

Exhibit F

Leverage and Outcomes

State of Iowa

Outcomes:

The solution will be implemented with long-term commitments in place. Building from a planning-based, systematic framework to support watershed problem solving requires multi-objective project implementation. The solution will allow flexibility to address problems as they exist in different settings and landform type/eco-region, and not focus on one narrow set of approaches, practices or technologies. The project team will strive to facilitate voluntary implementation of best management practices to support long-term solutions within the current regulations. Attainable results will be achieved by addressing all types of impacts on water resources, including agricultural, commercial, municipal, and residential. Improving watershed function is a responsibility that all Iowans share.. The engineered solutions under consideration include systems designed to capture and retain water in the fields that will then be utilized in the summer months for irrigation. The co-benefits include measurable reduction in nutrients flowing into Iowa waterways and a reduction in soil loss during intense repetitive rain events. There is also the potential to design projects that include renewable energy activity. Iowa is very active in the production of renewable energy alternatives such as wind, solar and biofuels. IEDA, as the State-designated energy office, will bring opportunities to the attention of stakeholders as the project develops.

Dubuque's Bee Branch Watershed Flood Mitigation project is a holistic, multi-phased, green infrastructure investment to mitigate flooding, improve water quality, stimulate development, and enhance quality of life. The project catalyzes community economic, social and environmental capital to create resilient neighborhoods, foster economic opportunities and balance resources. The 13-phase Bee Branch Watershed project will reduce the volume of stormwater, slow the rate of stormwater through the upper watershed, and increase the safe conveyance of stormwater through flood-prone areas. When complete, it also will include "daylighting" a buried creek, community gardens, outdoor amphitheater/classroom, bioswales, landscaped parkways, 1,000 trees, hike/bike trails, water recreation and other amenities, and necessary utilities and public infrastructure. The design life of the various improvements associated with the project is 100 years. The majority of infrastructure improvements are to be completed by 2021. The restoration of houses could be completed over two years.

How can your idea be implemented in an environmentally and financially sustainable way?

The funds utilized in this program will focus on buying down the initial costs of implementation, sharing the burden of the costs between the land owners and downstream communities. As the proposed approach is intrinsically linked to reversing the sources of environmental degradation through soil erosion and water pollution, environmental conditions are inherently addressed in the proposed project.

The Bee Branch Watershed Flood Mitigation Project's single most important achievement is removal of silos at every project level including federal funding, and is thus financially sustainable. The project leverages public and private investments in order to improve neighborhood quality, thus improving property values. As opposed to building additional storm sewers that whisk rapidly-moving water downstream, the watershed approach creates space for natural management of flash flooding while protecting homes near the waterway.

Dubuque's Housing and Community Development Department has been actively involved in the training of lead and "Healthy Homes" contractors. Because of past Lead Hazard Control Grants, the need for trained lead professionals was paramount to the success of the program. Currently, staff can provide all disciplines of professional lead certifications. Past HUD grant performances reported an average of 86 percent Section 3 contractors and workers on projects. The City will initiate a partnership with the local office of Iowa Workforce Development. This office offers immediate work on a daily basis for interested individuals. Training and business opportunities will be provided to low- and very-low-income persons living within the community by providing scholarships for participating in professional lead certification training, which will be required to perform work on the homes because of the high incidence of lead based paint use in this target area.

To ensure the program reaches persons of need that may be under-served due to cultural differences, the Multicultural Family Center of Dubuque will be utilized for outreach. The staff is dedicated to reaching families based on understanding and collaboration across racial, ethnic and socioeconomic groups committed to producing engaged families and community members. The Center will promote contractor and worker job opportunities in partnership with Northeast Iowa Community College,

Successful project implementation will result in a 30 percent reduction of peak flow in the rural target area watersheds. This reduction will directly address the unmet recovery needs of the eligible target areas which are currently vulnerable to flooding. Success will be measured by the best practices implemented according to the

landscape we are working within, by determining reduced soil loss and nutrients which are an indicator of reduced peak-flow. Measurements will be determined by computer modeling as well as utilizing existing and expanded stream gauging systems.

The City of Dubuque will perform healthy homes interventions for 300 units, by utilizing rehabilitation, weatherization and lead resources. Structurally sound, energy-efficient, lead-hazard-free, safe, and healthy living environment will be the outcomes. This can be achieved by combining resources to maximize services through a collaboration of programs. Coordinated inspections and interventions will result in a bigger “bang for buck”, with a lower per-home cost than would be experienced if each home was assisted by independent agencies without integrated schedules.

Implementing integrated, green infrastructure solutions will result in better on-site management of severe rain events. These public and private investments and the creation of more resilient homes will prevent an estimated \$582 million in damages over the 100-year life of the project and create an incentive for individuals and businesses to reinvest in the area, which can be measured in increased property values.

Leverage:

The City of Dubuque has engaged in conversations with FEMA to address floodplain and insurance issues. In the Bee Branch Watershed’s flood prone area shown on the FEMA digital flood insurance rate map (DFIRM), a typical residential property owner, whose mortgage is federally backed, will need to purchase flood insurance at a cost of approximately \$1,000 annually. Much of the properties included in the FEMA DFIRM flood zones are in low- to moderate-income neighborhoods. The financial impact of additional flood insurance costs are magnified for homeowners and businesses who are struggling to get by in a tough economy. If this neighborhood remains in FEMA flood zones, we anticipate disinvestment and the reversal of years of effort to encourage home ownership and reinvestment. Businesses and industries will experience higher costs to operate, and reduced borrowing power for building improvements, new machinery and equipment, and job growth. Removing land from the floodplain and establishing more moisture-resistant housing will result in diminished need for flood insurance. Additionally, flood insurance is not available to tenants in this high-renter neighborhood, furthering the potential negative impact on over 60 percent of the current population who rents.

While many programs and resources already exist to support watershed programs, additional resources are needed to serve identified needs, especially to link programs effectively with local communities. Examples of potential funding sources include Section 319(IDNR/EPA), Water Protection Fund (DSC), Watershed Protection Fund (WSPF, DSC), PL566 Public Law 566 Watershed Program (NRCS), and Environmental Quality Incentive Program (NRCS). Partnerships with the Iowa Flood Center, Iowa DNR's watershed management authorities, the Iowa Daily Soil Erosion Project Team, and IDALS will provide the technical support for the project. The Project team will also look within the communities for additional resources. This could include financial, technical or in-kind support. By addressing a flooding issue using green infrastructure versus gray infrastructure, financial assistance through the EPA's Clean Water SRF Program is possible. Transforming the flood-prone area where commercial property values have actually dropped by 6 percent while they increased community-wide by 39 percent will result in affordable, safe and healthy workforce housing.

The State of Iowa, through the Flood Mitigation Board, has firmly committed resources in the target areas to increase their resiliency to flooding. Letters of partnership demonstrate shared technical resources and financial incentives that mirror the approach outlined in this application. IDALS, DNR, IDOT, the Iowa Water Center at Iowa State University, and the Iowa Flood Center at the University of Iowa will be the primary partners committing funds, expertise, education and outreach, and research efforts to expand the program across multiple priority watersheds.