



8401 Arlington Boulevard
Fairfax, Virginia 22031-4666

703 849 0100
703 849 0118 fax
www.dewberry.com

Mr. John Abbott
Division of Homeland Security and Emergency Management
Building 15
2019 Washington Street East
Charleston, West Virginia 25305-0130

December 23, 2009

**RE: Expression of Interest Statewide Standard All-Hazard Mitigation Plan Update
HSE 10031.**

Dear Mr. Abbott:

Compliant, comprehensive, appropriate and community-focused – the West Virginia Division of Homeland Security and Emergency Management will receive a mitigation plan update from the Dewberry Team that will meet these goals to effectively mitigate natural and human-caused hazards and disasters. Our approach to hazard mitigation features real-world experience and tested solutions that will define your plan for recovery, and provide you with the means to assess future risk factors and develop proactive, deliberate plans to better protect your citizens and assets. We will ensure **compliance** with the Division of Homeland Security and Emergency Management and FEMA requirements and will deliver a plan to FEMA on or before September 1, 2010. We will prove to FEMA Region III officials that the 2010 plan:

1. represents a comprehensive update process acknowledging prior mitigation accomplishments;
2. provides a revised vulnerability assessment clearly showing the most vulnerable communities to all hazards;
3. delivers a practical, targeted mitigation strategy focused on resiliency and mitigation of state critical facilities, positioning projects for Hazard Mitigation Assistance grants; and
4. supports mitigation for repetitive and severe repetitive loss structures to return more funds to WV through increased federal grant funding levels.

We have consistently held disaster recovery and mitigation contracts with the Federal Emergency Management Agency (FEMA). **More importantly, we have achieved 100 percent final approval by FEMA.** In addition to our work on the Alabama, Louisiana, Mississippi, New Jersey, South Dakota and Virginia approved State plans, we have worked with hundreds of communities to develop local, regional, tribal and university hazard mitigation plans. Dewberry will integrate your current HAZUS-MH update together with the State of West Virginia Standard All-Hazard Mitigation Plan update through an effective process maximizing participation of your staff, Hazard Mitigation Council members and mitigation stakeholders. Selecting Dewberry will assure you seamless integration as we undertake the Mitigation Plan update process. The Dewberry team is ready to move your plan forward to ensure eligibility of all Stafford Act and HMA programs with approval prior to the present plan's October 18, 2010 expiration. If you have any questions, please do not hesitate to contact us at lzensinger@dewberry.com or dmills@dewberry.com or at 703 849.0100.

Sincerely,

Laurence Zensinger
Vice-President

RECEIVED
2009 DEC 23 PM 1:25
WV PURCHASING
DIVISION



2.0 Executive Summary

Dewberry and Davis LLC (Dewberry), is pleased to submit this proposal for services in response to the Expression of Interest dated December 3, 2009 *Expression of Interest to Provide Statewide All-Hazard Mitigation Plan Update HSE10031*. **The revised plan must be compliant with the Disaster Mitigation Act of 2000 and related guidance and crosswalk requirements, along with state requirements detailed in the Expression of Interest and be submitted to FEMA for approval in advance of the October 18, 2010 expiration date of the 2007 plan to maintain eligibility for critical Robert T. Stafford Act Public Assistance and Hazard Mitigation Grant Program funds**

We believe we are most qualified to update your plan because:

1. We will prove to FEMA Region III that the 2010 updated Plan meets all CFR update requirements for:
 - 2004 and 2007 strategy evaluation;
 - updated, comprehensive Vulnerability Assessment;
 - prioritized mitigation actions for targeted state critical facilities and repetitive flood loss structures focusing mitigation to the greatest need; and
 - full documentation during plan development and implementation that will jump start the 2013 update
2. Dewberry has the most experienced team of mitigation planners, hazard engineers, geographers and emergency management experts that will do the heavy lifting for you.
3. Deborah Mills, our Project Manager, is the former Virginia State Hazard Mitigation Officer who authored Virginia's 2004 Standard Plan and 2007 Enhanced Plan. Annette van Hilst, a West Virginia registered architect will serve in the role of Principal-in-Charge. She is our Ranson WV Office Planning Director who will be your advocate.
4. We know the NFIP, Appalachian flooding issues, wildfire, winter storms, earthquake, climate change, mining, environmental and dam safety, levee and impoundment issues
5. Our team routinely performs HMA grant project feasibility evaluations, benefit-cost analysis and NEPA assessments; we will help position your priority 2010 critical facilities and structural mitigation projects for fast-tracked FEMA HMA grant funding.
6. We will deliver a repetitive loss plan that will increase the federal cost share for two HMA grant programs to 90%, reducing your match obligation.

Mitigation Program Expertise:

- 24 Approved plans serving 291 Region III communities.
- Close working relationships with R III mitigation program leaders.
- Authorship of FEMA Hazard Mitigation "How-To-Guides."
- Deployment to hundreds of JFOs following floods, wildfires, tornados, earthquakes, winter storms and hurricanes.
- Leaders in dam safety, tailing pile and levee inspection, climate change, H&H modeling, dFIRM and FIS production.

OUR TEAM KNOWS HAZARD MITIGATION PLANNING:

Emergency management, and specifically hazard mitigation planning and project scoping, are core services that clients have depended on Dewberry for more than 30 years. We provide national policy and program support to the Mitigation and Disaster Assistance divisions of FEMA. Our hazard and emergency management specialists average more than 26 years of experience as local, state, and federal



emergency managers, or as consultants. Across the country and at all levels of government, our staff have supported disaster planning and mitigation programs; coordinated federal grants; and conducted comprehensive planning to protect communities from the ravages of natural and human-caused hazards. **Most importantly, our team has an extensive record of service to FEMA Region III and its partner states and local governments through support to the Public Assistance Program, Hazard Mitigation Technical Assistance Program task orders and disaster response activities. We know Region III states and the FEMA Region III Hazard Assessment and Mitigation Planning staff. Dewberry's strength is having the resources of a large firm, while providing the attentive customer service of a small firm.**

WITHOUT QUESTION THE DEWBERRY TEAM HAS THE PROVEN EXPERIENCE AND RELIABILITY REQUIRED TO COMPLETE YOUR PLAN UPDATE.

The project will be led by Dewberry's Deborah Mills, a nationally known expert in hazard mitigation, natural resource management and disaster recovery. In addition, we have identified leads for each of the major elements of the planning process with proven experience in hazard mitigation planning, the National Flood Insurance Program, structural mitigation design, Public Assistance, Individual Assistance and long-term recovery programs

Dewberry's model for hazard mitigation planning projects never changes: assign the project team best qualified to complete the work and keep the same key personnel committed for the duration of the project.

- **Deborah Mills, Project Manager** joined Dewberry following service with the Commonwealth of Virginia. As the State Hazard Mitigation Manager, she brought innovation to the Hazard Mitigation Program. As the Recovery and Mitigation Division Director, she successfully facilitated revision and approval of the 2007 Commonwealth of Virginia *Standard and Enhanced Hazard Mitigation Plan*, **the only approved Enhanced Plan in FEMA Region III.**
- **Annette van Hilst, Principal-in-Charge** is a West Virginia native who has devoted her career to local land use planning, environmental management and land development. She knows comprehensive planning, environmental regulations, wetland protection and project management. Annette will be your advocate through the plan development process *and will ensure that all West Virginia architecture and engineering laws, regulations and standards are met.*
- **Rachael Herman, Risk Assessment Lead** managed development of the Virginia *Standard and Enhanced Hazard Mitigation Plan* Hazard Identification and Risk Assessments (HIRAs), including the new HIRA that is the foundation for the 2010 Virginia revised plan. She recently joined Dewberry and will lend her extensive GIS, vulnerability assessment and planning skills to the project. Rachael has used her broad GIS and modeling skills to complete HIRAs for hundreds of communities through regional hazard mitigation plans.
- **Jane Sibley Frantz, Mitigation Planning Lead** is an expert in hazard mitigation planning, and has led more than 20 local mitigation planning teams resulting in 100% FEMA plan approval and local plan adoption. She is a valued resource to FEMA as a task order manager on FEMA's nationwide HMTAP contract with specialties in mitigation planning, HMA grants, benefit cost analysis and losses avoided.
- **Mark Matulik, Process Documentation Lead** served Colorado as the NFIP Coordinator and SHMO prior to joining Dewberry. Mark has contributed to many state and local mitigation plans, including the Mississippi State Plan and southwest Virginia regional plans. He is a veteran of Joint Field Offices, bringing hazard mitigation to infrastructure repair and replacement project worksheets through his extensive knowledge of section 406 mitigation. Mark was a key



contributor to Mississippi's post-Katrina recovery supporting the state's Katrina HMGP pilot match program and §406 mitigation

- **Scott Choquette, Quality Manager** is a former state Connecticut NFIP Planner with vast experience in local and state comprehensive, land-use, environmental and hazard mitigation planning. Scott has served as the project manager as well as quality manager on dozens of mitigation planning projects and will provide quality control management to every aspect of the West Virginia plan update process

Four key former FEMA leaders are on our team. **Larry Zensinger** led many FEMA programs and is credited with creation of the Hazard Mitigation Grant Program following the 1993 Mississippi River floods. **Steve Olsen**, former Region VII Mitigation Director, led the mitigation program for the 1994 historic Grand Forks flooding. The principals of our teaming partner, **Colin Vissering** and **Steve Pardue** worked at the FEMA Headquarters Mitigation Directorate as well as in the private sector supporting FEMA prior to forming their mitigation focused small business.

Supplementing our vast national, Region III and West Virginia experience, our team has developed state hazard mitigation plans for Alabama, Louisiana, Mississippi, New Jersey, South Dakota and Virginia. Together, Dewberry and Vissering, Pardue, and Associates, Inc. (VPA) have completed hundreds of FEMA approved local and multi-jurisdictional hazard mitigation plans, including Disaster Resistant University Plans; many in Region III. ***Our commitment to hazard mitigation planning and past experience proves our reliability.***

We know the challenge that timing presents in completing a 44CFR§201.4 compliant Standard all-hazards mitigation plan approved by the WV Hazard Mitigation Council and presented to West Virginians through outreach. **We recognize the risk of a lapsed plan, and can assure you that our proposed understanding of the process, approach to the work and fast-tracked schedule for completion will assure adoption by the Governor and submittal to FEMA Region III for approval without a lapse in eligibility for vitally necessary Stafford Act programs.**

Dewberry "Value-Added" WV Hazard Mitigation Plan Elements:

- *Expert NEPA and BCA analysis of prioritized mitigation strategies*
- *90% federal funding levels for FMA and SRL programs through targeted repetitive loss property mitigation strategies*
- *Web-based secure FTP site for project management and Council participation supplemented by public pages for WVDHSEM websites.*
- *HIRA data targeted to regional plans*
- *Indexed Word and PDF FINAL formatted plan on thumb drives for easy reference and portability.*

We can assure you completion and submittal at least forty-five days prior to the October 18, 2010 expiration of your present plan. We will remain committed to the WV All-Hazard Mitigation Plan through FEMA's approval by providing our services in responding to FEMA's concerns and making necessary revisions. *We believe our understanding and experience in state hazard mitigation plan development, coupled with our team's knowledge of West Virginia's natural hazards and issues can successfully complete the plan through the project approach and accelerated schedule presented in this Expression of Interest.*

Dewberry's method of performance will provide a clear and straightforward process for updating and adding value to the 2007 *West Virginia State All-Hazards Mitigation Plan*. Since this is the second update, we believe that the state's hazard mitigation staff are widely experienced in the planning process, so our approach takes the plan to the next level with a new Risk Assessment, an achievable Mitigation Strategy



that focuses on fundable mitigation actions for the state's critical facilities and Plan Maintenance Reporting Templates to keep the plan fresh while meeting maintenance requirements.

The major components of our approach are as follows:

- **Hazard Assessment.** Completion of a revised Hazard Identification and Risk Assessment (HIRA) leading to the Vulnerability Analysis that prioritizes areas with the greatest risk from natural and human-caused hazards forms the plan foundation. The priority focus will be the priority natural hazard risks to the state: flooding, wildfire, and winter storm. Every potential natural hazard will be examined with consideration of peripheral human-caused hazards such as dams, gob piles, unstable areas due to mining, even climate change. We will incorporate at-risk state critical facilities into the updated risk assessment.
- **Mitigation Planning.** Our experienced team will guide the state hazard mitigation program staff, the Hazard Mitigation Council and stakeholders through an expert facilitated process. Senior mitigation planners and meeting facilitators will lead you through the plan update process maximizing each participant's valuable time. The planning process will efficiently engage stakeholders to incorporate their expertise into the plan without lengthy meetings and onerous processes.
- **Processes and Documentation.** All required elements of the state hazard mitigation plan will be documented in formats consistent with the order of 44CFR§201.4, the interim final guidance "blue book," and the most current Standard State Plan crosswalk. We will weave the new elements of Flood Mitigation Assistance Planning, Repetitive Loss and Severe Repetitive Loss HMA program eligibility planning into the §322 plan process to ensure plan adoption and approval **and increase your FMA and SRL federal allocations to 90%**. Our experts will prepare the final plan draft with enough time to assure full Hazard Mitigation Council and public review, adoption by the Governor, submittal to FEMA Region III and response/revision to any element of the plan where FEMA requires more detail. As former state officials, we are fully cognizant of FEMA Region III reporting requirements and will present all required quarterly status reports and invoices to WV Division of Homeland Security and Emergency Management at least two weeks prior to FEMA Region III deadlines.

We have organized this Expression of Interest to simplify your review and have cross-walked your expressed needs to Dewberry's qualifications, experience, understanding of the work, project approach and proposed schedule:

Section 3.0 Qualifications are presented in detail, including an organization chart that outlines project team leadership and functional responsibilities, along with technical experts aligned with the above three WV plan revision functional areas.

Section 4.0 Understanding, Project Approach and Proposed Schedule details how we will meet the challenges the State faces in updating the plan while demonstrating our ability to solve your goal to deliver a compliant plan to FEMA well in advance 2007 plan expiration date of October 18, 2010.

Section 5.0 Dewberry Team Experience provides resumes of our proposed staff and technical experts.

Section 6.0 Dewberry Team Project Experience describes relevant project experience, and a listing of state, regional, local, tribal and DRU plans completed by our project team.



3.0 Qualifications

Proposed Project Team

Dewberry

The Dewberry Team has provided expert pre- and post-disaster assistance to federal, state, county, regional and municipal clients nationwide in support of disaster preparedness, response, recovery and mitigation programs. We have consistently held contracts with the Federal Emergency Management Agency (FEMA) for more than 30 years. Our emergency management technical experts and specialists average more than 26 years of experience as local, state and federal emergency managers or as consultants. Their experience includes:

- Supporting hazard mitigation planning and disaster related programs
- Hazard Mitigation Assistance Grant guidance and project review
- Public Assistance Program grants technical support
- Individual Assistance Program mission support
- Rapid mobilization and management of staff for damage assessment and disaster recovery

We provide comprehensive planning to protect against hazards ranging from localized riverine flooding to potential terrorist/weapons of mass destruction events. Our team is experienced in assessment of potential vulnerabilities and the physical protection of people, facilities and critical infrastructure and avoidance of disruptions to commerce and continuity of government operations.

Dewberry's strong track record is founded on hazard mitigation planning. We work closely with FEMA on mitigation policy development and guidance, including the FEMA mitigation planning *How-to-Guide* series. Since 2003, we have provided support to the competitive Pre-Disaster Mitigation grant program national evaluation and technical review process for national projects. Dewberry has worked on state, multi-jurisdiction, local, and tribal government mitigation plans for metropolitan and rural areas in Region III and nationwide. *We take pride in our resources and experience serving all clients; we believe our reputation of responsiveness, quality, timely and within- budget work is our greatest asset.*

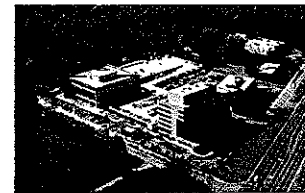
We employ key staff with extensive specialized and localized experience, including former state and local emergency managers, three former State Hazard Mitigation Officers and experienced mitigation planners. In addition, our structural engineers, architects, geographers and environmental experts know emergency management, disaster recovery and mitigation. As a result of our experience, we have understanding of the issues important to local communities and states. We understand how federal policies and regulations governing grant programs interrelate with activities conducted locally in administering all aspects of disaster and mitigation programs. Our long history of land use planning and development, dam safety, mine land reclamation, transportation planning, and disaster recovery programs allow us to identify connections between community planning that incorporates public safety projects and actions that will protect people and property while maintaining continuity of critical societal function immediately following an emergency or disaster.

Dewberry & Davis LLC (Dewberry)

Years in Operation: 52

**Location of Company
Offices:** 40 locations
throughout the United
States

Headquarters:
8401 Arlington Blvd.
Fairfax, VA 22031
703.849.0100 phone
703.206.0103 fax



Ranson, WV Office:
401 S. Fairfax Boulevard
Suite 3
Ranson, WV 25438
304.725.4572 phone

www.dewberry.com



Partner Firm

Dewberry is partnering with Vissering, Pardue and Associates, Inc. (VPA) for the West Virginia Statewide Standard All-Hazard Mitigation Plan revision. VPA has a solid history of teaming with Dewberry to assist mutual clients, including FEMA mitigation support work. The firm brings a national reputation for excellence, not only in hazard mitigation planning, but in technical project review, including benefit-cost analysis. Their specialties include project development, NEPA review and issues resolution. Dewberry will be entirely responsible for delivering the project on time and within budget. VPA's portion of the project will consist of approximately 20% of the scope, with a focus on incorporation of local plan HIRA data and goals/strategies into the state plan, along with assessment of critical facilities state project priorities to position them for project development and grant funding. VPA will also support revision and update of the hazard identification and risk assessment portion of the plan. The firm's expertise includes:

- Hazard mitigation planning
- Risk assessment
- Benefit-Cost Analysis
- National Environmental Policy Act (NEPA) and Section 106 historic preservation compliance
- Hazard Mitigation Grant Program (HMGP), Pre-disaster Mitigation Program (PDM), and Flood Mitigation Program (FMA) project development
- Long-term community recovery planning
- Continuity of Operations (COOP) Planning

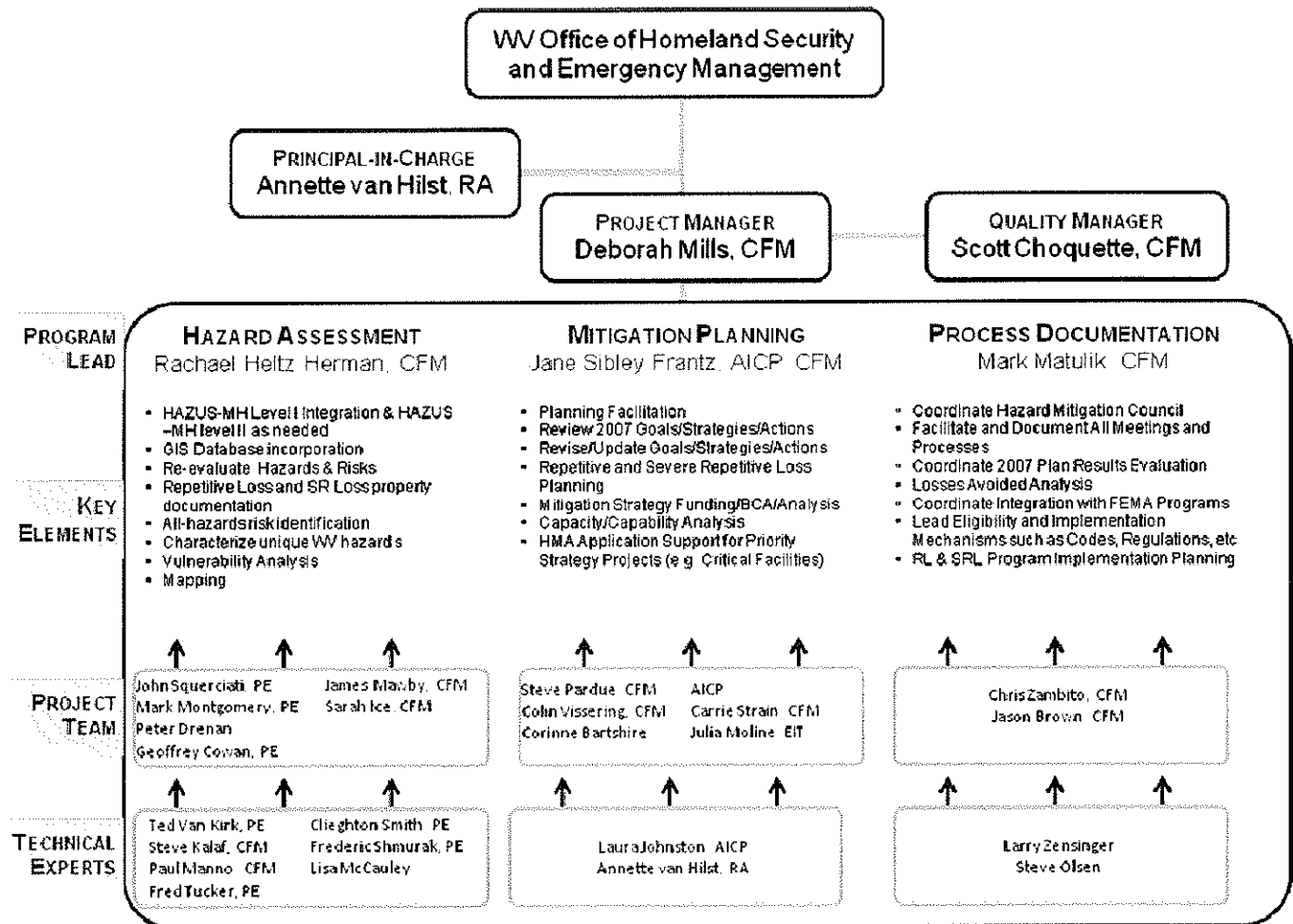
Dewberry's history of successful collaboration with Vissering Pardue has resulted in more than \$250,000 in disaster recovery work for this small business, capitalizing on their specialties to serve disaster-ravaged communities nationwide.

Project Team Members

The plan update will be led by Dewberry's Deborah Mills as Project Manager, and a team of experienced hazard mitigation professionals. Our Principal-in-Charge, Annette van Hilst, leads Planning Services in our Ranson West Virginia Office and will serve as the executive responsible for full compliance with West Virginia architectural contract provisions and licensing requirements. The West Virginia Plan Revision Project Team has been organized to streamline reporting lines and focus on delivering service to you in a cost-effective, timely manner.



WEST VIRGINIA STATE HAZARD MITIGATION PLAN REVISION TEAM



We are confident our team's combination of planning, scientific engineering, meeting facilitation, and related skills and experience are exactly what is needed to meet West Virginia plan revision requirements. We will strive to continue our strong reputation for excellence in technically-based stakeholder involvement, community outreach and meeting facilitation while we integrate current data with new information to produce your Vulnerability Assessment through:

- ✓ **New HAZUS-MH Level I analysis** (performed through a separate contract) integrated with past HIRA databases into the new Hazard Identification/Risk Assessment. We will supplement your new Level I HAZUS-MH runs as necessary with more detailed Level-II runs for the most vulnerable West Virginia communities to strengthen the vulnerability analysis in areas with de-certifying levees, flood walls, mountain top mining or unstable slopes.
- ✓ **Characterization of flood hazards** by geographers and engineers adept at Appalachian hydrology and hydraulic modeling used in digital Flood Insurance Rate Map (dFIRM) and Flood Insurance Study (FIS) compilation. The Region III Dewberry Hazard Engineering Services team produced West Virginia's recent dFIRM products and will again partner with the state through FEMA's Risk MAP program to further characterize the state's flood hazards.
- ✓ **Use of specialized environmental engineers** that can address the environmental and geographical challenges unique to the Mountain State that exacerbate natural hazard emergency or disaster events, particularly those from flooding, dam break, winter storm, or wildfire.



- Deborah Mills, a WVU Forest Management Program graduate, served the Virginia Department of Forestry for ten years and knows mountain wildfire hazards.
- ✓ **Performance of benefit-cost analysis and loss avoidance studies** helps characterize mitigation projects, both in terms of the damages prevented by installed projects and the eligibility or proper prioritization of proposed measures. John Squerciati, Ted Van Kirk and Jane Sibley Frantz bring decades of BCA experience to the team. They were key members of the recent benefit cost re-engineering project that has provided web-accessed BCA modules. Deborah Mills performed a model losses avoided analysis for Bluefield Virginia that highlighted the return on residential and commercial mitigation investments.
 - ✓ **Knowledge of the challenges** wrought by the ridge and valley geophysical province riddled with strip mines, mountain top mining operations, tailing ponds, gob piles and logging operations and the risks these hazards pose to stream valley residents.

The project team members are professionals with extensive disaster and hazard mitigation experience, as well as unparalleled FEMA knowledge and critical local experience necessary for a successful plan. Members of the project team have completed, reviewed, and approved dozens of individual hazard mitigation planning projects during their time with Dewberry, Vissering-Pardue, other contractors, FEMA and various state emergency management agencies. Brief summaries of their experience are provided below. Further resumes for key personnel can be found in Section 5.0.

DEBORAH MILLS, CFM – PROJECT MANAGER. Ms. Mills is presently Region III Deputy Department Manager overseeing FEMA Risk MAP production work. She also manages state and regional and local hazard mitigation planning projects. She supports Dewberry's Building Sciences Practice as a project manager for FEMA Hazard Mitigation Technical Assistance Program and Technical Assistance Research Contract task orders. Prior to joining Dewberry, she was the Virginia State Hazard Mitigation Officer, where she managed more than \$40M in mitigation grant program funds as an Enhanced State. She led the development of the approved Standard and Enhanced Mitigation Plan in 2004 and the Enhanced Hazard Mitigation Plan in 2007 and coordinated development of the 2009 revised HIRA and Vulnerability Analysis. She is Co-Chair of ASFPM's Flood Mitigation Committee. She has served on 16 Presidential declared disasters, including service to the Katrina Biloxi Area Field Office through EMAC. As Virginia's Recovery and Mitigation Division Director from 2005 through March 2007 she supervised closure of 90% of open Hurricane Isabel project worksheets. She managed development of 27 local/regional all-hazard mitigation plans and eight Disaster Resistant University plans. While a floodplain management planner, she conducted more than 200 Community Assistance Visits/Community Assistance Calls. Deborah managed section 319 and Chesapeake Bay nonpoint source water pollution grants for a decade with the Department of Conservation & Recreation and was known as an expert in stream and river restoration. A trained and experienced facilitator; she authored the state's first comprehensive natural resource plan for the Department of Forestry and created the computer database and companion comprehensive forest resource economic study: *Virginia's Forests - Our Commonwealth*.

WV Plan Project Role: *Ms. Mills will provide project coordination and constant communication with WVOHSEM and the Hazard Mitigation Council. She will submit monthly progress reports, serve as the primary point of contact with state staff and Council members, facilitate project team resource allocation and ensure a smooth plan update process.*

ANNETTE VAN HILST, RA – PRINCIPAL-IN-CHARGE. Annette is a registered architect in the State of West Virginia and who manages Planning Services in Dewberry's Ranson WV office. A life-long West Virginian, Annette brings broad experience and knowledge of West Virginian regulatory processes, including local zoning and code enforcement, historic preservation and community planning. Annette



will ensure efficiency and quality throughout the plan update process to ensure that project staff has adequate resources to complete the project within schedule and budget

WV Plan Project Role: As Principal-in-Charge, Annette will be responsible for ensuring that any work performed under this Professional Architect Services contract is in full compliance with West Virginia professional architect standards, as appropriate.

SCOTT CHOQUETTE, CFM – QUALITY MANAGER. Mr. Choquette, Dewberry’s Mitigation Planning Practice Leader, has more than 16 years of experience in hazard mitigation, floodplain management, and natural hazards, land use and environmental planning. His work has included natural hazard identification, risk assessment, mitigation project evaluations, grants management, and development and delivery of NFIP, Community Rating System (CRS) and mitigation training programs and community compliance. Prior to joining Dewberry, Mr. Choquette served as State Coordinator of the National Flood Insurance Program (NFIP) and Deputy State Hazard Mitigation Officer for the State of Connecticut. In that capacity, he managed FEMA’s NFIP Community Assistance Program and mitigation planning and grants programs. Mr. Choquette served as Lead Mitigation Planner for the State of Connecticut and as Chairman of the Connecticut Interagency Hazard Mitigation Committee. He recently served on the Board of Directors of the Association of State Floodplain Managers (ASFPM) as a Regional Director (and past Officer) and is currently active on the ASFPM National Mitigation Policy Committee. As a member of that Committee, Mr. Choquette has participated in many national mitigation policy and regulatory development focus groups hosted by FEMA.

WV Plan Project Role: As Quality Manager, Scott will provide quality review of the risk assessment methodologies, vulnerability analysis, 2007 mitigation strategies accomplishment evaluation, newly developed strategies and the Repetitive Loss strategy. He will review all drafts and final products and assist coordination of public and stakeholder outreach.

RACHAEL HELTZ HERMAN, CFM – HAZARD ASSESSMENT LEAD. Ms. Heltz Herman has a broad range of experience and expertise in geospatial information technology as it applies to natural hazards and mitigation planning. She recently joined Dewberry after serving as the Environmental GIS Manager at the Center for Geospatial Information Technology at Virginia Tech. Ms. Heltz Herman has contributed to local, State and regional hazard mitigation plans. She has developed approved Hazard Identification and Risk Assessment (HIRA) sections for the Commonwealth of Virginia Standard Hazard Mitigation Plan as well as for six regional hazard mitigation plans covering dozens of participating jurisdictions. In addition, she led Map Modernization contracts that improved FEMA Flood Insurance Rate Maps and Flood Insurance Studies for Virginia counties and hosted the state’s Map Modernization website. Most recently she led the complete revision of the Virginia Enhanced Plan 2009 HIRA that focuses on state owned critical facilities.

WV Plan Project Role: With the support of James Mawby, John Squerciati, Paul Manno, Cleighton Smith, Peter Drenan and other hazard engineers Rachael will direct research of recent hazard events, interpret and incorporate HAZUS-MH Level I runs into the HIRA and direct targeted Level II runs, oversee revision of all hazard profiles and develop the plan vulnerability analysis. Rachael will supervise production of mapping products that will assist the Hazard Mitigation Council and stakeholders with development and prioritization of targeted mitigation strategies.

JANE SIBLEY FRANTZ, AICP, CFM – MITIGATION PLANNING LEAD. Ms. Sibley Frantz has ten years of professional experience in emergency management. Her background includes work with a national non-profit agency, the federal government and private consulting. Ms. Sibley Frantz has led the development of FEMA-approved local and regional mitigation plans encompassing 285 communities nationwide along with more than 15 disaster resistant university plans and has participated in numerous



workshops, conferences and training opportunities on natural hazards, floodplain management and FEMA's mitigation programs. She has completed disaster preparedness, response, recovery and mitigation project assignments for local and federal agencies, including the US Environmental Protection Agency and the Federal Emergency Management Agency (FEMA).

WV Plan Project Role: *Jane will assist West Virginia's hazard mitigation program staff, NFIP coordinator and the Hazard Mitigation Council to review existing strategies. She will facilitate revised strategies that are responsive to the new HIRA and resultant Vulnerability Analysis. She will direct all planning activities and provide facilitation coordination of Council meetings and events throughout the plan revision process, with support from Steve Pardue, Colin Vissering, Corrine Bartshire and Carrie Strain. In addition, Jane and Steve Pardue will oversee provision of cost and benefit data, NEPA evaluations and project definition for all state critical facilities projects proposed by the revised plan.*

MARK MATULIK, CFM – PROCESS DOCUMENTATION LEAD. Mr. Matulik has more than 25 years of experience in floodplain management, natural hazard mitigation, disaster assistance, FEMA programs, mitigation project management, and grant administration. He has contributed to many state and local hazard mitigation plans, including the Mississippi Standard Hazard Mitigation Plan. Prior to joining Dewberry, Mr. Matulik managed and administered State of Colorado activities for Federal Emergency Management Agency (FEMA) Programs including the Community Assistance Program (CAP), Flood Mitigation Assistance Program (FMA) and the Hazard Mitigation Grant Program (HMGP). Technical, administrative, regulatory and engineering assistance was provided to all Colorado counties and municipalities through these programs to assist them in preventing, mitigating and responding to natural hazards, primarily floods.

WV Plan Project Role: *As the Process Documentation Lead, Mark will coordinate with Deborah, Rachael, Jane and all project staff to ensure that all elements of 44CFR 201.4 are met in accordance with FEMA Blue Book guidance and the Standard State Plan Cross Walk. He will support meeting facilitation, plan preparation and documentation of all planning processes. He will coordinate all stakeholder and public outreach activities in support of the plan. Mark will also direct monthly and quarterly reporting.*

A staff matrix table follows highlighting the experience of our team related to hazard mitigation planning and environmental engineering



Names	Registrations	State Plan Preparation	Local Plan Preparation	Project Management	Planning Process Experience	Meeting Facilitation	HIRA Development	Vulnerability Assessment	HAZUS-MH	GIS	Mining/Dam Safety	Capacity Assessment	Structural Engineering	Losses Avoided/BCA	Land Use Development	Mitigation Goals and Strategies	Analyze Actions and Successes	Plan Maintenance	Program Integration	Public Involvement	Public Assistance
Deborah Mills	CFM	X	X	X	X	X	X	X				X		X		X	X	X	X	X	X
Scott Choquette	CFM	X	X	X	X	X	X	X				X				X	X	X	X	X	X
Rachael Heltz Herman	CFM	X	X	X	X	X	X	X	X	X				X			X	X		X	
Jane Sibley-Frantz	AICP, CFM	X	X	X	X	X	X	X				X		X	X	X	X	X	X	X	X
Mark Matulik	CFM	X	X	X	X	X	X	X				X		X		X			X	X	X
Hazard Assessment																					
Ted Van Kirk	PE			X	X	X	X	X				X	X	X		X	X		X	X	X
John Squerciati	PE, CFM			X	X	X	X	X				X	X	X		X	X				X
Sara Ice	CFM			X						X	X										X
Steve Kalaf	CFM			X	X	X			X	X	X						X		X		
Mark Montgomery	PE											X	X	X		X					X
Peter Drenan				X	X	X							X	X		X				X	X
Paul Manno		X	X	X	X	X	X	X		X		X		X		X	X	X	X	X	X
Fred Tucker	PE										X										
Geoffrey Cowan	PE										X										
Cleighton Smith	PE, CFM		X		X	X	X	X			X										
Frederic Shmurak	PE										X										
James Mawby	CFM			X	X	X	X	X	X	X											
Mitigation Planning																					
Steve Pardue	AICP, CFM	X	X	X	X	X	X	X				X		X		X	X	X	X	X	X
Corinne Bartshire	AICP, CFM	X	X	X	X	X	X	X	X	X		X		X	X	X		X		X	
Carrie Strain			X		X		X	X				X		X		X	X	X			
Julia Moline	EIT, CFM		X		X		X	X				X	X								
Colin Vissering	AICP, CFM	X	X	X	X	X	X	X				X		X		X	X	X			
Laura Johnston	LLA	X	X	X	X	X	X	X				X		X	X	X	X	X	X	X	X
Annette van Hilst	RA			X	X	X									X		X		X	X	
Project Facilitation and Documentation																					
Larry Zensinger		X		X	X	X	X	X				X		X		X	X	X	X	X	X
Chris Zambito	CFM, GISP	X	X	X	X	X	X	X	X	X		X		X		X	X	X	X	X	
Jason Brown			X		X		X	X	X	X		X		X		X		X		X	
Steve Olsen		X	X	X	X	X	X	X	X			X				X	X	X	X	X	X



4.0 Project Understanding and Approach

4a Project Understanding

The *West Virginia State All-Hazard Mitigation Plan* was effective October 18, 2007 per the November, 2006 release of new FEMA Standard State Plan interim final guidance and a revised cross walk. The cross walk requirements were further revised and released in early 2008 to reflect incorporation of FMA, Repetitive Loss and Severe Repetitive Loss planning into the mitigation planning process to provide increased funding levels for certain HMA programs. With our team's recent experience in revising Alabama, the District of Columbia, Mississippi, New Jersey, South Dakota and Commonwealth of Virginia plans, we have expert knowledge of current 44 Code of Federal Regulations requirements and the most efficient analytical methods, planning processes and documentation tools to efficiently revise a state plan ensuring compliance with FEMA plan requirements. West Virginia is soliciting assistance in updating the existing *West Virginia State All-Hazard Mitigation Plan* in a manner that meets the *Disaster Mitigation Act of 2000* (DMA 2000) requirements, including current updates, and addresses the recommended revisions pursuant to FEMA's documented review in 2007. **A draft of the updated plan will be submitted to FEMA Region VIII no later than 45 days in advance of the present plan's October 18, 2010 expiration date to maintain all Stafford Act and HMA grant eligibility for the state and its local government partners.**

Dewberry's planning approach focuses on addressing FEMA's recommended revisions and providing West Virginia with an improved, approvable plan prior to expiration of the present plan on October 18, 2010.

Revision of a state plan into a fresh, fully compliant Standard Plan is a challenge for any state with limited dedicated hazard mitigation staff during the best of times. The plan has to be straightforward and direct in its approach to hazard mitigation, setting clear priorities for tactical mitigation strategies and actions that support reduced impacts from disasters. While the plan must set a high standard of excellence in proposing a vital mitigation program, the actions contained must be achievable or the plan will not have relevance. During a recession, for an under-resourced state with staff diverted to many pressing responsibilities, including emergencies and current Joint Field Office operations for a current Presidential-declared disaster; preparation of a compliant and relevant plan becomes a monumental challenge. **We understand the compressed schedule necessitated by the need to maintain eligibility for Robert T. Stafford Act and HMA grant programs – we can meet your needs with our team of experienced practitioners.**

Our team understands West Virginia. Our Project Manager, Deborah Mills, is a graduate of West Virginia University, as are some key team members. We've served in Appalachian Joint Field Offices supporting hazard mitigation, public assistance grants and individual assistance and households programs. Our structural engineers are leaders in their field with authorship of many FEMA Technical Bulletins, manuals and course offerings in their resumes. We have experts in environmental issues, including dam safety, gob pile safety, river restoration and NEPA. Our engineers and geographers have performed hydrologic and hydraulic flood analysis to support new WV flood studies and dFIRM production. We can add value to your vulnerability analysis by prioritizing the greatest holistic threats to your most vulnerable communities.



We will perform a complete review of the existing plan following FEMA's new Standard Plan cross walk to ensure all information is updated using the best available data during the contract performance period. Per these guidelines, our review will focus on the three broad components of the plan that reflect our project team organization:

1. Vulnerability Assessment
2. Planning to develop mitigation goals and strategies
3. Documentation of the planning process.

Three managers will supervise these components; we propose organization of the plan into the seven distinct areas outlined in the FEMA Standard Plan cross walk. This approach will facilitate successful adoption and approval of the final updated plan.

The updated plan will continue to serve as a guide for community decision-makers as they commit resources in an effort to reduce the future impact of natural hazards. Pursuant to the Council's recommended revisions, we will update the resource listing and funding capabilities in the plan. Using local and State input, the updated plan will further serve as a means of linking policies outlined in other planning documents (e.g. regional planning and development plans, natural resource plans, storm water management plans, emergency management plans, etc.) in a cohesive and holistic way to maximize loss reduction, minimize redundancies and create efficiencies based on multiple planning objectives.

4b Project Approach

The following recommended approach is discussed in the order provided in the December 3, 2009 *Request for Quotation, PROCUREMENT SPECIFICATIONS* beginning on page 8 (Project Description) of the Expression of Interest document for ease of review. These tasks and plan elements will be integrated into the FEMA Standard State Plan Cross Walk plan elements as delivered through a mutually agreed upon planning process shown on the Project Schedule.

3.1 General Requirements:

The plan will contain all required elements for a Standard State Plan as detailed in 44 Code of Federal Regulations §201.4. With concurrence from the West Virginia Division of Homeland Security and Emergency Management State Hazard Mitigation Officer and Hazard Mitigation Planner, along with the Hazard Mitigation Council, the plan will be formatted in the following chapters that cover the following areas:

Chapter 1: Introduction – this section will outline the state's prerequisite adoption requirements per §201.4 (c) (6) and §201.4 (c) (7).

Chapter 2: Planning Process – This section includes documentation of the plan revision process, including all reviews and evaluations of the 2007 plan as well as all WV staff, Council, stakeholder and public interactions during the planning process. Supporting data such as meeting agendas, attendance and minutes will be incorporated into an appendix. A password-protected SharePoint Site will be developed for the plan accessible only to WV hazard mitigation plan participants (Agency staff, HM Council, key stakeholder representatives). This will enable efficient transfer of documents, templates, review materials, etc. throughout the planning process. We use this approach on all of our mitigation planning work with positive feedback from plan participants. A public participation comment and information website can be supported as needed or amendments to the hazard mitigation section on the WV Division of Homeland Security and Emergency Management website.



Chapter 3: Risk Assessment – The present HIRA, will be reviewed and revised to integrate HAZUS-MH Level I runs being conducted through a separate contract concurrent to the planning process. We will then integrate new hazard information, data, GIS databases and uploads from local hazard mitigation plans. New algorithms will characterize vulnerability of residences, businesses, industry and critical state facilities and infrastructure. Finally, future losses from each analyzed hazard will be predicted using the most accurate, proven analytical tools to assure relevance and incorporation in future emergency operations plans. HIRA data, along with Vulnerability Analysis results will be formatted in a manner that guides the Hazard Mitigation Council review of present mitigation strategies and development of new strategies that target mitigation to the more vulnerable communities. The Vulnerability Analysis will be available in a format useful to regional planning and development commissions to inform future local mitigation plan revisions as well as other land-use, comprehensive planning and natural resource plans at the local level.

Chapter 4: Mitigation Plan Goals and Strategies – Mitigation actions carried over from the 2004 plan and new 2007 actions will be reviewed and characterized fully as to success, lessons learned, losses avoided through implementation and appropriateness for continuation in the 2010 plan. Relevant local plan priorities will be examined and uploaded during this process for connectivity to the revised state plan. A facilitated planning process will support this effort incorporating input from staff, the Hazard Mitigation Council and stakeholders.

The newly formatted 2010 mitigation plan goals and strategies will be fully documented with expansion and documentation of priority strategies and state critical facility initiatives to include cost approximations, benefit analysis, value-added, funding sources including HMA and other grant programs or leveraging opportunities. The capability of West Virginia to implement its plan will be described through a robust capacity assessment that will fully integrate all available state, federal, local and non-governmental organization (NGO) programs and funding sources relevant to the goals and strategies in the 2010 plan. Use of HMA funds to date will be analyzed and discussed with “lessons learned” and success stories highlighted. *Steve Pardue, an expert in mitigation project definition and BCA and NEPA analysis will provide detailed information on all proposed state critical facilities hardening projects to position the state and local governments for FEMA HMA grant funding.*

Chapter 5: Coordination of Local Mitigation Planning – West Virginia has 11 Regional Planning and Development Councils, 55 counties and nearly 300 NFIP member communities, all with limited resources for hazard mitigation planning. The state is partnering with FEMA to aggressively support the 50 counties with 2009 plan expirations to revise plans to continue progress and maintain HMA grant eligibility. The revised West Virginia state plan will fully detail local mitigation planning support as well as the upload of localized hazard and risk data and priority projects. All local critical facility and infrastructure initiatives detailed in plans will be uploaded into the state plan to better direct a state strategy for resiliency through mitigation and to meet section 201.4 (c)(2)(ii) requirements for mitigation strategy development for state-owned critical facilities.

Chapter 6: Repetitive Loss Mitigation – Congress has directed FEMA through several avenues to address the continued drain of repetitive loss property insurance claims on the National Flood Insurance Program. Three Hazard Mitigation Assistance (HMA) grant programs now support mitigation efforts for repetitive loss and severe repetitive loss structures: The Flood Mitigation Assistance (FMA) Program, the Repetitive Flood Claims (RFC) Program and the Severe Repetitive Loss (SRL) Program. Accelerated funding (90% federal funds) is available through the FMA and RFC programs if the Standard Hazard Mitigation Plan provides a robust strategy to target repetitive loss and severe repetitive



loss structures for mitigation. Our Project Manager received approval for her plan in a Region III state and has the experience to direct this chapter of the plan. Jane Sibley Frantz, our Mitigation Planning Program Lead, has provided guidance and support to development of FEMA's 2009 and 2010 Hazard Mitigation Assistance (HMA) grant guidance, so have intimate knowledge of repetitive loss programs and the application of Flood Mitigation Assistance, Repetitive Flood Claims and Severe Repetitive Loss grant programs. Mark Matulik wrote pilot SRL plans for several states early in the program.

Chapter 7: Plan Maintenance – “Bringing the plan to life” is a significant challenge, so much so that FEMA used this moniker for one of its “How-to-Guides.” The Plan Maintenance chapter will cap the plan with a mechanism to track goal and strategy implementation, upgrade the HIRA and integrate the plan with West Virginia's new Risk MAP program that will provide more complete characterization of flooding hazards through improved products during the next five years. Tools and templates will be developed to ease accomplishment tracking by WV hazard mitigation program staff, the Hazard Mitigation Council, and other agency partner and stakeholders.

3.2 Project Description:

Task 1: Revised Plan Format.

We recommend plan ordering per §201.4 for ease in plan cross walking and approval, accomplishment tracking and future revisions. Our Project Manager, Deborah Mills, was successful in developing this format for the Commonwealth of Virginia 2004 Standard and 2007 Standard and Enhanced Plans. We propose reorganizing the current plan in accordance with the order of 44 *Code of Federal Regulations* §201.4 *Standard Plan Requirements* or in any other format required by the state hazard mitigation team or Hazard Mitigation Council.

Task 2: Compliance with Standard State Plan Requirements.

2.1. Our project team will be led by hazard mitigation experts with national reputations and experience in state, local, multi-jurisdictional and Disaster Resistant University hazard mitigation plans as well as structural mitigation and disaster recovery expertise. The plan will completely address all requirements outlined in 44 *Code of Federal Regulations* §201.4 *Standard Plan Requirements*, the 2007 revised interim final guidance “blue book” and the current Standard State Plan Cross Walk. Related regulations pertaining to federal grants management and the NFIP will also be incorporated into the plan in appropriate sections or appendices. In addition, any requirements or policies of the State of West Virginia germane to hazard mitigation planning, floodplain management, grants management or disaster recovery will be integrated into the plan.

Task 3: Integration with other Planning Initiatives.

3.1. A key emphasis of the new standard state plan requirements is a more thorough incorporation of FEMA HMA, NFIP and related disaster recovery programs into the standard hazard mitigation plan. In addition, initiatives such as Map Modernization, Risk MAP, EMPG, DHS grants and other local, state, federal and non-governmental activities must be included in the plan. State and local zoning, building code enforcement, comprehensive planning and related natural resources planning will be integrated into the plan as appropriate.



Task 4: Project Implementation Capability.

4.1 The Capacity/Capability Analysis will be integrated into Chapter 4 – Mitigation Planning to connect 2010 developed goals and strategies and those carried forward from previous plans to every potential partner that can contribute to implementation or success. This analysis will not be limited to traditional government programs, but will encompass regulatory and code enforcement, voluntary programs and financial opportunities such as grants or leveraging partnerships. The processes involved will be detailed for appropriate mitigation actions.

4.2 **Benefit-Cost Documentation:** Dewberry has one of the most robust teams of FEMA benefit-cost module experts in the nation. We supported development of the current BCAR module and teach two-day BCA training workshops at the Emergency Management Institute as well as in open Joint Field Offices and at state-hosted FEMA Hazard Mitigation Technical Assistance Program (HMTAP) supported trainings across the country. If requested, such training can be incorporated into the planning process if the WV staff, Council and stakeholders feel that the training would be useful in determining mitigation strategy priorities. *We will provide baseline BCA input data as available for all priority structural mitigation and critical facilities projects to position WV for FEMA HMA grant funding.*

4.3 **Repetitive Loss Structures Mitigation Strategy:** As previously discussed, we propose a Chapter 6 in the plan devoted to mitigation of repetitive loss and severe repetitive loss structure mitigation. Not only is this a new requirement of Standard State Plans, but increased FMA and SRL FEMA mitigation grant funding is available for an approved repetitive loss segment in the state plan. West Virginia has more than 21,400 NFIP policy holders. Information developed in this section of the plan can position local governments for Community Rating System (CRS) participation which will lower the NFIP insurance premiums paid by their property owners. *We have experience in repetitive loss analysis, plan development and the CRS program, and will provide the elements required for the plan as well as the “value added” CRS benefits to interested local governments.*

Task 5: Assessment of Mitigation Actions

5.1 **Mitigation Action Effectiveness and Losses Avoided:** Dewberry has deep expertise and experience in losses avoided calculations, particularly where original benefit-cost analysis data is available. Through FEMA program support task orders we have drafted guidance on losses avoided methodologies for wildfire. In addition, our team members have performed losses avoided analysis for the *Commonwealth of Virginia Enhanced Mitigation Plan*, Congressional and state official inquiries and to support “success story” documentation. Our disaster support experience can fully “paint the picture” of the positive impacts of mitigation investments, not only with regard to residential structures but through 406 Public Assistance Program mitigation focused on critical infrastructure and utilities.

Task 6: Effective use of Available Mitigation Funding

Dewberry will assist West Virginia’s hazard mitigation staff in characterizing use of more than \$60M in HMA grants since inception to strengthen West Virginia families, businesses and infrastructure. This documentation will be provided in Chapter 6: Plan Maintenance where 44CFR (c)(5)(ii) requires a comprehensive description of grant program and project management through close-out. We will weave these benefits into a discussion of losses avoided as well. Linkages will be provided to prior plans’ (2004 and 2007) mitigation strategies and actions as well as priorities for funding the 2010 mitigation initiatives.



Task 7: Commitment to a Comprehensive Mitigation Program

7.1 Chapter 1 will provide all current legislative and executive order activities related to hazard mitigation and adoption by the state of West Virginia of the 2004, 2007 and 2010 All-hazard Mitigation Plans. Additional relevant activities, laws, policies and actions will be incorporated into the plan in relevant chapters. For example, innovative GIS methodologies developed in the state's universities could contribute to future risk assessments. This work would be discussed in Chapter 3: Risk Assessment and could also be integrated into mitigation strategies supported by programs described in the Capability Assessment.

Task 8: Pre-requisite Adoption by the State

8.1 Legal Processes for Adoption: Dewberry will follow the guidance of WV hazard mitigation staff to incorporate the endorsement of the agency director, associated Hazard Mitigation Council members and the Governor (as indicated) per 44CFR201.4 requirements. We suggest presentation of this documentation in Chapter 1, following the cross walk format, with supporting materials provided in an appropriate appendix. We will facilitate the state agency adoption process through a template as appropriate on behalf of WV Office of Homeland Security and Emergency Management as well as all planning process participant agencies and organizations.

8.2 Grant Management Compliance: Management of all funds directed by the Robert T. Stafford Disaster Assistance Act or the FEMA HMA grant programs is dictated by the provisions of 44CFR§13.11(c). Our team's former FEMA mitigation directorate employees and State Hazard Mitigation Officers are fully cognizant of the provisions of the section of the code and will ensure that appropriate assurances are included in Chapter 1 of the plan.

8.3 Amendments: 4CFR 13.11(d) requires plan amendment to reflect changes in state law, policy, organization or agency operation as well as changes to federal regulations or statutes. Dewberry will create a template for tracking such changes and determine a method for plan revision to accommodate and document such changes in either Chapter 1 or Chapter 7, as appropriate.

Task 9: Progress Reports and Draft Deliverables:

9.1 Monthly Progress Reports: Dewberry will provide monthly progress reports to accompany invoices with detailed milestone accomplishments, deliverables and task descriptions as directed by the WV Division of Homeland Security and Emergency Management. We have experience with reporting to accommodate a variety of state, local and regional government needs and formats, as well as experienced project managers who have decades of federal and state accomplishment reporting experience.

9.2 Preparation and Submittal of Quarterly Status Reports: We have expansive experience in preparation of quarterly status reports for FEMA both for our mitigation planning clients and our own task order program support work. We pledge to provide quarterly status reports to include milestone reporting, financial summary reports and task updates within one week of West Virginia's FEMA reporting deadline. We are confident in our ability to proactively represent the state, the plan or the planning process at the FEMA Region III office as needed and appropriate.



9.3 Deliverable Drafts: All draft deliverable materials will be presented to West Virginia Division of Homeland Security and Emergency Management at least two weeks prior to the FEMA Region III submittal deadline.

Further, it is recommended that major plan elements be submitted in draft format to the Region III planning staff for review and conditional approval:

- Evaluation of the 2004 and 2007 Mitigation Strategies
- Risk Assessment (HIRA and Vulnerability Analysis)
- Prioritized 2010 Plan Strategies with Comprehensive Analysis (costs, benefits, potential losses avoided, NEPA issues, and funding sources)

This approach will streamline the final approval process and prevent major “surprises” as the 2007 expiration date nears if regional expectations or interpretation of cross walk requirements have been misinterpreted



4C – Proposed Project Schedule

The following proposed schedule is based on a 16-month contractual agreement beginning in September 2009. Dewberry is confident that a complete draft of the *West Virginia State All-Hazards Mitigation Plan* revision will be completed and submitted to FEMA Region III for review 75 days prior to the October 18, 2010 plan expiration date. An estimated timeline for each task noted in *Section 3b Proposed Approach* is presented below. Dewberry is pleased to discuss modification of the schedule as necessary. The * indicates four proposed Hazard Mitigation Council Meetings:

- **October 2009** Kick-off focusing on the HIRA and evaluation of the 2007 plan
- **February 2010** Vulnerability Analysis Finalized; Develop Mitigation Goals and Strategies
- **May 2010** Review Draft Strategies and Finalize Priorities and Capability Assessment
- **October 2010** Celebrate Plan Approval and Jump Start Implementation

Project Task	Jan 10	Feb 10	March 10	April 10	May 10	June 10	July 10	August 10	September 10	October 10	November 10	December 10	January 11	EOI General Requirements
1. Pre-Planning Support and Data Collection	█													1;2;3;1;3;2;4;2;6;7;8;1;9;1;9;2;9;3;3;1;5;1
2. 2007 Plan Review / Local Plan Upload		█	█											1;2;3;1;5;1
3. Hazard Identification, Risk Assessment and Vulnerability Analysis		* █	█	█	█									1;2;3;1;5;1
4. Mitigation Goals, Strategies, and Projects					* █	█	█							1;2;3;1;4;1;4;2;5;1;6
5. Capability Assessment			█	█	█									3;1;4;1
6. FMA RL & SRL Planning					█	* █	█							1;2;3;1;4;3
7. Draft Plan Sections Submittal and Review					* █	█	█							3;2;6
8. Final Plan Submittal and Review						█	* █	█	█					7
9. Plan Adoption Support (by 10/1/10)										█				8;1;8;2;8;3
10. Plan Distribution FEMA PDM Closeout											* █	█	█	9;2;9;3
EOI General Requirements	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	

* Denotes a Hazard Mitigation Council or WVHSEM Mitigation Planning Team On-site Meeting



5.0 Dewberry Team Experience

Our team brings nationally-recognized experts in state, regional and local mitigation planning to the West Virginia Hazard Mitigation Council. The members of the project team have specific experience with and knowledge of DMA 2000 related planning requirements and guidance. In addition, our structural engineers, water pollution experts, architects and foresters have specific experience and knowledge of West Virginia natural resources issues and hazard challenges.

West Virginia Standard Hazard Mitigation Plan Update Team Organization

Deborah Mills, CFM

Project Manager

Prior to joining Dewberry, Ms. Mills served the Commonwealth of Virginia in a variety of emergency management and environmental leadership capacities. Mills served as the State Hazard Mitigation Officer for Virginia, where she managed more than \$40M in mitigation grant program funds as an Enhanced State, including the development of the approved 2004 Standard Mitigation Plan and Region III's only Enhanced Hazard Mitigation Plan in 2007. She is Co-Chair of ASFPM's Flood Mitigation Committee. She has served on 16 Federal declared disasters, including the Katrina Biloxi AFO. As Virginia's Recovery and Mitigation Division Director, she supervised closure of 90% of open Isabel project worksheets. She managed development of 27 local/regional all-hazard mitigation plans and eight Disaster Resistant University plans. She conducted more than 200 CAV/CAC visits as floodplain planner. She managed state and EPA water pollution grant programs and specialized in river and stream restoration during her tenure with the Department of Conservation and Recreation. A trained and experienced facilitator; she authored the state's first comprehensive natural resource plan and created the computer database and companion comprehensive forest resource economic study: *Virginia's Forests - Our Commonwealth*.

SELECTED EXPERIENCE

- Served as state liaison and coordinating contact for more than 50 HMTAP projects including local and state mitigation planning, flood studies, special projects, and BCA and Coastal Construction and Residential Retrofitting training courses.
- Conceptualized the 2004 Richmond Virginia Shockoe Bottom recovery strategy following Tropical Depression Gaston.
- Developed a dozen local government workshops on disaster damage assessment, grant project development, elevation project management, planning, and non-structural and structural mitigation.
- Served as pilot state for Severe Repetitive Loss state and local training modules.

EDUCATION

- BS, Forest Resource Management, Engineering Concentration West Virginia University

REGISTRATIONS

- Association of State Floodplain Managers, Certified Floodplain Manager



Annette van Hilst

Principal-in-Charge

Ms. van Hilst directs the Ranson, WV Planning Program, responsible for providing planning services including feasibility analysis, concept plans, sketch plats, variance & rezoning requests, historic studies and community impact studies. She is familiar with regulatory processes, including zoning and subdivision regulations, code enforcement, historic preservation and planning. She has a broad knowledge of local history and the architectural context of local building styles. She is knowledgeable in federal housing and community development programs in both the public and nonprofit sectors.

SELECTED EXPERIENCE

- Jefferson Crossing II, Charles Town WV – provided planning services for mixed-use shopping center.
- Hunter Survey, Shepherdstown, WV – prepared Community Impact Statement, including wetland delineation and floodplain study for single family home development.
- Burr Industrial Park, Jefferson County WV – developed community impact statement, supervised engineering services and construction.
-

Scott Choquette, CFM

Quality Assurance/Quality Control

Mr. Choquette, Dewberry's Mitigation Planning Practice Leader, has more than 16 years of experience in hazard mitigation, floodplain management, and natural hazards, land use and environmental planning. His work has included natural hazard identification, risk assessment, mitigation project evaluations, grants management, and development and delivery of NFIP, Community Rating System (CRS) and mitigation training programs and community compliance. Prior to joining Dewberry, Mr. Choquette served as State Coordinator of the National Flood Insurance Program (NFIP) and Deputy State Hazard Mitigation Officer for Connecticut. In that capacity, he managed FEMA's NFIP Community Assistance Program and mitigation planning and grants programs. Mr. Choquette served as Lead Mitigation Planner for Connecticut and Chairman of the Connecticut Interagency Hazard Mitigation Committee. He recently served on the Board of Directors of the Association of State Floodplain Managers (ASFPM) as a Regional Director (and past Officer) and is currently active on the ASFPM National Mitigation Policy Committee. As a member of that Committee, Mr. Choquette has participated in many national mitigation policy and regulatory development focus groups hosted by FEMA.

SELECTED EXPERIENCE

- Service line leader for Dewberry for Disaster Mitigation Act 2000

EDUCATION

- BA, Architecture, Carnegie Institute of Technology

REGISTRATIONS

- Certified Public Housing Manager
- State Historic Preservation Office Approved Consultant

EDUCATION

- BS, Regional Planning Westfield State College

REGISTRATIONS

- Association of State Floodplain Managers, Certified Floodplain Manager



(DMA2K) compliant mitigation plans. Responsible for project management, team oversight, plan writing and outreach support for development of all-hazard regional mitigation plans

- QA/QC manager for Mitigation Plan Updates and or Amendments and Detailed Project Scoping for State of Louisiana. Leads company efforts in updated plans, hazard identification, and risk assessment processes
- Deputy project manager for development of Mississippi Hazard Mitigation Plan, project manager for Massachusetts State Plan update of vulnerability and risk assessment. Both plans have been approved by FEMA.

Rachael Heltz Herman, CFM

Hazard Assessment Lead

Ms. Heltz Herman has a broad range of experience and expertise in geospatial information technology as it applies to natural hazards and mitigation planning. She recently joined Dewberry following five years of service as the Environmental GIS Manager at the Center for Geospatial Information Technology at Virginia Tech. Ms. Heltz Herman has contributed to several local, state, and regional hazard mitigation plans and she has developed approved Hazard Identification and Risk Assessment (HIRA) sections for the Commonwealth of Virginia Standard Hazard Mitigation Plan as well as for six local hazard mitigation plans. In addition, she has modernized FEMA Flood Insurance Rate Maps and Flood Insurance Studies for several communities in Virginia.

SELECTED EXPERIENCE

- Developed approved Hazard Identification and Risk Assessment (HIRA) sections for six local hazard mitigation plans and Commonwealth of Virginia's Standard Hazard Mitigation Plan per Stafford Act and 44CFR Part 201 requirements.
- Modernized FEMA Flood Insurance Rate Maps (FIRMs) and Flood Insurance Studies (FIS) for several communities in Virginia. Effective maps for Montgomery County, City of Radford, and Giles County Virginia. Creation of new approximate zone A and map production is currently underway for Dinwiddie County, Virginia. Knowledgeable of FEMA Guidelines and Specifications for Flood Hazard Mapping Partners.

Jane Sibley-Frantz, AICP, CFM

Mitigation Planning Lead

Ms. Sibley Frantz has ten years of professional experience in the emergency management field. Her background includes work with a national non-profit agency, the federal government, and private consulting. Ms. Sibley Frantz has led the development of FEMA-approved local and regional mitigation plans encompassing 285

EDUCATION

- MS Education, Curriculum and Instruction in Learning Sciences and Technologies, Virginia Polytechnic Institute and State University (Ongoing)
- BS, Interdisciplinary Studies in Environmental Science, State University of New York College at Fredonia

REGISTRATIONS

- Association of State Floodplain Managers, Certified Professional Engineer
- National Restaurant Association Educational Foundation, ServSafe Food Safety Certification
- National Restaurant Association Educational Foundation, ManageFirst Nutrition Certification

EDUCATION

- MRP, Land Use and Environmental Planning, University of North Carolina
- BA, Public Policy, College of William and Mary

REGISTRATIONS

- American Institute of Certified Planners, Certified Planner



communities nationwide along with more than 15 disaster resistant university plans. She has led numerous workshops, conferences and training opportunities on natural hazards, floodplain management, and FEMA's mitigation programs. Ms. Sibley Frantz has completed disaster preparedness, response, recovery and mitigation project assignments for local and federal agencies, including the US Environmental Protection Agency and the Federal Emergency Management Agency (FEMA).

SELECTED EXPERIENCE

- Supported development of FY 2009 and 2010 FEMA HMA grant program guidance.
- Developed uniform methodology for development of university, state, regional and local hazard mitigation plans.
- Cross-walked 20% of the Arkansas local hazard mitigation plans through a state contract.
- Provided task management for revisions to 2008 NFIP Technical Bulletins' revisions and Building Science Publication Baseline Study.

Mark Matulik, CFM

Process Documentation Lead

Mr. Matulik has more than 25 years of experience in flood plain management, natural hazard mitigation, disaster assistance, FEMA programs, mitigation project management, and grant administration. He has contributed to several State and local hazard mitigation plans, including the South Dakota and Mississippi Standard Hazard Mitigation Plans. Prior to joining Dewberry, Mr. Matulik managed and administered State of Colorado activities for Federal Emergency Management Agency (FEMA) Programs including the Community Assistance Program (CAP), Flood Mitigation Assistance Program (FMA) and the Hazard Mitigation Grant Program (HMGP). Technical, administrative, regulatory and engineering assistance was provided to all Colorado counties and municipalities through these programs to assist them in preventing, mitigating and responding to natural hazards, primarily floods.

SELECTED EXPERIENCE

- Contributed to Mississippi Standard Hazard Mitigation Plan
- Served as Lead Field Liaison for the Katrina Mississippi Global Match Program.
- Provided leadership for the for Hurricane Katrina recovery and mitigation programs in Mississippi
- Serves as Subject Matter Expert supporting the unification of five mitigation grant programs including the development of the guidance crosswalk and FY10 HMA draft program guidance (2008)
- Since 2005, has served as a senior member of FEMA's Benefit Cost Analysis (BCA) Technical Review Team.

- Association of State Floodplain Managers, Certified Floodplain Manager

EDUCATION

- MA, Public Administration, University of Colorado
- BS, Agronomy, Soil Science, Colorado State University

REGISTRATIONS

- Association of State Floodplain Managers, Certified Floodplain Manager



Hazard Assessment

Theodore Van Kirk, PE

Mr. Van Kirk's 28 years national experience bridges the full range of FEMA mitigation and disaster assistance programs. He has managed Dewberry's HIRA and mitigation planning program delivering 46 university/local/regional/state plans covering six states, 39 institutions and 285 communities to local, state and university clients. He manages performance of more than \$60M in contract and task order workload annually encompassing a multitude of hazards including floods, hurricanes, wildfires, earthquakes, and tornadoes. Mr. Van Kirk is the author of multiple publications including FEMA 259, 348 and AIA Buildings at Risk Series (*Flood Hazard Mitigation*) and contributed to multiple FEMA publications including the IVAN MAT, FEMA 311, technical bulletins, recovery bulletins, and the *Hurricane Mitigation Handbook*. A certified FEMA TTT and instructor for BCA, Retrofitting, RSDE, and Cost Estimating, he has taught hundreds of classes, including multiple public assistance program classes for which he developed the curricula. He served on ASCE Standards Committee that developed *Flood Resistant Design and Construction* (ASCE 24-98); is a member of the National Academy of Sciences Disasters Roundtable Steering Committee and provided subject matter expertise to the USGS contract that delivers post-disaster imagery to FEMA's disaster programs. He participated in the evaluation of technical outreach materials for CA OEM's Earthquake and Tsunami Program.

SELECTED EXPERIENCE

- Served as Dewberry PM and technical lead for three consecutive nationwide FEMA public assistance support contracts from 1995-present
- Managed more than 100 task orders for more than 60 disasters in 35 states and US Territories, including many activated with 48 hours notice.
- Provided technical expertise and oversight management for multiple MAT, recovery bulletins, technical bulletins and building sciences task order project deliverables

John Squerciati, PE, CFM

Mr. Squerciati's career spans twenty years experience in civil engineering, with specific experience in structural analysis, design, construction, and building code compliance. He served as Lead for Damage-Frequency module of FEMA's Benefit Cost Analysis Re-engineering (BCAR), QA/QC support to EQ and wildfire modules; member of BCAR Beta test group. He has been Dewberry's manager for multiple FEMA task orders through the firm's Public Assistance, TARC, and HMTAP contracts. Experienced in structural mitigation measures, he has provided expert review of thousands of hazard mitigation grant applications for mitigating

EDUCATION

- MBA, Business Administration, Loyola University
- BS, Civil Engineering Bucknell University

REGISTRATIONS

- Professional Engineer VA

EDUCATION

- MS, Civil Engineering, The Cooper Union for the Advancement of Science and Art
- BS, Civil Engineering, The Cooper Union for the Advancement of Science and Art

REGISTRATIONS

- Professional Engineer, VA, LA, MD
- Association of State Floodplain Managers Certified Floodplain Manager



floods, earthquake, tornados, and coastal hazards. Mr. Squerciati has received two Dewberry *Awards for Excellence* for the Hurricane Katrina MAT report and the FEMA Region IV Hurricane Hazard Mitigation Handbook.

SELECTED EXPERIENCE

- Supported and managed more than 80 task orders in 31 states for more than 40 federally declared disasters.
- Provided analysis of hazard vulnerabilities and recommended site specific mitigation measures following Hurricane Katrina in LA, Hurricanes Charley, Frances, and Ivan in FL, tornados in WI and OH.
- Developed Hurricane Hazard Mitigation Handbook for FEMA Region IV following the 2004 hurricane season; provided QA/QC for Wildfire Hazard Mitigation Handbook for FEMA Region IX.
- Provided pre- and post- disaster technical support and programmatic assistance to FEMA's Public Assistance Program.

Mark Montgomery, PE

Mr. Montgomery has more than 18 years of experience in the field of civil engineering and environmental management projects. Mr. Montgomery currently manages Dewberry's role in a joint venture technical assistance contract supporting FEMA's public assistance program. He is currently managing technical staff deployments to the present WV Joint Field Office and has served in numerous JFOs managing development and funding of project worksheets. He has extensive experience in the areas of civil engineering and facility management, including completing numerous environmental surveys and investigations, developing hazard mitigation and operations and maintenance plans, developing plans and specifications for abatement design, and general construction administration. Experience includes the completion of numerous environmental surveys and investigations, development of hazard mitigation and operations, and maintenance plans, development of plans and specifications for abatement design, and general environmental construction administration.

EDUCATION

- Certificate, Inspecting for Lead Hazards, Georgia Institute of Technology
- Certificate, Lead-Based Paint Risk Assessment, Georgia Institute of Technology
- BS, Civil Engineering West Virginia University, 1987

REGISTRATIONS

- Professional Engineer, VA
- Radiation Safety Certification
- Certified Lead Based Paint Abatement Designer, MD



Lisa McCauley, PE

Ms. McCauley has 23 years of experience in both West Virginia and Virginia, including all aspects of engineering design, public representation, and management for residential, commercial, and industrial site plans and construction plans. Initial work includes development of concept plans, Land Evaluations and Site Assessments, feasibility studies, variance applications, and conditional use permits for numerous West Virginia local government and private development contractual projects. She has also performed wetland delineations in conjunction with project design and was a speaker at the 2008 “Developing Communities on Karst” seminar held annually at the National Conservation Training Center in Shepherdstown, WV.

SELECTED EXPERIENCE

- Project manager for construction projects throughout West Virginia, with responsibilities including site planning, oversight of construction planning and engineering design, coordination with client, coordination with city and State agencies, representation at public meetings

Steve Kalaf, CFM

With 30 years National Flood Insurance Program (NFIP) experience, Steve is responsible for developing and managing Dewberry’s NFIP quality program for more than 10,000 studies including automated QC systems and knowledge management system (HELPR). As a major author of FEMA’s *Guidelines and Specifications* and associated Procedure Memos, he has unmatched knowledge of FEMA requirements, including levee mapping protocols, datum conversions, and floodplain boundary standards. Steve is also the Program Manager for the U.S. Fish & Wildlife Service Coastal Barrier Resources System Map Modernization program, which includes active collaboration between FEMA and the USFWS. Additionally, he serves as Dewberry’s point of contact for the Mapping Service Center and is adept at rapidly identifying, tracking, and resolving issues.

EDUCATION

- BS, Civil Engineering, Bucknell University

REGISTRATIONS

- Professional Engineer, WV and VA

EDUCATION

- BS, Geography, Frostburg State University

REGISTRATIONS

- Association of State Floodplain Managers Certified Floodplain Manager



Peter Drenan

Mr. Drenan has 24 years national experience encompassing architecture, design, construction management, project management, cost estimation and building codes. He directed the completion of over \$750 million in construction projects. In addition to the design and development of design and construction projects, he has six years FEMA experience supervising recovery operations, debris operations, historic preservation, and other disaster assistance programs. His significant track record of successful management and delivery of disaster recovery services, managing performance of FEMA staff, local hires, Mission Assigned work (including USACE and BOR) and Technical Assistance Contractors (TAC) work totaling over \$2 billion encompasses a multitude of hazards including floods, hurricanes, and tornadoes. Mr. Drenan contributed to FEMA building science and mitigation related publications including the technical bulletins, recovery bulletins, and the *Hurricane Mitigation Handbook* and authored the development of FEMA Task Book Descriptions and FEMA Public Assistance Courses. He is also an instructor for multiple Public Assistance Courses, including Debris Management Program, PA Pilot Course Program, PA Operations I & II, Debris Operations and Debris Monitoring. He is a national leader in teaching and seminar presentations on building, construction details, and building codes with a wide-ranging background in building code issues, construction management, conflict resolution, litigation support and project management planning.

EDUCATION

- BS, Architecture North Carolina State University

REGISTRATIONS

- Comprehensive Building Code Specialist—Nationwide (International Residential Code)

Paul Manno

Mr. Manno has over 16 years of experience in planning and specializes in natural hazard and emergency management planning. Since 1995, he has been involved in the Federal Emergency Management Agency (FEMA) through assignments with the firm's National Flood Insurance Program Technical Evaluation Contractor (TEC), National Infrastructure Support Technical Assistance Contractor (NISTAC) and Hazard Mitigation Technical Assistance Program (HMTAP) contracts. This work has included natural hazard identification, risk assessment, benefit cost analysis, and mitigation project identification and recommendations for infrastructure and residential facilities nationwide. Mr. Manno has facilitated public information programs, as well as trained FEMA, state and local officials in the areas of Debris Operations and Debris Management. He has also been involved in contingency planning for local communities and has assisted in developing GIS-based models for use in debris management planning and debris removal.

EDUCATION

- Master's Program, City and Regional Planning, University of Virginia
- BS, Environmental Science, University of North Carolina-Wilmington



Fred Tucker, PE

Mr. Tucker has more than 35 years of professional experience working as a civil engineer. Mr. Tucker has been approved by the Federal Energy Regulatory Commission (FERC) as a Consultant for performing the 5-year Independent Consultant Inspection of major hydroelectric projects regulated by them. At least 10 years of experience with dam engineering are required for approval by the FERC. He has a working knowledge of federal and state dam safety regulations, RCRA regulations (Subtitle C and Subtitle D), Clean Water Act regulations, Virginia Department of Environmental Quality (DEQ) regulations, and Code of Maryland Regulations (COMAR); he is familiar with the regulatory process. Mr. Tucker performed Phase I safety inspections for Duke Power Company for ash dike impoundments at four coal-fired power-plants.

EDUCATION

- MSCE, Civil Engineering, University of Arkansas
- BSCE, Civil Engineering University of Arkansas

REGISTRATIONS

- Professional Engineer, VA, MD, NC, SC, PA, FL

Geoffrey Cowan, PE

Mr. Cowan has more than 25 years of experience in the areas of dam safety engineering, drainage design, stormwater management, and floodplain management. He is responsible for the planning and design of water resources projects, including lakes and dams, stormwater management facilities, hydraulic structures, and channel improvements. Mr. Cowan has been a consultant to local municipalities for the purpose of establishing and updating local stormwater and floodplain management criteria and policies, including the development of dam design criteria. He served as a Project Manager responsible for periodic dam safety inspections and evaluations for Fairfax County. Duties involved reviewing state-of-the-art dam design criteria by federal and state agencies, conducting personal interviews with dam safety officials, summarizing alternative approaches and criteria, and providing recommendations to Fairfax County officials. Performed dam safety inspection and completed operation and maintenance certificate application to bring existing dams into compliance with Virginia Dam Safety Regulations.

EDUCATION

- BS, Civil Engineering, Virginia Polytechnic Institute and State University

REGISTRATIONS

- Professional Engineer VA

Cleighton Smith, PE, CFM

Mr. Smith has 30 years of experience in hydrologic and hydraulic analyses related projects involving floodplain issues. These projects typically involved considerable interaction with Federal, State and Local government officials. Mr. Smith has extensive experience with a wide-range of hydrologic and hydraulic computer programs. Representative project experience includes dam failure analyses and dam safety inspections and reports.

EDUCATION

- MS, Water Resources, Clarkson University
- BS, Civil Engineering, Clarkson University

REGISTRATIONS

- Professional Engineer, NJ, IL, IN, WI, MN, MI, WA
Association of State Floodplain Managers, Certified Floodplain Manager



Frederic Shmurak, PE

Mr. Shmurak has 20 years of engineering experience in water resources engineering as well as in civil site design and geotechnical engineering. Mr. Shmurak specializes in dam evaluation, design and rehabilitation projects having worked on over 30 intermediate and high hazard dams as well as numerous miles of earthen embankment dikes.

EDUCATION

- MS, Civil Engineering (Water Resources and Environmental Hydraulics), Georgia Institute of Technology
- BS, Civil Engineering The Citadel

REGISTRATIONS

- Professional Engineer, NC SC GA

James Mawby, CFM

Mr. Mawby has 12 years of experience as a Geographer/GIS professional supporting a variety of projects to include natural hazard identification, land use and environmental planning, permitting, and regulatory compliance. His responsibilities include project task management of National Flood Insurance Program (NFIP) county-wide re-studies, H&H of approximate floodplain hazard identification, LiDAR-based terrain data management and surface creation in support of NFIP re-studies, business development/project management of HAZUS-specific projects and Risk-Map related support for FEMA Regional HAZUS initiatives (community outreach efforts). He is also responsible for meeting specific cartographic needs, database design specifications, data accuracy and/or precisions and metadata requirements of NFIP DFIRM databases.

EDUCATION

- BS, Environmental Studies, The Richard Stockton College of New Jersey

REGISTRATIONS

- Association of State Floodplain Managers, Certified Floodplain Manager



Mitigation Planning

Steve Pardue, AICP, CFM

Mr. Pardue has 20 years experience as a planner and practitioner in the areas of hazard mitigation, risk assessment and benefit-cost analysis. Since forming Vissering Pardue & Associates in 2006, Mr. Pardue and his co-Principal Colin Vissering have been involved in a wide variety of work related to hazard mitigation, risk assessment, and FEMA program support. The work has included grant application development, complex risk assessments and benefit-cost analyses in support of grant applications, numerous mitigation plans and components of plans, and support for the State of Mississippi in assessing opportunities for global match for HMGP projects. Prior to his current employment, Mr. Pardue was part of the FEMA team that developed much of the initial policy and technical practice for FEMA's mitigation grant programs.

Selected Experience

- State Hazard Mitigation Plans: lead planner for updates to State of New Jersey and State of Alabama mitigation plan updates, both of which were approved by FEMA
- Local Hazard Mitigation Plans: project manager for the development of risk assessments for multiple hazard mitigation plans in NJ; lead planner for hazard mitigation plan updates in several localities in LA and OK
- University Hazard Mitigation Plans: Principal-in-Charge for development of University of Maryland Hazard Mitigation Plan, technical lead for risk assessments and benefit-cost analyses for George Mason University

Colin Vissering, AICP, CFM

Mr Vissering has over 17 years of experience in environmental and urban planning, policy, and emergency management and hazard mitigation programs. In addition to running environmental and disaster services divisions in large engineering companies, he has managed mitigation, environmental and cultural resource activities for federal disaster programs, providing oversight for numerous NEPA Environmental Assessments and related natural resource studies. His experience includes development of hazard mitigation plans and grant applications, environmental training, federal environmental regulatory and policy development, and drafting and implementation of National Historic Preservation Act agreement documents. Mr. Vissering was formerly a Lieutenant in the U.S. Navy and a Senior Environmental Protection Specialist for the Federal Emergency Management Agency where he developed and managed FEMA's NEPA programs compliance program

SELECTED EXPERIENCE

EDUCATION

- MCP, Community Planning, University of Maryland
- BS Architecture, University of Texas

REGISTRATIONS

- American Institute of Certified Planners, Certified Planner
- Association of State Floodplain Managers, Certified Floodplain Manager

EDUCATION

- MCP, Community Planning, concentration in Physical and Environmental Planning, University of Maryland
- BS, Societ and Eastern European Studies, George Washington University

REGISTRATIONS

- American Institute of Certified Planners, Certified Planner
- Association of State Floodplain Managers, Certified Floodplain Manager



- Technical Advisor for Mitigation, Office of Gulf Coast Recovery
- Senior Planner, ESF #14 Long-Term Recovery Planning
- Evaluation of Special Considerations for the World Trade Center Recovery Efforts
- Task Order Coordinator, FEMA How To Planning Guides: Report to Congress on the Natural and Beneficial Functions of Floodplains
- NEPA Compliance Coordinator, FEMA Mitigation Directorate

Corinne Bartshire, AICP, CFM

Ms Bartshire is a project manager and hazard mitigation planner for the Disaster and Mitigation Services group. She contributes leadership, outreach expertise, quality writing, and organization to Dewberry's DMA2K compliant hazard mitigation plan projects. Ms. Bartshire also serves in the hazard mitigation technical assistance program as needed for mitigation grant application review, benefit cost analysis training, and post-disaster tasks such as collecting high water mark information after heavy rains. Ms. Bartshire has more than 8 years of professional experience in planning and GIS. Her background includes 4 years of GIS consulting work with local communities.

EDUCATION

- MCRP, City and Regional Planning, California Polytechnic State University
- BS, Environmental and Resource Sciences, University of California at Davis

REGISTRATIONS

- American Institute of Certified Planners, Certified Planner
- Association of State Floodplain Managers, Certified Floodplain Manager

Carrie Strain

Ms. Strain serves as an Emergency Management Specialist in Dewberry's Emergency Management and Homeland Security Branch with a successful record in emergency management and homeland security preparedness and planning on the local, State, and Federal governmental levels. Ms. Strain has been involved in numerous aspects of emergency management including: post disaster assessments, mitigation planning, response and long-term recovery planning, and is knowledgeable of FEMA Public Assistance. Specific areas of specialty include: evacuation planning and mitigation planning.

EDUCATION

- Graduate Certificate, Homeland Security, Emergency Preparedness, and Response
- BS, Environmental Science, Oregon State University

Julia Moline, EIT, CFM

Ms Moline has a wide range of experience in emergency management and related fields and has contributed to various aspects of local and university hazard mitigation plans, including hazard identification and risk assessments, vulnerability analyses, and capability assessments. She was a member of the FEMA 2008 Midwest Floods Mitigation Assessment Team, and has contributed to the creation and update of several FEMA building sciences publications and training courses. Her background includes work with state and local agencies and the US House of Representatives.

EDUCATION

- BS, Structural Engineering, Columbia University
- BA, Economics, Columbia University

REGISTRATIONS

- Engineer in Training, NY
- Association of State Floodplain Managers, Certified Floodplain Manager



Laura Johnston

Ms. Johnston has more than 20 years expertise in current and long-range planning services for communities, cities, parishes, counties and regions for the growth and revitalization of urban, suburban and rural communities. She was a local planning director in Wisconsin and currently leads Dewberry's Hazard Mitigation Planning Program in Louisiana directing development of parish mitigation plans. Her professional and technical experience in current and long-range planning includes: post-disaster planning, hazard mitigation planning at the community, parish/county and state levels (independently and in tandem with the Department of Homeland Security/Federal Emergency Management Agency), current and long-range land use planning, negotiation assistance, public participation/stakeholder involvement, facility planning and analyses, and comprehensive planning. She has worked extensively in both the public and private sector

EDUCATION

- BA, Environmental Planning and Landscape Architecture, Utah State University, College of Natural Resources

REGISTRATIONS

- Licensed Landscape Architect, Louisiana
- Licensed Real Estate Sales Agent, Louisiana



Project Facilitation and Documentation

Laurence Zensinger

Mr. Zensinger has worked in virtually every aspect of the Federal Emergency Management Agency's (FEMA's) response and recovery activities since its creation, including development of the Federal Response Plan, the National Urban Search and Rescue System, the Hazard Mitigation Grant Program, the national system for the centralized processing of individual disaster claims and the innovation of numerous disaster response and recovery programs. He has extensive experience working with state and local agencies and officials as a result of directing a variety of field disaster operations, including serving as Federal Coordinating Officer for the \$8 billion Northridge earthquake. He has expert knowledge of disaster preparedness, mitigation, response, and recovery practices throughout the various agencies of federal, state, and local governments and US territories. He is an expert in governmental structures, organizations, and emergency management processes as well as intergovernmental relations in the specialized field of emergency management, mitigation, response, recovery, and disaster preparedness/homeland security.

Selected Experience

- Principal-In-Charge of a team of planning and engineering professionals providing professional and technical assistance to a variety of cities and parishes across the State of Louisiana for mitigation plan updates and detailed project scoping
- Provided organizational leadership and QA/QC review of LA post-Katrina hazard mitigation planning activities for 70 parishes.
- Directed development of a revised *Long-term Disaster Response and Recovery Operations SOP*. Focus groups were conducted with FCO's and FEMA Management to develop the SOP. The new operational planning process was piloted during the 2008 Iowa floods.

Steve Olsen

Mr. Olsen has more than 35 years of experience in disaster and mitigation activities. He has worked over his career in all phases of emergency management, preparedness, response, recovery and mitigation. His efforts have included work in natural and human-caused disaster activities in more than 30 states in the country. He has worked as a manager in disaster programs, served as a Federal Coordinating Officer on disasters in the field, and was the FEMA, Region VIII Division Director for Mitigation programs. In that capacity he supported state, local and tribal governments in the implementation of FEMA Mitigation and National Flood Insurance Programs and initiatives. These included the Disaster Mitigation Act of 2000, Project Impact, Flood Mitigation Assistance, Community Rating System, Hazard Mitigation Grant Program, Pre-Disaster Mitigation and

EDUCATION

- MS, Urban Planning, Southern Illinois University
- BS, Earth Sciences, Valparaiso University

EDUCATION

- MBA, Business, University of Kansas, 1970
- BA, Psychology, University of Kansas, 1968



Map Modernization. Steve continues to work in these important areas in his Dewberry position as the Director of West Operations. His has been deployed to work on the Florida and Louisiana hurricanes in 2004, 2005 and 2006 and manages Dewberry projects in the Western United States

Sarah Ice, CFM

Ms. Ice is a task manager and business manager for the Management and Consulting Services group. She is proficient in GIS and utilizes it on a day to day basis for FEMA FIRM production. She assists engineers in producing flood maps for the National Flood Insurance Program and reviews those maps and related texts for accuracy. Ms. Ice reviews and processes Summary of Map Action letters on behalf of FEMA. Ms. Ice has community outreach experience in the form of presenting new mapping data to community officials at community coordination meetings. She has been involved in post-disaster tasks such as collecting high water mark information after heavy storms and flooding. Her background includes 4 years of professional experience in geography and GIS.

EDUCATION

- MBA, University of Maryland-University College (Ongoing)
- BNS, Geography, Missouri State University

REGISTRATIONS

- Association of State Floodplain Managers, Certified Floodplain Manager

Chris Zambito

Mr. Zambito joined Dewberry in 2008 following ten years service as the Senior planner for Hillsborough County, FL (>1 million residents) for 10 years specializing in hazard mitigation and emergency management practices. He has performed risk assessments and hazard identification as well as managed many programs, such as the Local Mitigation Strategy, Community Rating System, and Critical Facility Inventory. He has led these programs to the multi-million dollar benefit of local government and residents. Mr. Zambito provides expertise in the development of local risk assessment plans and outreach strategies with a focus on reaching consensus with local, state, and federal stakeholders to achieve a common goal

EDUCATION

- Graduate Certificate, Geographic Information Systems, University of South Florida
- BS, Business Administration, University of South Florida

REGISTRATIONS

- Association of State Floodplain Managers, Certified Floodplain Manager
- GIS Certification Institute, Certified Geographic Information Systems Professional

Jason Brown

Mr. Brown is a hazard mitigation planner for the Disaster and Mitigation Services group. He contributes quality writing and GIS analyses to Dewberry's DMA2K compliant hazard mitigation plan projects. Mr. Brown also assists with Flood Insurance Rate Map development by performing quality review, GIS editing, and community outreach.

EDUCATION

- BS/Regional Planning and Geography and Economics, Westfield State College, MA



6.0 Dewberry Team Project Experience

Dewberry has completed dozens of local, multi-jurisdictional, DRU and state hazard mitigation plans that ensured that hundreds of jurisdictions remained eligible for Robert T. Stafford Act disaster assistance grants and HMA program grants.

Dewberry staff is comfortable and adept at communication and facilitation with a broad range of stakeholders, politicians and policy and technical experts at all levels. Whether engaging a local homeowner, an emergency manager or a FEMA officer, Dewberry always considers first and foremost the goals, objectives, and specific needs of the community we are serving.

Dewberry and FEMA Region III. Dewberry has robust relationships with local governments, states, and FEMA Region III staff. Our staff has a wide range of experience developing local, state, and university hazard mitigation plans. We support FEMA flood assistance programs, the Hazard Mitigation Technical Assistance Program, and Public Assistance Program through technical assistance contracts. We know the regional staff, state staff, and local stakeholders through this service and our hundreds of disaster deployments.

All-Hazard Mitigation Project Experience

The Dewberry team is recognized as a leader in the hazard identification, risk assessment, and mitigation planning field. We have proven experience with DMA2K-compliant planning efforts and extensive experience with FEMA expectations for this planning project. Hazard mitigation plans that Dewberry has successfully completed or are currently completing are outlined in the following table, followed by additional project descriptions.

Virginia Standard and Enhanced Hazard Mitigation Plan

Deborah Mills developed the Commonwealth's 2004 Standard State Plan and 2007 Standard and Enhanced Plan while serving the Department of Emergency Management. Both were considered national models, most notably the 2007 Enhanced Plan losses-avoided methodology was heralded by FEMA plan reviewers as "an easy to follow, practical model for showing the value of investments in Bluefield, Virginia. Rachael Herman, while at Virginia Tech, supervised the 2004 and current HIRA which has been submitted to Region III using new, innovation methods not employed in any other state hazard mitigation plan. FEMA region III staff participated on the Virginia HIRA sub-committee during the past year, reinforcing relationships and FEMA acceptance of the new method and the resultant Vulnerability Analysis. One "value added" from the 2009 HIRA is its application as the state's base HIRA that will serve as the database for future Virginia EOPs, Continuity of Operations Plans, human-caused hazards plans, critical facilities planning and EMAP re-accreditation.

State Hazard Mitigation Plan, South Dakota Office of Emergency Management

The State of South Dakota contracted Dewberry to revise the existing State of South Dakota Hazard Mitigation Plan and bring the plan into compliance with the requirements of the Disaster Mitigation Act of 2000 and its implementing regulations: 44 CFR Part 201. The previous review of South Dakota's 2004 Hazard Mitigation Plan yielded several areas of required improvement. Dewberry coordinated with the State of South Dakota Office of Emergency Management (SDOEM) and FEMA to develop a State Hazard Mitigation Team (SHMT) representative of the state's diverse interests. Through regular



meetings with the SHMT and SDOEM, Dewberry's Corrine Bartshire, Scott Choquette and Jane Sibley Frantz have guided South Dakota through a successful hazard mitigation planning process. This process included meetings in Aberdeen, Sioux Falls, Pierre, and Rapid City to present preliminary Risk Assessment results to the public and relevant stakeholders and gather local feedback throughout the state. The updated plan was approved and adopted in April 2008.

Thank you so much for your assistance with this plan! It has been a great experience working with you guys and we sure hope you will be there in a few years to help us out again!- Jason Bauder, SD Office of Emergency Management

State Hazard Mitigation Plan, Mississippi Emergency Management Agency (MEMA)

As a member of a three firm team, Dewberry was retained by the State of Mississippi to update the State's Hazard Mitigation Plan. This was the first update of the plan, post-Hurricane Katrina and was complete a revision of the existing plan. Dewberry team members Scott Choquette, Laura Johnston, Mark Matulik and Corinne Bartshire were engaged in nearly all elements of plan revision. Dewberry's primary responsibility was to guide the team through the planning process and to ensure compliance with DMA 2000 and guidance requirements. We were involved on a team that completely re-wrote the Hazard ID and Risk Assessment and were responsible for local plan roll-up and mitigation strategy development. The plan was approved by FEMA in October of 2007, with only one round of very minor revisions.

Hazard Mitigation Grant Program Support, Mississippi

Dewberry provided support to the State of Mississippi in the pilot global match program supporting the Hurricane Katrina Hazard Mitigation Grant Program. Mark Matulik served as a liaison between FEMA Region IV, the FEMA Transitional Recovery Office (TRO), the Mississippi Emergency Management Agency (MEMA), the Mississippi Development Authority (MDA), and the Mississippi Governor's Office. Performance Status: All of the projects and task orders noted above were completed on schedule and within or under budget.

Hazard Mitigation Planning and Project Scoping (Louisiana Pilot Planning Grant Program)

Dewberry's Baton Rouge Office, led by Laura Johnston, has been retained by Louisiana Parishes and cities to assist in executing the requirements of FEMA hazard mitigation plan revisions and grant funding conditions, including a feasibility analysis, project scoping and plan amendment and/or update

- **Iberia Parish** – Dewberry is currently working with the Parish on the update of their hazard mitigation plan and scoping of mitigation actions under the pilot program. We are working closely with community leaders to identify and scope mitigation actions that will benefit the community and to update their hazards and risk assessments.
- **City of Thibodaux** - Dewberry is currently working with the City on the update of its hazard mitigation plan and scoping of mitigation actions under the pilot program. We are working closely with community leaders to identify and scope mitigation actions that will benefit the community and update their hazards and risk assessments as well as working with City officials to re-identify and prioritize all critical facilities
- **Allen Parish, City of Covington, Caldwell Parish, Catahoula Parish and Winn Parish** – Dewberry is currently working with the Cities and Parishes on the amendment to their hazard mitigation plan and scoping of mitigation actions under the pilot program. We are working closely with community leaders to identify and scope mitigation actions that will benefit the communities.



State of Louisiana - Vulnerability Assessment and Hazard Mitigation Plan

Dewberry worked with the Governor's Office of Homeland Security and Emergency HSEP to rank all state-owned assets for level of analysis, mitigation priorities, and response and recovery importance. Additionally, we developed a process to determine which critical facilities had the highest potential combined loss for all hazards and created hazard maps for the State. Dewberry's mapping and analyses were used in the development of the State's Hazard Mitigation Plan and in the certification of the agency for the Emergency Management Accreditation Program (EMAP).

State Hazard Mitigation Plan and Update, Alabama Emergency Management Agency

In 2007, Steve Pardue of VPA was a team member contracted by the Alabama Emergency Management Agency to update the State Hazard Mitigation Plan. Mr. Pardue was also lead planner and project manager of the team that produced the original Alabama State HMP, in 2004. The update process involved included coordination with the State Hazard Mitigation Team. In addition to the standard update requirements, the work produced a Severe Repetitive Flood Loss Mitigation Plan (approved in 2008), flood and wind risk assessments for 22 State critical facilities, and a draft State Enhanced Mitigation Plan. The updated plan was approved by FEMA Region IV in 2008 with minimal comments.

State Hazard Mitigation Plan Update, New Jersey Office of Emergency Management

In 2007, Vissering Pardue and Associates, Inc. was part of the team contracted by the New Jersey Office of Emergency Management to complete the three-year update the State Hazard Mitigation Plan. The update entailed a nearly complete revision of the 700 page document, and development of a Severe Repetitive Flood Loss Mitigation plan. The HMP now includes a comprehensive hazard identification section, and detailed risk assessments for several of the most prevalent hazards. The updated plan was approved by FEMA Region II in 2008.

Crater Planning District Commission, Virginia Hazard Mitigation Plan

Dewberry, along with the Virginia Tech Center for Geospatial Information Technology, developed a multi-jurisdictional hazard mitigation plan for the communities of the Crater Planning District Commission through the leadership of Ted Van Kirk, Jane Sibley Frantz and John Squerciati. Deborah Mills served as the state liaison as SHMO during plan development. The plan was approved by FEMA as meeting both 322/DMA-2K and FMA requirements. The Crater Advisory Committee includes representation from a broad range of stakeholders including representatives from Virginia State University. This effort included completing a hazard identification and risk assessment, facilitating community outreach and public participation, developing a mitigation strategy, assessing communities capabilities, and coordination with the local mitigation committee and other community officials. This regional planning effort covers Chesterfield, Dinwiddie, Greensville, Prince George, Surry and Sussex counties, and the Cities of Colonial Heights, Emporia, Hopewell, and Petersburg.

I want to thank you and your fine Dewberry Team for your excellent work in regard to the development of the Crater Region Natural Hazard Mitigation Plan. The professionalism displayed by the Dewberry Team was exemplary. - Dennis Morris, Executive Director of the Crater PDC

LENOWISCO Planning District Hazard Mitigation Plan, Virginia

The LENOWISCO Planning District, which includes the Virginia communities of Lee County, Wise County, Scott County, and the City of Norton, contracted Dewberry to create a DMA2K compliant hazard mitigation plan. Dewberry worked with the Planning District to develop a mitigation advisory



committee consisting of each municipality's stakeholders to guide the planning process. The plan included hazard identification and risk assessment, a vulnerability analysis, and a capability assessment as well as a mitigation strategy that was developed with heavy community involvement. The LENOWISCO Hazard Mitigation Plan was approved in 2005, in time to meet FY 2005 grant funding requirements.

Cumberland Plateau Planning District Commission Hazard Mitigation Plan, Virginia

Dewberry developed a DMA2K compliant hazard mitigation plan for the Cumberland Plateau Planning District Commission, which includes Buchanan, Dickenson, Russell, and Tazewell Counties in Virginia. Major growth within the Planning District increased the risks from and vulnerabilities to natural hazards in the region; therefore the mitigation strategy that Dewberry developed with community involvement emphasized promoting better understanding of local hazards and risks and building support for mitigation and hazard-reduction activities. Deborah Mills, as Virginia SHMO, supported development of the plan. The plan included hazard identification and risk assessment, a vulnerability analysis, and a capability assessment. The Cumberland Plateau Planning District Commission plan was approved by FEMA in December of 2005.

DeKalb County, Georgia Multi-Jurisdictional Multi-Hazard Mitigation Plan

DeKalb County, in the Metropolitan Atlanta area, is one of the fastest growing areas of the United States. Dewberry completed the plan for the county and its incorporated areas on an accelerated schedule (five months) with no subcontractors. We facilitated the review and approval of the plan by the Georgia Emergency Management Agency and FEMA Region IV, in a record seven business days and met the deadline, by two days, for project applications that were dependent upon the approved plan. As a result of our ability to expedite the project, complete a quality plan, and work with our contacts in the state and FEMA Region, DeKalb County was the successful recipient of more than \$10 million dollars in project funding during the FY 2005 Pre-Disaster Mitigation Competitive grant program cycle.

Flood Mitigation Services for the Bozutto Riverview Landing Apartment Complex, Eagleville, Pennsylvania. Team members conducted a site assessment of the Riverview Landing apartment complex and prepared a report of findings and recommendations for reducing future flood damage. Based on information provided by Bozutto, the Riverview Landing site is impacted by nuisance flooding of the Schuylkill River adjacent to a riverside access road that extends to the edge of the apartment complex.

Disaster Resistant University Program, Virginia. Deborah Mills, when serving as Virginia SHMO and later as the Division Director for Recovery and Mitigation, was known nationally as an advocate for Disaster Resistant University Plan development. She advocated development of eight DRU plans in the Commonwealth. As the prime contractor, Dewberry worked with seven universities in the Commonwealth of Virginia to develop hazard mitigation plans that met the requirements of DMA2K and FEMA's Disaster Resistant University program, including the first university plan to be approved by the Commonwealth of Virginia and FEMA Region III. Ted Van Kirk led the project team, which included John Squerciati and Jane Sibley Frantz. Each plan was unique in that Dewberry provided detailed analysis of at-risk structures, providing mitigation recommendation for high and medium priority buildings. Highlights include the Virginia Tech and Radford plans which addressed ridge and valley region hazards on a campus basis, and the University of Virginia Plan prepared for a World Heritage site featuring a regional trauma center, Jefferson's Academic Village, and the Rotunda. The UVA plan, along with the Virginia Commonwealth University plans is among the first in the nation to use innovative assessment tools to prioritize human-caused hazards.



Hazard Mitigation Assistance (HMA) Unification

Dewberry, as a subcontractor, is supporting the unification of five of FEMA's Mitigation Division's existing mitigation grant programs into the Hazard Mitigation Assistance Program, which will enable FEMA to deliver grant funds in a more timely and effective manner. This multi-year unification effort focuses on linking the four pre-disaster programs [Flood Mitigation Assistance (FMA), Severe Repetitive Loss (SRL), Repetitive Flood Claims (RFC), and Pre-Disaster Mitigation (PDM)] and managing overall consistency with the post-disaster program, the Hazard Mitigation Grant Program (HMGP). Dewberry continues to support program strategy and management; development of guidance and regulations; program outreach; facilitation of the application processes; and facilitation of the award and post-award processes. The effort relies on the extensive knowledge and working relationships of the consulting team in all aspects of mitigation programs and management, FEMA, State and local grantees and sub-grantees and other federal grant programs.

Hazard Mitigation Technical Assistance Program, Federal Emergency Management Agency

The Hazard Mitigation Technical Assistance Program contract offers technical support for the HMGP and FEMA's other pre- and post- disaster mitigation programs. As a subcontractor, Dewberry provides support nationwide for projects such as plan reviews, multi-hazard identification and risk assessments, post flood hazard verifications and restudies, benefit-cost analyses, project evaluations, GIS applications development, and other disaster support. Recent relevant experience includes the following:

- Participated in the development of FEMA's State and Local Mitigation Planning How-To Guides and Mitigation Planning Workshop materials.
- Developed GIS and loss estimation analysis applications used to develop statewide HIRA in four states. Also developed GIS protocols for identification, mapping, and assessment of critical infrastructure in Louisiana.
- Participated in FEMA's Repetitive Loss Team Planning and completed repetitive loss structure evaluations in FEMA Regions I, III, IV, V and VI.
- Participated in the development of benefit-cost analysis methodologies used by FEMA to analyze tornado and counterterrorism projects and to integrate disparate flood analysis modules into a single analysis tool. Provides ongoing technical assistance to FEMA's Benefit Cost Hotline.
- Performed hazard verification in Rockland County, NC after Hurricane Floyd.
- Performed revised hydrologic and hydraulic analyses and revised mapping for watersheds in four Pennsylvania counties in the aftermath of heavy flooding in May 2006.
- Local mitigation plan evaluations and reviews for compliance with the Disaster Mitigation Act of 2000 regulations for FEMA.
- Supported development of 2005 Pre-Disaster Mitigation Grant program guidance and materials to assist potential grantees in preparing applications. Participated in the development of FEMA engineering technical review processes and scoring procedures.
- Developed a hurricane mitigation handbook for public buildings and infrastructure for FEMA Region IV, the handbook contains technical, cost and policy information on structural and non-structural wind and flood mitigation measures.
- Supported 2004 Disaster Resistant Universities program by providing technical support to application review for project grants including technical editing and support of Disaster Resistant University and FEMA mitigation success stories publications.
- Shockoe Bottom Flood Retrofit Study. Conducted detailed evaluations of flood impact on a historic commercial district along James River in Richmond, VA. Identified possible mitigation



alternatives and developed and delivered outreach presentations to business and building owners and builders.

- Provided engineering/environmental/benefit-cost analysis reviews of projects submitted for 2004 – 2009 funding under FEMA’s Hazard Mitigation Assistance Program. Also provided
- Engineering, environmental, and benefit cost analysis reviews for thousands of projects submitted under FEMA’s Hazard Mitigation Grant Program.

Public Assistance Technical Assistance Contract, Federal Emergency Management Agency

Dewberry as part of NISTAC, a joint venture held with URS has effectively and efficiently delivered technical assistance support on 92 task orders representing more than \$270M of work on this \$453M contract. This is the eighth consecutive technical assistance contract held by Dewberry since 1982. Dewberry’s expertise in nationwide post disaster response and recovery including hazard mitigation, GIS support services, code analysis, and cost estimating contributes to an in-depth understanding of all aspects of disasters and hazard mitigation. Ted Van Kirk, Mark Montgomery, John Squerciati, Peter Drenan, Paul Manno and Mark Matulik all support this contract, bringing emphasis to 406 mitigation to add mitigation to post-disaster repair and replacement of government infrastructure. Recent relevant experience includes:

- Led development of FEMA’s 406 Mitigation Course, Earthquake & Flood Mitigation Handbooks, and JFO integration of 404/406 programs.
- Responded to more than 400 disasters throughout 49 states and all US territories
- Since 2005, deployed 800+ engineers, architects, construction inspectors, cost estimators and other technical specialists to conduct thousands of building assessments on damaged public facilities and infrastructure and to develop eligible scopes of work and cost estimates for more than 30,000 project worksheets, including projects in West Virginia
- Developed FEMA’s Cost Estimating Function which improved estimating process and accuracy and formed the basis for Mitigation’s BCAR Estimating Module.
- Provided on-site GIS/IT support to 8 disasters and developed GIS applications for debris estimating and PDA’s.
- Within one week of the Oct 2007 Southern CA Wildfires, Dewberry created a Post-Fire Hazard Awareness Maps website to disseminate post-fire potential debris flow area, volume, and fire perimeter information

Technical Assistance and Research Contract, Federal Emergency Management Agency

Dewberry, as a Building Engineering Sciences and Technology Team (BESTT) joint venture partner, has been providing building science and technical support to FEMA’s Mitigation Directorate since 2004. To date, 76 task orders totaling \$16.5M for architectural, building performance assessment, engineering security, graphic design, technical writing, HAZUS, code monitoring, and conference and training support services has been awarded under this contract. Project highlights and Dewberry contributions include:

- **BESTT disaster resistant codes development services** contributed to the FEMA Program Manager receiving the FEMA Gold Medal AWARD.
- **HMGP Reconstruction Grant Pilot** - Developed guidance for project eligibility, environmental reviews, engineering and close-out. Developed unit cost guidance and oversaw development of global benefit-cost analysis.
- **Technology Transfer.** Reviewed national survey of 1,664 publication users and facilitated 12 national focus group sessions to provide insight into the publication effectiveness to suggest improved layouts and delivery mechanisms



- **Multi-Hazard Design:** Expert input and best practices for updating Flood Retrofit Publications and Courses (FEMA 259, FEMA 312, and E279) and led 2009 delivery of FEMA's Multi-Hazard Mitigation Design Course for regional mitigation staff.
- **Mitigation Assessment Teams,** publications, recovery advisories, technical bulletins, and training/outreach efforts have improved FEMA partnering with stakeholders
- **Flood/Wind Building Science Helpline:** Developed protocols and procedures for implementing email/phone helpline and coordinate BESIT and FEMA responses to inquiries.
- **Repetitive Loss Properties** – Investigated data anomalies within NFIP database of 135,000 properties nationwide for repetitive loss claim validation, establishing fair market values, and verifying severe repetitive loss property status.

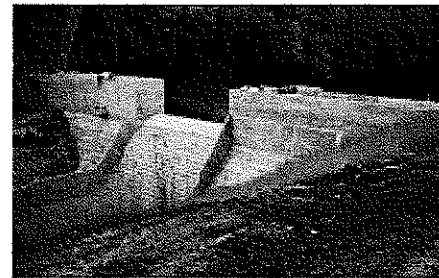
Related Dam Safety and Environmental Experience

Impoundment structures have received increasing attention by FEMA and must be addressed in a natural hazards mitigation plan. West Virginia's hosts a variety of dam structures that contain mine tailings, support power plants, industries, farms and municipal water supply. The state has a Dam Safety law. Our experts will be available to support analysis of the state's dam inventory for the impoundment section of the HIRA.

Dam Safety Engineering

Dewberry has extensive background in hydrologic/hydraulic engineering, geotechnical engineering, and dam inspection and design. The firm has been involved with numerous dam inspections to comply with Virginia Dam Safety Regulations and has designed small and medium-sized dams throughout the Commonwealth. Dewberry has provided inspection, study, and new/rehabilitation design services to a variety of clients over the past 25 years. Dewberry's dam engineering experience includes:

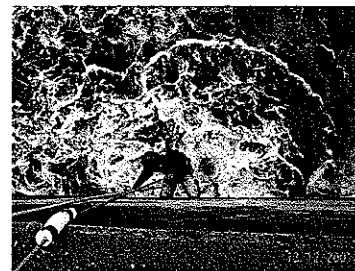
- Virginia Operation and Maintenance Permit Application preparation
- Phase I and II investigations
- Feasibility studies
- Hydrologic analyses for Spillway Design Flood development
- Hydraulic analyses of spillway structures and outlet works
- Dam break modeling and Emergency Action Plan development
- Geotechnical investigations and design
- Dam stability analyses (concrete gravity and earth)
- Planning and design of new dams (concrete gravity and earth)
- Planning and design of dam rehabilitation measures



In addition, Dewberry engineers have extensive experience in performing dam safety inspections for the power industry and private owners of dams in accordance with federal and state dam safety regulations for more than 100 dams. Mr. Frederic Tucker, PE, of Dewberry has been approved by the Federal Energy Regulatory Commission (FERC) as a Consultant for performing the 5-year Independent Consultant Inspection of many major hydroelectric projects regulated by them. At least 10 years of experience with dam engineering are required for approval by the FERC. The inspection required by the FERC involves not only a systematic visual inspection of the condition of the water impounding facility, but also the rigorous review of previous engineering analyses and studies, history and construction records, maintenance and operation procedures, and instrumentation records. From these inspections much has been learned about how dams have been engineered in the past, how well they have performed, and what some of the shortcomings have been as compared to FERC safety criteria.



Dewberry's engineering staff is well versed in the design of earth dam embankments and associated spillway structures. Specifically, they are familiar with the design and safety criteria required by state and federal regulatory agencies. In addition, they are experienced in performing geotechnical analyses for evaluation of slope stability under all credible loading conditions, seepage, piping potential, and settlement. They are familiar with the design measures used to enhance stability and to limit and control seepage. Dewberry engineers have designed or analyzed stability of more than 30 embankment dams. Our hydraulic engineers are well versed in spillway design flood development and hydraulic design of a wide range of spillway systems, including drop inlet spillway, overland spillway, concrete chute spillways, ogee spillways, and various energy dissipaters.



Hydrologic and Hydraulic Design for Dams

Dewberry has performed hydrologic and hydraulic analysis for numerous dam safety projects. We have applied design guidelines established by various agencies including the NRCS and the US Army Corps of Engineers for spillway design flood development, dam break analysis, and hydraulic proportioning of principal and auxiliary spillways. We are very familiar with design guidelines from various federal and state agencies related to hydrologic and hydraulic design for dams and spillways and have applied these procedures and practices towards the design of spillway systems for numerous dams.

Cedar Run 6, Fauquier County Virginia

Under subcontract to GEI Consultants, Dewberry provided hydrologic and hydraulic design for the spillway system at the Cedar Run 6 dam, in Fauquier County, Virginia. This was an NRCS PL-566 project involving an RCC dam with a stepped RCC auxiliary spillway and a two-way covered baffle inlet riser principal spillway.

Dam Break Analysis Study, Northeastern United States.

Dewberry performed dam break analyses of 104 unsafe dams in an 11-state area as part of FEMA's Dam Safety Mapping Program. Using a hand calculation method developed by Dewberry, the breached flood hydrograph, flood wave attenuation characteristics and depth of flood wave were developed and the inundation areas were mapped. The project provided FEMA with a preliminary assessment of the flood potential downstream of unsafe dams and was used to demonstrate the need for a workable dam safety program in the United States.

Damage Survey Reports, Kansas.

Dewberry performed post-storm assessments of damaged dams in Presidential declared disaster areas and completed damage survey reports for 105 dams. Work included determination of damage, scope of repairs, cost estimates and the interpretation of federal-aid eligibility requirements.

General Civil Consultant Services, Fairfax County, Virginia.

Under consecutive program support multi-year contracts, Dewberry has assisted the Fairfax County Government, Department of Public Works and Environmental Services (DPWES) in implementing a general broad scope of design projects, including development of standards and specifications for the design and construction of regional stormwater management facilities for small dams. The projects involved review and evaluation of existing county guidelines for design and construction of dams as well as conducting research on design regulations and standards from other states' dam safety programs, the US Army Corps of Engineers (USACE), the Bureau of Reclamation, and the NRCS. Development of these standards included preparation of recommendations for hydraulic and



hydrologic design methodologies, providing geotechnical requirements for dam design, and developing specific standards details for spillways, trash racks, and other appurtenant structures. Changes in the Commonwealth of Virginia Dam Safety Regulations caused additional dams in Fairfax County to be subject to regulation. With the new State regulation, it was necessary to obtain an Operation and Maintenance (O&M) Certificate for each dam through the Virginia Department of Conservation and Recreation (DCR), Division of Dam Safety. Nine Fairfax County dams were not previously regulated by the State. Therefore, it was necessary to **inspect each dam and prepare an application package** for submission to DCR requesting an O&M Certificate

Keatons Run Dam, Locust Grove, Virginia.

Dewberry performed a complete foundation investigation, hydrologic studies, hydraulic analysis, and structural design inspection of this 30-foot-high earth fill dam. The firm **provided a determination of the soundness of the dam** for a client homeowners' group that accepted responsibility for the dam's operation and maintenance. Dewberry was later hired to design structural improvements to the dam based on earlier recommendations

Ranson West Virginia Dewberry Land-use Planning Projects Jefferson Crossing II, Uniwest Group, LLC, Charles Town, West Virginia.

Planning services were provided for a mixed-use shopping center proposed to contain the following uses: 125,000 SF of major retail space, two smaller retail centers total 29,000 SF, two restaurants, an 80-room motel, and one out-parcel. The project was guided by Dewberry Annette van Hilst through the first stage of approval process. Now completed, the project consists of a mixed-use shopping center containing the following uses: 125,000 SF of major retail space, two smaller retail centers for a total 29,000 SF, two restaurants, an 80-room motel, and one out-parcel.

Norborne Glebe Park, Arcadia Building Company, Charles Town, West Virginia.

Dewberry developed the concept plan for a community park that maintains the existing stream valley and provides walking trails and parking areas. The project supported development and design of a planned community including 450-single family homes, 250 townhouses, 200 multi-family units, park and community use, and commercial and professional area as well as construction plans for an additional 250-single family homes

Hunter Survey, WV Hunter, LLC, Shepherdstown, West Virginia.

As lead planner and architect, Annette van Hilst researched, prepared & presented the required Community Impact Statement to local the planning commission for first approval of project. The project entailed a single family home development of 36 lots with well and septic systems. The project also included a wetland delineation and floodplain study.

Deerfield Village, Wilmoth Construction, Shepherdstown, West Virginia.

As architect, planner and project manager, Annette van Hilst assisted the client with development of the Community Impact Statement and presentation to the Jefferson County Planning Commission. She developed architectural plans for reuse of existing farm building into sales office and maintenance facility and provided engineering services for this 48 residential unit cluster subdivision located in an existing orchard with innovative waste water treatment plant and community water system. She also supported the Deerfield Village Plant Building for Snyder Environmental as Project Manager responsible for developing the architectural plan for the water plant building.



Summary Hazard Mitigation Planning Experience:

We have proven experience with DMA2K-compliant planning efforts and extensive experience with FEMA expectations for this planning project. Relevant projects that we have successfully completed or are currently completing are outlined below:

Project	Multi-Jurisdictional	Community Outreach	Risk and Vulnerability Assessment with Mapping	Mitigation Strategy Development	Flood Profile	Wildfire Profile	Earthquake Profile	Landslide or Subsidence Profile	Extreme Winter Weather Profile	Tornado or Strong Winds Profile	# of Communities	Project Status	Date Completed
State Hazard Mitigation Plans													
Virginia Standard and Enhanced Hazard Mitigation Plan (authored by Deborah Mills as VA SHMO)		■	■	■	■	■	■	■	■	■		<i>Approved</i>	November 2007
South Dakota State Hazard Mitigation Plan		■	■	■	■	■	■	■	■	■		<i>Approved</i>	April 2008
Alabama State Hazard Mitigation Plans (VPA)		■	■	■	■	■	■	■	■	■		<i>Approved</i>	October 2007
New Jersey State Hazard Mitigation Plans (VPA)		■	■	■	■	■	■	■	■	■		<i>Approved</i>	
Louisiana State Hazard Mitigation Plan		■	■	■	■	■		■	■	■		<i>Approved</i>	April 2005
Mississippi State Hazard Mitigation Plan		■	■	■	■		■		■	■		<i>Approved</i>	October 2007
Massachusetts State Hazard Mitigation Plan Update		■	■		■		■	■	■	■		<i>Approved</i>	October 2007



Projects in Region III													
Cumberland Plateau Planning District Commission, Virginia, Hazard Mitigation Plan	■	■	■	■	■	■		■	■	16	Approved	January 2006	
LENOWISCO Planning District Commission, Virginia, Hazard Mitigation Plan	■	■	■	■	■	■		■	■	10	Approved	January 2006	
Northern Shenandoah Valley Regional Commission, Virginia, Hazard Mitigation Plan	■	■	■	■	■	■		■	■	20	Approved	April 2007	
West Piedmont Planning District Commission, Virginia, Hazard Mitigation Plan	■	■	■	■	■	■		■	■	13	Approved	August 2006	
Northern Neck Planning District Commission, Virginia, Hazard Mitigation Plan	■	■	■	■	■	■		■	■	10	Approved	June 2006	
Northern Virginia Regional Commission Plan (Fairfax County)				■						14	Fairfax	February 2007	
Richmond Regional Planning District Commission, Virginia, Hazard Mitigation Plan	■	■	■	■	■	■		■	■	7	Approved	September 2006	
Frederick County, MD Hazard Mitigation Plan		■	■	■	■	■	■	■	■		Pending Approval		
Washington, DC Vulnerability Assessment		■	■		■	■		■	■	1	Approved	December 2007	
West Piedmont Planning District Commission, Virginia, Hazard Mitigation Plan	■	■	■	■	■	■		■	■	13	Approved	August 2006	
Crater Planning District Commission, Virginia, Hazard Mitigation Plan	■	■	■	■	■	■		■	■	18	Approved	May 2006	
Prince George's County, MD Hazard Mitigation Plan	■	■	■	■	■	■		■	■	1	Approved	May 2005	
Dauphin County, Pennsylvania, Mitigation Plan	■		■	■	■					41	Approved	December 2004	
Old Dominion University Disaster Resistant University Plan, Norfolk, VA		■	■	■	■	■	■	■	■	1	Approved	October 2007	
Radford University Disaster Resistant University Plan, Radford, VA		■	■	■	■	■		■	■	1	Approved	November 2006	
Virginia Tech Disaster Resistant University Plan, Blacksburg, VA		■	■	■	■	■	■	■	■	1	Approved	January 2007	
Virginia State University Disaster Resistant University Plan, Petersburg, VA		■	■	■	■	■		■	■	1	Approved	April 2007	
University of Mary Washington Disaster Resistant University Plan, Fredericksburg, VA		■	■	■	■			■	■	1	Approved	December 2008	
University of Virginia Disaster Resistant University Plan, Charlottesville, VA		■	■	■	■	■		■	■	1	Approved	February 2009	



Projects in Region III														
Virginia Commonwealth University Disaster Resistant University Plan, Richmond, VA			■	■	■	■	■					1	Draft Plan Underway	
Berks County, PA Hazard Mitigation Plan			■	■	■	■	■					74	Approved	May 2007
Chesapeake, VA Hazard Mitigation Plan			■	■	■	■	■					1	Approved	April 2004
Dauphin County, PA Hazard Mitigation Plan	■	■	■	■	■	■	■	■	■	■		41	Approved	December 2004
Local and Multi-Jurisdictional Mitigation Plans														
DeKalb County, GA Multi-Hazard Mitigation Plan (8 Jurisdictions)	■	■	■	■	■	■	■					8	Approved	March 2006
Eastern Band of the Cherokee Indians, Cherokee, NC Hazard Mitigation Plan			■	■	■	■	■	■	■	■		1	Approved	February 2005
Heart of Illinois Project Impact Multi-Jurisdictional Multi-Hazard Mitigation Plan	■	■	■	■	■	■	■					5	Approved	January 2004
Costilla County, Colorado, Multi-Hazard Mitigation Plan (3 Jurisdictions)	■	■	■	■	■	■	■	■	■	■		3	Conditional Approval	September 2007
Santa Barbara County, CA Multi-Hazard Mitigation Plan (9 Jurisdictions)	■	■	■	■	■	■	■	■				9	Approved	February 2005
Costilla County, CO Hazard Mitigation Plan	■	■	■	■	■	■	■	■	■	■		3	Approved	September 2007
Towne of Boone, NC (FPM only) Hazard Mitigation Plan			■	■	■							1	Approved	January 1999
Lewis County, WA (FPM only) Hazard Mitigation Plan			■		■	■						1	Approved	August 2005
San Diego County, CA (FPM and RL Only) Hazard Mitigation Plan			■		■	■						1	Approved	February 2005
Allen Parish, LA Hazard Mitigation Plan	■		■	■	■	■						6	Pending Approval	
Caldwell Parish, LA Hazard Mitigation Plan	■		■	■	■	■						4	Approved	February 2009
Catahoula Parish, LA Hazard Mitigation Plan	■		■	■	■	■						4	Approved	April 2006
City of Covington, LA Hazard Mitigation Plan			■	■	■	■						1	Approved	February 2009
Enid, OK Hazard Mitigation Plan			■	■	■	■	■					1	Approved	January 2009
Iberia Parish, LA Hazard Mitigation Plan	■		■	■	■	■						5	In Progress	
Park County, CO Hazard Mitigation Plan	■		■	■	■	■						3	Approved	February 2009
City of Thibodaux, LA Hazard Mitigation Plan			■	■	■	■							In Progress	
Winn Parish, LA Hazard Mitigation Plan	■		■	■	■	■						6	In Progress	



University Plans															
California State University (Humboldt, San Bernardino, Hayward, Sacramento)	■		■		■	■	■	■	■	■	■	4	<i>Approved</i>	April 2003	
Colleges of the Fenway (Boston, MA)	■	■	■	■	■				■			6	<i>Approved</i>	2007	
University of North Carolina— Wilmington (Wilmington, NC)		■	■	■	■	■	■		■	■		1	<i>Approved</i>	June 2008	
City of Santa Barbara School Districts (21 campuses in 2 cities) (CA)	■	■	■	■	■	■	■	■	■	■		2	<i>Approved</i>	December 2008	
Other Relevant Projects															
FEMA Nationwide Hazard Mitigation Technical Assistance Program (HMTAP) and Public Assistance Program Support	■	■	■	■	■	■	■						■	<i>150+ Task Orders</i>	

All listed projects included active participation or management by at least one member of the West Virginia Hazard Mitigation Plan.