (Department of Fish and Wildlife Fisheries Restoration Grants Program) to obtain restoration funds.

I have extensive (24 years) knowledge and experience in hydrology, geomorphology, geology, and salmonid habitat requirements. I used this knowledge and experience to evaluate the effects of proposed actions on marine or anadromous fish species, their habitat, and protected resources to ensure conservation and resource management objectives. For example, I used the Klamath National Forest's spawning gravel (fine sediment) data and NOAA Fisheries fine sediment to salmon survival curves to estimate the effects of salvage logging on downstream spawning gravel quality.

One of my primary duties is to evaluate the effects of proposed actions on marine or anadromous species and their habitats under NEPA, ESA, and the Magnuson–Stevens Fishery Conservation and Management Act (MSA). This draws on my extensive knowledge of the laws, executive orders, statutory and regulatory requirements, practices, and procedures governing Federal fisheries and protected species conservation and management. I have used this knowledge and experience to plan, develop, and implement complex fishery and protected species management actions and regulations. I gained this experience through trainings, application, review and implementation of proposed protect resource regulations to ensure consistency with all relevant requirements. For example, I have written technically sound and robust correspondence and scientific and technical written documents (e.g., Federal register Notices, environmental assessments, and letters of concurrence) consistent with pertinent statutes, regulations, policies, and procedures for ESA Section 7 and 10 consultations and NEPA evaluations (See also Forest Hydrologist experience). I also led two NEPA Environmental Assessments for NOAA Fisheries. The first involved the evaluation of the Hoopa Valley Tribe's proposal to use NOAA fisheries disaster relief funds for a road system project and the second evaluated whether the Mad River Hatchery and Genetic Management Plan for winter-run steelhead satisfied the ESA Section 4(d) Rule. These projects required detailed fisheries and hydrologic analyses, clear and concise NEPA documents (EAs and FONSI), public outreach and notifications (Federal Register Notices), and coordination with General Council, Tribes, and Federal and State agencies.

I have extensive experience reviewing complex ESA documents to ensure compliance with the Act and consistency with agency requirements. For example, I regularly review Biological Assessments produced by action agencies during pre-consultation. I am periodically consulted as an expert by other agency and NOAA Fisheries colleagues to review draft scientific publications and other technical documents to ensure compliance with ESA requirements and consistency with agency clearance requirements such as US Army Corps of Engineers permitting. I participated on the Humboldt County Gravel Mining ESA evaluation team and developed bedload transport relations for use in annual gravel extraction limits.

My duties include compiling and analyzing scientific data and technical information to evaluating the effects and biological impacts of proposed land management and extraction industry actions, instream flow management, and water project operations on marine or aquatic species/habitats to determine compliance and consistency with applicable laws, regulations, and policies. This requires performing scientific literature research for assigned effects analyses and management plans that discern applicable results and conclusions. For example, I am compiling large wood management related scientific literature to develop a large wood management strategy for the Trinity River which will recommend augmentation rates and locations. I have also provided physical and river process related input into recovery plans and status reviews.

I have analyzed the impact and managed the internal review process of proposed fishery and protected species management plans (e.g., Mad River Hatchery and Genetic Management Plan) upon the human environment, anadromous and marine fish, protected resources (habitat), various the fishing industry, communities, the public, and other affected parties that resolved issues and accomplish the stated conservation, recovery, and management objectives.

My work requires ensuring that all regulatory documents are completed, reviewed, approved, and implemented within established deadlines as stated in government regulations. Under the ESA and NOAA Fisheries requirements, we are required to meet specific timeframes and deadlines. I have prepared numerous technical written documents, presentations, and briefings that required strong skills to communicate scientific research using the English language, technical and scientific jargon, and government regulatory language. All these documents required these latter skills and the manipulation of text, tables and graphics to implement guidance regarding composition format, content and tone (e.g., NOAA's NEPA style guide and conventions and Quality Assurance Plan).

I have strong written and verbal communication skills and a comfort with spreadsheet and database software and willingness to learn new software. I have performed analyses including spatial analysis using ArcGIS software, hillslope stability using SHALSTAB software, flood frequency using PEAKFQWin and excel software, 2-D hydraulic flow modeling using SRH-2D and IREC software, sediment transport computations in BAGS and excel, and river restoration design and review using a host of software. I am always looking for new software to improve my abilities such as using the draft iBer 2-D hydraulic model's large wood module to predict large wood transport and deposition and evaluate large wood augmentation scenarios or the new SRH-2D sediment transport module.

Work with other regulatory and outside agency staff to assembling, analyzing, and interpreting scientific data pursuant to the NEPA, ESA, MSA, and other natural resource conservation statutes such as the SONCC coho salmon critical habitat designation and habitat requirements. This requires me to ensure and maintain high levels of scientific standards, integrity and professionalism and analyze complex resource management problems and recommend proposed solutions. For example, during the Greater Prairie Creek and Greater Mill Creek Ecosystem Restoration Projects I led the effects analysis discussions to decipher how the fine sediment related effects will impact anadromous fish. I proposed two approaches: use the National and State Parks wealth of suspended sediment and spawning gravel data and Newcombe and Jenson's (1996) Severity of Ill Effects approach as modified by Bray (2000, HSU thesis on Freshwater Creek) to estimate instream behavioral effects and survival to emergence in the spawning gravels.

I have conducted numerous field reviews and risk assessments of project proposals and restoration projects including watershed and stream restoration projects, Caltrans road projects, and USFS timber actions. This information was used to identify challenges to species recovery, and develop and implement high priority management actions. Over the last ten plus years, our North Coast restoration community has been learning to incorporate large wood, beaver, and riparian vegetation into the physical landscape and support the geomorphic processes that create river systems that are resilient but malleable to change. For example, during review of the French Creek landslide project I was able to convince CalTrans that rock groins are not fish habitat and large wood and riparian plantings would provide essential cover for salmonids and meet the attributes of critical (Section 7) and essential (MSA) habitats.

I am surrounded by and constantly learning from NMFS's numerous fish biologists with expertise in anadromous fish life history, biology, and habitat requirements. We constantly engage in fisheries conversations such as how we should construct to inundate floodplains to increase salmonid food production and feeding. These essential conversations draw on my expertise in hillslope and riverine geomorphic processes and fisheries life history requirements, including passage, spawning, and rearing. Our office is an endless workshop where staff learns and contributes to the greater knowledge pool. To support these efforts, I continue to learn and use new tools (e.g., 2-D hydraulic models) and research in riverine and hillslope processes (geomorphology) to evaluate land uses practices that affect the quantity and quality of habitat available to NOAA's trust resources. For example, I have started measuring large wood transport on the Trinity River to support large wood budgeting efforts, and reached out to European researchers who have developed a large wood transport and depositional module for the iBer 2-D hydraulic model. We hope to use this model to improve our rehabilitation designs and direct TRRP large wood augmentations efforts.

While providing technical assistance during Section 7 ESA consultations and Section 10 assistance, I have collected, assembled, and analyzed multiple years of hydrologic and river monitoring data to assess their potential effects from various natural resource activities on listed species and critical and/or essential habitat. For example, I have used decades of streamflow and sediment transport data to estimate annual sediment loads and compare these to gravel extraction rates to assess habitat changes. I also worked with the US Forest Service to estimate effects to habitat from post-fire timber harvest related activities on various instream fine-sediment metrics using years of monitoring data. During the Trinity River Diversion consultation, I developed annual hydrographs based on tributary contribution estimates by drainage area and various streamflow records to combine with weighted useable area habitat curves to assess changes in salmonid habitat under different dam release scenarios. Work on the Trinity River Restoration Program (TRRP) has required interpreting complex interactions between riverine ecology and geomorphological processes (sediment transport, large wood dynamics, and channel erosion) to design the multiple large-scale river corridor rehabilitation projects to create anadromous fish habitat.

Providing technical assistance to evaluate a Timber Harvest Habitat Conservation Plan (HCP) to implement the statutes and mandates of the Endangered Species Act under sections 7 and 10. We are evaluating the proposed incidental take by evaluating the timber company's monitoring data and take permit requirements.

I have participated in numerous professional/scientific committees including the TRRP work groups including the Channel Rehabilitation, Physical, Flow, Watershed, and Interdisciplinary Team from 2010-2018. These work groups require the development and maintenance of rapport with colleagues from diverse backgrounds. The TRRP has one of the best Adaptive Management programs which we use to guide future restoration efforts, policy, and habitat restoration. I led the physical workgroup (2017 and 18), preparing and conducting quarterly meetings, editing notes, and preparing and tracking analyses and workgroup progress. I provided review, verbal and written comments and recommendations on TRRP and workgroup activities including channel rehabilitation designs and monitoring activities. I have participated in sediment transport and large wood monitoring. Helped develop and currently working on the fine sediment and Large Wood Management Strategy (lead) synthesis reports.

I have installed streamflow, turbidity, and suspended sediment monitoring stations on three Trinity River tributaries on the Hoopa Indian Reservation. I periodically collect measurements and process the gaging records. I am providing oversight and guidance to the Tribe for future data collection efforts. I also monitor several other Northern California watersheds (see personal interests section) and have extensive experience with streamflow gaging, sediment transport monitoring, and stream gaging records computation and interpretation (see Geomorphologist and Hydrologist experience). Used standard resource inventory and monitoring methods to ensure comparisons through time.

Evaluated numerous stream restoration proposals throughout Northern California including attending FRGP Technical Review Team field reviews as a NMFS geomorphologist.

Evaluated proposed flow releases from several dams and developed and designed releases for the upper Eel River block water releases and the Trinity River fall flow releases. Participating in review of groundwater management proposals throughout the California Coastal area.

Participated in multiple annual summer steelhead and spring-run Chinook salmon "fish dives," with other agencies and groups to track populations. This provides greater partnerships and awareness.

Participated in multiple outreach efforts including the Hoopa Fish Fair, California State Parks Junior Guards summer sessions, and local school science fairs.

1/09-5/09 **Associate Faculty** College of the Redwoods, 7351 Tompkins Hill Rd, Eureka, CA 95501

Taught Environmental Geology and Physical Geography classes and labs to some great students. Prepared lectures and homework and lab assignments. Graded all papers and labs. Prepared and led field trips to Freshwater Creek to learn about stream dynamics and salmonid habitat.

7/05-1/09 **Geomorphologist** Graham Matthews & Associates, Arcata, CA
(GMA & Associates closed the Arcata Office)

Project manager for the Trinity River Sediment Monitoring Project, Hunter Creek Watershed Assessment, the Morton Creek Restoration Project, and the Battle Creek Monitoring Project.

Oversaw project management to ensure they were on time and within budget.

Designed and implemented monitoring and restoration projects.

Analyzed field data and wrote and produced technical reports and Watershed Assessments for various Federal and State agencies and landowners including timber companies.

Surveyed and collected streamflow, bedload, suspended sediment, and turbidity data on numerous creeks and rivers. Supervised multiple field crews including spring dam release cataraft sediment sampling crews on the Trinity River.

11/04-7/05 **Conservation Associate** Pacific Rivers Council, 1326 SW 16 Ave., Eugene, OR 97201

Worked for scientifically sound management plans to protect and restore aquatic habitat on Federal Lands. I evaluated various NEPA, NFMA, and ESA documents for compliance with State and Federal laws, regulations, and policies to ensure they protected and restored impacted watersheds, rivers, native aquatic species, and aquatic habitats. Reviewed road management, timber harvest, and land management plans to ensure species conservation and create restoration opportunities. Worked with multiple stakeholders (e.g., USFS) to develop salmonid and habitat protections that ensured species recovery for West Coast anadromous species.

2/03-10/04 **Forest Hydrologist GS-1315-11** Bridger-Teton National Forest, Jackson, WY 83001

I designed and implemented hydrologic and geomorphically based resource management sampling programs and analyses to complete NEPA resource specialist reports, Environmental Assessments and Environmental Impact Statements that covered activities such as timber harvest, grazing, road systems, and fire management. I wrote and led others in preparing scientific and administrative technical written documents such as draft Federal Register Notices, environmental assessments, reports, and monitoring reports. I used disparate policy, technical, and legal information to develop NEPA alternatives, analyze options, and develop conclusions and recommendations for action by higher-level officials such as road system development, grazing management plans, and stream restoration actions. Worked on numerous NEPA and multi-disciplinary teams.

Prepared and oversaw the Forest's Watershed budget including grants and program of work for restoration and monitoring. Ensured projects were completed on time and within budget.

Lead responsibility for evaluating, assessing, and preparing compliance documents of ecosystem and watershed restoration projects. Developed a watershed restoration inventory, monitoring, and assessment program for the 3.2 million acre Forest. This led to the implemented and monitored large watershed and stream restoration projects. Evaluated aquatic habitat restoration proposals for technical merit, biological soundness, cost effectiveness, and significant consequences to public land resources

Participated in and advised the Greater Yellowstone Hydrologists group regarding the development, review, ranking, design, and implementation and effectiveness of ecosystem and watershed restoration projects.

Dealt with highly sensitive programs that require some political tact including tracking and addressing water right issues. Helped develop a Forest wide water rights database.

Worked and collaborated with aquatic resource and fisheries staff to evaluate and monitor salmonid spawning and rearing habitat conditions. These efforts led to multiple stream restoration projects.

Collaborated and built working with special interest groups, stakeholders, forest staff, USFS research, cooperating agencies, citizens, and non-government entities to ensure watershed resources were conserved, protected, and furthered management goals. Organized workshops and with the USFS's Rocky Mountain Research Station and National Riparian Service Team and Forest Staff and cattle ranchers.

Operated multiple streamflow and sediment monitoring stations to support Forest activities monitoring.

Supervised up to six employees including seasonal field crews that collected hydrologic, stream habitat, and management related impact data.

Served as fire resource advisor and on post-fire Burned Area Emergency Rehab (BAER) teams to protect human resources and aquatic habitat during and after wildfires. Analyzed the wildfire and fire suppression impacts to watershed and human resources.

6/01-1/03 **Hydrologist GS-1315-9** Bridger-Teton National Forest, Jackson, WY 83001

Duties were similar to GS-11 Forest Hydrologist job. I received a desk audit to a GS-11 because I was doing the Forest hydrologist's duties. NEPA support; watershed restoration design/implementation.

5/99-5/01 **Hydrologist GS-1315-7** Bridger-Teton National Forest, Jackson, WY 83001

Performed watershed and stream monitoring, NEPA technical writing support, and river restoration actions.

5/95-8/97 **Field Geomorphologist** McBain & Trush Consulting, Arcata, CA 95521

Worked as a field geomorphologist sampling and collecting data for the Trinity River Maintenance Flow Project, the Clavey and Cherry Creek Bedrock Rivers Study, the Tuolumne River Restoration Project, the Carmel River Restoration Evaluation, and the Mono Lake Stream Study.

6-9/96 **Fisheries Field Biologist** Thomas Payne & Associates, Arcata, CA 95521

Sampled streamflow and salmonid habitat and behavior for developing instream flow regimes in Idaho. Measured streamflow during high flow using catarafts and during low flows using wading techniques.

10/92-8/94 **Research Assistant** Institute for River Ecosystems, Humboldt State University, Arcata, CA Investigated sediment, wood and fish passage through culverts, and developed sampling methodologies for surveying road-stream crossings. Investigated the effects of dams on Sierra Nevada Rivers. Assisted with a redd viability study in the mainstem Smith River.

6/85-10/91 **Whitewater Raft Guide** Worked for various raft companies on the Arkansas (CO), Colorado (Gore Canyon), Gauley, New (WV), Skykomish (WA), Trinity (Burnt Ranch gorge), Cal-Salmon, American, Smith, Yuba, Tuolumne, and Klamath Rivers.

EDUCATION

- Humboldt State University, Arcata, CA, Geology Graduate Program Spring 1991-94 (geomorphology). Completed all undergraduate and graduate geology classes and labs required for a M.S. Also completed several fisheries and engineering classes including Coastal Fisheries Management and Fluid Mechanics
- University of Oregon, Eugene, OR. Attended several classes including The Scientific Nature of Geomorphology, Geography 607 Research Seminar, Hillslope Geomorphology, and Professor Dr. Josh Roering's weekly Geomorphology Seminar while working at Pacific Rivers Council, 2004-05
- University of Lowell (renamed U. of Massachusetts), Lowell, MA, Bachelor of Science in Physics, June 1989. I also completed computer programming and engineering classes including Thermodynamics

SELECT WORKSHOPS AND TRAINING

- Completed multiple online trainings including MATLAB programming, 2D flow modeling, and ArcGIS
- Advanced ESA Section 7 Class. Primary Instructor: Eric Shott, Arcata, CA May 12-14, 2015
- Attended SRH-2D Hydraulic Modeling Training Instructor: Yong Lai, Weaverville, CA March 5, 2013
- Advanced ESA Section 7 Class. Instructor: Craig Johnson, Arcata, CA Nov. 17-19, 2010
- ESA Basic Section 7 Class, Instructor: Penny Ruvelas, Sacramento, CA, June 15-16, 2009
- USGS's Sediment Data Collection Methods Workshop, Castle Rock, WA, March 13-16 2007
- Interagency Burned Area Emergency Response (BAER) Training, Denver, CO, April 26-30, 2004
- Road Decommissioning, an Impacts of Mining & Re-naturalization of Streams, and a Re-naturalizing Streams Impacted by Dams and Dam Removal Workshop, U. of Missoula, MT. May 2004
- Hydropower Licensing (FERC) Training, Salt Lake City, Utah, Jan. 8-10, 2002
- NEPA Training, Bridger-Teton National Forest, Jackson, Wyoming, December 2001 and April 2003
- ArcGIS training at ESRI's training facility Salt Lake City, 2002

WORKSHOPS, TRAINING, AND OUTREACH

- Trained USFS seasonal watershed crews (2000-04) in swift water rescue, to survey, map, and sample various stream channel parameters, sample streamflow, suspended sediment, and bedload, make useful notes, observations, and deductions about land use impacts on river channels, riparian, and hillslopes
- Co-taught Teton Science School's River Channels 3-day class (July 1998-2005) with Luna Leopold, Bill Trush and Scott McBain. Prepared and delivered lectures and taught stream surveying techniques
- Taught a one-day swift water rescue to coworkers for Tom Payne & Associates. May 1996
- Co-Taught a culvert workshop on stream flow and fish passage, College of the Redwoods, CA Oct. 1993
- Public outreach and education presentations: Hoopa Fish Fair, California State Parks Junior Guards Training, Science Fair Judge, and hundreds of discussions with private landowners and the public

SELECT PRESENTATIONS AND PAPERS

- Will present *Hydroacoustic Monitoring of Bedload Transport in the Trinity River, CA.* at the Sedimentation and Hydrology Conference in Reno, NV. June 24-28, 2019
- Presented *Large Wood Dynamics and Management in the Trinity River, California, CA.* at the International Conference Wood in the World Rivers in Valdivia, Chile, January 7-11, 2019
- Presented multiple field talks to NMFS coworkers on *Coastal and Lagoon Processes, North Coast Geology and Tectonics, and Sediment Transport Processes in the Trinity River (2011-2018)*
- Presented *Trinity River Passive Acoustic and Bedload Transport Results* at the International Bedload Surrogates Workshop at the Saint Anthony Falls Laboratory, University of Minnesota, April 11-14, 2007
- Presented a lecture entitled *Lessons Learned from monitoring several Stream Channel Rehabilitation Projects* at the USFS's National Conference for Forest Service Physical Scientists, October 18-22, 2004
- Presented a *Lessons Learned from Several Stream Restoration Projects* at the Greater Yellowstone Hydrologist's Annual Meeting (Feb. 2004) and the USFS Region 4 Biophysical Workshop, April 2004
- Presented a *Water Quality Monitoring: Strategy and Data* talk at the Water Law and Administration: A Case Study on the Green River, Pinedale, WY. June 20-23, 2002
- Presented a *Forest Water Quality Monitoring* presentation at the Greater Yellowstone Network Water Quality Planning Meeting, June 25-26, 2002, Gardiner, MT
- *Snake River Geomorphology and Hydrology* lecture, Summit on the Snake workshops. June 2001 & 02
- Presented a talk at the Western Division American Fisheries Society Annual Meeting, Flagstaff, AZ, June 21, 1994, *Maintaining Dynamics of Steep Bedrock Rivers: Implications for Channel Morphology and Biological Communities.*
- Wrote *Dynamics of Steep Bedrock Channels* with Scott McBain and Bill Trush (1994) for the USFS
- Presented data analysis results and proposed action plans at numerous public meetings and forums

COMMUNITY PARTICIPATION EXAMPLES

- **Wetlands and Creeks Committee Member** - City of Arcata, Arcata, CA. Jan. 2017- current
- **Vice-Chair and Treasurer** - Surfrider Foundation, Humboldt Chapter, Arcata, CA. Jan 2014 – Current
Co-host and organize the monthly Ocean Night, outreach events, and various campaigns
- **Board Member** - Snake River Fund, Jackson, WY (307) 690-3930. We worked to ensure BLM's Snake River land parcels remain in the public trust for recreational use. April 2002- Oct. 2004
- **River Institute Raft Trip Guide and Organizer** - Humboldt State University's Institute for River Ecosystems trips on the North Fork of the Smith River, CA (1995-97; 2000); Salmon River, CA (2006)

PERSONAL INTERESTS

- I read and learn as much as I can about geomorphology, geology, watershed restoration, salmonids, landscape evolution, large wood dynamics, hydroacoustic bedload dynamics, and climate change
- I co-run streamflow and sediment transport monitoring stations on Freshwater and Jacoby creeks
- Avid whitewater kayaker, surfer, mountain biker, car mechanic, and West Coast explorer

REFERENCES

- Ann Garrett, Assistant Regional Administrator, Protected Resources Division, Pacific Islands Regional Office, Hawaii (808) 725-5130
- Randy Klein, Hydrologist and CHERT member, Arcata, CA (707) 407-7958
- Andre Lehre, Retire HSU professor and CHERT member, McKinnelyville, CA (707)
- Leslie Wolff, Hydrologist, NMFS, North Coast Office, Arcata, CA Arcata, CA (707) 825-5172