



## John R. Stevenson, B.S., CFO

### *Fisheries Biologist, Duvall Office*

Mr. Stevenson, a fisheries biologist and BioAnalysts' Chief Financial Officer, has 34 years of research experience, with 24 years of experience in radio telemetry research evaluating migratory behavior of juvenile and adult salmonids. His experience in telemetry research includes the design, setup, and monitoring of complex telemetry systems at hydroelectric projects, as well as mobile survey techniques (i.e., aerial, boat and ground surveys). He has an extensive background in salmon passage issues, which he obtained while working for the Pacific Northwest Utilities Conference Committee and has continued during his tenure at BioAnalysts. Mr. Stevenson served as a member of the Expert Fish Passage Panel evaluating past, current and potential bull trout upstream passage options on the Clark Fork River in Montana for Avista Corporation. In addition to his experience with salmonid passage, Mr. Stevenson led a research project to assess upstream passage of lamprey at Rocky Reach Dam for Chelan PUD using radio telemetry. In conjunction with that research, Mr. Stevenson was tasked with the modification of existing lamprey traps to capture research subjects. Those traps were later the focal point of a study to develop the means to collect northern Pikeminnow within the Rocky Reach and Rock Island dam fish ladders as part of an eradication program. For that effort, Mr. Stevenson designed new entrance configurations to enhance collection efficiency, which proved to be highly successful. He served as the project leader of fisheries investigations in a South-Central Alaska stream, assessing relative juvenile abundance, distribution, and habitat use, as well as spawning location of various salmonid adults using radio telemetry. Currently, Mr. Stevenson is involved in evaluating the abundance and distribution of Chinook redds in the Chelan River, Washington using an unmanned aerial vehicle.

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### **Experience and Expertise**

- ◆ Design and Implementation of Field Research Projects
- ◆ Project Management
- ◆ Juvenile Passage Issues at Hydroelectric Projects
- ◆ Juvenile and Adult Salmonid Radiotelemetry Research
- ◆ Computer Applications
- ◆ Fish and Habitat Surveys
- ◆ Mapping and GPS Techniques

### **Education**

- ◆ B.S., 1985, Biology, Eastern Washington University

### **Professional Affiliations**

- ◆ American Fisheries Society

### **Certifications**

- ◆ PADI Certified Open Water, Advanced, Nitrox and Drysuit SCUBA diver
- ◆ FAA 107 Certification (small Unmanned Aircraft Systems)

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## **Professional Experience with BioAnalysts, Inc., 1994 - Present**

### **Research Biologist, Spawning Ground Surveys, Okanogan and Methow Basins: 1999-Present**

Mr. Stevenson has assisted in documenting the abundance and distribution of redds and time of spawning for summer/fall Chinook salmon in the Okanogan and Methow basins. During field surveys, he has collected additional information to help describe life history characteristics such as origin (hatchery vs. wild), size at maturity, age at maturity and egg voidance.

### **Research Biologist, Box Canyon Dam Fish Passage: 2015-2017**

Mr. Stevenson developed and installed a radio telemetry system at Box Canyon Dam to determine the location of passage of radio-tagged bull trout, westslope cutthroat trout, and mountain whitefish. Telemetry arrays include both aerial and underwater systems to assess passage at individual turbine units and the spillway. Telemetry data were analyzed by Mr. Stevenson using an Access database he developed.

### **Lead Research Biologist, Grant Creek, Alaska Fisheries Assessment: 2012 to 2015**

Mr. Stevenson conducted fisheries investigations related to hydroelectric licensing efforts on a small South-Central Alaska stream. Investigations included the trapping and assessment of various salmonid juveniles using incline plane traps, minnow traps, snorkeling, and beach seining. Adult investigations were conducted using primarily spawning ground surveys and radiotelemetry techniques. Field operations concluded early November of 2013, and reporting concluded in May of 2014. Recently, FERC granted a license to construct the hydroelectric project on Grant Creek, Alaska.

### **Expert Fish Passage Panel Member, Avista Corporation: 2007 to 2010**

Mr. Stevenson served as an Expert Panel member to the Avista Corporation tasked with the review of biological and engineering information in relation to the development and construction of upstream passage facilities at Cabinet Gorge and Noxon dams on the Clark Fork River in Montana. The four-member panel was convened to review existing literature and data, develop a Fish Passage Development Process Model, review a physical hydraulic model, and submit a report of the Panel's findings and recommendations.

### **Lead Research Biologist, Egg/Fry Incubation Survival Study: 2002-2003 and 2011 to 2015**

Mr. Stevenson conducted a study that assessed the survival of incubating eggs and alevins in the tailrace of the Lake Chelan Hydroelectric Project in the Mid-Columbia. Sampling techniques include the underwater excavation of incubating eggs using SCUBA, and the installation and monitoring of temperature and dissolved oxygen probes. Survival was also assessed using Cylindrical Egg Tubes containing developing embryos in man-made redds.

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**Lead Research Biologist, Pikeminnow Acoustic Deterrent Study: 2010**

Mr. Stevenson conducted research in the spring of 2010 to evaluate the hearing capabilities of Northern pikeminnow and various salmonid species. The primary objective of this study was to ascertain the potential of using an acoustic device to reduce predation on juvenile salmonid species at various locations at large hydroelectric facilities in the Mid-Columbia River.

**Lead Research Biologist, Bull Trout Movement Study: 2001-2009**

Mr. Stevenson served as the lead research biologist evaluating adult bull trout migratory behavior within the Mid-Columbia River using radiotelemetry techniques. Results from this research were used to assess the potential delay of hydroelectric projects on the upstream migration of bull trout within the Mid-Columbia, as well as mortality associated with passage at Rocky Reach and Rock Island dams.

**Research Biologist, Aquatic Macroinvertebrate Inventory and RTE Assessment for Wells Hydroelectric Project, 2006**

Mr. Stevenson served as a research biologist on a study to provide baseline information on the aquatic macroinvertebrate fauna and mollusks in the Wells Project. This aquatic macroinvertebrate inventory was conducted in order to characterize the aquatic macroinvertebrate and mollusk assemblage found within the Wells Project, and to provide information on the possible occurrence of rare, threatened and endangered (RTE) macroinvertebrate species. Sample techniques included the use of an Ekman dredge, colonization baskets, and excavation of sample sites using an airlift pump system; the last two sample methods were performed using SCUBA.

**Lead Research Biologist, Juvenile Fish Passage Efficiency and Survival Evaluations: 1996-2000, and 2003**

Mr. Stevenson has served as the lead research biologist on juvenile salmonid passage behavior and survival studies at Rocky Reach and Rock Island dams using radiotelemetry. Results from this research were used to develop a final design for a surface collection device at Rocky Reach Dam.

**Lead Research Biologist, Evaluation of Adult Pacific Lamprey Passage: 2004**

Mr. Stevenson conducted a radiotelemetry project assessing adult lamprey passage at Rocky Reach Dam. Metrics of interest included migration timing and rate of adult lamprey as they migrated upstream of Rocky Reach Dam, passage success, and the rate of fallback and re-ascension of the adult fishway.

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## Other Professional Experience

### **Senior Fisheries Analyst, Pacific Northwest Utilities Conference Committee, Portland, OR: 1989-1994**

Responsibilities included representation of PNUCC membership in technical and policy-related forums concerning mainstem anadromous fish passage and resident fish within the Columbia River Drainage. Performed detailed analytical and statistical evaluations of biological issues, including knowledge of computer models used to evaluate salmonid survival and behavior. Knowledgeable in the Endangered Species Act, the Northwest Power Planning Council's Fish and Wildlife Program and the Bonneville Power Administration's Fish and Wildlife Program. Represented PNUCC membership on the Kootenai River Basin Steering Committee and the U. S. Corps of Engineers Drawdown Technical Advisory Committee. Chaired the PNUCC Bull Trout Committee.

### **Seasonal Biologist, Grant County Public Utility District, Ephrata, WA: 1986-1989**

Monitored salmonid smolt migrations on the Columbia River at Priest Rapids and Wanapum dams using hydroacoustic techniques. Data was used to develop horizontal and vertical distributions, diel and run-timing patterns, and spill efficiency. Worked extensively with both adult and juvenile fish in field situations. As field biologist on prototype diversion screen project, he was responsible for data collection and analysis.

### **Fisheries Technician, Washington Department of Fisheries, Battleground, WA: 1986**

Collected Coded Wire Tag and creel data on upriver bright fall chinook in the Hanford Reach of Washington. The data determined the effectiveness of smolt transportation.

### **Volunteer Biologist, Arkansas Game and Fish Commission and University of Tennessee, Booneville, AK: 1988 and 1989**

Volunteer work capturing, radio collaring, and radio telemetry tracking of black bears. Data were used to determine den and habitat selection, as well as survival rates of black bear in the Ouachita Mountains of western Arkansas.

### **Volunteer Biologist, Idaho Department of Fish and Game and University of Idaho, Priest Lake, ID: 1987**

Volunteer work assisting in the capture, blood sampling, and radio telemetry tracking of white-tailed deer in the Idaho panhandle.

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## Select Publications and Reports

- Alexander, R. F., C. Sliwinski, B. L. Nass, and J. R. Stevenson. 2003. An assessment of impacts associated with construction activities on adult steelhead migration through Rocky Reach Dam, 2002. Report to Public Utility District No. 1 of Chelan County. Wenatchee, WA.
- Beeman, J. W., E. E. Hockersmith, and J. R. Stevenson. 2012. Design and performance of radio telemetry systems for assessing juvenile fish passage at three hydroelectric dams. Pages 281-302 in N. S. Adams, J. W. Beeman, and J. H. Eiler, editors. Telemetry techniques: a user guide for fisheries research. American Fisheries Society, Bethesda, Maryland.
- Chapman, D., C. Peven, A. Giorgi, T. Hillman, F. Utter, M. Hill, J. Stevenson, and M. Miller. 1995. Status of sockeye salmon in the Mid-Columbia region. Don Chapman Consultants, Inc., Report for Chelan, Douglas and Grant County Public Utility Districts. Wenatchee, WA. 245+ pp.
- Chapman, D., C. Carlson, D. Weitkamp, G. Matthews, J. Stevenson, and M. Miller. 1997. Homing in sockeye and chinook salmon transported around part of their smolt migration route in the Columbia River. N. Am. J. Fish. Manage. 17:101-113.
- English, K. K., T. C. Nelson, C. Sliwinski, and J. R. Stevenson. 1998. Assessment of passage facilities for adult sockeye, chinook, and steelhead at Rock Island and Rocky Reach dams on the Mid-Columbia River in 1997. Report to Chelan County PUD, Wenatchee, WA.
- English, K. K., T. C. Nelson, C. Sliwinski, J. R. Stevenson, and T. R. Mosey. 1998. Evaluation of juvenile spring chinook, steelhead, and sockeye migratory patterns at Rocky Reach Dam using radio-telemetry techniques, 1998. Report to Chelan County PUD, Wenatchee, WA.
- English, K. K., R. C. Bocking, T. C. Nelson, C. Sliwinski, J. R. Stevenson, and T. Mosey. 1999. Evaluation of juvenile Spring Chinook, Steelhead, and Sockeye Migratory Patterns at Rocky Reach Dam Using Radio-telemetry Techniques, 1999. Prepared for Public Utility District No. 1 of Chelan County. Wenatchee, WA.
- English, K. K., C. Sliwinski, T. C. Nelson, and J. R. Stevenson. 1999. Assessment of passage facilities for adult spring and summer chinook at Priest Rapids and Wanapum dams on the Mid-Columbia River in 1998. Prepared for Grant County Public Utility District No. 2. Ephrata, WA.
- English, K. K., C. Sliwinski, J. J. Smith, J. R. Stevenson, and T. R. Mosey. 2000. Evaluation of juvenile spring chinook, steelhead, and sockeye migratory patterns at Rocky Reach Dam using radio-telemetry techniques, 2000. Report to Chelan County PUD, Wenatchee, WA.
- English, K. K., C. Sliwinski, B. Nass, and J. R. Stevenson. 2001. Assessment of adult steelhead migration through the Mid-Columbia River using radio-telemetry techniques, 1999-2000. Report to Chelan County PUD, Wenatchee, WA.

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- Evans, S. D., and J. R. Stevenson. 2012. Optimization of radio telemetry receiving systems. Pages 139-161 in N. S. Adams, J. W. Beeman, and J. H. Eiler, editors. Telemetry techniques: a user guide for fisheries research. American Fisheries Society, Bethesda, Maryland.
- Giorgi, A. and J. Stevenson. 1994. Biological issues pertaining to aquatic resources affected by Wanapum Reservoir drawdown. Don Chapman Consultants, Inc., Report for Grant County Public Utility District. Ephrata, WA. 28 pp.
- Giorgi, A.E., J. R. Stevenson, and D. W. Chapman. 1995. Failure of the 1994 and 1995 spring chinook runs. Don Chapman Consultants, Inc., Boise, ID.
- Giorgi, A. and J. Stevenson. 1995. Review of biological investigations describing smolt passage behavior at Portland District Corps of Engineer projects: Implications to surface collection systems. Don Chapman Consultants, Inc., Report for the U.S. Army Corps of Engineers, Portland District. Portland, OR. 33 pp.
- Giorgi, A., J. Stevenson, and D. Chapman. 1995. Assessment of adult return data as a metric to evaluate mitigative measures during stream-type chinook outmigration in the Snake River. Don Chapman Consultants, Inc., Report for the Pacific Northwest Utilities Conference Committee. Portland, OR. 18 pp.
- Giorgi, A. E., T. W. Hillman, J. R. Stevenson, S. G. Hays, and C. M. Peven. 1997. Factors that affect the downstream migration rates of juvenile salmon and steelhead in the mid-Columbia River basin. North American Journal of Fisheries Management 17:268-282, 1997.
- Giorgi, A. E., M. Miller, and J. Stevenson. 2002. Mainstem passage strategies in the Columbia River system: transportation, spill, and flow augmentation. Northwest Power Planning Council, Portland, Oregon.
- Giorgi, A. E., and J. R. Stevenson. 2009. An assessment of opportunities for conducting studies on juvenile summer/fall Chinook in the vicinity of Chelan PUD hydroelectric projects. A report prepared for Public Utility No. 1 of Chelan County, Wenatchee, WA 98801.
- Hillman, T., J. Stevenson, and D. Snyder. 1999. Assessment of spawning and habitat in three Puget Sound streams, Washington. BioAnalysts, Inc. Report to the Airport Communities Coalition, Des Moines, WA.
- Hillman, T., M. Miller, J. Stevenson, and D. Snyder. 2002. Effects of a powerhouse shutdown on summer/fall Chinook salmon incubation success. BioAnalysts, Inc. Report to Chelan County Public Utility District, Wenatchee, WA.
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- Lady, J., J. R. Stevenson, J. R. Skalski, and A. E. Giorgi. 2000. A pilot study to estimate route-specific survival and passage probabilities of steelhead smolts at Rocky Reach and Rock Island Dams, 1999. Wenatchee, WA: Chelan Public Utility District, No. 1.
- Mallas, S. J., and J. R. Stevenson. 2007. Pilot evaluation of Pikeminnow trapping in the Rocky Reach fishway using overflow-weir traps, 2007. BioAnalysts, Inc. Report to Chelan County Public Utility District, Wenatchee, WA.
- Mallas, S. J., and J. R. Stevenson. 2008. Northern Pikeminnow trapping at Rock Island and Rocky Reach dams using modified lamprey traps – 2008. BioAnalysts, Inc. Report to Chelan County Public Utility District, Wenatchee, WA.
- Miller, M., J. R. Skalski, J. Lady, A. E. Giorgi, and J. R. Stevenson. 2000. A pilot investigation to assess the feasibility of estimating steelhead survival at Wanapum and Priest Rapids projects using radio telemetry analysis, 1999. BioAnalysts, Inc. Report to Grant County Public Utility District, Ephrata, WA.
- Miller, M. D., and J. R. Stevenson. 2014. Grant Lake hydroelectric project (FERC No. 13212); Aquatic resources study – Grant Creek, Alaska: Fisheries assessment - Final Report. Final report prepared for Kenai Hydro, LLC. Kenai, Alaska.
- Miller, M., J. Stevenson, A. Giorgi, and B. Torrell. 2001. Migration behavior of radio-tagged juvenile coho salmon in Swift Reservoir, 2001. Report to PacifiCorp, Portland, OR and Cowlitz County PUD, Longview, WA.
- Miller, M., J. Stevenson, and A. Giorgi. 2002. Migration behavior of radio-tagged juvenile Chinook salmon in Swift Reservoir, 2002. Report to PacifiCorp, Portland, OR and Cowlitz County PUD, Longview, WA.
- Miller, M., J. Stevenson, T. Hillman, and D. Snyder. 2002. Summary of bull trout suspected to have perished in fall, 2002. BioAnalysts, Inc. Report to Chelan, Douglas, and Grant County Public Utility Districts, Wenatchee, WA.
- Miller, M., A. Giorgi, B. Nishitani, M. Timko, and J. Stevenson. 2002. Behavior of salmonid smolts at Swift Dam using 3-dimensional tracking with acoustic tags. Report to PacifiCorp, Portland, OR and Cowlitz County PUD, Longview, WA.
- Ploskey, G. R., G. E. Johnson, A. E. Giorgi, R. L. Johnson, J. R. Stevenson, C. R. Schilt, P. N. Johnson, and D. S Patterson. 2007. Synthesis of biological research on juvenile fish passage and survival at Bonneville Dam through 2005. Prepared for the U.S. Army Corps of Engineers. Contract DE-AC05-76RLO1830.
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- Skalski, J. R., A. E. Giorgi, J. Lady, J. R. Stevenson, R. Townsend, and K. English. 2000. A study to estimate route-specific survival and passage probabilities of chinook salmon and steelhead smolts at Rock Island Dam, 2000. Report prepared for Public Utility District No. 1 of Chelan County. Wenatchee, WA.
- Skalski, J. R., J. Lady, R. Townsend, A. E. Giorgi, J. R. Stevenson, C. M. Peven, and R. D. McDonald. 2001. Estimating inriver survival of migrating smolts using radiotelemetry. *Canadian Journal of Fisheries and Aquatic Sciences* 58 (10): 1987-1997.
- Skalski, J. R., J. R. Stevenson, J. Lady, R. Townsend, A. E. Giorgi, M. Miller, and K. English. 2001. An assessment of project, pool, and dam survival for Chinook and Steelhead Smolts at Rocky Reach and Rock Island Dams using radio telemetry and pit-tag techniques, 2000. Prepared for Chelan County PUD, Wenatchee, WA.
- Skalski, J. R., R. Townsend, J. Lady, A. E. Giorgi, J. R. Stevenson, and R. D. McDonald. 2002. Estimating route-specific passage and survival probabilities at a hydroelectric project from smolt radiotelemetry studies. *Canadian Journal of fisheries and Aquatic Sciences* 59: 1385-1393.
- Stevenson, J. and D. Olsen. 1990. Yearling Chinook salmon travel time and flow regime relationships in the John Day Pool, 1989. Pacific Northwest Utilities Conference Committee, Technical Paper, Review Draft, DO209, DO401, Portland, OR.
- Stevenson, J., A. Giorgi, W. Koski, K. English, and C. Grant. 1997. Evaluation of juvenile spring chinook and steelhead migratory patterns at Rocky Reach and Rock Island dams using radio telemetry techniques, 1996. BioAnalysts, Inc. report prepared for Public Utility District No. 1 of Chelan County. Wenatchee, WA. 18+ pp.
- Stevenson, J., A. Giorgi, W. Koski, K. English, and J. Skalski. 1997. Evaluation of juvenile spring chinook and steelhead migratory patterns at Rocky Reach and Rock Island dams using radio telemetry techniques, 1997. BioAnalysts, Inc. report prepared for Public Utility District No. 1 of Chelan County. Wenatchee, WA. 70+ pp.
- Stevenson, J. R., J. R. Skalski, J. Lady, R. Townsend, A. E. Giorgi, and R. McDonald. 2000. A Pilot Study Assessing the Feasibility of Using Radio telemetry and PIT-tag Techniques to Estimate Project, Pool, and Dam Survival of Steelhead Smolts at Rocky Reach and Rock Island Dams, 1999. BioAnalysts, Inc. report prepared for Public Utility District No. 1 of Chelan County. Wenatchee, WA.
- Stevenson, J. R., T. W. Hillman, M. D. Miller, and D. J. Snyder. 2002. Movement of bull trout within the mid-Columbia River and tributaries, 2001-2002. BioAnalysts, Inc. report prepared for Public Utility District No. 1 of Chelan County. Wenatchee, WA.
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