



## Legislation Details (With Text)

**File #:** 21-6366      **Version:** 1      **Name:**  
**Type:** Negotiation      **Status:** Passed  
**File created:** 11/15/2021      **In control:** Commissioners Court  
**On agenda:** 11/30/2021      **Final action:** 11/30/2021  
**Title:** Request for approval to negotiate an agreement with National Severe Storms Laboratory, a unit of the National Oceanic and Atmospheric Administration for cooperative research and development to develop, maintain, and provide real-time gauge adjusted gridded rainfall data to the District (Countywide).

**Sponsors:**

**Indexes:**

**Code sections:**

**Attachments:**

| Date       | Ver. | Action By           | Action | Result |
|------------|------|---------------------|--------|--------|
| 11/30/2021 | 1    | Commissioners Court |        |        |

**Department:** Flood Control District

**Department Head/Elected Official:** Alan R. Black, P.E., Interim Executive Director

**Regular or Supplemental RCA:** Regular RCA

**Type of Request:** Negotiation

**Project ID** (if applicable): N/A

**Vendor/Entity Legal Name** (if applicable): National Severe Storms Laboratory, a Unit of the National Oceanic and Atmospheric Administration

**MWDBE Participation** (if applicable): N/A

**Request Summary (Agenda Caption):**

Request for approval to negotiate an agreement with National Severe Storms Laboratory, a unit of the National Oceanic and Atmospheric Administration for cooperative research and development to develop, maintain, and provide real-time gauge adjusted gridded rainfall data to the District (Countywide).

**Background and Discussion:**

National Oceanic and Atmospheric Administration (NOAA), which is the parent agency of the National Weather Service (NWS) and National Severe Storm Laboratory (NSSL), is a key federal partner of the District. The District leverages data and hazard products provided by NOAA and its various divisions to conduct emergency management operations during weather events and for communicating risk with partners, officials, and citizens in and around Harris County. In addition, the District utilizes the numerous real-time and forecast rainfall available from NOAA to perform flood modeling and analysis during flood events. The NWS and District identified an opportunity to develop a new real-time radar rainfall product that leverages the scientific and advanced capabilities available through NOAA/NSSL/NWS and the extensive rainfall gauge network provided by Harris County's Flood Warning System. This product, formally called Gauge Adjusted Radar

Rainfall (GARR), would provide a better estimate of rainfall than radar products that are currently available from NOAA by incorporating rainfall from Flood Warning System rain gauges into the radar rainfall creation process. In addition to incorporating FWS gauges, the radar resolution would be increased to provide more detail over small areas and the frequency of availability increased to 10-minutes from 60-minutes to allow for more frequent updates and inclusion into Flood Control processes. Combined these improvements will result in more frequent, reliable, and accurate estimates of real-time rainfall across the region.

**Expected Impact:**

Execution and completion of the proposed project will provide the District with accurate and reliable real-time radar rainfall data that utilizes the advanced capabilities of NOAA and extensive rainfall gauge network provided by the Flood Warning System. This project will improve the District's flood forecast modeling capabilities by providing more accurate and more frequent real-time rainfall for the Harris County region, which intern will improve the quality of information shared internally and externally during event operations. In addition, having local benefits, the methods used to develop the new real-time radar rainfall product for Harris County will provide a template for how rain gauge networks across the country can be integrated with NOAA's radar rainfall products.

**Alternative Options:**

Alternative options are available through private consulting firms and venders and are currently be used by the District for the previously stated purpose of flood modeling and analysis during weather events. Pursuing the proposed project will reduce the annual cost associated with these types of services by approximately 50-75%.

**Alignment with Goal(s):**

- ☐ Justice and Safety
- ☐ Economic Opportunity
- ☐ Housing
- ☐ Public Health
- ☐ Transportation
- ☒ Flooding
- ☐ Environment
- ☐ Governance and Customer Service

**Prior Court Action (if any): N/A**

| Date | Agenda Item # | Action Taken |
|------|---------------|--------------|
|      |               |              |

**Location: N/A**

Address (if applicable): N/A

Precinct(s): Countywide

**Fiscal and Personnel Summary**

|  |          |       |            |
|--|----------|-------|------------|
| Service Name   | N/A      |       |            |
|  | FY 21-22 | FY 22 | Next 3 FYs |
| <b>Incremental Expenditures (do NOT write values in thousands or millions)</b> |          |       |            |
| Labor Expenditures   | \$       | \$    | \$         |
| Non-Labor Expenditures   | \$       | \$    | \$         |
| <b>Total Incremental Expenditures</b>  | \$       | \$    | \$         |
| <b>Funding Sources (do NOT write values in thousands or millions)</b>          |          |       |            |
| Existing Budget  |          |       |            |
| Choose an item.  | \$       | \$    | \$         |
| Choose an item.  | \$       | \$    | \$         |
| Choose an item.  | \$       | \$    | \$         |
| <b>Total Current Budget</b>  | \$       | \$    | \$         |
| Additional Budget Requested  |          |       |            |
| Choose an item.  | \$       | \$    | \$         |
| Choose an item.  | \$       | \$    | \$         |
| Choose an item.  | \$       | \$    | \$         |
| <b>Total Additional Budget Requested</b>                                       | \$       | \$    | \$         |
| <b>Total Funding Sources</b>   | \$       | \$    | \$         |
| <b>Personnel</b> (Fill out section only if requesting new PCNs)                |          |       |            |
| Current Position Count for Service   | -        | -     | -          |
| Additional Positions Requested   | -        | -     | -          |
| <b>Total Personnel</b>   | -        | -     | -          |

**Anticipated Implementation Date:** November 30, 2021

**Emergency/Disaster Recovery Note:** Not an emergency, disaster, or COVID-19 related item

**Contact(s) name, title, department:** Alan R. Black, P.E., Interim Executive Director

Matthew K. Zeve, P.E., Deputy Executive Director

**Attachments** (if applicable): N/A