Bob Mussetter, Ph.D., P.E.

Task Lead, Hydrology and Hydraulics

EDUCATION

PhD, Hydraulic (River) Engineering, Colorado State University, 1989

MS, Hydraulic (River) Engineering, Colorado State University, 1982

BS, Civil Engineering, Montana State University, 1976

PROFESSIONAL REGISTRATION

Registered Professional Engineer (Civil) in 10 states, including Louisiana

PRESENT POSITION

Program Manager/Group Discipline Lead for Hydraulic Engineering

PROFESSIONAL AFFILIATIONS

ASCE, AGU, AWRA, Diplomate, American Academy of Water Resources Engineers

YEARS OF EXPERIENCE

Tetra Tech: 20

Total: 34

OFFICE LOCATION

Fort Collins, CO

EXPERIENCE RELATED TO RFP

- Nationally-recognized expertise in river hydraulic, sediment transport processes, and geomorphology
- Analytical and design experience with river diversions, including associated sedimentation issues
- Significant experience with EIS alternative evaluations and drafting of EIS sections related to river hydraulics, sedimentation and geomorphology
- Significant experience leading and directly participating in multi-disciplinary teams for EIS/EIR and habitat restoration projects
- Previous project experience with proposed Lower Mississippi Diversion projects

Dr. Mussetter has nearly 35 years of experience in field data collection, analysis, design and computer modeling for a broad range of water-resource and civil engineering projects. His primary area of expertise involves integration of surface-water hydrology, multi-dimensional hydraulic analysis, sediment transport theory and other aspects river mechanics with fluvial geomorphology to understand and solve river stability, flooding and habitat issues. He has extensive experience in analysis of hydrologic, hydraulic, sediment transport, scour and other geomorphic processes in a wide variety of settings throughout the U.S and internationally. This broad base of experience provides him with general knowledge of stream processes over the range of geographic settings, as well as specialized knowledge of local conditions in many specific areas. His project experience has varied in scope from collection and analysis of basic field data to detailed engineering analysis of riverine processes, including development and application of complex mathematical models. Dr. Mussetter has completed numerous projects for the U.S. Army Corps of Engineers (USACE) and other state and federal agencies, a large percentage of which were performed directly in support of environmental impact statements (EIS). As part of this work, he has been principal author of numerous EIS sections related to the physical setting, the range of relevant river processes, and potential effects of the EIS alternatives.

Project Experience

Louisiana Department of Natural Resources/CH2M Hill, Phase 1: Reconnaissance–level evaluation of the Third Delta Conveyance Channel Project, Louisiana. Tetra Tech (formerly Mussetter Engineering, Inc.) Project Manager for a reconnaissance-level investigation of the feasibility of creating an additional delta with two distinct lobes in the Barataria and Terrebonne basins between the Mississippi and Atchafalaya deltas in south Louisiana. Dr. Mussetter's role in the project included providing guidance and review of analyses being performed by CH2M Hill staff regarding geomorphic and geologic issues associated with selection of the pilot channel dimensions and development of algorithms for evaluating pilot channel evolution, flow and sediment diversion effects on the Mississippi River, hydraulic and sediment transport modeling, selection of appropriate sediment transport functions for erosion of the predominantly fine-grained and cohesive pilot channel boundary materials, and transport of the sand-size material derived from the Mississippi River that are required for delta lobe building.

U.S. Army Corps of Engineers, New Orleans District, West Bay West Bay Sediment Diversion, Lower Mississippi River, River Mile 5, CH3D-SED Modeling, Louisiana. Tetra Tech (formerly Mussetter Engineering, Inc.) Principal-in-Charge of CH3D-SED 3-dimensional flow simulation and sediment- transport computer modeling to test five proposed diversion angles to identify the angle that results in the smallest increase in sedimentation in locations on the Mississippi River, including West Bay and Head of Passes, Louisiana. Dr. Mussetter provided technical guidance and QA/QC review of the modeling that was performed by staff directly under his supervision.

U.S. Army Corps of Engineers, Albuquerque District and New Mexico Interstate Stream Commission, Upper Rio Grande Water Operations Review and Environmental Impact Statement. Project Manager and member of the Geomorphology and Sediment Workgroup. Dr. Mussetter's work on this project included a wide range of responsibilities, including field data collection, hydraulic and sediment transport modeling, and extensive coordination with other team members to understand and quantify key aspects of the existing river environment in the Upper Rio Grande that includes the mainstem and key tributaries from the Colorado/New Mexico State Line to Elephant Butte Reservoir. During later phases of this project that spanned

over five years, he was responsible for evaluating the potential impacts of alternatives for altering various aspects of the system, including changes in the flows due to operational changes in the reservoir and water-delivery system, changes in sediment loading associated with both the system operation and continued urbanization of key portions fo the watershed, and efforts to restore and maintain habitat for the endangered silvery minnow and willow flycatcher. A key aspect of the habitat restoration involved restoring overbank flows and sediment delivery to overbank areas to create spawning and rearing habitat for the silvery minnow. In addition to the analytical work, Dr. Mussetter was responsible for drafting portions of the description of existing environment and alternative evaluations related to river sedimentation and geomorphology.

California Department of Water Resources and U.S. Bureau of Reclamation, San Joaquin River Restoration Program Programmatic Environmental Impact Statement and Reach 2B Improvements Project-specific Environmental Impact Report. Tetra Tech Program Manager and Technical Lead to support efforts by the California Department of Water Resources (CDWR) , Bureau of Reclamation (Reclamation) and other stakeholder in implementing the terms of the 2005 Settlement Agreement between the Natural Resource Defense Council, Friant Water User's Assocation and State and Federal Agencies to restore instream and riparian habitat along 150-miles of the San Joaquin River between Friant Dam and the Merced River. Dr. Mussetter has played a key role in this on-going effort through a multi-year contract with CADWR through a wide range of studies related to hydraulic, geomorphic and sediment transport issues that must be overcome to meet the restoration goals. Dr. Mussetter was responsible for drafting sections existing environment and alternative evaluation for the Programmatic EIS related to hydraulic, geomorphologic, river mechanics and sediment transport processes, and he drafted similar sections for the Reach 2B Improvements Project-specific EIR. This work includes significant coordination with other team members who have a wide variety of technical backgrounds and stakeholders who have a wide variety of interests, many of which are not aligned with program goals and objectives.

Platte River Recovery Implementation Program, Platte River Habitat Restoration Studies. Tetra Tech Program Manager and Technical Lead for several multi-year contracts with the Platte River Recovery Implementation Program (PRRIP) to design and monitor management actions to restore and maintain habitat for the endangered Least Tern, Piping Plover, and Whooping Crane, while avoiding adverse impacts to the Pallid Sturgeon. Dr. Mussetter's role in these projects includes both management of these complex, long-term contracts and significant direct involvement in collection and analysis of field data, computer modeling of geomorphic and sediment transport processes, and evaluation of the impacts of various management actions that include sediment augmentation, flow modifications associated with changes in operation of the water-supply and flood control system, and direct mechanical alteration of the channel. Specific completed and on-going projects for this effort include a data collection and modeling study to understand the potential effects of upstream activities on pallid sturgeon habitat in the lower river; review and modifications to the data collection and analysis plan for the Elm Creek Adaptive Management Experiment; completion of the 3-year, controlled adaptive management experiment at the Elm Creek Complex to understand the impacts to sandbar habitat of changes in the flow and sediment regime and direct manipulation of vegetated sandbars; on-going conduct of a multi-year monitoring program to systematically collect and analyze geomorphic and vegetation data in the overall, approximately 100-mile reach of the Central Platte River to document and understand natural river dynamics and the response to Program actions, 2-dimensional modeling studies to assist in designing flow consolidation projects, and various studies to understand and remediate flood hazards along the reach. This work included extensive data collection, report writing, and coordination with and presesntations to PRRIP staff and stakeholders.

Unitah Water Conservancy/Bown Collins & Associates, Inc., Hydraulic and Sediment-transport Evaluation, Uintah Water Conservancy Pumping Plant, Utah. Tetra Tech Program Manager and Technical Lead for multi-dimensional hydraulic and sediment transport studies to support design of a new pumping station to supply water to agricultural interests in the Unitah Valley. Severe sedimentation issues plagued the previous pump intake, required relocation and frequent maintenance to insure continued operation. Dr. Mussetter led a team of Tetra Tech hydraulic engineers in performing field data collection and hydraulic and sediment transport studies to identify and understand the reasons for the previous sedimentation issues, identify alternative location along the study reach that would provide the best opportunity for avoiding the sedimentation issues, detailed studies in the vicinity of the intake at the selected location to understand provide hydraulic design parameters for the intake and quantify the anticipated sediment loads that would be diverted into the pumping plant under normal operations.

TETRA TECH

ROBERT A. MUSSETTER

POSITION: Program Manager and Discipline Lead
Tetra Tech, Inc.

EDUCATION:

1989 Ph.D. Civil (Hydraulic) Engineering
Colorado State University, Fort Collins, CO

1982 M.S. Civil (Hydraulic) Engineering
Colorado State University, Fort Collins, CO

1976 B.S. Civil Engineering
Montana State University, Bozeman, MT

PROFESSIONAL CAREER:

May 2009 – present	Program Manager and Discipline Lead, Tetra Tech, Inc.
Jan 1994 – May 2009	President and Principal Engineer, Mussetter Engineering, Inc.
Sept 1992 - Jan 1994	Vice President, Resource Consultants & Engineers, Inc
Jan 1991 - Sept 1992	Principal, Resource Consultants, Inc.
Sept 1989 - Jan 1991	President, Mussetter Engineering, Inc.
Sept 1987 - Sept 1989	Associate and Manager of Fort Collins office, Simons, Li & Associates, Inc.
Sept 1986 - Sept 1987	Senior Engineer and Manager of Fort Collins office, Simons, Li & Associates, Inc.
Mar 1984 - Sept 1986	Senior Engineer and Project Manager, Simons, Li & Associates, Inc.
Dec 1981 - Mar 1984	Hydraulic Engineer, Simons, Li & Associates, Inc.
Aug 1980 - Dec 1981	Research Assistant, Colorado State University, Fort Collins, CO.
Jun 1976 - Aug 1980	Officer, U.S. Army Corps of Engineers, Fort Eustis, VA (Platoon leader, facility engineer, highest grade achieved: Captain).

PROFESSIONAL SOCIETIES AND HONORS:

Diplomate, Water Resource Engineer, American Academy of Water Resources Engineers
American Society of Civil Engineers
American Geophysical Union
American Water Resources Association

TETRA TECH

REGISTRATION: Registered Professional Engineer:

Arizona (1985) #17918
California (1999) #59128
Colorado (1983) #20758
Idaho (1997) #8809
Louisiana (2006) #32687
Montana (1984) #4803-PE
New Mexico (1995) #12603
South Dakota (1995) #6001
Texas (2001) #89604
Wisconsin (2005) #37449

COMMITTEES AND OTHER AFFILIATIONS:

Faculty Affiliate	Colorado State University, Civil Engineering, Department
Member	American Society of Civil Engineers, Urban Erosion Technical Committee
Member	Federal Emergency Management Agency, Riverine Erosion Hazard Area Project Working Group

REPRESENTATIVE PROJECT EXPERIENCE (LITIGATION):

Application for Approval of Absolute Groundwater Rights of the United States of America, Case No. 04CW35. District Court, Water Division 3, Colorado (litigation support, deposition, 2007)

United States v. ASARCO Inc. et al., Evaluation of the Coeur d'Alene and South Fork Coeur d'Alene Rivers for Mine Tailings Impacts. Case No. CV 96-0122-N-EJL (litigation support and deposition, 2004)

U.S. District Court of Kansas, Jacqueline Seyler v. Burlington Northern Santa Fe Corporation and AMTRAK – Case No. 99-2342-KHV, Kansas (deposition, 2002)

Superior Court of Arizona, County of Mariposa, The Burlington Northern and Santa Fe Railway Company v. The State of Arizona et al.—Case No. CV98-14172, Arizona (deposition, 2002)

Souza Property Flooding vs City of Fort Collins, Colorado (litigation support, expert testimony at trial, 2001)

Age of Islands in the Snake River Sector of the Deer Flat National Wildlife Refuge in State of Idaho v. United States of America, United States District Court for the District of Idaho, Case No. CIV97-0426-S-BLW, (expert report, litigation support, 1997-2001)

Evaluation of Stream Channel Processes and Water Rights Claims for Channel Maintenance Flows by the U.S. Forest Service and U.S. Fish and Wildlife Service and Various Indian Tribes Throughout the Snake River Basin, Idaho (litigation support and affidavits, 1994-2001)

TETRA TECH

Evaluation of instream flows for channel maintenance purposes for National Forest streams in Colorado (extensive litigation support, affidavits, deposition and expert testimony at trial.) (1986-2000)

Evaluation of the Roughness Characteristics of the Neosho River, Associated with Backwater from Grand Lake of the Cherokees, Miami, Oklahoma (litigation support, expert testimony, 1998)

REPRESENTATIVE PROJECT EXPERIENCE (CONSULTING):

Principal Engineer for analysis and design to support the San Joaquin River Restoration Project, California.

Principal Engineer for Hydraulic and Sediment-transport Analysis of the Carmel River Bypass Option, California. Submitted to California American Water, Monterey, California.

Principal Engineer and author of Feasibility Study for Alternatives to Mitigate Flooding Effects on Boxelder Creek. Submitted to Land Acquisition and Management, Centennial, Colorado.

Principal Engineer and author of Preliminary Assessment of Boat Wakes on Beach and Shoreline Erosion in the Hells Canyon Reach of the Snake River. Submitted to Davis Wright Tremaine, LLP, Washington, DC.

Principal Engineer and author of FLO-2D Development, Albuquerque Reach, Rio Grande. Submitted to U.S. Army Corps of Engineers, Albuquerque District.

Principal Engineer and author of Bathymetric Survey of Eagle Nest Lake, New Mexico. Submitted to Bohannan-Huston, Inc., Albuquerque, New Mexico.

Principal Engineer and author of Skunk Creek Channel Stabilization Recommendations and Preliminary Design. Submitted to the City of Sioux Falls, South Dakota, Sioux Falls, South Dakota.

Principal Engineer and author of San Clemente Reservoir and Carmel River Seiment-Transport Modeling to Evaluate Potential Impacts of Dam Retrofit Options. Submitted to American Water Works Service Company, Voohees, New Jersey.

Principal Engineer and author of Carmel River Sediment-Transport Study, Monterey County, California. Submitted to California Department of Water Resources, Fresno, California

Principal Engineer and author of Indian Bar Sediment Disposal Site Study, Ralston Afterbay, California. Submitted to Jones & Stokes, Sacramento, California, and Placer County Water Agency, Foresthill, California.

Principal Engineer and author of Hydraulic and Channel Stability Analysis, and Design of Erosion Control Plan for Auburn Ravine between Highway 65 and Highway 193, Lincoln, California. Submitted to Kleinfelder, Inc., Sacramento, California.

Principal Engineer and author of Hydrologic, Hydraulic, Erosion and Sediment Transport Analysis, Rummel Creek Watershed Studies, Texas. Submitted to SWA Group, Houston, Texas.

Author of an "Erosion and Sediment Design Guide" for the Albuquerque Metropolitan Arroyo Flood Control Authority for use by public agencies and consultants in designing flood control and erosion protection measures in urbanized areas of the Southwestern U.S.

Analysis of channel stability and determination of an erosion risk line (prudent line) along Calabacillas Arroyo, Albuquerque, New Mexico.

Geomorphic and sediment yield analysis for arroyos feeding to the North Diversion channel, Albuquerque, New Mexico to support a sedimentation study being performed by Waterways Experiment Station.

Instructor for the National Highway Institute's "Stream Stability and Scour at Highway Structures" training course (presented the course nine times, to-date).

Design of the Standard Project Flood channelization for a 2-mile reach of the Agua Fria River, Arizona.

Preparation of Master Drainageway Plan for Cache la Poudre River corridor in Fort Collins, Colorado.

Evaluation of flooding impacts on the Neosho River associated with backwater from Grand Lake of the Cherokees, Miami, Oklahoma (litigation support).

Development of a reclamation plan to restore approximately two miles of Whitewood Creek near Deadwood, South Dakota. The project reach has been heavily impacted by the discharge of mine tailings and subsequent placer mining of the deposits.

Evaluation of the impacts to stream channel stability in the Uncompaghre River between Montrose and Delta, Colorado (□35 miles) of a proposed hydropower operation.

Evaluation of the channel stability and flooding impacts along the Genesee River near Rochester, New York associated with subsidence of the river valley caused by underground salt mining.

Evaluation of stream channel processes and water rights claims for channel maintenance flows by the U.S. Forest Service and various Indian Tribes throughout the Snake River Basin in Idaho (litigation support).

Sediment engineering and channel stability analysis of the Feather and Yuba Rivers, California between the Sutter Bypass and Daguerre Point Dam (□35 miles) to evaluate potential impacts to lateral and vertical stability associated with increased in-levee capacity.

Sediment engineering and channel stability analysis of the Lower American River, California between Sacramento River confluence and Folsom Dam (□23 miles) to evaluate potential impacts to levees, bank protection and riparian habitat associated with various operation scenarios for Folsom Dam.

TETRA TECH

Sediment engineering and channel stability analysis of the Middle Fork American River, California to evaluate to distribution of sediment deposits upstream of the proposed Auburn Dry Dam and the potential for coarse sediment entrainment through the Dry Dam sluices.

Assessment of cobble bar dynamics and sediment movement in the North Fork Feather River, California to evaluate the potential impacts to fish and riparian habitat associated with sediment-pass-through operations from hydropower facilities.

Evaluation of critical spawning habitat for endangered fishes in the Upper Colorado River basin, including studies on the Yampa River in Dinosaur National Monument, Green River in Desolation and Gray Canyons and the Mineral Bottoms area, and the Colorado River near Grand Junction, Colorado.
Evaluation of instream flows for channel maintenance purposes for National Forest streams in Colorado (extensive litigation support, including expert testimony at trial.)

Evaluation of channel maintenance flows on North Boulder Creek, Colorado to support an Environmental Report on the potential impacts of rehabilitation of the Lakewood Pipeline.

Channel stability analysis and design of environmentally sensitive channel protection measures for Hoop Creek, a steep mountain stream draining the south side of Berthoud Pass, Colorado.

Channel stability, floodplain analysis and hydraulic analysis to support design of a greenbelt/community park along the Laramie River, Laramie, Wyoming.

Geomorphic, hydraulic, and sedimentation analysis to evaluate post-mining stability and develop environmentally sensitive channel protection measures for Whitewood Creek, Lead, South Dakota.

Design of a river stabilization plan and assessment of environmental impacts for an approximately 6-mile reach of the Elkhorn River, Nebraska.

Geomorphic, hydraulic, and sedimentation analysis of Cache Creek, Yolo County, California.

Analysis of bed degradation and channel stability on the lower Kansas River, Kansas.

Analysis of failure of a natural gas line crossing the Truckee River near Carson City, Nevada (litigation support).

Evaluation of the relationship between stream channel processes and the growth of riparian vegetation in Bishop Creek, California.

Sedimentation study to evaluate the impacts on navigation resulting from construction of locks and dams and channel meander cutoffs on the Red River between Shreveport, Louisiana, and Index,

Arkansas. Geomorphic, sediment engineering and channel stability analysis of the American River, California.

Qualitative and quantitative analysis and development of erosion- and flood-control plan for Upper Hickahala and Senatobia Creek Watershed, Mississippi.

Analysis of reservoir operations at Lahontan Dam, Nevada to determine causes of erosion damage at a construction site (litigation support).

Hydraulic and sediment routing study to determine the impacts of dredging and channelization of tributaries on the mainstem Yazoo River, Mississippi.

Analysis of baseline conditions and development of pollution cleanup plans for Erjen Creek in southwestern Taiwan.

PUBLICATIONS AND LECTURES:

Mussetter, R.A., 2013. Fire Effects on Runoff and Sediment Delivery from Rio Grande Watersheds, presentation to Rio Grande Basin Meeting, Albuquerque, September 17.

Harvey, M.D., Mussetter, R.A., Haggerty, G.M., Lundahl, A., and Pegram, P., 2012. Instream and Riparian Habitat Restoration in the Albuquerque Reach of the Middle Rio Grande, New Mexico. Presented at the 2012 Work Environmental & Water Resources Congress, Albuquerque, New Mexico, May 20-24.

Thomas, D.B., Mussetter, R.A., and Boberg, S.A., 2012. FLO-2D Modeling to Support the Rio Grande Bosque Restoration Feasibility Study, Albuquerque Reach of the Middle Rio Grande, New Mexico. Presented at the 2012 Work Environmental & Water Resources Congress, Albuquerque, New Mexico, May 20-24.

Trabant, S.C., Mussetter, R.A., and Shafike, N., 2012. Sediment Routing Model of the Middle Rio Grande. Presented at the 2012 Work Environmental & Water Resources Congress, Albuquerque, New Mexico, May 20-24.

Harvey, M.D., Mussetter, R.A., Fullerton, W.T., Rolland, C., and Donnelly, C., 2012. Sediment Plug Formation in the San Acacia Reach of the Middle Rio Grande. Presented at the 2012 Work Environmental & Water Resources Congress, Albuquerque, New Mexico, May 20-24.

Harvey, M.D., Mussetter, R.A., Marcus, M., and Kuhn, W., 2011. Multipurpose Channel Relocation, Middle Rio Grande, New Mexico. Abstract presented at the 14th International River Symposium, Brisbane, Australia, September 26-29.

Harvey, M.D., Mussetter, R.A., Trabant, S.C., and Fowler, D., 2010. Insensitivity of the North Branch Root River, Milwaukee County, Wisconsin: Implications for Restoration. Poster presented at the PRRSUM First Annual Upper Midwest Stream Restoration Symposium, La Crosse, Wisconsin, February 21-24.

Mussetter, R.A. and Harvey, M.D., 2010. Physical and ecological challenges facing restoration of 240km of the Upper San Joaquin River from Friant Dam to the Merced River, California. 13th International River Symposium, Perth, Western Australia, 11-14 October.

Harvey, M.D. Mussetter, R.A., Fullerton, W.T., Bailey, P., and Kuhn, W., 2010. Ecosystem restoration in four water-short rivers of the Western USA. 13th International River Symposium, Perth, Western Australia, 11-14 October.

TETRA TECH

Mussetter, R.A. and Harvey, M.D., 2009. Relationship between Physical Characteristics, Flow Regime and Riparian Vegetation in Coarse-grained Streams. Proceedings of the 7th International Symposium on Ecohydraulics (pending), Concepcion, Chile, Jan 12-16.

Harvey, M.D. and Mussetter, R.A., 2009. Modeling of Fine and Coarse Sediment Dynamics in the Upper Colorado River, USA: Implications for Biological Productivity. Proceedings of the 7th International Symposium on Ecohydraulics (pending), Concepcion, Chile, Jan 12-16.

Mussetter, R.A., Trabant, S.C., and Morris, C.E., 2008. Sediment Routing Model of the Middle Rio Grande. Presented at the 50 Years of Soil and Water Research in a Changing Agricultural Environment Conference, September 3-5, Oxford, Mississippi.

Mussetter, R.A., Harvey, M.D., and Parkinson, S., 2007. Boat Wake Erosion of Sand Bars in Hells Canyon of the Snake River, Idaho and Oregon. World Environmental and Water Resources Congress 2007, ASCE, Tampa, Florida, May.

Mussetter, R.A., 2007. An Introduction to Rivers of the Arid Southwest. In Price, L.G., Johnson, P.S., and Bland, D., (eds), Water Resources of the Middle Rio Grande, San Acacia to Elephant Butte, New Mexico Bureau of Geology and Mineral Resources, pp. 14-18.

Mussetter, R.A., Harvey, M.D., and Harner, R.F., 2005. Physical characteristics, flow regime and riparian vegetation in coarse-grained streams, Idaho Batholith, USA. Poster presented at the Sixth Gravel-bed Rivers Conference, Austria, September 5-9.

Mussetter, R.A. and Trabant, S.C., 2005. Analysis of Potential Dam Removal/Retrofit Impacts to Habitat, Flooding and Channel Stability in the Carmel Valley, California. Proceedings of the Watershed 2005 Management Conference, ASCE, Williamsburg, Virginia, July 19-22.

Mussetter, R.A. and Harvey, M.D., 2005. Design Discharges for Arroyos in an Urban Setting. Proceedings of the EWRI 2005 World Water and Environmental Resources Congress, Anchorage, Alaska, May 15-19.

Harvey, M.D. and Mussetter, R.A., 2005. Difficulties of Identifying Design Discharges in Steep, Coarse-Grained Channels in the Arid Southwestern US. Proceedings of the EWRI 2005 World Water and Environmental Resources Congress, Anchorage, Alaska, May 15-19.

Armstrong, S., Miller, W., Mussetter, R.A., Harvey, M.D., and Thomas, D.B., 2004. Aquatic Habitat and Hydraulic Modeling Study, Rio Grande at Bosque del Apache National Wildlife Refuge. Poster session for the 2004 Festival of Cranes, San Antonio, New Mexico, November.

Mussetter, R.A. and Harvey, M.D., 2004. Geomorphic, Hydrologic, Hydraulic and Sediment Transport Analyses: Tools for Evaluating In-channel and Channel-margin Habitat Dynamics. Proceedings of the 3rd Missouri River and North American Piping plover and Least Tern Workshop, Sioux City Iowa, April 12-14.

TETRA TECH

Harvey, M.D. and Mussetter, R.A., 2004. Fine Sediment Dynamics in Coarse-Grained Streams; Implications for Biological Productivity in Urbanized Western Streams. Proceedings of the EWRI Environmental Resources Congress 2004, Salt Lake City, Utah, June.

Mussetter, R.A. and Harvey, M.D., 2004. Maintaining Natural Conditions in Urban Arroyos: Is It Possible? Proceedings of the EWRI Environmental Resources Congress 2004, Salt Lake City, Utah, June.

Mussetter, R.A., Trabant, S.C., and Wolff, C.G., 2004. Analysis of Potential Dam Removal Impacts to Habitat, Flooding, and Channel Stability in the Carmel Valley, California. Proceedings of the EWRI Environmental Resources Congress 2004, Salt Lake City, Utah, June.

Mussetter, R.A., Wolff, C.G., Peters, M.R., Thomas, D.B., and Grochowski, D., 2004. Two-Dimensional Hydrodynamic Modeling of the Rio Grande to Support Fishery Habitat Investigations. Proceedings of the EWRI Environmental Resources Congress 2004, Salt Lake City, Utah, June.

Peters, M.R., Mussetter, R.A., Thomas, D.B., and Wolff, C.G., 2004. Two-Dimensional Hydrodynamic Modeling of the Rio Grande to Support Fishery Habitat Investigations. Abstract for the proceedings of the American Geophysical Union, Hydrology Days 2004, Colorado State University, Fort Collins, Colorado, March.

Lunger, J.R., Harvey, M.D., and Mussetter, R.A., 2004. Investigation of Habitat Formation and Fish Use during a Range of Flows in a Sand-bed Stream, the Pecos River, New Mexico. Abstract for the proceedings of the American Geophysical Union, Hydrology Days 2004, Colorado State University, Fort Collins, Colorado, March.

Thomas, D.B., Harvey, M.D., and Mussetter, R.A., 2004. Sediment Yield Estimates from Ungaged Tributaries to the Middle Rio Grande, New Mexico. Abstract for the proceedings of the American Geophysical Union, Hydrology Days 2004, Colorado State University, Fort Collins, Colorado, March.

Wolff, C.G., Mussetter, R.A., and Harvey, M.D., 2004. Evaluation of the Effects of Dam Re-operation on Establishment of Riparian Vegetation, Verde River, Arizona. Abstract for the proceedings of the American Geophysical Union, Hydrology Days 2004, Colorado State University, Fort Collins, Colorado, March.

Mussetter, R.A., Harvey, M.D., Anthony, D.J., 2003. Identification of the Ordinary High-water Mark of the Snake River, Western Idaho, USA. Abstract: Proceedings of Hydrology Days 2003, American Geophysical Union, Fort Collins, Colorado.

Harvey, M.D., Mussetter, R.A., Anthony, D.J., 2003. Island Aging and Dynamics in the Snake River, Western Idaho, USA. Abstract: Proceedings of Hydrology Days 2003, American Geophysical Union, Fort Collins, Colorado.

Harvey, M.D., Mussetter, R.A., Morris, C.E., 2003. Fine Sediment in the Upper Colorado River During Spring Runoff and Summer Baseflows: Implications for Flow Recommendations and Biological Productivity. Abstract: Proceedings of Hydrology Days 2003, American Geophysical Union, Fort Collins, Colorado.

Wolff, C.G., Mussetter, R.A., Bucher, B., 2003. Channel Remediation and Restoration Design for Silver Bow Creek, Butte, Montana. Abstract: Proceedings of Hydrology Days 2003, American Geophysical Union, Fort Collins, Colorado.

Harvey, M.D., Mussetter, R.A., Morris, C.E., 2003. Fine Sediment Dynamics in the Upper Colorado River during Spring and Summer Baseflows. Presented to the Upper Colorado River Basin Researcher's Annual Meeting, Grand Junction, Colorado, January 16.

Miller, W.J., Rees, D.E., Ptacek, J.A., Harvey, M.D., Mussetter, R.A., and Morris, C.E., 2002. Ecological and Physical Processes during Spring Peak Flow and Summer Base Flows in the Colorado River above the Gunnison River, Volume I, Draft Report. Prepared for the Colorado River Water Conservation District, Glenwood Springs, Colorado.

Mussetter, R.A., Gessler, D., and Wolff, C.G., 2002. Modeling of Potential Dam Removal Impacts to Habitat, Flooding, and Channel Stability on the Carmel River, California. Hydrology Days, Colorado State University, Fort Collins, Colorado, April 1-2.

Mussetter, R.A., Harvey, M.D., and Trabant, S.C., 2002. Historical and Present Day Sediment Loads in the Middle Rio Grande, New Mexico. Proceedings of Hydrology Days, 2002 American Geophysical Union, Colorado State University, Fort Collins, Colorado, April 1-2.

Mussetter, R.A., Harvey, M.D., Zevenbergen, L.W., and Tenney, R.D., 2001. A Comparison of One- and Two-Dimensional Hydrodynamic Models for Evaluating Colorado Squawfish Spawning Habitat, Yampa River, Colorado. In Applying Geomorphology to Environmental Management, Anthony, D.J., Harvey, M.D., Laronne, J.B., and Mosley, M.P. (eds), Water Resource Publications, Englewood, Colorado, p. 361-379.

Mussetter, R.A. and Harvey, M.D., 2001. The Effects of Flow Augmentation on Channel Geometry of the Uncompahgre River. In Applying Geomorphology to Environmental Management, Anthony, D.J., Harvey, M.D., Laronne, J.B., and Mosley, M.P. (eds), Water Resource Publications, Englewood, Colorado, p. 177-198.

Mussetter, R.A. and Harvey, M.D., 2001. Composite *n*-Value Estimation: Implications for Estimating the Hydraulic Impacts of Riparian Habitat Restoration. Presentation at Seventh Federal Interagency Sedimentation Conference, Reno, NV, March 25-29.

Harvey, M.D. and Mussetter, R.A., 2001. Restoration of the San Joaquin River: Constraints and Opportunities. Presentation at Seventh Federal Interagency Sedimentation Conference, Reno, NV, March 25-29.

Wolff, C.G., Harvey, M.D., and Mussetter, R.A., 2000. San Miguel River Restoration: Geomorphology and Hydraulic Engineering as a Basis of Design. 2000 Joint Conference on Water Resources Engineering and Water Resources Planning and Management, Minneapolis, Minnesota, July 30-August 2.

Mussetter, R.A., 2000. Bed Material Transport Equation for High Suspended Sediment Concentrations, 2000. 2000 Joint Conference on Water Resources Engineering and Water Resources Planning and Management, Minneapolis, Minnesota, July 30-August 2.

TETRA TECH

Thomas, D.B., Abt, S.R., Mussetter, R.A., and Harvey, M.D., 2000. A Design Procedure for Sizing Step-Pool Structures. 2000 Joint Conference on Water Resources Engineering and Water Resources Planning and Management, Minneapolis, Minnesota, July 30-August 2.

Mussetter, R.A., Harvey, M.D., Wolff, C.G., and McDowall, D.G., 2000. Whitewood Creek Reclamation Plan: A Sound Basis for Design. 2000 Joint Conference on Water Resources Engineering and Water Resources Planning and Management, Minneapolis, Minnesota, July 30-August 2.

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