



2021 Virtual HBCU-UP/CREST PI-PD Meeting



CREST Center for Sustainable Water Use (CREST-SWU)

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Project Overview

- Involving Faculty from Colleges of Engineering and Agriculture along with several key stakeholders, both private and government
- Program aims to assist regional policymakers to address challenges that inhibit water resources utilization – for agricultural, municipal and energy sectors
- Center is developed through three interdependent subprojects – 1) Monitoring and Information Systems (MIS), 2) Modeling and Dynamic Forecasting (MDF), and 3) Decision Support Systems (DSS)

Best Practices/Successes

- MIS subproject research involves developing wireless sensor network for real-time monitoring of ground water levels, soil moisture monitoring
- Work through MDF subproject include developing models to improve management of surface and groundwater quality and quantity in three Texas Water Planning Areas
- DSS subproject work involves developing decision-support tools unique to the region to help stakeholders to experiment with alternative climate, policy and management scenarios

Implications

- A real time monitoring sensor network will be developed that will assist stakeholders and policymakers in effective water management
- Contribute to our understating of the dynamic interactions among hydrological processes, human activities, and climate conditions – crop production
- Agricultural studies will provide an insight on use of fertilizers and different sources of water on the crop production quality and yield.
- Development of surveys for growers and water managers to assist in holistic and systems level approach

Identified Gap(s) for Future Collaboration or Enhancement

COVID-19 Effects

- University closure for face-to-face interactions affected significantly in student recruitments
- Data collections efforts in the field requiring face-to-face meetings were delayed due to travel and personal interaction limitations

Future Efforts

- We will try and implement innovative projects as part of coursework in Spring 2021 to develop and conduct surveys to help stakeholders