PROPOSAL FOR PROCESSING AND IDENTIFICATION OF BENTHIC MACROINVERTEBRATE SAMPLES

Solicitation number: DEP15456

Prepared for:
State of West Virginia
Dept. of Environmental Protection
Division of Water and Waste Management

Prepared by:
EcoAnalysts, Inc.
June 22, 2011

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DUNS # 005593470
GSA # GS-10F-0050U

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INTRODUCTION

June 22, 2011

EcoAnalysts respectfully submits our bid in response to West Virginia DEP's Request for Quotation #DEP15456, for the processing and identification benthic invertebrate samples collected from West Virginia waters. We hope to demonstrate that our experience providing highly accurate, legally defensible water quality data to state governmental agencies over the past 16 years makes EcoAnalysts the right choice for this project.

Established by three University of Idaho graduate students in 1995, EcoAnalysts has grown to become the recognized leader in the bioassessment industry. As the largest invertebrate taxonomy laboratory in North America, our clients trust us with over 6,000 benthic macroinvertebrate samples annually. Our scientists also provide expertise in taxonomic services for periphyton, phytoplankton, and zooplankton. Our staff of 10 taxonomists has a total of 22 NABS certifications and over 190 years of combined taxonomy experience, and our superior quality of work is relied on by water quality monitoring experts across the United States and Canada.

We have served your area in the past, and our knowledge of West Virginia's taxa and required protocols for sample processing will assist us in meeting your data quality expectations and deadlines.

As sole contractor, EcoAnalysts has the capacity and expertise to complete this project according to the specifications enumerated in the Request for Proposals. We look forward to your review of our qualifications and to having the opportunity to serve you. Thank you for your time and consideration, and please contact me at 208.882.2588 x81 or kmerrill@ecoanalysts.com with any questions or comments.

Sincerely,

Kaylani Merrill

Kaylani Merrill
Business Development

1) PROJECT MANAGEMENT

Communication of milestones will be reported by EcoAnalysts' project coordinator, Shanda McGraw. A project initiation phone conference will be scheduled to review our technical process and plan for completing the work as described. Throughout the project, EcoAnalysts will provide feedback to West Virginia DEP when certain milestones are accomplished:

Milestone 1- Sample receipt
Milestone 2- Completion of sorting process
Milestone 3- Completion of taxonomic identification
Milestone 4- Final data delivery

Project Scope

EcoAnalysts recognizes that quality control is of utmost importance to this project. We owe our tremendous growth and success as a company to the rigorous development and careful maintenance of unparalleled quality control standards and procedures. Please see page 18 of this proposal for a detailed description of EcoAnalysts Quality Control and Quality Assurance procedures. EcoAnalysts understands that West Virginia DEP's required quality control and analytic processes are divided into the following five major steps, as outlined on page 5 of DEP's Request for Quotation:

Step 1 - Receipt of samples at specified location

EcoAnalysts understands that we will provide sample pick-up and delivery services and that DEP will not ship samples using commercial transport.

Step 2 - Sorting of samples in a timely and professional manner

EcoAnalysts has served WVDEP in the past and is familiar with the State's required protocols, as described in pages 6-11 of the Request for Quotation, and in "WVDEP Watershed Branch - Standard Operating Procedures for Processing Benthic Macroinvertebrate Samples."

Step 3 - Identification of samples in a timely and professional manner

EcoAnalysts fully understands the State's required identification protocols as enumerated in pages 11-22 of the Request for Quotation. We also understand that identifications must be performed by degreed biologists with current NABS certifications for genus level EPT (eastern) and genus level chironomidae (eastern), and that identification of organisms by non-professional personnel or those without NABS certifications is strictly forbidden. We guarantee that the biologists performing the identifications will be dedicated taxonomists whose principal task on a daily basis involves the identification of benthic macroinvertebrates.

Step 4 - Quality Assurance/Quality Control

Please see page 18 of this proposal for a detailed description of EcoAnalysts industry-leading Quality Control and Quality Assurance procedures.

Step 5 - Legal Testimony

EcoAnalysts understands that legal action based upon benthic macroinvertebrate results is possible. Having completed projects with similar requirements for state governmental agencies throughout our 16-year history, our scientists are fully prepared to provide consulting expertise in a legal or administrative setting.

2) Experience with Sorting and Identification of Benthic Macroinvertebrates

EcoAnalysts has completed well over 1,000 macroinvertebrate (aquatic and terrestrial), zooplankton, periphyton and phytoplankton projects from across the United States and Canada. As an example of our industry-leading capacity and demand for our high-quality services, in 2010 we processed and delivered data for 7,772 macroinvertebrate samples, averaging 648 samples per month. The following table lists the number of macroinvertebrate samples we have processed over a recent five-year span:

Year	Number of Macroinvertebrate Samples
2006	3964
2007	3792
2008	3023
2009	4755
2010	7772

In this section we highlight relevant projects to demonstrate our familiarity and experience with benthic macroinvertebrate taxonomy projects and our ability to rigorously adhere to our clients' specific performance criteria. We encourage you to contact our clients to discuss our ability to meet expectations with respect to quality of services, cost control, timeliness of performance, and customer service.

West Virginia Department of Environmental Protection Macroinvertebrate ID and QC

Contact: John Wirts
West Virginia DEP — (304) 926-0499 ext.1060
601 57th St. — (304) 926-0495
Charleston, WV 25305 — jwirts@mail.dep.state.wv.us

Contract Period: 2005

Project Description: EcoAnalysts processed over 200 macroinvertebrate samples in 2005 for the West Virginia Dept. of Environmental Protection. All samples were sorted by DEP staff and EcoAnalysts identified the invertebrates to the genus level, including Chironomidae. In addition, we performed QC checks on several samples from previous contractors to verify taxonomic accuracy. A turnaround of 6 months for 220 samples was maintained.

Baltimore County Dept. of Environmental Protection Macroinvertebrate Identification

Contact: Dennis Genito
Baltimore County Dept. of Environmental Protection
401 Bosley Ave, Ste. 416 — (410) 887-4488
Towson, MD 21204 — dgenito@baltimorecountymd.gov

Contract Period: 2008-Present

Project Description: EcoAnalysts' field biologists sample 100 sites annually in the Patapsco River/Back River Basin and the Gunpowder Falls/Deer Creek Basin areas in Baltimore County. 400 sites have been sampled to date. Biologists are certified by the Maryland Biological Stream Survey prior to beginning in the field. A probabilistic sampling design is followed, and physical habitat assessments are conducted as well as vernal pool searches. Macroinvertebrate samples are collected with a 600 micron mesh d-frame net. A field report is prepared, and samples are then shipped to our Idaho headquarters and laboratory for sorting and identification. The sorting lab subsamples to a target count of 100 organisms, and extensive quality control checks (QC) are conducted on sorted samples to assure 90% efficacy. All sorting and QC on 100 samples is finished within three weeks. Macroinvertebrates are identified in by

EcoAnalysts taxonomists to genus level, except oligochaetes to family, as per client request. A 10% re-id QC is conducted by a second taxonomist on every sample.

EPA National Aquatic Resource Survey, 2011-2014

Contact: Katie Rechenberg
United States Environmental Protection Agency
Cincinnati Procurement Operations Division
26 W. Martin Luther King Drive — 513.487.2853
Cincinnati, OH 45268-0001 — rechenberg.kathleen@epa.gov

Contract Period: March 18, 2010 to Present

Project Description: From 2011 to 2014, EcoAnalysts will process macroinvertebrate, zooplankton, phytoplankton, and algal samples from around the country for the EPA's NARS project. The National Aquatic Resource Survey is a nationwide series of assessments over five years designed to generate statistically valid estimates of the ecological health of all waterbody types (i.e., streams, rivers, lakes, reservoirs, wetlands, and coastal areas) through sampling a representative assemblage of the aquatic community and associated ecological data. EcoAnalysts will participate in the water and plant sample collection phase of these yearly national surveys, and with this contract provide the analytical laboratory services to identify the flora and fauna found in the samples. As a veteran EPA contractor, EcoAnalysts has processed samples for several National Aquatic Resource Surveys in the past, including: EPA National Lakes Assessment Zooplankton, Phytoplankton, and Macroinvertebrates; EPA National Rivers and Streams Assessment Macroinvertebrates; and macroinvertebrate samples for the EPA National Coastal Assessment.

Survey of the Nation's Lakes – Benthic Macroinvertebrates, Zooplankton, and Phytoplankton

Contact: Carol Peterson
US Environmental Protection Agency
Office of Wetlands, Oceans, and Watersheds
1200 Pennsylvania Avenue
4503T NW — 202.566.1304
Washington, DC 20450 — peterson.carol@epa.gov

Contract Period: 2007-2009

Project Description: EcoAnalysts Inc. was awarded the National Lakes Assessment benthic macroinvertebrate contract from the EPA Office of Wetlands, Oceans, and Watersheds. This project encompassed lake systems, including rivers and streams, from 49 states, and was consistent with the Rapid Bioassessment Protocols of the EPA. EcoAnalysts processed and identified 1,272 phytoplankton samples, 2,520 zooplankton samples, and 1,189 macroinvertebrate samples. Each sample was processed using a 500-micron mesh sieve, and sorted to a minimum target count of 500 organisms. Each sample underwent a QC protocol that required at least 20% of the material be re-sorted to ensure a minimum 90 percent efficacy. Organisms were sorted into the groups Generals, Chironomidae, and Oligochaetes and were identified to genus/species. The QC component for taxonomy required that 10 percent of the samples be re-identified to ensure a minimum 90 percent efficacy. EcoAnalysts delivered all data on 1,189 samples in October, 2009. Additionally, we assisted the U.S. EPA in establishing and standardizing methods of analysis, quality assurance procedures, and quality control processes for the National Lakes Survey.

2010 National Rivers and Streams Assessment Macroinvertebrate Sample Processing

Contact: Frank Keller

Tetra Tech, Inc.

10306 Eaton Place, Suite 340	(703) 385-6000 x141
Fairfax, VA 22030	Frank.keller@tetratech.com

Contract Period: March 2010 to Present

Project Description: EcoAnalysts is processing approximately 1500 macroinvertebrate samples from around the country for the EPA's National Rivers and Streams Assessment project. Processing protocols match the EPA National Rivers and Streams Assessment Laboratory Methods Manual (USEPA, 2008). In this project we are assisting Nevada Department of Environmental Protection, Great Lakes Environmental Center, and Tetra Tech, Inc., in sorting and identifying macroinvertebrates in these samples. The majority of samples are being processed for Tetra Tech, Inc.

Great Lakes Environment Center (GLEC), West Virginia Benthos

Contact: Don McNew

GLEC	(231) 941-2230
739 Hastings Street	(231) 941-2240 fax
Traverse City, MI 49686	dmcnew@glec.com

Contract Period: 2005-2006

Project Description: EcoAnalysts processed 58 samples from West Virginia as a subcontractor. The samples came pre-sorted by our lab technicians subsampled them further to a 200 organism target count. Our taxonomists identified Oligochaete to class, and Chironomidae and all other macros to genus. There was a re-id of 10% of the samples as a QC check as well as a QC on the synoptic reference collection.

NY City Department of Environmental Protection Benthos 2008-2010

Contact: Martin "Butch" Rosenfeld

New York City Department of Environmental Protection

465 Columbus Avenue, Suite 190	(914) 773-4486
Valhalla, NY 10595-1336	mrosenfeld@dep.nyc.gov

Contract Period: 2008-2010

Project Description: In 2008, the New York City Department of Environmental Protection hired EcoAnalysts to process, enumerate, and identify 45 samples from New York wadeable waters. Each sample was processed using a standard 500-micron mesh sieve, and enumerated to a minimum 100 target count. Each sample underwent a QC process of resorting at least 20 percent of the material to ensure a minimum 90 percent efficacy. Special protocols at the client's request included: not picking any organisms that exceeded 1.5mm in length (except for beetles); mites, pupae, and nematoda were not included in the official count, but were recorded separately. Organisms were then separated into the following groups: Generals, Chironomidae, and Oligochaeta, and then identified to Genus/Species for each. The taxonomy QC component for this project included a 10 percent re-identification of the organisms to ensure a minimum 90 percent efficacy. Client returnables and deliverables included: all macros, mounted Oligochaetes, all sample containers, and a reference collection; a taxa report, a taxonomy ID QC percent similarity report, and a sorting efficacy report.

3) Taxonomist Resumes and NABS Certifications

Over the last 16 years, EcoAnalysts has assembled the industry-leading taxonomy team in North America. With over 190 years of combined experience and 22 NABS certifications in every available category, we are able to offer West Virginia DEP superior quality combined with the capacity to meet your project deadlines.

EcoAnalysts recognizes the need for better taxonomic data quality throughout the country, and we hold ourselves to a very high standard. In response to this need, Gary Lester, EcoAnalysts' CEO, accepted a nominated position on the Taxonomic Certification Committee of the North American Benthological Society (NABS). The committee has developed the only certification program for taxonomists in the United States and Canada.

The following is a list of EcoAnalysts' macroinvertebrate taxonomists who will be assigned to the project and their educational backgrounds, years of experience, and NABS certifications:

Name	Degree	Discipline	Years of Macroinvertebrate Taxonomy Experience	NABS Certifications
John Pfeiffer	MS BS AAS	Entomology Fisheries Resource Management	18	EPT East EPT West General Arthropods East General Arthropods West
Patrick Barrett	MS BS	Entomology Natural Resources	4	EPT East EPT West General Arthropods West
Gregory Wallace	BS	Wildlife Conservation & Management	17	Chironomidae East Chironomidae West
William Lavoie	MS BS	Zoology and Physiology Fish & Wildlife Resources	7	EPT East EPT West General Arthropods East General Arthropods West
Matt Hill	BS	Entomology	6	EPT East EPT West
		Total Years Taxonomy Experience:	52	

Below are resumes for the taxonomists who will be assigned to this project.

JOHN PFEIFFER – LEAD TAXONOMIST / AQUATIC ECOLOGIST

Mr. Pfeiffer has over 18 years of experience in aquatic bioassessment and taxonomy of benthic macroinvertebrates. He is the Senior Taxonomist at EcoAnalysts and oversees both the primary identification process as well as the quality assurance checks in the taxonomy lab. Mr. Pfeiffer has provided taxonomic identification of benthic macroinvertebrates on thousands of samples from rivers and streams across the country.

Prior to joining EcoAnalysts, John completed his graduate studies at the University of Idaho where he developed a preliminary bioassessment protocol for mid-order streams in the Palouse Region of Idaho. Concurrent with his studies, John worked part-time for a natural resource consulting company where he was responsible for taxonomy lab supervision and project QA/QC.

Education
M.S. Entomology University of Idaho (1998)
B.S. Fisheries Resource Management University of Idaho (1994)
A.A.S. Fish and Wildlife Management Hocking College (1991)

Professional Memberships
Idaho Academy of Sciences
Idaho Entomology Group
North American Benthological Society (NABS)

Technical Training
Taxonomy, Systematics, and Ecology of the Freshwater Oligochaetes of North America Workshop. 2009. Hosted by EcoAnalysts, Inc. Mark Wetzel, instructor.
Freshwater Gastropoda Workshop. 2004. Sponsored by Freshwater Mollusk Conservation Society. University of Alabama. Multiple instructors.
Diptera Workshop. 2000. Sponsored by U.S. Environmental Protection Agency, Region 10. Dr. Jon Gelhaus and Dr. Bill Turner, instructors.
Trichoptera Workshop. 1998. Sponsored by U.S. Environmental Protection Agency, Region 10. Dr. Skip Smith and Bob Wisseman, instructors.
Mollusca Identification. 1997. Sponsored by Northwest Biological Assessment Workgroup. Joe Furnish, instructor.

Reports
Pfeiffer, J.J., C.A. Robinson and G.T. Lester. 2000. Biological assessment of eight macroinvertebrate sites and a comparison of sampling methods and their influence on support status. EcoAnalysts, Inc. for Montana Department of Environmental Quality.
Pfeiffer, J.J., C.A. Robinson and G.T. Lester. 1999. 1999 habitat and biological assessments of White Pine, Wepah and Big Sand Creeks. Clearwater National Forest, Orofino, ID.
Pfeiffer, J.J. and S.M. Lindstrom. 1998. Habitat survey of three tributaries of the Kootenai River, with special reference to kokanee (Oncorhynchus nerka) spawning habitat. EcoAnalysts, Inc. for Kootenai Indian Tribe, Bonners Ferry, ID.
Lester, G.T., J.J. Pfeiffer and S.M. Lindstrom. 1998. Fish and macroinvertebrate survey of Trout Creek, Long Canyon Creek, and Parker Creek: three tributaries of the Kootenai River. EcoAnalysts, Inc. for Kootenai Indian Tribe, Bonners Ferry, ID.

Pfeiffer, J.J. and C.A. Robinson. 1998. 1998 habitat and biological assessments of White Pine, Wepah and Big Sand Creeks. Clearwater National Forest, Orofino, ID.

Certifications
NABS Certified Taxonomist – EPT East
NABS Certified Taxonomist – EPT West
NABS Certified Taxonomist – General Arthropods East
NABS Certified Taxonomist – General Arthropods West

PATRICK G. BARRETT – AQUATIC INVERTEBRATE TAXONOMIST

Pat started identifying aquatic invertebrates with EcoAnalysts in September 2005. He specializes in general taxonomy of western invertebrates. Pat also conducts field collections, has identified over 700 microcrustacea samples, and is knowledgeable about the invasive zebra mussel.

Before joining EcoAnalysts, Pat worked for two and a half years as a research assistant in the insect physiology lab at the University of Idaho. His research investigated aspects of both mating behavior and the physiological mechanisms involved in controlling that behavior in Anopheles gambiae mosquitoes. Prior to that, he worked as a fly-fishing guide/instructor in southern Idaho for several years.

Education
M.S. Entomology, University of Idaho (2011)
B.S. Natural Resources, Cornell University (1993)

Technical Training
Mayfly Taxonomy Workshop. 2009. Sponsored by North American Benthological Society. Grand Rapids, MI. Moderated by David L. Feldman.
Western Invasive Mussel Workshop. 2009. Sponsored by the Bureau of Reclamation in Las Vegas, NV.
Coleoptera Workshop. 2008. Crawford, FL. Instructed by John Epler.
US EPA National Lakes Assessment Field Training Workshop. 2007. Olympia, WA.
Odonata Workshop. 2007. Sponsored by the Xerces Society. Olympia, WA. Dennis Paulson and Ken Tenneron, instructors.

Certifications
NABS Certified Taxonomist – EPT West
NABS Certified Taxonomist – EPT East
NABS Certified Taxonomist – General Arthropods West
Idaho Licensed Fishing Guide
CPR
First Aid

Professional Membership
North American Benthological Society

GREGORY WALLACE – CHIRONOMID TAXONOMIST

Greg joined EcoAnalysts in 2008 as a Chironomid Taxonomist. Before joining EcoAnalysts, Greg worked for 15 years for the University of Missouri in the Department of Fisheries and Wildlife. Before joining EcoAnalysts, Greg also worked five years for the Missouri Department of Conservation in the Resource Science Division. During this time, he identified hundreds of thousands of aquatic invertebrate specimens to genus level. He also collected and sorted thousands of samples.

Other responsibilities he had were to calculate invertebrate community metrics, train field and lab technicians in proper protocols, conducting field reconnaissance, overseeing the daily operations of the aquatics laboratory, fish sampling and visual estimations, provide supplemental taxonomic training, and preparing presentations and papers as needed.

Greg also worked as a private consultant on various projects between 1996 and 2001 with several private contractors and a county stormwater assessment program. In these instances, Greg provided taxonomic identifications and sorting.

Since joining EcoAnalysts Greg has been trained to and now identifies Oligochaeata.

Education
B.S. Wildlife Conservation and Management, Missouri State University

Technical Training
Taxonomy, Systematics, and Ecology of the Freshwater Oligochaetes of North America Workshop. 2009. Hosted by EcoAnalysts, Inc. Mark Wetzel, instructor.

Certification
NABS Certified Taxonomist – Chironomidae East
NABS Certified Taxonomist – Chironomidae West

WILLIAM LAVOIE – AQUATIC INVERTEBRATE TAXONOMIST

Bill joined EcoAnalysts in 2009 as a general taxonomist. Previously he worked for Rhithron Associates in Missoula, Montana as a taxonomist.

Bill is a fisheries biologist with expertise in aquatic macroinvertebrate taxonomy, salmonid ecology, hydroelectric facilities, fish passage, stream habitat assessment, fish population assessment, periphyton taxonomy, ESA/NEPA documentation (BA, EA, EIS), habitat conservation plans, impact assessments, and watershed planning. His professional experience is split between taxonomic identification and enumeration of aquatic macroinvertebrates and non-diatom periphyton.

In addition to five years of experience in environmental consulting, Bill completed seven years of fish passage and transportation-related research on the Lower Snake and Columbia Rivers. Bill has experience as a taxonomy project coordinator overseeing taxonomic protocols, quality assurance, and data review, which is primarily used to calculate benthic indices of biotic integrity (BIBI) for Clean Water Act compliance and monitoring of surface waters.

Bill has experience writing technical and non-technical proposals, budgets, and reports, presenting proposals and research findings, design and construction of research equipment, and considerable field experience. Previously a lead invertebrate and non-diatom periphyton taxonomist with Rhithron Associates, Bill also supervised a wet laboratory and the collection/storage of fish blood and tissue samples.

With numerous unlisted technical reports, and six peer-reviewed fisheries research publications, Bill has also served as a peer-reviewer for two professional journals, and served a term as co-chair of the American Fisheries Society Public Visibility Committee.

Education
M.S. Zoology and Physiology (Fisheries), University of Wyoming (1993)
B.S. Fish and Wildlife Resources, Michigan State University (1990)

Training
Taxonomy, Systematics, and Ecology of the Freshwater Oligochaetes of North America Workshop. 2009. Hosted by EcoAnalysts, Inc. Mark Wetzel, instructor.

Certifications
NABS Certified Taxonomist- EPT West
NABS Certified Taxonomist- EPT East
NABS Certified Taxonomist- General Arthropods West
NABS Certified Taxonomist- General Arthropods East

4) List of Taxonomic References

The following is a partial list of taxonomic keys and references used by EcoAnalysts for identifying macroinvertebrates and periphyton in the Eastern United States region. EcoAnalysts taxonomists frequently use over 200 individual articles, papers, and handbooks to address taxonomy at the genus and species level. Collectively, our library consists of over 5,000 taxonomy, ecology, and bioassessment references from around the globe.

General References

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Merritt, R. W. and K.W. Cummins (eds.). 1996. An introduction to the Aquatic Insects of North America (2nd ed.). Kendall/Hunt Publishing Co., Dubuque, Iowa.

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Pennak, Robert W. 1989. Freshwater Invertebrates of the United States (3rd ed.). John Wiley & Sons, Inc, New York.

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Thorpe, J.H., A.P. Covich (eds.). 2001. Ecology and Classification of North American Freshwater Invertebrates (2nd ed.). Academic Press, Inc., San Diego California.

Ephemeroptera

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Allen, R.K., G.F. Edmunds Jr. 1961. A revision of the genus Ephemerella (Ephemeroptera: Ephemerellidae). III. The subgenus Attenuatella. Journal of the Kansas Entomological Society 34: 161-173.

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Allen, R.K., G.F. Edmunds Jr. 1963. A revision of the genus Ephemerella (Ephemeroptera: Ephemerellidae). VI. The subgenus Serratella in North America.. Annals of the Entomological Society of America 56: 583-600.

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Bednarik, A.F., W.P. McCafferty. 1979. Biosystematic revision of the genus Stenonema (Ephemeroptera: Heptageniidae). Canadian Bulletin of Fisheries and Aquatic Science 201: 73 pp.

Burks, D.B. 1953. The Mayflies, or Ephemeroptera of Illinois. Bulletin of the Illinois Natural History Survey 26: 216 pp.

Funk, D.H., B.W. Sweeney. 1994. The larvae of eastern North American Eurylophella Tiensuu (Ephemeroptera: Ephemerellidae). Transactions of the American Entomological Society 120: 209-286.

Jacobus, L.M., and W.P. McCafferty. 2006. A new species of Acentrella Bengtsson (Ephemereoptera:Baetidae) from Great Smoky Mountains National Park, USA. Aquatic Insects 28(2): 101-111.

Lewis, P.A. 1974. Taxonomy and Ecology of Stenonema Mayflies (Heptageniidae: Ephemeroptera). National Environmental Research Center, Office of Research and Development, U.S. Environmental Protection Agency, Cincinnati, Ohio. EPA-670/4-74-006.

Lugo-Ortiz, C.R., W.P. McCafferty. 1998. A new North American genus of Baetidae (Ephemeroptera) and key to Baetis complex genera. Entomological News 109: 345-353.

McCafferty, W.P. 1975. The burrowing mayflies of the United States (Ephemeroptera:Ephemeroidea). Transactions of the American Entomological Society 101:447-504

McCafferty, W.P., R.D. Waltz, J.M. Webb, and L.M. Jacobus. 2005. Revision of Heterocloeon (Ephemeroptera:Baetidae) 11pp. Journal of Insect Science 5:35

McCafferty, W.P., R.P. Randolph. 2000. Further contributions to the spatulate clawed Baetidae (Ephemeroptera). Entomological News 11: 259-264.

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McCafferty, W.P., R.D. Waltz. 1995. Labiobaetis (Ephemeroptera: Baetidae): new status, new North American species, and related new genus. Entomological News 106: 19-28.

McCafferty, W.P., M.J. Wigle, R.D. Waltz. 1994. Systematics and biology of Acentrella turbida (McDunnough) (Ephemeroptera: Baetidae). Pan-Pacific Entomologist 70: 301-308.

Morihara, D.K., W.P. McCafferty. 1979. The Baetis larvae of North America (Ephemeroptera: Baetidae). Transactions of the American Entomological Society 105: 139-221.

Morihara, D.K., W.P. McCafferty. 1979. The evolution of Heterocloeon, with the first larval description of Heterocloeon frivolus comb. n. (Ephemeroptera: Baetidae). Aquatic Insects.

Muller-Liebenau, I. 1974. Rheobaetis: A new genus from Georgia (Ephemeroptera: Baetidae). Annals of the Entomological Society of America.

Provonsha, A.V. 1990. A revision of the genus Caenis in North America (Ephemeroptera: Caenidae). Transactions of the American Entomological Society.

Waltz, R. D., D.E. Baumgartner, J.H. Kennedy. 1996. An atypical larval color form of Baetis intercalaris (Ephemeroptera: Baetidae) from Pennsylvania and the Kiamichi River basin of southeastern Oklahoma. Entomological News 107: 83-87.

Waltz, R.D., W.P. McCafferty. 1987. Systematics of Psuedocloeon, Acentrella, Baetiella, and Liebebiella, new genus (Ephemeroptera: Baetidae). Journal of the New York Entomological Society.

Waltz, R.D., W.P. McCafferty. 1987. New genera of Baetidae for some Nearctic species previously included in Baetis Leach (Ephemeroptera). Annals of the Entomological Society of America.

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Wiersema, N.A, C.R Nelson, and K.F Kuehnl. 2004. A New Small Minnow Mayfly (Ephemeroptera: Baetidae) from Utah, USA. Entomological News 115(3):139-145.

Odonata

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Hitchcock, S.W. 1974. Guide to the Insects of Connecticut: Part VII. The Plecoptera or Stoneflies of Connecticut. State Geological and Natural History Survey of Connecticut, Department of Environmental Protection, Hartford Connecticut.

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5) EcoAnalysts QA/QC Procedures

With 16 years of experience in benthic invertebrate sorting, identification, and enumeration, EcoAnalysts has a clear and thorough knowledge of the technical aspects of this project. Our team of dedicated sorting technicians and NABS-certified taxonomists provide accurate and defendable data that government regulators in the U.S. and Canada have come to rely on heavily throughout our many years of service and collaboration. Every step, from sample receipt through data delivery, is carefully and efficiently completed, with documented Quality Assurance and Quality Control QA/QC measures that meet or exceed the requirements of each project's specific protocols.

Sorting QA/QC: To ensure every sample meets a standard minimum level of sorting efficiency, EcoAnalysts' sorting quality assurance is maintained by re-sorting at least 100% of 4% of the samples will be resorted for QC.

The sorted sample is quality checked by a specially trained and designated sorting quality control technician (this will never be the technician who originally sorted the sample).

The QC technician re-sorts 100% of the sorted fraction of each sample to check if at least 90% of the organisms have been removed. An estimated percent efficiency is calculated by dividing the number of organisms found in the original sort by the total number of organisms estimated to be in the sorted material, based on those found in the quality control re-sort, using the following equation:

$$\text{SortingEfficacy} = \frac{\text{OriginalCount}}{\text{OriginalCount} + \left(\frac{\text{QACount} * \text{QASquares}}{\text{QTSquares}} \right)} * 100$$

Where:

OriginalCount = the number of organisms picked by the first sorter
QACount = the number of organisms found in the Quality Control sort
QASquares = the number of grids sorted during the QA process
QTSquares = the total number of grids in the QA Caton

Sorting efficiency is measured as the estimated percent of the total organisms found during the original sorting process. If the estimated percent sorting efficiency is 90% or greater, the sample passes the quality control check. If the estimate is less than 90%, the sample is re-sorted. When this happens, the sample undergoes the quality control process again until it passes the 90% efficiency requirement.
Sorting quality control data is recorded on the bench sheet and entered into the database for documentation. Organisms found during the QC process are added to those found during the sort. A quality control report will be generated and provided.

Taxonomy QA/QC: To ensure every sample meets a standard minimum level of taxonomic identification efficiency, EcoAnalysts' standard taxonomy quality control is maintained by re-identifying at least 10% of the samples that are processed in the lab.

Five percent of the samples will be randomly selected for re-identification by a QC taxonomist where all specimens in a sample that were not set aside for the reference collection will be re-identified.

Percent similarity is calculated using the Wittaker Coefficent of Community model (1975) model to compare both sets of data. The Jacccard similarity index will be used to document the similarity between the identifications of the original taxonomist and the QC check. The minimum required similarity is 90%.

Both taxonomists meet and discuss any discrepancies, either by re-examining the specimens or discussion, depending upon the nature of the difference. The final data will be adjusted according to the recommendations of both taxonomists. If requested, reconciliation reports are written and delivered to the client as part of the overall Quality Control Report.

A reference collection will be maintained and checked by a second taxonomist. All taxa which have not previously been encountered in the project shall be submitted to an independent specialist for identification. Specimens on slides will be provided with a key to link each specimen to the associated data.

West Virginia DEP Quality Control Requirements

As detailed in pages 22-23 of West Virginia DEP's Request for Quotation for this project, the following procedures shall be carefully followed in addition to EcoAnalysts' standard QC procedures:

1. EcoAnalysts will retain all voucher specimens and establish reference collections for this project, arranged based on taxonomic and/or phylogenic order, which will be delivered to DEP/DWWM at the contract period, or upon request if desired earlier.
2. EcoAnalysts will compile genus-level reference and voucher collections to be submitted.
3. With the exception of organisms approved to be used in the laboratories' internal reference collection, all specimens identified in the 200-organism subsamples will be returned to DEP/DWWM.
4. EcoAnalysts will evaluate sorting efficiency for 5% of all samples, and recovery errors shall not exceed 10% of the total sample. A record of all samples sorted, a list of quality control checks, and documentation of any corrective action taken will be maintained by EcoAnalysts to document the process, and will be provided to DEP/DWWM each time taxonomic results are submitted.
5. EcoAnalysts will re-identify a minimum of 5% of the samples, and a taxonomist other than the original identifier will perform this check.
6. EcoAnalysts will notify DEP/DWWM if of any significant changes in taxonomy occur during the life of this contract and provide supporting references.
7. DEP/DWWM biologists and/or another contract laboratory will verify identifications for a minimum of 2.5% of the samples. EcoAnalysts understands that we will be advised upon analysis of the two identifications if significant differences in identification are encountered, and that cancellation of the contract will result if discrepancies continue.

External QA/QC Analysis of EcoAnalysts' Lab

The following is a summary of the results of this most recent external QA/QC analysis of our own macroinvertebrate taxonomy laboratory. As you will see in the Summary Statistics, the Average PDE is 0.9% (<5%) and the Average PTD is 10.4% (<15%).

TETRA TECH

Taxonomic Data Quality Control Report

Analysis completed (date)	March 17, 2010
Report completed (date)	March 25, 2010
Tetra Tech project number	100-FFX-T24485-1504
Project name	National Lakes Assessment, Taxonomic QC, Benthic macroinvertebrates
Client	US Environmental Protection Agency, Office of Oceans, Wetlands, and Watersheds, Assessment and Watershed Protection Division (USEPA/OWOW/AWPD)
Client contact	Dr. Richard Mitchell (202-566-0644)
Primary taxonomist(s)	EcoAnalysts, Inc. (T1, multiple taxonomists)
QC taxonomist(s)	Mr. Michael Winnell (T2, Freshwater Benthic Services)
QC analyst	J. Stribling

Test conditions and narrative summary – As part of the USEPA National Lakes Assessment (NLA), there were a total of 1,189 littoral benthic macroinvertebrate samples collected from as many lakes throughout the US. The decision was made to perform this analysis on those samples with >300 organisms, and as a result of that filter, the sample lot for this QC evaluation was made up of 960 samples. Thus, there were 96 benthic macroinvertebrate samples (mostly around 500 organisms each, but all >300) randomly selected as 10% of the overall sample lot. Further, to standardize regional representation, the 96 samples were stratified by state, so that the QC samples were distributed among states in proportion to the number of lakes sampled in each state.

Primary sample sorting and taxonomic identifications for the 1,189 samples were done by EcoAnalysts, Inc., the latter by using several taxonomists with either specialization in certain groups (such as Chironomidae and Oligochaeta), or broad and in-depth expertise in all groups. Taxonomic identifications on all QC samples (n=96) were done by Freshwater Benthic Services (FBS) with a single taxonomist. These taxonomic comparison results (taxcomp) represent a direct comparison of identification results by independent taxonomists in separate laboratories. Although not specifically presented in this report, records are maintained, and available upon request, of the individual taxonomists who did the primary identifications. For these analyses, the primary identifications performed by EcoAnalysts are always represented as T1, and the QC identifications performed by FBS, as T2.

The QC results presented in this report are based on 96 samples, and is cumulative of the four 24-batch analyses that have been completed since January 2010. FBS (T2) received the samples from EcoAnalysts (T1) as sets of vials and oligochaete slides with the vial specimens preserved in approximately 95% ethanol; no results were sent to T2, thus, this exercise represents a blind comparison. T1 does not routinely slide-mount chironomids, but their technique is also not morphotyping – they examine every specimen. Following slide-mounting of those specimens, T2 identified all specimens in the samples. The QC analysts received spreadsheet results from each of T1 and T2, and performed the taxonomic comparisons, using the same approach as was used for the Wadeable Streams Assessment.

TETRA TECH

The mean percent taxonomic disagreement (PTD) for the overall NLA benthic dataset is 10.4, substantially better than the programmatic 15% measurement quality objective (MQO). Overall, the comparisons were very good, with 17 samples (out of 96) exceeding the MQO. Sample PTD ranged from 0.4-32.2%. The sample with the highest PTD of 32.2% was primarily due to identification results of Oligochaeta (worms), exhibited primarily as hierarchical differences among *Nais*, *Dero*, and Naididae. Substantial differences in overall specimen counts in samples were rarely evident, with percent difference in enumeration (PDE) ranging from 0.1-5.6%, the average of 0.9% substantially below the MQO of 5%. However, the one sample exceeding the PDE/MQO was due to approximately 40 midges that were apparently missing from the T2 count. The latter went back and confirmed the count; that difference remains unexplained.

Rates of error in the overall NLA benthic dataset are relatively trivial, and thus, the overall data quality is acceptable for additional analyses. There has been substantial interaction among all taxonomists, T1 and T2, to standardize some of the nomenclature, and which has contributed to the low error rate.

Standard operating procedures (SOP) for identifications documented and provided to all primary and QC taxonomists? Yes.

Additional comments: None.

SUMMARY STATISTICS (by sample lot)

Number of samples	96
Percent of sample lot	10%
Percent taxonomic disagreement (PTD)	
Average	10.4
Standard deviation	6.2
Measurement quality objective	15
Percent difference in enumeration (PDE)	
Average	0.9
Standard deviation	0.8
Measurement quality objective	5
Percent taxonomic completeness (PTC, absolute difference)	
Average	4.4
Standard deviation	4.9
Measurement quality objective	none designated

Hierarchical Target Levels

The lowest targeted taxonomic level will be genus, unless otherwise indicated below. For all taxonomic groups, if specimens can easily be identified to more detailed levels , for example, the specific epithet for monotypic genera, or if only one genus or species is known to occur in a certain geographic area, then these specimens should be recorded at the lowest possible taxonomic level (e.g., Ephemerellidae Drunella doddsl). If the minimum taxonomic level cannot be achieved due to early instars or damage, this should be noted in the data file with a "flag" variable

6) Deliverables to Be Returned to DEP/DWWM

Data Compilation and Delivery

The following are EcoAnalysts data compilation and delivery procedures, which will be tailored to the State of Virginia's specifications.

Throughout project and sample analysis, data entry is double checked for accuracy. Using networked computer systems, appropriate data are combined for each sample to obtain sorting statistics and comprehensive taxa lists and counts. Various metrics calculations are available from EcoAnalysts' proprietary Laboratory Information Management System (LIMS). Other metrics calculations, including Benthic Invertebrate Indices, are available upon request.

Data will be delivered in an electronic format specified by the client and emailed to the technical contact(s). Hard copies and/or copies on compact disc can be mailed to the client upon request. All laboratory reports, including sample data (taxa report), and sorting and taxonomy quality control reports will be delivered to the client within the specified timeframe.

All samples will be returned to the client.

EcoAnalysts, Inc. retains all raw data files used and derived in our projects.

As a further safeguard to ensure nomenclature accuracy in data entry, EcoAnalysts' state-of-the-art macroinvertebrate laboratory employs proprietary LIMS software on computers located at each taxonomist's workstation. As the sample is being identified, the taxonomist enters data directly into our custom-built Laboratory Information Management System (LIMS), thereby avoiding the potential for transcription errors in transferring data from paper to electronic files. This safeguard also guarantees that the person most qualified to recognize potential data entry errors, the taxonomist, is the only person handling the information entered into LIMS.

Sample Components Retention and Return

Processed sample components may include coolers, sorted and unsorted residues preserved in ethanol in jars and all identified organisms preserved in ethanol and/or slide mounted, including reference collection specimens.

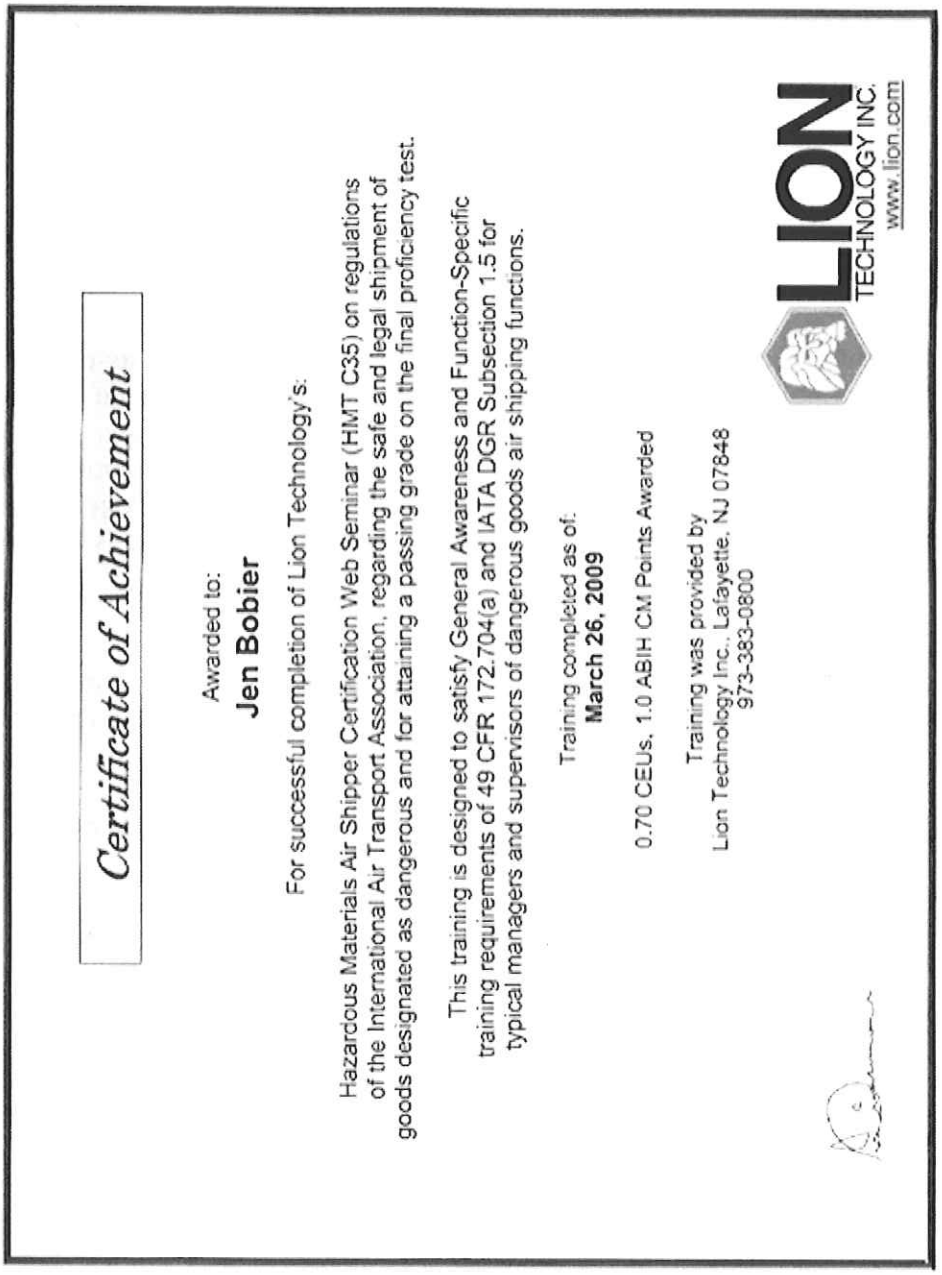
Components will be retained separately and returned to West Virginia DEP upon completion of sample processing.

Each component will be appropriately labeled with the sample identification number, date, and other relevant information such as sorting technician and taxonomist.

Sample components will be returned with chain of custody forms and according to the Department of Transportation (DOT) and International Air Transportation Association (IATA) rules and regulations for offering hazardous materials for shipment. Please see Appendix A for EcoAnalysts' certifications for shipping hazardous materials.

Appendix A: Certifications for Shipping and Handling of Hazardous Materials

EcoAnalysts' shipping coordinator, Jen Bobier, maintains current certifications for shipping, receiving, and handling hazardous materials. She has extensive experience in managing this delicate process and her careful oversight of all aspects of sample transmission ensures reliable, safe, and legal shipment and receipt of samples preserved in alcohol according to the Code of Federal Regulations, Title 49, and the International Air Transportation Association regulations. We are also registered with FedEx to ship hazardous materials, although we understand that West Virginia DEP requires EcoAnalysts to provide sample pick-up and delivery services and without using commercial transport for this project. The following are copies of Jen Bobier's certificates of training completed for Hazardous Materials Air Shipper Certification and HMT-S30 Shipping Hazardous Materials – Compliance Management.



Certificate of Achievement

Awarded to:

Jen Bobier

For successful completion of Lion Technology's:

Hazardous Materials Air Shipper Certification Web Seminar (HMT C35) on regulations of the International Air Transport Association, regarding the safe and legal shipment of goods designated as dangerous and for attaining a passing grade on the final proficiency test.

This training is designed to satisfy General Awareness and Function-Specific training requirements of 49 CFR 172.704(a) and IATA DGR Subsection 1.5 for typical managers and supervisors of dangerous goods air shipping functions.

Training completed as of:
March 26, 2009

0.70 CEUs, 1.0 ABIH CM Points Awarded

Training was provided by
Lion Technology Inc., Lafayette, NJ 07848
973-383-0800

LION TECHNOLOGY INC.
www.lion.com

Certificate of Achievement

This certificate is awarded to:

Jen Bobier

For successful completion of Lion Technology's Online Training Program

HMT-S30 Shipping Hazardous Materials — Compliance Management

This training is designed to satisfy the General Awareness and Function-Specific training requirements of 49 CFR 172.704(a) for typical managers and supervisors of hazardous materials transportation functions.
Training was conducted by Lion Technology Inc., 21 Sunset Inn Road, Lafayette, NJ 07848 (973-383-0800).

Individual Courses Completed:

EHS-101 Regulatory Literacy
HMT-101 Hazmat General Awareness
HMT-224 Hazmat Shipping Paperwork
HMT-225 Hazmat Marking & Labeling
HMT-226 Hazmat Placarding
HMT-227 Loading/Unloading Motor Vehicles
HMT-229 Offering Hazardous Materials
HMT-310 Hazmat Classification
HMT-320 Selecting Proper Shipping Names
HMT-330 Hazmat Packaging Rules
HMT-335 Specifying Hazmat Packaging
HMT-380 Hazmat Security, Incidents & Reporting
HMT-390 Hazmat Compliance Administration & Training

Director, EHS Training

As of: March 23, 2009

1.2 CEU's Awarded

LION TECHNOLOGY INC. www.lion.com

Appendix B: Letter of Recommendation

Below is a recent example of the level of customer service and customer satisfaction that EcoAnalysts aims to provide each of our clients.

Center for Ecological Sciences

Tetra Tech, Inc.
400 Red Brook Blvd., Suite 200
Owings Mills, MD 21117-5159
phone 410-356-8993
fax 410-356-9005

March 25, 2010

Mr. Gary T. Lester, President
EcoAnalysts, Inc.
1420 S. Blaine St., Suite 14
Moscow, ID 83843

Dear Gary,

I would like to offer this letter in recognition of the high quality and substantial volume of technical work EcoAnalysts, Inc. has provided under contract and in support of state, regional, and national biological monitoring and assessment initiatives. In particular, as you know, I have used your staff for benthic macroinvertebrate sample sorting, subsampling, and taxonomic identifications intermittently for over ten years; and, I have also worked with them on various aspects of USEPA's National Aquatic Resource Surveys, especially the National Lakes Assessment (NLA). For the NLA, EcoAnalysts' biologists provided support to the USEPA in sample processing and taxonomic identification for zooplankton, phytoplankton, and benthic macroinvertebrate samples.

Part of their scope of work for the NLA required participation in rigorous quality control (QC) evaluations. Occasionally when performing these QC analyses, I have encountered some resistance and defensiveness from individuals in the primary taxonomic laboratory; such has not been the case with your staff. They have, almost without exception, participated in the QC process with a collective attitude that can only be described as positive and cooperative, and always with focused and timely response to technical issues that may arise.

To summarize my experience with EcoAnalysts, Inc., your technical involvement in ecological/ environmental projects has always been beneficial and has contributed substantially to improving the technical quality of outcomes. The staff has always projected a professional attitude, with attention to detail, and a commitment to technical customer satisfaction. I look forward to their future involvement in projects.

Sincerely,

James B. Stribling, Ph.D.
Director

Tetra Tech, Inc.

DEP15456
BID SHEET

Item No.	Quantity	Description	Unit Price	Amount
A	500	Per sample un-sorted, identified to Genus level: 200-organism subsample	$230	115,000
E	4	Per each "sample pick-up/delivery" not "per sample" (Assume 100 samples per pickup)	$500	2,000
F	5 hr	Cost/hour for professional staff representation of data in legal/administrative setting	$150	750

* Whole sample sort & ID = $750/sample

TOTAL = 117,750

Contractor: Eco Analysts, Inc.

Signature: Kaylani Mensel

Date: June 22, 2011

Quantities listed on the bid schedule are for bid evaluation purposes only and are not a guarantee of quantities to be ordered over the life of the contract. Actual quantities ordered may be more or less than those stated on this schedule.

BID PREPARATION

The bidder shall include the information below with their bid. The contract award will be made to the qualified vendor with the lowest bid. We expect to collect approximately 500 samples per year, however there is no minimum number of samples that will be sent to the successful bidder. **Omission of any of the information listed below may result in disqualification.**

1) Description of how the project will be managed by the contractor.

2) Summary of experience with sorting and identification of benthic macroinvertebrates. Must have minimum of 5 years of experience with sorting / identifying benthic macroinvertebrates.

3) Resumes of taxonomists and copies of NABS certifications shall be included in the bid package.

4) List of taxonomic references used in the identification of all specimens.

5) Description of vendor's internal QA/QC procedures, stating specifically how errors are tracked and resolved, which will insure the highest level of accuracy in both the sorting and identifying processes.

6) Specific description of product that will be returned to DEP/DWWM (i.e., reporting format, specimens, etc.)

RFQ No. DEP15456

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

West Virginia Code §5A-3-10a states: No contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and the debt owned is an amount greater than one thousand dollars in the aggregate

DEFINITIONS:
"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Debtor" means any individual, corporation, partnership, association, Limited Liability Company or any other form or business association owing a debt to the state or any of its political subdivisions. "Political subdivision" means any county commission; municipality; county board of education; any instrumentality established by a county or municipality; any separate corporation or instrumentality established by one or more counties or municipalities, as permitted by law; or any public body charged by law with the performance of a government function or whose jurisdiction is coextensive with one or more counties or municipalities. "Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceed five percent of the total contract amount.

EXCEPTION: The prohibition of this section does not apply where a vendor has contested any tax administered pursuant to chapter eleven of this code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

Under penalty of law for false swearing (*West Virginia Code* §61-5-3), it is hereby certified that the vendor affirms and acknowledges the information in this affidavit and is in compliance with the requirements as stated.

WITNESS THE FOLLOWING SIGNATURE

Vendor's Name: EcoAnalysts, Inc.

Authorized Signature: _____ Date: 6-22-11

State of Idaho

County of Latah, to-wit:

Taken, subscribed, and sworn to before me this 22 day of ~~December~~ June, 20 11.

My Commission expires May 26, 20 16.

AFFIX SEAL HERE

NOTORY PUBLIC _____

GABRIELLE CORNER
Notary Public
State of Idaho

Rev. 09/08

State of West Virginia

VENDOR PREFERENCE CERTIFICATE

Certification and application* is hereby made for Preference in accordance with *West Virginia Code*, §5A-3-37. (Does not apply to construction contracts). *West Virginia Code*, §5A-3-37, provides an opportunity for qualifying vendors to request (at the time of bid) preference for their residency status. Such preference is an evaluation method only and will be applied only to the cost bid in accordance with the *West Virginia Code*. This certificate for application is to be used to request such preference. The Purchasing Division will make the determination of the Resident Vendor Preference, if applicable.

1. **Application is made for 2.5% resident vendor preference for the reason checked:**
___ Bidder is an individual resident vendor and has resided continuously in West Virginia for four (4) years immediately preceding the date of this certification; or,
___ Bidder is a partnership, association or corporation resident vendor and has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; or 80% of the ownership interest of Bidder is held by another individual, partnership, association or corporation resident vendor who has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; or,
___ Bidder is a nonresident vendor which has an affiliate or subsidiary which employs a minimum of one hundred state residents and which has maintained its headquarters or principal place of business within West Virginia continuously for the four (4) years immediately preceding the date of this certification; or,

2. **Application is made for 2.5% resident vendor preference for the reason checked:**
___ Bidder is a resident vendor who certifies that, during the life of the contract, on average at least 75% of the employees working on the project being bid are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; or,

3. **Application is made for 2.5% resident vendor preference for the reason checked:**
___ Bidder is a nonresident vendor employing a minimum of one hundred state residents or is a nonresident vendor with an affiliate or subsidiary which maintains its headquarters or principal place of business within West Virginia employing a minimum of one hundred state residents who certifies that, during the life of the contract, on average at least 75% of the employees or Bidder's affiliate's or subsidiary's employees are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; or,

4. **Application is made for 5% resident vendor preference for the reason checked:**
___ Bidder meets either the requirement of both subdivisions (1) and (2) or subdivision (1) and (3) as stated above; or,

5. **Application is made for 3.5% resident vendor preference who is a veteran for the reason checked:**
___ Bidder is an individual resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard and has resided in West Virginia continuously for the four years immediately preceding the date on which the bid is submitted; or,

6. **Application is made for 3.5% resident vendor preference who is a veteran for the reason checked:**
___ Bidder is a resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard, if, for purposes of producing or distributing the commodities or completing the project which is the subject of the vendor's bid and continuously over the entire term of the project, on average at least seventy-five percent of the vendor's employees are residents of West Virginia who have resided in the state continuously for the two immediately preceding years.

Bidder understands if the Secretary of Revenue determines that a Bidder receiving preference has failed to continue to meet the requirements for such preference, the Secretary may order the Director of Purchasing to: (a) reject the bid; or (b) assess a penalty against such Bidder in an amount not to exceed 5% of the bid amount and that such penalty will be paid to the contracting agency or deducted from any unpaid balance on the contract or purchase order.

By submission of this certificate, Bidder agrees to disclose any reasonably requested information to the Purchasing Division and authorizes the Department of Revenue to disclose to the Director of Purchasing appropriate information verifying that Bidder has paid the required business taxes, provided that such information does not contain the amounts of taxes paid nor any other information deemed by the Tax Commissioner to be confidential.

Under penalty of law for false swearing (West Virginia Code, §61-5-3), Bidder hereby certifies that this certificate is true and accurate in all respects; and that if a contract is issued to Bidder and if anything contained within this certificate changes during the term of the contract, Bidder will notify the Purchasing Division in writing immediately.

Bidder: NA Signed: _____

Date: _____ Title: _____

Check any combination of preference consideration(s) indicated above, which you are entitled to receive.