

*Privileged and Confidential (Optional)*

Scott Fraser  
City of Key West

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Subject:

Arcadis qualifications for property owner coordination, flood mitigation efforts

[BUSINESSUNIT]

Dear Mr. Fraser,

Date:

17 November 2015

Arcadis has the unique experience and resources to provide comprehensive services related to flood risk reduction under the requirements of both the NFIP and the FEMA mitigation grant programs. Our team includes a former State Floodplain Management Office / NFIP coordinator as well as many Certified Floodplain Managers (CFMs) and numerous American Institute of Certified Planners with direct experience in floodplain planning and risk reduction management.

Contact:

Joy Duperault

Phone:

850-895-4715

In the 2014 and 2015 annual federal grant programs, Arcadis developed a total of 20 nationally competitive applications that proposed to mitigate over 450 residences against future flood risk through elevation, mitigation reconstruction or property acquisition projects. Many of the residences included were Severe Repetitive Loss and Repetitive Loss properties, including a low-income housing complex that had suffered multiple losses. The applications developed had a total mitigation cost estimate of \$55.8 million. The communities that were part of this work were pleased with the process and the mitigation projects proposed.

Email:

[joy.duperault@arcadis.com](mailto:joy.duperault@arcadis.com)

This work has resulted in the availability of a new, streamlined grant application process as a model for communities to use when applying for FEMA mitigation grants. Moreover, \$12 million was identified by FEMA as potential award, and could be captured for mitigation in Florida communities thus strengthening the state further against losses from floods.

Arcadis also has experience implementing Repetitive Loss Area Analysis, completing careful examination and mitigation assessments for these communities. This comprehensive understanding of floodplain regulations assists

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our team in reviewing flood mitigation projects for compliance with federal regulations and local codes. We have also assisted communities with the Community Rating System and development of 510 Floodplain Management Plans.

### **Examples of Related Work**

#### Bristol Park HMGP Application / Escambia County, Florida

Arcadis conducted outreach to homeowners who experienced severe flooding in 2014 to develop a federal Hazard Mitigation Grant Program application. Over 30 homes are expected to be acquired at a total project cost of almost \$7.8 million (federal funding = \$5.8 million.) Award notification pending.

#### Columbia County, Florida

Arcadis has and continues to provide HMGP/HMA grant management services to Columbia County, Florida. With Arcadis' assistance, Columbia County has obtained more than \$8.8 million in federal funding for \$11.7 million in mitigation projects between 2010 and 2015. Some of the earliest work the Arcadis team performed in the County was facilitation of the local hazard mitigation planning process and subsequent HMGP/HMA applications that resulted from their approved hazard mitigation plan.

In coordination with the Local Mitigation Strategy Working Group, the Arcadis team managed to develop, implement, and manage a series of HMGP/HMA programs that have proven successful for the County's Floodplain Management efforts.

#### Brick Township, New Jersey, post-Hurricane Sandy

Arcadis led three engineering firms to conduct field evaluations after Hurricane Sandy's impacts, conducting site visits to approx. 8,400 homes within the project area. At its peak, Arcadis had 21 people in the field with tablets collecting data and syncing to an internal server, which collected more than 38,000 photographs for FEMA grant applications. Multiple objectives associated with this work included:

- Homeowner outreach to inform them of available programs and assist with needs determination
- Home assessment for residential mitigation measures
- Restoration status determination in highly impacted areas
- Necessary actions identification to restore infrastructure and public assets to pre-storm conditions
- Infrastructure mitigation opportunities identification

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- Records collection of photographic and engineer-collected evidence of the above to facilitate funding reimbursement as well as mitigation planning

In the attached resumes, please see additional cases that may relate to the work that the City is interested in accomplishing.

Sincerely,

Joy

Arcadis U.S., Inc.

Enclosures:

Resumes for Frank McColm, Joy Duperault, Kelli Thurson Reddick

## FRANK C. MCCOLM, AICP, CFM

Frank has more than six years of experience in Federal Grant Accounting Implementation.

### EDUCATION

BS, Interdisciplinary Social Science,  
Florida State University  
MS, Urban and Regional Planning and  
Development, Florida State University

### YEARS OF EXPERIENCE

Total – 9  
With Arcadis – 3

### PROFESSIONAL REGISTRATIONS

American Institute of Certified Planners  
Graduate Certificate in Real Estate  
Development, Florida State University  
Certified Floodplain Manager  
Certified Project Manager

### QUALIFICATIONS

- National Incident Management System (NIMS): 700(a), 800(b)
- Incident Command System (ICS): IS-100, IS-200, G-300, G-400
- Unified Hazard Mitigation Assistance (HMA): L212, L213, L214
- Six-Sigma
- Florida Division of Emergency Management, Management Academy

### PROFESSIONAL ASSOCIATIONS

Association of State Floodplain Managers  
American Planning Association

Mr. McColm's area of expertise is grant administration and implementation. He is a hazard mitigation programs expert specializing in grant management, and has extensive experience in regulatory compliance related to grant-funded projects. Mr. McColm's management of past projects has resulted in successful program and project planning, execution, and closeout.

### Project Experience

**Florida Division of Emergency Management: Hazard Mitigation Grant Program Administration / Tallahassee, FL.** Mr. McColm has provided consultation for Hazard Mitigation Grant Program administration from allocation of funding through closeout of grants and subgrants. Mr. McColm also developed and managed resource allocation plans to achieve program administration objectives. He has demonstrated experience in all areas of the grant lifecycle.

**Florida Division of Emergency Management Project Management / Tallahassee, FL.** Served as project manager responsible for over \$110M in hazard mitigation grant projects. Responsibilities included contract management, payment processing, project monitoring, project close-out, coordination of audit activities, as well as programmatic and financial compliance with state and federal regulations. Mr. McColm regularly worked with federal, state, and local officials to resolve complex issues.

**Special Application Reviewer for Confidential Clients throughout the Northeastern United States.** Following the impacts of Superstorm Sandy, Mr. McColm served as quality assurance reviewer for large grant-funded project applications prior to submittal to state and federal funding authorities. These reviews ensured regulatory and programmatic compliance as well as to incorporate best management practices.

**Sandy Recovery Improvement Act (SRIA): Programs Administered by the States (PAS) and Advance Assistance Implementation.** Mr. McColm facilitated the implementation of the Programs Administered by States and Advance Assistance opportunities made available through SRIA. As a result of Mr. McColm's involvement, the client was the first grantee in the nation to receive approval to conduct these activities through the federal funding authority. His contributions included drafting the initial application and all follow-up correspondence, creating scopes of work, research, and analysis. He also led negotiations with the

## Project Experience Continued

funding authority for operating agreement execution. In addition, Mr. McColm authored briefing documents that were presented at the National Emergency Management Association's annual meeting explaining the PAS application and approval process. The PAS and Advance Assistance have increased program implementation efficiency for the client.

**Policy Analysis: Various Cases / Nationwide.** Mr. McColm has completed multiple policy analyses relating to grant-funded project planning, implementation, and issue resolution. He has successfully provided consultation to resolve challenging funding source and program management issues. Further, he has drafted and submitted appeals for projects of all sizes as well as served as lead staff in resolving audits findings, some of which exceeded \$1M in findings impact.

**Florida Division of Emergency Management's Bureau of Mitigation Economic Impact Analysis / Tallahassee, FL.** Mr. McColm collected and analyzed data on mitigation projects funded between 2004 and 2011 and assessed their impact on Florida's economy in terms of employment. This deliverable was presented to senior state officials, and provided the client with a method to communicate their contributions to Florida's economy to senior management.

**Florida Division of Emergency Management's Bureau of Mitigation Business Plan Development / Tallahassee, FL.** Mr. McColm served as the lead for updating the Bureau of Mitigation's business plan. He coordinated management staff throughout the Bureau to assess and close existing goals. Performance metrics and intended outcomes were developed to achieve statewide hazard mitigation program goals. The finalized business plan and Bureau performance was subsequently presented to executive leadership within the agency.

**Florida Division of Emergency Management Disaster Declaration Outreach Material Development / Tallahassee, FL.** Mr. McColm supported statewide Hazard Mitigation Grant Program delivery through overhauling an application desk reference for Tropical Storm Debby. This desk reference provided guidance and information to applicants on statewide policies and procedures as well as information relating to federal regulation compliance. In addition, Mr. McColm planned and supported outreach activities for jurisdictions throughout the state and provided consultation on program and project management strategies and systems. According to the client, Tropical Storm Debby declaration experienced some of the fastest project approvals of any recent declaration.

**Residential Wind Retrofit Program Consultation.** At the request of a client, Mr. McColm has provided expert grant management advice to a southeastern state during its development of a grant-funded coastal residential wind retrofit program. He has also provided consultation to nationally recognized not-for-profit organizations on residential wind retrofit program development and accountability.

**Florida Department of Environmental Protection: Management Review and Auditing / Tallahassee, FL.** Mr. McColm conducted internal management reviews and process audits to identify areas for operational efficiency and developed implementation plans. Further, he performed financial and compliance audits of contracts to ensure appropriate and adequate administration. Duties also included research of various compliance topics, application of findings to specific circumstances and development of audit reports.

## L. JOY DUPERAULT, CFM

### EDUCATION

Bachelor of Fine Arts, School of the Art  
Institute, Chicago, IL 1977

### YEARS OF EXPERIENCE

Total – 29

With Arcadis – 1.5

**Hazard Mitigation Implementation – 7**

### PROFESSIONAL REGISTRATIONS

Certified Floodplain Manager,  
Association of State Floodplain  
Managers

### QUALIFICATIONS

- Mitigation Planning for Local Government/ Emergency Mgrs. G-318/G-393
- Various NFIP courses: L-273, E-194, FPM101, G-282, 284, 288, ASFPM CFM Refresher
- Emergency Management Institute Hazard Mitigation Grants, E-212, 213, 214
- NFIP basic insurance agent (2013) and producer training (2009)
- FEMA Declaration Process; Federal Grants Issues; State EOC training
- Basic FEMA Incidents Management Training IS-100/200, 700/800, 293/393
- Certified Volunteer Administrator (2007), Florida Assoc. of Volunteer Centers

As a staff planner with Arcadis, Joy works in floodplain management planning and resiliency practices; mitigation and recovery planning; and federal and state mitigation grant programs. She has excellent experience in program development and long-term strategic planning, post-disaster redevelopment coordination, local and regional public engagement processes, and community outreach and education. Joy has worked in a wide range of venues including state and federal planning programs, local government services, state-wide non-profit disaster activities coordination, and non-profit environmental education and conservation. Her greatest strength is bringing together adverse stakeholders to develop common goals and partnerships for sustainable and resilient regional solutions.

Much of her recent work with Arcadis has revolved around the review and/or update of local and regional planning for the integration of sustainability and resiliency measures. Her teamwork in assisting several large clients with their National Disaster Resilience Competition applications included finding new ways to look at resiliency in coastal communities subject to sea level rise.

### Project Experience

#### Department of Housing & Urban Development's National Disaster Resilience Competition (NDRC) / New York City, NY.

Worked on a large team to develop the narratives for this half billion dollar NDRC application, as well as offered research and writing support for the benefit-cost analysis report. Her team took part in developing the innovative coastal resiliency projects that will help New York overcome and adapt to future sea level rise, and protect critical affordable housing. **Norfolk, VA.** Joy worked on the development of this \$222 million NDRC application, and performed research and writing for the benefit-cost analysis report. The Norfolk project will allow the City to implement resilient flood protection measures and economic strategies to overcome coastal storm surge, future sea level rise, and concentrated poverty.

**Pensacola Bay Eastern Sub-Basin 2015 Action Plan / Escambia County, FL.** Joy's team collaborated on behalf of Escambia County, Florida and the City of Pensacola to analyze existing efforts for the reduction of stormwater flooding throughout the sub-basin, elevate

## Project Experience Continued

public engagement, and provide green infrastructure recommendations and funding sources for future integrated flood reduction efforts.

**Bay County, FL: Local Mitigation Strategy, Floodplain Management Plan & COOP Update.** Joy assisted Bay County to update their Local Mitigation Strategy by developing an NFIP Community Rating System 510 planning component for floodplain management and flood risk reduction. She also assisted the County with the update of their emergency Continuity of Operations Plan.

**Strategy for Serving Vulnerable Populations during Disaster: Calhoun County Local Mitigation Strategy / Calhoun County, FL.** The State of Florida awarded a Department of Homeland Security grant to analyze vulnerable populations in Calhoun County. Joy's team conducted the analysis and developed a strategy to improve emergency management services during time of disaster; updated the local mitigation plan for Calhoun County through public workshops; and updated the risk and vulnerability assessment while facilitating the local mitigation working group and public engagement process.

**Bergen County, NJ: 406 Mitigation Funding.** Hurricane Sandy brought about the application of millions of dollars in FEMA Public Assistance funding. Joy assisted the County's wastewater treatment facility to find ways to stretch these dollars through the use of both 406 mitigation funds and HMGP grant funding.

**Bristol Park HMGP Application / Escambia County, FL.** Joy's team conducted outreach to homeowners who experienced severe flooding in 2014 to develop a federal Hazard Mitigation Grant Program application. Over 30 homes are expected to be acquired at a total project cost of almost \$7.8 million (federal funding = \$5.8 million.)

**Weld County, CO: Hazard Mitigation Grant Applications.** Joy assisted in the development of various Hazard Mitigation Grant Program applications for planning, stream gages, and generators after Colorado's 2013 flood event. The County was subsequently awarded several of these grants.



## KELLI THURSON, CFM

### CUSTOMER SERVICE REPRESENTATIVE (TEAM LEAD)

#### EDUCATION

Master in Planning, Environmental and  
Natural Resource Management,  
Florida State University, 2013  
Bachelor in Science, Environmental  
Studies, Florida State University, 2011

#### YEARS OF EXPERIENCE

Total – 3  
With Arcadis – 2

#### PROFESSIONAL REGISTRATIONS

Certified Floodplain Manager,  
Association of State Floodplain  
Managers

#### PROFESSIONAL ASSOCIATIONS

American Planning Association Member

**Ms. Thurson's experience as a Planner and Technical Planning Associate with Arcadis has involved a variety of projects including economic and resiliency assessments, working with local governments on floodplain management strategies, benefit-cost analysis, and developing grant applications for hazard mitigation and resiliency projects. She has co-authored various reports, action plans, and technical memorandums; coordinated multi-faceted projects with various stakeholders; engaged citizens to shape resiliency projects; led development of grant applications for hazard mitigation assistance; and has provided technical support on multiple projects.**

#### Project Experience

**National Disaster Resilience Competition, Multiple Applicants / FL; New York City, NY; Norfolk, VA. Phase One Application Development.** Represented both the City of Pensacola and Escambia County in the state-wide development of an application to the U.S. Department of Housing and Urban Development's National Disaster Resiliency Competition. Conducted research and worked with HUD to determine eligibility for the client, and collaborated with other stakeholders throughout the state to develop a state-wide approach to resiliency that would enhance the State's current planning structure by consolidating separate planning mechanisms and developing a comprehensive action plan to achieve resiliency at various geographic scales.

*Phase Two Benefit-Cost Analysis.* Took the lead on evaluating the economic benefits of resiliency projects in New York City and Norfolk. Ms. Thurson used IMPLAN economic modeling software to conduct various economic assessments, including evaluating the impacts of project implementation, post-disaster scenario analyses, impacts of new assets, and identification of future growth risk. Results of the analyses included measurable impacts to employment figures, industry production, employment compensation, and gross domestic product for the study area. Such benefits were then incorporated into a benefit cost ratio to assist in justifying public expenditure on resiliency projects. Additional tasks for the Phase Two Benefit-Cost Analysis include coordination and completion of the final deliverable.

**Escambia County, City of Pensacola: Multiple Projects / FL. Pensacola Bay Eastern Sub-Basin Action Plan.** The Pensacola Bay Eastern Sub-Basin 2015 Action Plan is the result of a joint effort by the City of Pensacola and Escambia County to coordinate the actions and concerns of stakeholders in regard to serious



## Project Experience Continued

stormwater drainage issues. Ms. Thurson conducted an assessment of the social environment in the Eastern Sub-basin, evaluating how the built environment and drainage issues affect quality of life in the area. In addition to interviews with local community members and research of economic development and capital improvement plans, Ms. Thurson used the University of South Carolina's Social Vulnerability Index to assess the expected impact of natural hazards with socially vulnerable populations. In addition, Ms. Thurson provided quality assurance reviews of the document.

*Hazard Mitigation Grant Program Application Development.* Coordinated with both local jurisdictions separately to identify potential flood mitigation projects that would be eligible for disaster recovery assistance under DR-4177. Cumulatively, 10 flood mitigation project valued at \$14.6 million were identified, including acquisition/demolition projects and drainage improvements. Planned and executed a team approach to develop grant applications for each identified project, including coordination with other consultants to complete the tasks. Components of the grant applications that were developed and executed include: scoping, cost-estimating, benefit-cost analysis, environmental review, and compiling the application.

**Florida Division of Emergency Management, Bureau of Mitigation: Multiple Projects / FL. Community Assistance Visits and Calls.** Assisted the State Floodplain Management Office in conducting Community Assistance Visits to assess effectiveness of local floodplain management ordinances and enforcement practices of communities that participate in the National Flood Insurance Program. Ms. Thurson has worked with over 14 communities to assess compliance of new construction in the floodplain, review floodplain management ordinances and practices, and inspect permit files for new construction. The need for technical assistance to effectively administer the community's floodplain management program is gauged, reports are written for the State Floodplain Management Office to submit to the Federal Emergency Management Agency. In addition, Ms. Thurson has worked with communities to correct compliance issues that are brought to attention.

*Non-Disaster Assistance Pilot Program.* Co-developed a pilot program for the State of Florida to identify potential applicants for FEMA's Hazard Mitigation Assistance grant program and coordinate comprehensive grant application packages for acquisition, reconstruction, and elevation projects. Coordinated with four local jurisdictions to identify key stakeholders and generate interest in applications for Assistance, and then led application development for interested communities to submit over \$28 million worth of projects. Subsequent to the application development period, conducted an after-action report to include templates for future application periods, lessons learned, and a plan of action for how to select communities to provide future technical assistance based on FEMA priorities. Led the program in successive years.

*Acquisition Handbook Update.* Developed a package for the latest update of Florida's Acquisition Handbook to include a process map for grant application development, required documents for the application, and all associated guidance. The Acquisition Handbook will be available for all communities to use, when complete.

*Loss Avoidance Assessment.* Assisted in conducting a loss avoidance assessment of flood mitigation projects funded through Federal Emergency Management Agency Hazard Mitigation Assistance grant programs. Responsibilities included a map analysis to assess homes affected by drainage projects with missing project files, extracting the return on investment for those projects, and interpreting the data for the report. Recent weather events in the Florida Panhandle have led to the conception of a second loss avoidance report.