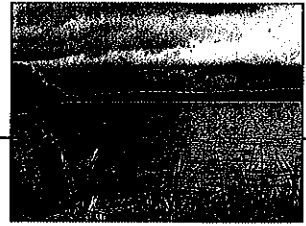


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**Section One**                      **CDM TMDL Vendor Qualification  
Questionnaire**

**Section Two**                      **WSA TMDL Vendor Qualification  
Questionnaire**

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PROCEEDINGS DIVISION  
STATE OF WV

**WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION  
TMDL VENDOR QUALIFICATION QUESTIONNAIRE Attachment A**

PROJECT NAME Monongahela River Watershed TMDL Project		DATE (DAY, MONTH, YEAR) November 18, 2010	FEIN 04-247 3650
1. FIRM NAME CDM Inc.		2. HOME OFFICE BUSINESS ADDRESS 2740 Smallman St., Suite 100 Pittsburgh, PA 15222	3. FORMER FIRM NAME NA
4. HOME OFFICE TELEPHONE 412-201-5500	5. ESTABLISHED (YEAR) 1947	6. TYPE OWNERSHIP Corporation	

7. PRIMARY TMDL DEVELOPMENT OFFICE: ADDRESS/ TELEPHONE/ PERSON IN CHARGE/ NO.OF TMDL DEVELOPMENT PERSONNEL IN OFFICE  
 2740 Smallman St., Suite 100  
 Pittsburgh, PA 15222  
 412-201-5500  
 Matthew R. Sickles, P.E., Vice President  
 Regional experts: 40 TMDL Experts  
 National experts: 200 TMDL Experts

8. NAMES OF PRINCIPAL OFFICERS OR MEMBERS OF FIRM  
 Richard Fox, Chairman and CEO  
 John Manning, President and Chief Operating Officer  
 Paul Brown, Executive Vice President  
 Paul Camell, Executive Vice President

8a. NAME, TITLE, & TELEPHONE NUMBER - OTHER PRINCIPALS  
 Matthew Sickles, Vice President, 412-201-5500  
 Jason Venier, Associate, 412-201-5500  
 Christopher Calpin, Senior Vice President, 513-583-9800  
 Randy Rogers, Senior Vice President, 312-346-5000

9. PERSONNEL BY DISCIPLINE

68 CONTRACT	80 WATERSHED ANALYST(S)	— OTHER (LIST BELOW)
ADMINISTRATOR(S)	26 SOILS SPECIALIST(S)	—
67 PROGRAM MANAGER(S)	500 TECHNICAL EXPERT(S)	—
975 PROJECT MANAGER(S)	50 TECHNICAL WRITER(S)	—
150 QA/QC MANAGER(S)	5 OUTREACH SPECIALIST(S)	—
125 BIOLOGICAL ANALYST(S)	25 SENIOR WATER RESOURCE ENGINEER(S)	
60 MODEL DEVELOPER(S)		

3,947 TOTAL PERSONNEL

10. DO YOU NEED ADDITIONAL EMPLOYEES TO FULFILL THE REQUIREMENTS OF THIS CONTRACT?     YES     NO

11. OUTSIDE KEY CONSULTANTS/SUB-CONSULTANTS ANTICIPATED TO BE USED. Attach "TMDL Vendor Qualification Questionnaire".

<p><b>NAME AND ADDRESS:</b>                  Wilbur Smith Associates                  Geary Plaza, Suite 210                  700 Washington Street, East                  Charleston, WV 25301</p>	<p><b>SPECIALTY:</b>                  Surveying, Field Work</p>	<p><b>WORKED WITH BEFORE</b>                  X                  Yes                  No</p>
<p><b>NAME AND ADDRESS:</b></p>	<p><b>SPECIALTY:</b></p>	<p><b>WORKED WITH BEFORE</b>                  Yes                  No</p>
<p><b>NAME AND ADDRESS:</b></p>	<p><b>SPECIALTY:</b></p>	<p><b>WORKED WITH BEFORE</b>                  Yes                  No</p>
<p><b>NAME AND ADDRESS:</b></p>	<p><b>SPECIALTY:</b></p>	<p><b>WORKED WITH BEFORE</b>                  Yes                  No</p>
<p><b>NAME AND ADDRESS:</b></p>	<p><b>SPECIALTY:</b></p>	<p><b>WORKED WITH BEFORE</b>                  Yes                  No</p>
<p><b>NAME AND ADDRESS:</b></p>	<p><b>SPECIALTY:</b></p>	<p><b>WORKED WITH BEFORE</b>                  Yes                  No</p>
<p><b>NAME AND ADDRESS:</b></p>	<p><b>SPECIALTY:</b></p>	<p><b>WORKED WITH BEFORE</b>                  Yes                  No</p>
<p><b>NAME AND ADDRESS:</b></p>	<p><b>SPECIALTY:</b></p>	<p><b>WORKED WITH BEFORE</b>                  Yes                  No</p>

12. A. Is your firm's personnel experienced in development of TMDLs for total recoverable metal?

YES Description and Number of Projects: 17

- Ballona Creek TMDL Implementation Plans for Metals, Bacteria and Toxicity, Los Angeles, CA
- Total Maximum Daily Load Development (15 projects), State of Illinois
- South Platte Urban Watershed TMDL Study, Denver, CO

B. Is your firm experienced in development of TMDLs for dissolved metals/pH?

YES Description and Number of Projects: 32

- Total Maximum Daily Load Development, State of Illinois

C. Is your firm experienced in development of TMDLs for bacteria impairments?

YES Description and Number of Projects: 18

- TMDL Development, Indianapolis Department of Environmental Management
- Ballona Creek TMDL Implementation Plans for Metals, Bacteria and Toxicity, Los Angeles, CA
- Total Maximum Daily Load Development, State of Illinois
- Middle Santa Ana River Bacteria TMDL Implementation, SAWPA, Santa Ana River Watershed, Southern California
- TMDL Plan-Bacteria, Michigan Department of Environmental Quality, MI
- Santa Monica Bay Beaches Wet Weather Bacteria TMDL Implementation Plan, Jurisdictions 2 and 3, Los Angeles, CA
- Santa Monica Bay Beaches TMDL Implementation Plan, Jurisdictions 5 and 6, Los Angeles, CA

D. Is your firm experienced in development of TMDLs for biological impairments?

YES Description and Number of Projects: 10

- Total Maximum Daily Load Development, State of Illinois
- Ballona Creek TMDL Implementation Plans for Metals, Bacteria and Toxicity, Los Angeles, CA
- Rock River Sediment and Phosphorus TMDL, USEPA and Wisconsin Department of Natural Resources, WI

E. Does your firm utilize a statistical biological model which assigns probabilities for likely stressors impacting benthic macroinvertebrate assemblages based on species-level taxonomy?

YES Description and Number of Projects: 25

- Denver International Airport Receiving Water Study, CO
- Habitat Study, South Plate River, Metro Wastewater Reclamation District, CO
- Pine River Ecological Risk Assessment Superfund Site, Michigan DNRE, St. Louis, MI
- Rouge River Wet Weather Demonstration Project, Wayne County Department of Environment, Detroit, MI
- Kalamazoo River Ecological Risk Assessment-Superfund Site, Michigan DNRE, Kalamazoo, MI
- American Water Macroinvertebrate Survey, Merrimac River, St. Louis, MO

12. F. Is your firm experienced with the LSPC/MDAS or equivalent modeling system in TMDL development.

YES Description and Number of Projects: 20

- Water Quality Model Development (WARMF) for Hangman (Latah) Creek Watershed, Washington Department of Ecology, Washington and Idaho
- TMDLs (WMM, HSPF, WAM, WASP, BATHTUB and EFDC), Florida Department of Environmental Protection, FL
- HSPF Modeling, Lake Whatcom TMDL for total phosphorus and sediment, Washington DOE
- WARMF Model to assess Santa Margarita River's assimilative capacity for nutrients, CA

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR TMDL DEVELOPMENT PROJECTS (Insert additional copies as necessary)

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE: 10			With modeling system(s), e.g., LSPC, MDAS, etc 10
	In EPA-approved TMDL development 10	In TMDL-related projects 10	In TMDL-related projects 10	
Dunavant, Rebecca A. Senior Environmental Scientist				

Brief Explanation of Responsibilities

- Project Manager for the Illinois EPA contract since 2006
- Project Manager, TMDL Data Collection, IEPA
- Project Manager, Oxbow TMDL Development, Mississippi Department of Environmental Quality
- Led large-scale and innovative sampling programs to support TMDL Development in Illinois
- Managed multiple field crews conducting stream gauging, grab sampling, and continuous monitoring for Illinois
- Project manager for the DuPage River/Salt Creek sediment-oxygen demand (SOD) monitoring

EDUCATION (Degree, Year, Specialization) M.S., Environmental Science and Engineering, Colorado School of Mines -- Golden (2003); B.A., Environmental Studies, University of Colorado -- Boulder (2000)

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

- Water Quality Standards Academy, EPA
- Colorado Water Quality Forum

REGISTRATION (Type, Year, State)  
n/a

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR TMDL DEVELOPMENT PROJECTS

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE: 16			With modeling system(s), e.g., LSPC, MDAS, etc 10
	In EPA-approved TMDL development 3	In TMDL-related projects 10	In TMDL-related projects 10	
Bounds, P.E., D.WRE, Daniel G. Principal, Environmental Engineer				

Brief Explanation of Responsibilities

- Senior Advisor, TMDL Public Workshops, IEPA
- Project Manager, Rock River Sediment and Phosphorus TMDL, WI
- TMDL development for programs in Illinois, Wisconsin, California
- Coordination with state and federal agencies

EDUCATION (Degree, Year, Specialization) B.S., - University of Illinois, Urbana-Champaign, Illinois, Civil Engineering (1993); M.B.A., - Eastern Illinois University, Charleston Illinois Business Administration (2001)

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

- Illinois Water Environment Association, Watershed Management Committee Chair and Second Vice President
- Water Environment Federation
- American Council of Engineering Companies
- Alliance for the Great Lakes

REGISTRATION (Type, Year, State)  
Professional Engineer, 2004, Illinois and California

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR TMDL DEVELOPMENT PROJECTS

YEARS OF EXPERIENCE: 25		
NAME & TITLE (Last, First, Middle Int.)	In EPA-approved TMDL development	In TMDL-related projects
Wagner, P.E., D.WRE, Richard A. Principal, Water Resource Engineer	6	6
		With modeling system(s), e.g., LSPC, MDAS, etc 25

Brief Explanation of Responsibilities

- Project Manager/Technical Reviewer, TMDL Modeling Study, Caloosahatchee River Watershed, Florida Department of Environmental Protection (FDEP)
- Technical Reviewer/Water Quality Modeler, TMDL Modeling Study, Upper Kissimmee River Basin, FDEP
- Project Engineer, TMDL Model Selection Memorandum, Kissimmee River Basin, FDEP
- Project Manager/Water Quality Modeler, TMDL Modeling Study, Perdido Bay, FDEP
- Project Manager/Water Quality Modeler, TMDL Modeling Study, Wekiva Lakes Watershed, FDEP

EDUCATION (Degree, Year, Specialization) M.S., Civil Engineering, University of Cincinnati (1983); B.S., Civil Engineering, Marquette University (1981)

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

REGISTRATION (Type, Year, State)  
Professional Engineer, 1989, Virginia and Florida

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR TMDL DEVELOPMENT PROJECTS

YEARS OF EXPERIENCE: 25		
NAME & TITLE (Last, First, Middle Int.)	In EPA-approved TMDL development	In TMDL-related projects
French, Ronald D. Vice President, Ecologist and Aquatic Biologist	8	8
		With modeling system(s), e.g., LSPC, MDAS, etc. 5

Brief Explanation of Responsibilities

- Previous Officer-in-Charge, TMDL Development, Illinois EPA
- Officer-in-Charge Illinois River (OK) Watershed Study
- Project Manager, Perouge Creek Watershed Study, Lake Saint Louis, MO
- Project Manager Chicago Area Waterways UAA Study
- Project Manager, Biological Monitoring Activities, Rouge River National Wet Weather Demonstration Project, Wayne County, MI

EDUCATION (Degree, Year, Specialization) M.A., Biological Sciences, Western State College, Gunnison, Colorado (1985); B.S., Environmental and Systematic Biology, California Polytechnic State University (1980)

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

- American Fisheries Society
- North American Lake Management Society
- Water Environment Federation
- American Council of Engineering Companies of Illinois

REGISTRATION (Type, Year, State)  
n/a

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR TMDL DEVELOPMENT PROJECTS (Insert additional copies as necessary)

NAME & TITLE (Last, First, Middle Int.)		YEARS OF EXPERIENCE: 10	
Cox, Ph.D., P.E., Thomas Water Resources Engineer	In EPA-approved TMDL development 10	In TMDL-related projects 10	With modeling system(s), e.g., LSPC, MDAS, etc. 10
<p>Brief Explanation of Responsibilities</p> <ul style="list-style-type: none"> <li>• Technical Advisor, Illinois EPA Total Maximum Daily Load (TMDL) Studies</li> <li>• Modeling expertise includes BATHTUB, QUAL2K, QUAL2E, WASP, HEC-Ras, HSPF</li> <li>• Experience includes stream ecology and ecosystem modeling, water quality and ecology field and laboratory research, and engineering software development.</li> </ul> <p>EDUCATION (Degree, Year, Specialization) Ph. D. - Engineering Science, University of Auckland, New Zealand (2005); M. Phil. - Science and Technology, University of Waikato, Hamilton, New Zealand (1999); M.S. - Environmental and Water Resources Engineering, University of Colorado, Boulder, Colorado (1997); B.S. - Civil and Environmental Engineering, Duke University(1994)</p>			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS		REGISTRATION (Type, Year, State)	
none		Professional Engineer, 2005, Colorado	

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR TMDL DEVELOPMENTS PROJECTS

NAME & TITLE (Last, First, Middle Int.)		YEARS OF EXPERIENCE: 8	
Bennett, Brian J. Environmental Scientist	In EPA-approved TMDL development 4.5	In TMDL-related projects 5	With modeling system(s), e.g., LSPC, MDAS, etc. 4
<p>Brief Explanation of Responsibilities</p> <ul style="list-style-type: none"> <li>• Project Scientist, TMDL Projects, IEPA</li> <li>• Data analysis and database management using a number of statistical and analytical software programs including MS Access and ArcGIS</li> <li>• Environmental modeling using load-duration curve assessments as well as software packages including QUAL2K and BATHTUB.</li> <li>• Extensive field sampling experience including development of a variety of sampling plans and protocols</li> </ul> <p>EDUCATION (Degree, Year, Specialization) B.S. - Fisheries and Wildlife, University of Missouri-Columbia (2002)</p>			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS		REGISTRATION (Type, Year, State)	
<ul style="list-style-type: none"> <li>• American Fisheries Society</li> <li>• North American Benthological Society</li> </ul>		n/a	



13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR TMDL DEVELOPMENT PROJECTS (Insert additional copies as necessary)

NAME & TITLE (Last, First, Middle Int.)		YEARS OF EXPERIENCE: 6	
In EPA-approved TMDL development	In TMDL-related projects	In EPA-approved TMDL development	In TMDL-related projects
0	0	0	0
<p>Mehrotra, Ph.D., Anna S. Environmental Engineer</p> <p>Brief Explanation of Responsibilities</p> <ul style="list-style-type: none"> <li>Project Engineer, Wet Weather Treatment Alternatives Analysis, Pittsburgh, PA</li> <li>Project Engineer, Process Alternatives Analysis, Knoxville, TN</li> <li>Project Engineer, Process Alternatives Analysis, Dahlgren, VA</li> </ul> <p>EDUCATION (Degree, Year, Specialization) Ph.D. - Environmental Engineering, UC Berkeley (2003); M.S. - Environmental Engineering, Stanford University (1995); B.S. - Mathematics/Applied Science, UCLA (1993)</p>			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS			
<ul style="list-style-type: none"> <li>Water Environment Federation</li> </ul>			

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR TMDL DEVELOPMENT PROJECTS

NAME & TITLE (Last, First, Middle Int.)		YEARS OF EXPERIENCE: 14	
In EPA-approved TMDL development	In TMDL-related projects	In EPA-approved TMDL development	In TMDL-related projects
10	12	10	12
<p>Locke, P.G., Adam L. Data Visualization Specialist/Hydrogeologist</p> <p>Brief Explanation of Responsibilities</p> <ul style="list-style-type: none"> <li>Staff Geologist, U.S. Geological Survey, Pittsburgh, PA</li> <li>GIS Specialist, U.S. Dept. of Energy, Picketon, OH</li> <li>Project Lead/Supervisor, U.S. Navy, Atlantic Division CLEAN II Program, Multiple Locations</li> <li>Information solutions experience includes data management, data visualization, GIS production, Web development, and Web-GIS development</li> </ul> <p>EDUCATION (Degree, Year, Specialization) B.S. - Geosciences, Hydrogeology, The Pennsylvania State University (1996)</p>			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS			
<ul style="list-style-type: none"> <li>Society of American Military Engineers - Sustaining Young Member, Philadelphia Post</li> <li>American Institute of Professional Geologists</li> <li>National Groundwater Association</li> </ul>			
			REGISTRATION (Type, Year, State)
			n/a

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR TMDL DEVELOPMENT PROJECTS (Insert additional copies as necessary)

NAME & TITLE (Last, First, Middle Int.)			YEARS OF EXPERIENCE: 17	
DePra, P.E., BCEE, Daniel J. Senior Environmental Engineer		In EPA-approved TMDL development 0	In TMDL-related projects 1	With modeling system(s), e.g., LSPC, MDAS, etc. 0

Brief Explanation of Responsibilities

- Project Manager for the West Virginia Comprehensive Water Planning Study, WV
- 15 years of project management experience including scheduling, scope development, financial evaluation and tracking, contracts, and subcontractor management

EDUCATION (Degree, Year, Specialization) M.S. - Civil Engineering, University of Pittsburgh (2004); B.S. - Mechanical Engineering, University of Pittsburgh (1993); B.S. - Chemistry, University of Pittsburgh (1993)

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

- American Academy of Environmental Engineers
- Engineers Society of Western Pennsylvania

REGISTRATION (Type, Year, State)

- Professional Engineer, 2009, West Virginia
- Professional Engineer, 1999, Pennsylvania and Ohio

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR TMDL DEVELOPMENT PROJECTS

NAME & TITLE (Last, First, Middle Int.)			YEARS OF EXPERIENCE: 20	
Sickles, P.E., Matthew R. Vice President, Environmental and Civil Engineer		In EPA-approved TMDL development 0	In TMDL-related projects 1	With modeling system(s), e.g., LSPC, MDAS, etc. 0

Brief Explanation of Responsibilities

- Officer-in-Charge and Office Leader for CDM's Pittsburgh office, responsible for delivering necessary resources to clients to fully meet project needs.
- Officer-in-Charge for NPDES project for Pittsburgh International Airport. During this project, CDM assisted with NPDES permit negotiations. Although the primary emphasis is deicing, some of their outfalls are subject to acid mine drainage TMDL so we are advising in accordance with the TMDL.

EDUCATION (Degree, Year, Specialization) B.S. - Environmental Engineering, The Pennsylvania State University (1989)

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

- American Academy of Environmental Engineers
- Engineer's Society of Western Pennsylvania
- Water Environment Foundation
- Pennsylvania Water Environment Association
- Southwestern Pennsylvania Engineering Outreach

REGISTRATION (Type, Year, State)

- Professional Engineer, 2005, Pennsylvania

14. PROVIDE A LIST OF SOFTWARE AND EQUIPMENT AVAILABLE IN THE PRIMARY OFFICE WHICH WILL BE USED TO COMPLETE TMDL DEVELOPMENT SERVICES

Available Software: WAMview, WASP, HSPP, EFDC, WMM, BATHTUB, WARMF, QUAL2K, BASINS, LSPC, SWMM, Aquatox and EPD-RIV1 SWMM, SLAMM, P8-UCM and SWAT.

CDM has invested approximately 2.5 million dollars in its field equipment inventory for projects involving Air Monitoring & Sampling, Confined Space Entry, Site Support, Soil Analysis, Soil Sampling, Survey Testing & Measuring, Treatability/Bench Scale, Water Level & Flow, Water Quality, Water Sampling, Weather Consumables This equipment can be shipped over night to any project site from the firm's own field equipment centers in Albuquerque, NM; Somerville, MA; Edison, NJ; and Irvine, CA.

15. CURRENT PROJECTS/ACTIVITIES IN WHICH YOUR FIRM IS PRESENTLY INVOLVED

NOTE: CDM provides professional services for hundreds of projects. Listed below are the firm's current TMDL assignments.

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	NATURE OF YOUR FIRM'S RESPONSIBILITY	ESTIMATED PROJECT COST	PERCENT COMPLETE
Total Maximum Daily Load Development, State of Illinois (multiple projects)	Jenny Clark, Project Manager, Illinois EPA, 1021 North Grand Ave. East Springfield, IL 62794 (217) 782-3362	Project management, TMDL development	\$340,000 to date	95%
Rock River Sediment and Phosphorus TMDL, USEPA and Wisconsin Department of Natural Resources, Wisconsin	Jean Chruscicki, USEPA Region 5, Ralph Metcalfe Federal Building, 77 West Jackson Blvd. Chicago, IL 60604, (312) 353-1435	TMDL development, including water quality analysis using SWAT, STELLA	\$210,000	90%
TMDL Development, USEPA, Montana (multiple projects)	Julie Dalsoglio, Water Quality Program Manager U.S. EPA Region VIII, Federal Office Building 10 West 15th Street, Suite 3200 Helena, Montana 59626 (406) 457-5025	Technical support for completing Phase I TMDL assessments	\$1,500,000	75%
Development of Methods for Linking Land Use Activities and BMPs to Tributary Nutrient Loading, USEPA, Lake Whatcom, Washington	Steve Hood Washington Department of Ecology 1204 Railroad Avenue, Suite 200 Bellingham, WA 98225 (360) 715-5211	Development of methodology for linking land use and BMPs to tributary nutrient loadings from watersheds flowing into Lake Whatcom	\$38,000	75%
Total Maximum Daily Load Support, Florida Department of Environmental Protection, Florida (multiple projects)	Eric Livingston, FDEP, Bureau of Watershed Management 2600 Blair Stone Road (MS #3510) Tallahassee, FL 32399 (850) 245-8430	TMDL protocol development, TMDL support	\$1,742,000 to date	75%

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	NATURE OF YOUR FIRM'S RESPONSIBILITY	ESTIMATED PROJECT COST	PERCENT COMPLETE
TMDL Support, Middle Santa Ana River Bacteria TMDL, California	Santa Ana Watershed Project Authority 11615 Sterling Avenue Riverside CA 92503 (951) 354-4220	TMDL Best Management Plan Implementation (Watershed compliance monitoring/Urban source evaluation studies/Dry Weather Implementation Plan Development)	\$515,000	Ongoing
TMDL Compliance for Ballona Creek Watershed Los Angeles, CA	City of Los Angeles Bureau of Sanitation Watershed Protection Division 1149 S. Broadway Los Angeles, CA 90015 (323) 342-1501	Developed TMDL implementation plans to address metals (Copper, Lead, Zinc, Selenium), bacteria (total coliform, fecal coliform, enterococcus, e-coli), and toxicity (attributed to metals and organic compounds)	\$985,000	95%
Nutrients TMDL for Machado Lake Ecosystem Rehabilitation/Wilming ton Drain Multi-Use Project, Los Angeles, CA	Alfred Mata City of Los Angeles Department of Public Works Bureau of Engineering 1149 S. Broadway Suite 620 Los Angeles, CA 90015 (213) 847-0346	TMDL, BMP, water quality analysis and management plan, lake water quality model, regulatory compliance, flood control, sediment/dredging	\$4,000,000	95%
TOTAL NUMBER OF PROJECTS: 30 TMDL projects			TOTAL ESTIMATED PROJECT COSTS: \$9 million	

16. CURRENT ACTIVITIES ON WHICH YOUR FIRM IS SERVING AS A SUB-CONSULTANT TO OTHERS

PROJECT NAME, TYPE AND LOCATION	NATURE OF FIRMS RESPONSIBILITY	NAME AND ADDRESS OF OWNER	ESTIMATED COMPLETION DATE	ESTIMATED PROJECT COST	
				ENTIRE PROJECT	YOUR FIRM'S RESPONSIBILITY
Rock River Sediment and Phosphorus TMDL, Wisconsin	TMDL development, including water quality analysis using SWAT, STELLA	USEPA and Wisconsin Department of Natural Resources 101 S. Webster Street PO Box 7921 Madison, WI 53707 (608) 266-2621	2011	\$300,000	\$210,000

17. COMPLETED WORK WITHIN LAST 5 YEARS IN WHICH YOUR FIRM WAS THE DESIGNATED FIRM OF RECORD

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED PROJECT COST	YEAR	EPA APPROVED?
Total Maximum Daily Load Development, State of Illinois	Illinois EPA, 1021 North Grand Ave. East Springfield, IL 62794 (217) 782-3362	\$5,500,000	2012	Yes
Water Quality Model Development for Hangman (Latah) Creek Watershed, Washington Department of Ecology, Washington and Idaho	Joe Joy Washington Department of Ecology Environmental Assessment Program, PO Box 47600 Olympia, WA 98504-7600 (360) 407-6486	\$55,000	2009	Yes

18. COMPLETED WORK WITHIN LAST 5 YEARS ON WHICH YOUR FIRM HAS BEEN A SUB-CONSULTANT TO OTHER FIRMS (INDICATE PHASE OF WORK FOR WHICH YOUR FIRM WAS RESPONSIBLE)

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF PRIMARY FIRM	ESTIMATED PROJECT COST OF YOUR FIRM'S PORTION	YEAR	EPA APPROVED?	CLIENT NAME AND ADDRESS
Lower Fox River TMDL, Green Bay, WI	The Cadmus Group 301 N. Broom Street Suite 201 Madison, WI 53703 (608) 250-1920	\$20,000	2008	Yes	USEPA Region V P.O. Box 1030 Keshena, WI 54135

19. Use this space to provide any additional information or description of resources supporting your firm's qualifications to perform work for the WVDEP's TMDL Program.

CDM has successfully implemented TMDLs in a variety of applications nationwide and understands the key components that must be addressed during the process. Our team brings superior technical, financial, and project management capabilities to the execution and coordination of the TMDL process, including:

- Real-world TMDL successes in Illinois, Washington, California, Florida, Montana, and Pennsylvania - which includes TMDLs approved by both State and Federal agencies;
- Modeling expertise and capabilities in estimating mass loading contributions from both point and nonpoint sources;
- Watershed-wide data management capabilities and analysis;
- Watershed/river and lake prioritizing based on contaminants; and
- Proven skills in stakeholder- and community-consensus building.

CDM will perform all the planning, administrative, and other activities required for developing the TMDL as described in the Expression of Interest and as directed by West Virginia DEP's project managers. CDM has the experienced in-house engineers and scientists to complete this work, and those staff will be managed by Becky Dunavant, our assigned project manager.

Along with our local West Virginia subconsultant, Wilbur Smith Associates, the project team will work closely with the West Virginia DEP TMDL team in completing all assignments in the Monongahela watershed. The individual members of our team have been selected for their ability to bring leadership and technical solutions to this project. We will apply our intimate knowledge of the watersheds, stakeholders and West Virginia EPA to develop specific TMDL implementation plans that are innovative, cost effective and practical.

20. The foregoing is a statement of facts.

Signature: Matthew R. Sickles

Title: Vice President

Printed Name: Matthew R. Sickles, P.E.

Date: November 17, 2010



**WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION  
TMDL VENDOR QUALIFICATION QUESTIONNAIRE Attachment A**

<b>PROJECT NAME</b> Monongahela River Watershed TMDL Project	<b>DATE (DAY, MONTH, YEAR)</b> November 18, 2010	<b>FEIN</b> 57-0405950
<b>1. FIRM NAME</b> Wilbur Smith Associates	<b>2. HOME OFFICE BUSINESS ADDRESS</b> Post Office Box 92, Columbia, SC 29202	<b>3. FORMER FIRM NAME</b> Wilbur Smith and Associates
<b>4. HOME OFFICE TELEPHONE</b> (304)-345-2339	<b>5. ESTABLISHED (YEAR)</b> 1952	<b>6. TYPE OWNERSHIP</b> Corporation

**7. PRIMARY TMDL DEVELOPMENT OFFICE: ADDRESS/ TELEPHONE/ PERSON IN CHARGE/ NO.OF TMDL DEVELOPMENT PERSONNEL IN OFFICE**  
NA

**8. NAMES OF PRINCIPAL OFFICERS OR MEMBERS OF FIRM**  
M. Stevenson Smith, PE, Chairman/Chief Executive  
Jerry Stump, PE, FACEC, Chief Operating Officer - U.S. Operations

**9. PERSONNEL BY DISCIPLINE**

<p>262 Administrative (001) 84 Civil Engineers (004) 218 Construction Inspectors (005) 3 Economists (008) 3 Electrical Engineers (009) 1 Geologists (011) 2 Hydrologists (012) 2 Landscape Architects (014) 35 Planners: Urban/Regional (018) 5 Geotechnical Engineers (020)</p>	<p>31 Structural Engineers (022) 13 Surveyors (023) 110 Transportation Engineers (024) 43 Analysts/Programmer (025) 12 Water Resource Experts (100) 9 Railroad Planners (102) 13 Environmentalists (106) 4 Transit Specialists (116) 7 Econ. Financial/Feasibility Analysts (124) 21 Data Processors/System Analysts (134)</p>	<p>11 Graphic Designers/Illustrators (137) 65 Highway/Roadway Engrs/Designers (147) 2 Industrial Designers (150) 5 Archaeologist (164) 14 Airport/Aviation Planners (166) 10 Geographic Information Specialists (175) 52 Engineering Technicians (186) 40 CAD/CADD Operators (192) 128 Transportation Planners (201) 1 Rights-of-Way Agents (502)</p>	<p>262 Administrative (001) 84 Civil Engineers (004) 218 Construction Inspectors (005) 3 Economists (008) 3 Electrical Engineers (009) 1 Geologists (011) 2 Hydrologists (012) 2 Landscape Architects (014) 35 Planners: Urban/Regional (018) 5 Geotechnical Engineers (020)</p>
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**10. DO YOU NEED ADDITIONAL EMPLOYEES TO FULFILL THE REQUIREMENTS OF THIS CONTRACT?**       YES       NO

11. OUTSIDE KEY CONSULTANTS/SUB-CONSULTANTS ANTICIPATED TO BE USED. Attach "TMDL Vendor Qualification Questionnaire".

NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____ Yes _____ No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____ Yes _____ No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____ Yes _____ No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____ Yes _____ No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____ Yes _____ No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____ Yes _____ No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____ Yes _____ No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____ Yes _____ No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____ Yes _____ No

12. A. Is your firm's personnel experienced in development of TMDLs for total recoverable metal?

NO

B. Is your firm experienced in development of TMDLs for dissolved metals/pH?

NO

C. Is your firm experienced in development of TMDLs for bacteria impairments?

NO

D. Is your firm experienced in development of TMDLs for biological impairments?

NO

E. Does your firm utilize a statistical biological model which assigns probabilities for likely stressors impacting benthic macroinvertebrate assemblages based on species-level taxonomy?

NO

F. Is your firm experienced with the LSPC/MDAS or equivalent modeling system in TMDL development.

NO

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR TMDL DEVELOPMENT PROJECTS (Insert additional copies as necessary)

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		With modeling system(s), e.g., LSPC, MDAS, etc.
	In EPA-approved TMDL development	In TMDL-related projects	
Crittenden, George J. Project Designer			
<p>Brief Explanation of Responsibilities</p> <p>Mr. Crittenden has 30 years of experience in providing design, technical services, and surveying for mine land reclamation projects, water and wastewater lines, airports, residential subdivisions, and highways. His experience includes extending a water line into the marrowbone area; producing designs and plans to extend a Ragland Public Service District water line to approximately 150 customers; Senior Design Technician responsible for mitigating problems in two impoundments containing water and coal refuse at Scott Tipple; and Senior Design Technician responsible for design and contract documents for grading, installation of bar gate seals, dry seals and establish positive drainage, refuse pile regarding, and soil cover and seeding at Minden Mine Dump. Project Manager for Terry Branch Portals.</p>			
<p>EDUCATION (Degree, Year, Specialization)</p> <p>Drainage Workshop, WVDOT/2005            Control, Maccaferri, Inc./2001            PSMJ Marketing Workshop/2005            KSPE Training/2000            PSMJ Project Manager's Boot Camp/2004            InXpress Workshop/1996            Sediment Control Design, WVDOT/2004            Workshop/1979            Right of Way Plan Development/2001, 2002 and 2003            Development of Signing, Marking and Maintenance of Traffic Plans, WVDOT/2001</p>			
<p>MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS</p> <p>REGISTRATION (Type, Year, State)            National Institute for Certification in Engineering Technologies (NICET), 1993</p>			

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR TMDL DEVELOPMENT PROJECTS (insert additional copies as necessary)

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE	
	In EPA-approved TMDL development	In TMDL-related projects
Clegg, Larry, P. PE, Senior Project Manager		With modeling system(s), e.g., LSPC, MDAS, etc.
<p>Brief Explanation of Responsibilities</p> <p>Mr. Clegg, as senior project manager, is responsible for the execution of the project. These responsibilities include managing the budget, project schedule, and design staff, as well as overseeing the design. Mr. Clegg's experience includes working on many types of civil engineering projects such as grading, water, wastewater, roadway, drainage, hydraulics, and stormwater management.</p>		
<p>EDUCATION (Degree, Year, Specialization)</p> <p>BSEM, 1981, Mining Engineering            BSCE, 1987, Civil Engineering</p>		
<p>MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS</p> <p>REGISTRATION (Type, Year, State)            Professional Engineer, 1999 WV; 1991 FL; 2003 AR;            2009 VA</p>		

14. PROVIDE A LIST OF SOFTWARE AND EQUIPMENT AVAILABLE IN THE PRIMARY OFFICE WHICH WILL BE USED TO COMPLETE TMDL DEVELOPMENT SERVICES

ArcView 10

MicroStation

AutoCad

FlowMaster

HEC-RAS and HEC GeORAS

MAGELLAN MobileMapper CX

Microsoft Office

Adobe Acrobat Professional

15. CURRENT PROJECTS/ACTIVITIES IN WHICH YOUR FIRM IS PRESENTLY INVOLVED

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	NATURE OF YOUR FIRM'S RESPONSIBILITY	ESTIMATED PROJECT COST	PERCENT COMPLETE
King Coal Highway Highway and Bridge Design Mercer County, WV	WVDOT 1900 Kanawha Blvd. East Charleston, WV 25305		\$ 98,000,000	99%
Charles Town By-Pass Sign Renovation Plans Jefferson County	WVDOT 1900 Kanawha Blvd. East Charleston, WV 25305		\$500,000	45%
I-70 Sign Renovation, Ohio County	WVDOT 1900 Kanawha Blvd. East Charleston, WV 25305		\$2,000,000	75%
District 2 Design/Build	WVDOT 1900 Kanawha Blvd. East Charleston, WV 25305		\$5,700,000	80%
Beckley Z-Way Raleigh County	WVDOT 1900 Kanawha Blvd. East Charleston, WV 25305		\$45,000,000	30%
Pennsylvania Avenue Signals Kanawha County	WVDOT 1900 Kanawha Blvd. East Charleston, WV 25305		\$500,000	75%
Statewide Transportation Plan Various Counties	WVDOT 1900 Kanawha Blvd. East Charleston, WV 25305		N/A	30%
TOTAL NUMBER OF PROJECTS: 7			TOTAL ESTIMATED PROJECT COSTS: \$ 151,700,000	Construction Cost

16. CURRENT ACTIVITIES ON WHICH YOUR FIRM IS SERVING AS A SUB-CONSULTANT TO OTHERS

PROJECT NAME, TYPE AND LOCATION	NATURE OF FIRMS RESPONSIBILITY	NAME AND ADDRESS OF OWNER	ESTIMATED COMPLETION DATE	ESTIMATED PROJECT COST	
				ENTIRE PROJECT	YOUR FIRM'S RESPONSIBILITY
	Freeway Corridor Studies	Sub to: HNTB For: Texas DOT 125 E. 11 <sup>th</sup> Street Austin, TX 78701	2014	N/A	\$595,395 (Fee)
I-4 CEI Services Florida	Construction Engineering and Inspection for Expressway	Sub to: Parson Brinkerhoff For: Florida DOT 605 Suwanee St Tallahassee, FL 32399	2008	N/A	\$492,314 (Fee)



17. COMPLETED WORK WITHIN LAST 5 YEARS ON WHICH YOUR FIRM WAS THE DESIGNATED ENGINEER OF RECORD (Partial Listing of Projects)

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST	YEAR	CONSTRUCTED (YES OR NO)
West Virginia Route 9 Environmental Impact Statement Berkeley County, WV	WVDOT 1900 Kanawha Blvd. East Charleston, WV 25305-0430	\$162,000,000	2000	Yes
US 522 Highway & Bridge Design Morgan County, WV	WVDOT 1900 Kanawha Blvd. East Charleston, WV 25305-0430	\$50,000,000	2006	No
US 470 Sign Renovation Contract Plans Ohio County, WV	WVDOT 1900 Kanawha Blvd. East Charleston, WV 25305-0430	\$750,000	2007	Yes
Greenbrier St. Sign Renovation Contract Plans Kanawha County, WV	WVDOT 1900 Kanawha Blvd. East Charleston, WV 25305-0430	\$500,000	2005	Yes
WV 2 Highway Design Wetzel/Marshall County, WV	WVDOT 1900 Kanawha Blvd. East Charleston, WV 25305-0430	\$22,000,000	2007	No
WV 10 CEI, Logan County, WV	WVDOT 1900 Kanawha Blvd. East Charleston, WV 25305-0430	\$10,000,000	2002	Yes
WV 2 CEI, Brooke County, WV	WVDOT 1900 Kanawha Blvd. East Charleston, WV 25305-0430	\$21,000,000	2002	Yes
WV 14 CEI, Wood County, WV	WVDOT 1900 Kanawha Blvd. East Charleston, WV 25305-0430	\$10,000,000	2004	Yes

I-81 Sign Renovation Berkeley County, WV	WVDOT 1900 Kanawha Blvd. East Charleston, WV 25305-0430	\$1,500,000	2005	Yes
Sign Fabrication Manual Revisions & Updates, Charleston WV	WVDOT 1900 Kanawha Blvd. East Charleston, WV 25305-0430	N/A	2005	N/A
Giliam Arch Bridge Replacement Highway and Bridge Design Mercer County, WV	WVDOT 1900 Kanawha Blvd. East Charleston, WV 25305-0430	\$1,300,000	2005	Yes
Reedy Creek Hydraulic Study Roane County, WV	WVDOT 1900 Kanawha Blvd. East Charleston, WV 25305-0430	\$ 19.3 (WSA Fee)	1999	No
West Virginia Turnpike Toll Revenue & Rate Reclassification	WVPEd 1900 Kanawha Blvd. East Charleston, WV 25305-0430	\$41,700 (WSA Fee)	1999	N/A
US 119 Rock Creek Intersection Traffic Safety and Improvement Study Boone County, WV	WVDOT 1900 Kanawha Blvd. East Charleston, WV 25305-0430	\$69,000 (WSA Fee)	2001	N/A
US 522 EIS Morgan County, WV	WVDOT 1900 Kanawha Blvd. East Charleston, WV 25305-0430	\$351,000 (WSA Fee)	2002	N/A
East Beckley Bypass EA Raleigh County, WV	WVDOT 1900 Kanawha Blvd. East Charleston, WV 25305-0430	\$464,000 (WSA Fee)	2002	N/A
US 50 Traffic Operations and Safety Study Mineral/ Hampshire Counties, WV	WVDOT 1900 Kanawha Blvd. East Charleston, WV 25305-0430	\$185,000	2003	N/A

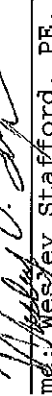
WV 9 EIS Morgan/Berkeley/Jefferson Counties, WV	WV DOT 1900 Kanawha Blvd. East Charleston, WV 25305-0430	Stop Work Order at 50% Complete`	2002	N/A
Ohio SR 7 Traffic Operations & Safety Study Washington County, DOH	ODOT WV DOT 1900 Kanawha Blvd. East Charleston, WV 25305-0430	\$250,000 (WSA FEE)	2000	N/A
Parkersburg-Marietta MPO Long Range Multimodal Transportation Plan, Wood County, WV & Washington County OH	WWW Interstate Planning Commission 531 Market St Parkersburg, WV 26101	\$267,000	2004	N/A
US 220 Relocation Hampshire County, WV	WV DOT 1900 Kanawha Blvd. East Charleston, WV 25305-0430	\$668,000 (WSA Fee)	2004	No
I-81 Sign Renovation Berkeley Co. WV	WV DOT 1900 Kanawha Blvd. East Charleston, WV 25305-0430	\$195,000 (WSA Fee)	2003	No
I-15 Managed Lanes Value Pricing Demonstration San Diego, CA	San Diego Association of Governments 401 B Street, Suite 800 San Diego, CA 92101	\$777,571	2002	Yes
Grisson Parkway Myrtle Beach, SC	City of Myrtle Beach PO Box 2468 Myrtle Beach, SC 29578	\$678,976	2002	Yes
James White Parkway Design Knoxville KY	Tennessee Dept of Transportation 505 Deadrick Street Nashville, TN 37243	N/A	2000	Yes
I-95 AtLee-Elmont Interchange Hanover County, VA	Commonwealth of Virginia Structure and Bridge Division 1401 E. Broad Street Richmond, VA 23219	\$2,735,809	2001	Yes

18. COMPLETED WORK WITHIN LAST 5 YEARS ON WHICH YOUR FIRM HAS BEEN A SUB-CONSULTANT TO OTHER FIRMS (INDICATE PHASE OF WORK FOR WHICH YOUR FIRM WAS RESPONSIBLE)

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF PRIMARY FIRM	ESTIMATED PROJECT COST OF YOUR FIRM'S PORTION	YEAR	EPA APPROVED?	CLIENT NAME AND ADDRESS
Data is not currently available. WSA has served as a subconsultant to numerous firms on large and small projects worldwide.					

19. Use this space to provide any additional information or description of resources supporting your firm's qualifications to perform work for the WVDEP's TMDL Program.

20. The foregoing is a statement of facts.

Signature:   
 Printed Name: Wesley Stafford, PE, AICP

Title: AIC, WV Office

Date: November 17, 2010